



# 2010-2011 CATALOG

## **Notice to Readers**

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Every effort has been made to provide accurate information. Policies and information may have changed since publication. Please consult with the appropriate University department or office for possible revisions. For department information, call the University at 360-650-3000.

This catalog is available in alternate formats by calling the ADA Coordinator at 360-650-3307 (voice) or 360-650-2535 (TTY).

### **Policy on providing equal opportunity and prohibiting illegal discrimination**

This policy governs all employees, students, agents, groups, individuals, and organizations who use University facilities, and other members of the University community to the extent provided by law.

Federal and state statutes prohibit discrimination on the basis of race, color, religion, national origin, sex, age, disability, status as a Vietnam era or disabled veteran, creed, and marital status. Western Washington University and a Governor's Executive Order also prohibit discrimination on the basis of sexual orientation.

The Board of Trustees has pledged to make every reasonable effort to provide the resources necessary to implement this policy. Questions can be directed to the Vice Provost for Equal Opportunity and Employment Diversity, 360-650-3307 (voice).

1. Definition. Personnel Actions – Decisions related to employment such as hiring, promotion, separation, compensation, benefits within the limits of the law, transfers, layoffs, return from layoff, University-sponsored training, education, tuition assistance, and social or recreational programs.
2. Western Washington University shall provide equal opportunity to its employees, students, applicants and users of its services and facilities.
3. Discrimination based on race, color, religion, national origin, sex, age, disability, status as a Vietnam era or disabled veteran, creed, marital status and sexual orientation is prohibited in the operation of all University programs, activities and services.
4. The President of Western Washington University ensures compliance with this policy.
5. All members of the University community are responsible for ensuring that equal opportunity and non-discrimination are integral parts of Western Washington University.
6. Recruitment and selection policies will be developed, monitored and enforced to remove barriers to equal employment opportunity and to prevent illegal discrimination.
7. Personnel actions will be administered with fairness and equity.
8. Promotion and hiring decisions shall be in accordance with the principles of equal opportunity.
9. Illegal discrimination in the recruitment and admission of students is prohibited.
10. Western will cooperate with federal and state agencies in fulfilling obligations under the law.

## President's Message



*Even after so many years in academia, looking at Western's catalog takes me right back to my first year of college — to that sense of awe and anticipation I experienced at the variety of courses available to me. It represented to me then, and still does, a sense of infinite possibility.*

*Awe and anticipation, yes. But, all those possibilities meant feelings of anxiety, also. What are the best courses? What are the courses best for me?*

*At Western, it really is excellence across the board. That's not presidential hype. That's how I described my conclusions after spending my first four months at Western meeting with every single department: were you to pick your major by throwing a dart at our undergraduate catalogue, you would be assured of getting the best or one of the very best programs available in the state.*

*Beyond our classrooms, the WWU community distinguishes itself as a place where themes of civic engagement and giving back to the community, valuing diversity in all its forms, and environmental stewardship and sustainability run deep. Our students recognize that education is only truly higher when put to higher purposes.*

*As you look through this catalog, you will find a remarkable range of courses, and that selection is only the beginning of what makes WWU one of the premier comprehensive universities in the Western United States. Explore the courses. Get excited. And take a few moments to imagine how a Western education can help you learn what you don't know and build on what you do.*

A handwritten signature in black ink that reads "Bruce".

President

# UNIVERSITY CALENDAR

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September 2010						
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December 2010						
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June 2011						
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February 2011						
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August 2011						
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## 2010-2011 ACADEMIC YEAR\*

### Fall Quarter 2010

September 22 (Wednesday)  
8 a.m., classes begin\*\*

November 11 (Thursday)  
Veterans Day holiday

November 24, Noon, to November 28  
Thanksgiving recess

December 6-10  
Final examination week

December 11 (Saturday)  
Commencement

### Winter Quarter 2011

January 3 (Monday)  
Registration for new freshmen

January 4 (Tuesday), 8 a.m.  
Classes begin\*\*

January 17 (Monday)  
Martin Luther King, Jr., Day holiday

February 21 (Monday)  
Presidents Day holiday

March 14-18  
Final examination week

March 19 (Saturday)  
Commencement

### Summer Quarter 2011

May 3 (Monday)  
Registration

June 21 to July 29  
Six-week session

June 21 to August 19  
Nine-week session

June 21 (Tuesday)  
Classes begin\*\*

July 4 (Monday)  
Independence Day holiday

August 20 (Saturday)  
Commencement

\*This calendar is subject to change. Dates appearing in admissions or registration or employee instructions take precedence over those in the University catalog.

\*\*Some extension programs have varying start dates. Check with the site or program office to verify date classes begin.

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# **Western Washington University**

## **Engaged Excellence**

### **Vision**

Western Washington University will become the premier public comprehensive university in the country through engaged excellence.

#### ***Mission: The Western Experience***

Western Washington University is committed to engaged excellence in fulfilling its tripartite mission of teaching, scholarship, and community service in a student-centered environment, with a liberal arts foundation and opportunities to develop professional skills. As a public institution of higher education, Western serves the needs of the citizens of the state of Washington by providing undergraduate and select graduate programs in Bellingham and at selected locations elsewhere in the state. Western provides students with a personalized teaching and learning environment of the highest quality. Through engaged excellence:

- Western instills in graduates a life-long passion for learning and fosters individual curiosity, intellectual rigor, critical thinking, and creativity.
- Western promotes scholarly and creative work of significance and applies that scholarship in regional, national, and global communities.
- Western creates opportunities for students to display leadership, civic engagement, social responsibility, and effective citizenship.
- Western brings together an increasingly diverse and talented student body, faculty, and staff to form a learning community that, along with community partners, involves its members in active learning, scholarly discourse, and reflection.
- Western provides a high quality environment that complements the learning community on a sustainable and attractive campus intentionally designed to support student learning and environmental stewardship.

These efforts create an integrated and distinctive Western Experience.

#### ***Western Values***

Western's mission and strategic objectives are supported by the following core values.

**Excellence:** Western attains and recognizes excellence in all facets of operation.

**Engagement:** Western expects students to be actively involved in their own learning and all community members to be actively involved in collaborative scholarship, creative activities and in service to the broader community.

**Diversity:** Western appreciates the importance of diversity of thought and people and seeks to become more diverse. We honor the contributions of all members of the campus community. We are committed to listening to all sides of an issue and opposed to any form of discrimination.

**Community Service:** Western expects all members of the University to serve and enrich the intellectual vitality of the campus and the broader community. We expect individual members to be committed to improving the Western Experience for all.

**Integrity:** Western expects all members of the campus community to interact honestly and ethically. We value and expect open, fair, and straightforward behavior and take personal and collective responsibility for our words and our actions.

**Innovation:** Western encourages creativity, collaboration, and a willingness to experiment and be receptive to new ideas. We strive to bring these qualities to our work and our interactions with others.

### ***Strategic Objectives***

- To demonstrate engaged excellence:
  - In interactive learning and the active participation of students in scholarly and creative activities.
  - In supporting teacher-scholars who integrate the highest quality teaching, scholarship, and creative activities.
  - In civic engagement by developing leadership, effective citizenship, and social responsibility in all members of the campus community.
  - As a diverse campus community where members appreciate, honor, and celebrate people with diverse perspectives and backgrounds.
  - In environmental stewardship and sustainable practices through our programs, scholarship, and actions.

### ***Strategic Actions***

These actions are designed to enhance Western's institutional effectiveness in fulfilling its mission, meeting its strategic objectives, and providing an effective foundation for the Western Experience.

- **Recruit and retain high quality students.** High quality and diverse students enhance the Western Experience for all. Western remains committed to continuing to recruit highly talented students, despite an increasingly competitive environment. Therefore:
  - The University should enhance the financial resources available for student recruitment.
  - The University should enhance recruitment efforts for targeted populations.
  - The University should improve the student-faculty ratio and add staff, where warranted, to enhance students' academic experience.
  - The University and its units should develop policies that improve access to courses and majors and make entry requirements for majors more predictable.
  - The University should improve delivery of advising services, especially for undecided and transfer students.
  - The University should improve international, cross-cultural, and interdisciplinary opportunities for students.
  - The University and its units should incorporate assessment of student learning outcomes.
  - The University should continue to promote the health and wellness of community members through educational and recreational and fitness opportunities.
- **Recruit and retain high quality faculty and staff.** High quality faculty and staff are crucial for providing students an integrated Western Experience. The University faces an increasingly competitive national marketplace for the services of faculty and staff. Therefore:
  - The University needs to maintain ongoing emphasis on achieving competitive salaries and broad-based benefits for faculty and staff.
  - The University needs to strengthen its system of recognizing and rewarding excellence in teaching, scholarship, and creative activities for faculty and staff.

- The University needs to devote more resources to support innovative teaching, high quality scholarly and creative activities, and collaborative and interdisciplinary activities.
  - The University needs to enhance its emphasis on increasing the diversity of its faculty and staff through recruitment, retention, and exchange opportunities.
  - Internally, units need to support faculty and staff by clarifying expectations and rewards for professional development in teaching, scholarship, creative activities, and service and by facilitating employee efforts to balance those expectations.
  - Units need to identify ways to facilitate and recognize staff efforts to serve the needs of the campus community.
  - The University should devote attention to how it might respond to the high cost of housing for faculty and staff.
- **Maintain growth trajectory and improve enrollment management.** Western's Bellingham campus is nearing ultimate capacity, but expansion in some areas has not kept pace with overall enrollment growth. Therefore:
- The University should maintain its existing policy of moderate annual growth (approximately 1 percent or 120 students per year) to the currently planned capacity of 12,500 FTE by 2013. If the University desires additional growth, it should consider such options as developing additional capacity on the waterfront or expanding Extended Programs. [www.wwu.edu/president/action\\_plan.shtml](http://www.wwu.edu/president/action_plan.shtml).
  - The University should improve the student-faculty ratio and add staff, where warranted, to enhance the academic experience of students.
  - Units should develop a clear plan for enrollment capacity at the unit level, and this should be linked to distribution of resources across units.
  - The University should undertake a study of the role of graduate education and its relative scope and scale, then design a plan for its future development.
- **Build collaborative relationships with off-campus communities.** Western places a high value on connections with the broader community, its role in serving the needs of the broader community, and the 'real-life' laboratory that the broader community provides. Therefore:
- The University should provide improved structure to facilitate civic engagement, leadership development, effective citizenship, and social responsibility in its members.
  - Units should seek to increase the scope of existing outreach and collaborative programs, where feasible, and should consider building broader connections to regional, national, and global communities through such activities as internships, applied scholarship, service learning, and community service.
  - The University should increase involvement of alumni and other volunteers with students in academic departments.
  - The University should engage students and alumni in ways that ensure their lifelong connection to Western.
  - The University should engage friends and other constituents in ways that develop enduring relationships with Western.
  - The University should seek new relationships and strengthen existing ones with other organizations interested in developing and implementing sustainable practices.
  - The University should continue collaborating with the local community in developing and implementing sustainable practices and increasingly serve as a resource for sustainable development.

- **Become more diverse and enhance opportunities for students to understand and participate in different cultures and diverse societies.** Diversity remains one of the central values of the Western Experience. Therefore:
  - The University should strive to become more diverse through recruitment, hiring, and exchange efforts.
  - The University should develop more avenues for campus community members to experience different communities — locally, nationally, and internationally.
  - Units should integrate the study of different cultures and diverse societies more fully across the curriculum.
- **Develop and maintain campus infrastructure.** Since an aesthetically beautiful and well-maintained campus continues to be one of Western's strongest assets, the University has a responsibility to maintain the beauty and functionality of its campus. Therefore:
  - The University should enhance information resources, especially the library, and maintain technological currency to strengthen support for educational and scholarly activity.
  - The University should develop or redevelop current and future spaces to be flexible, efficient, and sustainable.
  - The University should continue efforts to ensure that the campus environment remains healthy, safe, and secure.
  - The University should ensure that maintenance programs sustain the beauty of the campus and the functionality of the existing facilities.
- **Improve communication throughout the University.** As Western has grown in size, scope and complexity, effective communication among its units and members has emerged as an important challenge. Therefore:
  - The University should increase opportunities for formal and informal interaction among members of the campus community.
  - The University should expand efforts to ensure that decisions are made openly, pathways toward decisions are clear and understood, and effective mechanisms for sharing information are maintained.
  - The University should encourage interdisciplinary initiatives and eliminate communication and other barriers to such initiatives.
- **Promote the effective management of resources.** Western is committed to demonstrating accountability and the effective stewardship of resources. Therefore:
  - The University should promote effective management of its resources and demonstrate consistent accountability to all of its stakeholders.
  - The University should continue to take a leading role in developing and implementing sustainable practices in consumption, transportation, and facilities.
- **Increase and diversify funding.** Since Western can no longer rely exclusively on the traditional mix of funding sources from state support and tuition, additional resources will be needed to pursue new initiatives. Therefore:
  - The University should continue to provide proposals to the Executive and Legislative branches of the government for increased investment in public higher education.
  - All units should be encouraged to seek alternative funding sources, including enhanced support from external grants and contracts, participation in federal initiatives, private philanthropic support through the WWU Foundation, and possibly broadened recruitment efforts or expansion of self-sustaining programs.

- University Advancement will actively pursue strategies to encourage increased alumni, parent, corporate, foundation, and community support.
- **Self-assess and develop Outcomes.** To achieve the strategic objectives, Western and its units need to focus energy and resources to support the 2006 Strategic Plan. Therefore:
  - The University and its units should assess how well programs are aligned with Western's strategic objectives and, if need be, reallocate resources to better support those objectives.
  - Units should develop expected outcomes with measurable indicators that will allow them to assess their progress in achieving the University's strategic objectives.
  - The University should clarify and strengthen the processes that make use of this plan so that decisions based on this plan are transparent and the plan remains a living document adapted to Western's changing needs, opportunities and challenges.
- The 2006 Strategic Plan should be reviewed every two years as part of the University's biennial budget development process and revised at least every three biennia.

## The University

Western Washington University is situated in Bellingham, a city of 75,750 overlooking Bellingham Bay and many of Puget Sound's 172 San Juan Islands. The University is 90 miles north of Seattle, 55 miles south of Vancouver, British Columbia, Canada, and an hour's drive from Mount Baker.

Since the first class of 88 students entered New Whatcom Normal School in 1899, the school has grown into the third largest institution of higher education in the state. The Normal School became Western Washington College of Education in 1937, Western Washington State College in 1961, and achieved university status in 1977.

### Academic Programs and Degrees

Western Washington University is organized into a Graduate School and seven undergraduate colleges: the College of Business and Economics, the College of Fine and Performing Arts, Fairhaven College of Interdisciplinary Studies, the College of Humanities and Social Sciences, Huxley College of the Environment, the College of Sciences and Technology, and Woodring College of Education.

To fulfill its academic objectives, Western's curriculum includes a program of broad general education; intensive studies designed to develop scholarly competence in the arts and sciences; professional programs for both public school personnel and a variety of other professionals; and graduate programs in professional education, the arts, the sciences, humanities, and business areas.

Western's undergraduate and graduate programs lead to the following degrees: Bachelor of Arts, Bachelor of Arts in Education, Bachelor of Fine Arts, Bachelor of Music, Bachelor of Science, Master of Arts, Master of Business Administration, Master of Education, Master of Music, Master in Teaching, Master of Science, and Master of Professional Accounting.

### Extension Programs

See the Extended Education and Summer Programs section in this catalog. All of Western's extension programs, credits and degrees meet the same requirements as regular Western programs unless otherwise noted.

### Accreditation

The University is accredited by the Northwest Commission on Colleges and Universities to offer work at the bachelor's and master's degree level. The following colleges, departments and/or programs are also accredited:

- **College of Business and Economics** — AACSB International-The Association to Advance Collegiate Schools of Business, 777 South Harbour Boulevard, Suite 750, Tampa, FL 33602-5730;
- **Chemistry** — American Chemical Society, 1155 Sixteenth St. N.W., Washington, D.C. 20036;
- **Computer Science** — Computing Accreditation Commission of Accreditation Board for Engineering and Technology, Inc., 111 Market Place, Suite 1050, Baltimore, MD 21202;
- **Music** — National Association of Schools of Music (NASM), 11250 Roger Bacon Drive #21, Reston, VA 20190;
- **Psychology** (mental health and school counseling master's degree programs) — Council for Accreditation of Counseling and Related Educational Programs, 5999 Stevenson Avenue, Alexandria, VA 22304;
- **Recreation** — National Recreation & Park Association, 22377 Belmont Ridge Rd., Ashburn, VA 20148

- **Speech-language Pathology** — American Speech-Language-Hearing Association, 2200 Research Boulevard, Rockville, MD, 20850-3289;
- **Electronics Engineering Technology, Manufacturing Engineering Technology, and Plastics Engineering Technology**— Technology Accreditation Commission of Accreditation Board for Engineering & Technology, Inc., 111 Market Place, Suite 1050, Baltimore, MD 21202;
- **Industrial Design** — National Association of Schools of Arts and Design, 11250 Roger Bacon Dr., Suite 21, Reston, VA 20190;
- **Woodring College of Education** — National Council for the Accreditation of Teacher Education (NCATE), 2010 Massachusetts Avenue N.W., Suite 500, Washington, DC 20036-1023; and the Washington State Professional Educator Standards Board, P.O. Box 47236, Olympia, WA 98504-7236 (teacher education and educational administration programs); Council on Rehabilitation in Education — 1699 Woodfield Road, Suite 300, Schaumburg, IL 60173; (rehabilitation counseling program).

The University holds membership in the Council of Graduate Schools in the United States and the Western Association of Graduate Schools.

## **Assessment**

As part of an ongoing effort to assure the quality of the education received by its students, Western Washington University conducts a comprehensive assessment program designed to monitor and continually improve student learning. This assessment program conforms with guidelines established by the state's Higher Education Coordinating Board. From time to time students may be asked to participate in outcomes assessment by completing satisfaction surveys, sitting for achievement examinations, compiling portfolios of their academic work, or evaluating their own work and the quality of instruction in their classes. The purpose of all such assessment activities is to monitor and continually improve the quality of Western's academic program.

Students are strongly encouraged to participate in these assessment efforts when asked to do so. Participants can be assured that assessment results are always treated with the strictest professional confidentiality.

## **Research**

At Western, faculty research and the training of students in scientific and scholarly methods and techniques have received considerable impetus through foundation and government grants. Awards to support faculty research, curricular development, and involving students in research have been made by a wide range of agencies and foundations, including the National Institutes of Health, National Endowment for the Arts, National Science Foundation, Department of Education, Department of Transportation, the Corporation for National and Community Service, Environmental Protection Agency, Canadian Embassy, National Endowment for the Humanities, U.S. Forest Service, American Chemical Society, National Park Service, U.S. Department of Defense, U.S. Small Business Administration, National Aeronautics and Space Administration, The Research Corporation and various local agencies and agencies of the state of Washington. The Office of Research and Sponsored Programs was established to encourage and coordinate faculty research and creative scholarly endeavor throughout the University. The office assists the faculty in obtaining funds for development and research, administers the awards, and provides other services and funding in support of scholarly endeavors.

## **Equal Opportunity Office**

Western Washington University, in compliance with state and federal laws and regulations, does not discriminate on the basis of race, color, creed, religion, national origin, sex (including sexual harassment), age, disability, marital status, sexual orientation and gender expression or identity, or veteran's status in any of its policies, procedures, or practices. This nondiscrimination policy covers admission and access to, and treatment and employment in, university programs and activities, including but not limited to academic admissions, financial aid, educational services, and employment. The EOO assists search committees in attracting broad and diverse applicant pools, in support of the University's Affirmative Action goals.

The EOO both through formal and informal complaints, serves as a resource to faculty, staff and students in resolving discrimination complaints. In addition, the EOO provides training to the campus community on a variety of topics including Sexual Harassment Prevention, Racial Harassment, Religious Harassment, Lesbian, Gay, Bisexual and Transgender (LGBT) Harassment, and Disability Awareness. The EOO welcomes all faculty, staff and students and provides advice and assistance with civil rights protection issues. Inquiries regarding the University's equal opportunity policies and services may be directed to the Equal Opportunity Office at 360-650-3307.

## **Academic Facilities**

The main campus and its 91 buildings occupy 215 acres along Sehome Hill overlooking Bellingham Bay and downtown Bellingham. Other University properties, such as the marine laboratory at Shannon Point in Anacortes, support regional educational and conservancy programs.

In addition, off-campus courses and programs are held at various sites. The University has on-campus residence halls and student apartments for more than 4,000 students.

The beautiful natural setting of the main campus and its award-winning architecture make Western Washington University a stimulating place for work and study.

### *The Libraries*

Western Libraries, consisting of the main library, a branch of the Music Library in the Performing Arts Center, and the Huxley Map Library, house over 1.4 million volumes of books, periodicals, government documents, maps, sound recordings, videos, and more. All of these may be searched using our online catalog. The collections include unique intellectual and cultural heritage materials covering the history of the University and our geographical area such as those held at the Center for Pacific Northwest Studies, as well as special collections in support of the University's curricula. The Libraries also offer access to online periodical databases and other resources, many with full text access, available from campus or from home 24x7. Our collection is supplemented by resources from the Orbis Cascade Alliance, a consortium of 34 academic libraries.

The Libraries serve as a vibrant living, learning space for students, offering them the opportunity to interact with information and with each other. We do this in our physical locations by offering study spaces, access to technology, and research assistance, and virtually through our website. The Libraries pride themselves on offering the same level of access to materials and services to distance learning students as to those pursuing coursework on campus.

The Libraries contribute to the academic success and lifelong learning of Western's students by offering credit instruction, instruction in academic courses, and by answering research queries at the point of need.

### ***Academic Technology & User Services (ATUS)***

Upon a student's online activation of his or her Universal ID and Password, key resources become available, including the MyWestern portal, the WWU network and WWU wireless network, use of more than 20 general university computer labs and numerous departmental labs with scanners and printers, residence hall computer labs, and the Student Technology Center (STC).

General university computer labs are open 24/7 during the academic year, and provide general use software for Windows and Macintosh users. In addition, academic departments provide computer and software resources which are specific to the needs of students in their disciplines.

The Student Technology Center offers classes in the use of software, multimedia tools, and website development, in addition to printing of specialized materials for academic coursework.

Laptop computers for use on the wireless network may be borrowed at Wilson Library, Viking Union and several other campus locations. Multimedia equipment is available for checkout at ATUS Classroom Services and the STC.

The ATUS Help Desk, Haggard Hall 123 provides computer and software support to all campus communities. The Help Desk staff can be called at 360-650-3333.

### ***Outdoor Sculpture Collection and Western Gallery***

The historic precedent of establishing public art on a university campus as early as 1957 and the prominence of the artists in Western's Outdoor Sculpture Collection make this University and its specific art works widely known beyond the Northwest. Considered one of 10 acclaimed university collections in the United States, Western's sculpture spans the last half of the 20th century and is integrated with the terrain and campus architecture. The collection includes large-scale works by international, national and regional artists such as Magdalena Abakanowicz, Alice Aycock, Anthony Caro, Nancy Holt, Donald Judd, Robert Morris, Bruce Nauman, Isamu Noguchi, Tom Otterness, Beverly Pepper, Richard Serra, and Mark di Suvero. Since 2006 new works by six artists have been added to the collection. Website information and a brochure are available to students and visitors who wish to learn about the 29 works. The collection is administered by a curator and an advisory board. Acquisitions are made through a thoughtful process ensuring a standard of high quality and cultural relevance while maintaining the integrity of a late 20th century and early 21st century sculpture collection of international interest.

The Western Gallery, in a wing of the Fine Arts Complex in the center of campus, has 4,500 square feet of exhibition space with sophisticated environmental controls. The gallery features temporary art exhibitions of a diverse character appropriate to our pluralistic society. As part of the educational programs of the gallery, weekly lectures during major exhibitions are scheduled involving a variety of scholars. The contemporary art exhibitions and forums offer students the opportunity to cross reference works of art with the discourse of various disciplines.

### ***Shannon Point Marine Center***

Located on an 87-acre campus in Anacortes, Washington, the Shannon Point Marine Center (SPMC) provides facilities and programs that support the study of marine science on the part of students and faculty from throughout the University. Winner of the 2002 Presidential Award for Excellence in Science, Math and Engineering Mentoring, SPMC provides to biology or environmental science undergraduate majors specializing in marine science a ready opportunity to take courses and engage in special programs supporting independent study and research. Master's of Science students who participate in the Marine and Estuarine Science Program, offered through the Department of Biology and Huxley College of the Environment, take courses and engage in thesis research at the Marine Center.

Federally sponsored programs, that include both Western students and others from around the nation, include the summer Research Experiences for Undergraduates, and the Multicultural Initiatives in Marine Science: Undergraduate Participation, both sponsored by the National Science Foundation.

Only an hour's drive from the main campus in Bellingham, facilities are designed to provide the most up-to-date opportunities for study of marine science on the part of both undergraduates and graduate students. Included is a well-equipped academic vessel fleet that provides ready access to the rich marine environment in the waters surrounding SPMC and a sophisticated analytical instrumentation base that provides students distinctive opportunities for education in the principles of marine science and training in the application of modern field and laboratory investigative techniques.

The SPMC campus provides extensive marine habitat for field and laboratory study, with the Mosquito Pass Study Site on San Juan Island providing additional sites useful for comparative studies. A running seawater system brings the marine environment into the controlled conditions on the laboratory to facilitate study of marine plants and animals. There are housing and dining facilities for 24 people. The Shannon Point Marine Center of Western Washington University also provides a marine outlet for the SPMC Consortium that includes Skagit Valley College, Edmonds Community College and Everett Community College.

## **Undergraduate Admission**

- General Admissions Information
- Freshman Admission
- Transfer Admission
- Post-Baccalaureate Admission
- International Student Admission
- Readmission of Former Students
- Extension Program Admission Information
- Special Students and Auditors

*Old Main 200, 360-650-3440, admissions.wwu.edu*

***Every effort has been made to provide accurate information regarding admissions policies and procedures. However, these practices may change prior to catalog revision. Please consult the Office of Admissions prior to submitting an application.***

The Undergraduate Office of Admissions welcomes applications for freshman, transfer and post-baccalaureate undergraduate admission as well as readmission applications for undergraduate students returning to Western. Western Washington University's admissions policies reflect the University's commitment to enroll students with diverse interests and backgrounds who demonstrate ability, motivation and creativity.

### **General Admissions Information**

Admission to Western is selective as the number of qualified applicants exceeds the number of available enrollment spaces. Selection criteria may vary from quarter to quarter dependent upon space availability. Criteria considered in the review process include academic achievement, activities, program of study and individual circumstances.

An Undergraduate Application for Admission is required of all freshman, transfer and post-baccalaureate applicants. International students must complete the International Student Undergraduate Application. Former Western undergraduate or post-baccalaureate students who wish to reapply must submit the Returning Student Application. All applications must be accompanied by a nonrefundable \$50 application fee.

### ***Application Deadlines and Procedures***

Although some students are notified of an admission decision prior to the application deadline, the majority of decisions are not made until after the application deadline. All on-time applications are given equal consideration.

- Fall Quarter
  - Freshman (includes all Running Start applicants) - March 1  
*NOTE: January 31st is the priority date for scholarship consideration*
  - Transfer, Post-bac, Former Western Student — April 1
  - International students — March 1 (if applying from out of country); April 1 (if applying from another U.S. or Canadian institution)
- Winter Quarter — October 1
- Spring Quarter — January 15
- Summer Continuing to Fall
  - Freshmen (includes all Running Start applicants) – March 1  
*NOTE: January 31st is the priority date for scholarship consideration*
  - Transfer, Post-bac, Former Western Student — April 1

- International students — March 1 (if applying from out of country); April 1 (if applying from another U.S. or Canadian institution)

Western extension program deadlines and fees may vary. Please contact the specific program for information. See the Extended Education and Summer Programs and Woodring College of Education sections in this catalog or [http://admissions.wwu.edu/transfer/x\\_apply.html](http://admissions.wwu.edu/transfer/x_apply.html) for details.

For priority consideration, all application materials, including official transcripts and test scores, if required, must be postmarked by the deadline. To be considered official, transcripts must be sent directly from the issuing institution or be delivered in an official, sealed envelope. Transcripts must be received from all institutions attended, regardless of whether or not credit is desired.

Each admitted student must confirm intent to enroll by submitting a nonrefundable \$250 fee. This one-time enrollment fee funds a variety of academic support services related to new student orientation, advising, and academic success. Enrolling students must also provide proof of measles immunization prior to course registration.

Admission to the University does not imply admission to a major or enrollment in specific courses. Many academic programs have selective admission requirements, including grade point average (GPA), prerequisite course work, et cetera. Students should refer to the College sections of this catalog for specific major declaration requirements.

The Office of Admissions sponsors a variety of campus visit options for prospective students. Specific information may be obtained by contacting the Office of Admissions at 360-650-3440 or by visiting [admissions.wwu.edu](http://admissions.wwu.edu).

### ***Students of Color***

In keeping with our belief that a quality education requires the exchange of ideas across cultural, social, political and religious differences, Western has a proactive commitment to diversify its student body. Students of color comprised 18.7 percent of Western's fall, 2009, enrollment, compared with 13.2 percent of Western's fall, 2000, student body. A variety of academic, financial, cultural and personal support services are available to interested students.

### ***Students with Disabilities***

The University's policy regarding admission and access prohibits discrimination on the basis of disability. Western Washington University is committed to making physical facilities and instructional programs accessible to students with disabilities. After admission, students with disabilities are encouraged to contact disAbility Resources for Students at 360-650-3083 so services can be discussed and coordinated in a timely manner.

### **Freshman Admission**

The most important criterion in the selection process is demonstrated academic achievement, including grade point average, quality and nature of course work, grade trends, and SAT or ACT scores. Activities, leadership, special talent, multicultural experience and individual circumstances also are considered. All applicants are strongly encouraged to submit an essay with the application for admission.

Students are encouraged to pursue academic course work and advanced study beyond the minimum course requirements listed below. Academic course work exceeding the minimum requirements, including Advanced Placement, honors, Running Start and International Baccalaureate, will strengthen the application for admission.

**English:** Four units, at least three selected from college preparatory composition and literature courses. One unit may be satisfied by courses in drama, public speaking, debate, journalistic writing, ESL or business English.

**Mathematics:** Three units of mathematics are required, at the level of algebra, geometry and advanced (second-year) algebra. More advanced mathematics courses are recommended such as trigonometry, mathematical analysis, elementary functions and calculus. Arithmetic, pre-algebra and business mathematics will not meet the requirement. An algebra course taken in the eighth grade may satisfy one unit of the requirement if second-year algebra is completed in high school.

**Science:** Two units of college preparatory science, including one unit of an algebra-based chemistry or physics course with laboratory experience. Two units of agricultural science will equal one unit of science.

**Social Science:** Three units of college preparatory course work, including history, government, psychology, politics, economics, geography, et cetera. Credit granted for student government, community service, or other applied or activity courses may not be used to fulfill this requirement.

**World Language:** Two sequential units in a single foreign language, Native American language or American Sign Language. Students entering the United States education system from non-English speaking countries at the eighth grade or later are exempt.

**The Arts:** One semester or one trimester in the fine, visual or performing arts, to be chosen from study in art appreciation, band, ceramics, choir, dance, dramatic performance, music, photography, et cetera. Courses in color guard, drafting, fashion design, sewing, woodworking, et cetera, are not acceptable.

**Electives:** One semester in any of the above areas is required.

Since the number of qualified applicants exceeds the number of available enrollment spaces, meeting minimum requirements is no guarantee of admission. Students who do not meet minimum eligibility requirements are exempt under certain circumstances. College course work may also be used to fulfill high school requirements. See College Credit for High School Students section below.

#### ***College Credit for High School Students***

High school students earning college credit will be considered freshmen for admissions purposes, as long as the student attempts no college-level course work after high school graduation (excluding summer). The University will accept college credit in fulfillment of high school course requirements as indicated on the high school transcripts. College-level credit will be awarded in a manner consistent with standard transfer equivalency policies. To receive credit, students are responsible for submitting official college transcripts and/or score reports.

#### ***Running Start and College in the High School***

Regardless of number of college credits earned, Running Start students and other high school students with college credit must follow freshman application procedures and meet freshman admission standards. This includes completion of the high school course requirements and submission of ACT or SAT exam scores.

### ***Advanced Placement (College Board), International Baccalaureate, and Cambridge International Exams***

Western encourages students to take Advanced Placement/ International Baccalaureate, and/or Cambridge International courses and exams where available. College-level credit will be granted to enrolling students who have scored a 3 or above on the AP exams and a 4 or above on the higher-level IB exams. See the University Academic Policies section in this catalog for further details.

### ***Admission Requirements for Home Schooled Students***

All freshman applicants need to supply Western with SAT or ACT test scores along with detailed documentation that outlines the curriculum they have studied in the last four years. Typically, this documentation is in the form of a transcript. The home-schooled student must demonstrate academic preparation comparable to general freshman admission requirements. While not required, GED scores can be helpful in assessing the preparation of nontraditional applicants.

### **Transfer Admission**

Western welcomes transfer students in all majors and from all types of colleges and universities. A transfer applicant is a student who has attempted college credit after high school graduation. Please see the section on Freshman Admission if your college credits were earned while you were also fulfilling high school requirements.

Academic achievement is the most significant factor in the application review. Clearly defined academic goals, completion of major prerequisites and related experiences, number of transfer credits, contributions to and/or experiences with multiculturalism, special talent, personal circumstances, and space availability are also considered.

Minimum requirements for transfer admission include a 2.0 cumulative transferable GPA and a 2.0 in the quarters prior to application review and enrollment. Students applying with fewer than 45 completed transferable quarter credits also must meet freshman admission standards. *Meeting minimums is no guarantee for admission as the number of qualified applicants exceeds the number of available enrollment spaces.*

In calculating the transfer admission GPA, the Office of Admissions uses all transferable academic courses, including repeats, from all regionally accredited colleges the student has attended. Admission to the University does not imply admission to a major or enrollment in specific courses. Many academic programs have selective admissions requirements, including GPA, prerequisite course work, auditions, portfolio review, et cetera. Students should refer to the College sections of this catalog for specific major declaration requirements.

### ***Transfer Policies and Procedures***

Western Washington University endorses the Higher Education Coordinating Board's **Policy on Inter-college Transfer and Articulation among Washington Public Colleges and Universities**. Detailed transfer advising information, including course equivalency information, as well as a list of transfer student rights and responsibilities, is listed on the transfer admission section of Western's website.

### ***Transfer of Credit***

In general, Western Washington University grants credit for baccalaureate-oriented courses completed at accredited institutions of higher education. Transfer of credit policies are developed by the University's Admissions Committee and the statewide Inter-College Relations Committee and approved by the University's faculty. Authority to administer these policies is shared by the

Registrar, the Director of Admissions and, where applicability of major or minor is concerned, department chairs.

Several factors govern the acceptance of transfer credit. Chief among them is accreditation. For transfer credit purposes, Western recognizes those institutions which have received accreditation by the Regional Associations of Schools and Colleges.

Western allows a maximum of 135 quarter (90 semester) credits to transfer from any combination of regionally accredited institutions, including no more than 105 quarter (70 semester) lower-division credits. Additional course work which exceeds this amount may be used to meet specific requirements but additional credits will not be allowed to count toward the 180 credit requirement for graduation.

Regardless of the number of transfer credits awarded, the student must earn a minimum of 45 resident credit hours through Western for graduation.

Lower-division transfer coursework that is deemed equivalent to an upper-division course cannot be used to satisfy WWU's 60 credit upper-division minimum requirement.

Certain credits earned at previous institutions do not transfer, regardless of that institution's accreditation, including:

- College courses numbered below 100
- Technical and vocational courses
- Developmental education or remedial courses
- English as a Second Language
- Sectarian religion courses
- Credit for life experience/travel
- Study skills courses
- CLEP examination credit
- DANTES credit by examination

### ***Military credit***

Students may receive up to 30 credits for educational training based on American Council of Education guidelines. To receive these credits students must submit either an official military transcript or DD-214 for review. These credits do not transfer from one institution to another and so may apply to the Direct Transfer Agreement (DTA) associate degree only as part of the 15 credits of nontransferable course work allowed under Inter-College Relations Commission (ICRC) guidelines.

### ***Transfer of Associate Degrees***

**Direct Transfer Agreement (DTA) Associate Degree.** Students who complete a DTA associate degree at a Washington State community college prior to initial enrollment at Western ordinarily will satisfy all of Western's General University Requirements (GURs). To be accepted in lieu of Western's GURs, the associate degree must meet Washington state's Inter-college Relations Commission (ICRC) guidelines and include at least 90 credits. The DTA degree must include 75 credits that are directly transferable to Western. Up to 15 credits not normally transferable may transfer if used as part of this associate degree. Western will not accept any non-transferable credit earned after the DTA is awarded. The Pass/Fail grading option may only be used in the general elective area. Students should work closely with community college transfer advisors to ensure their curriculum choice follows the approved guidelines.

An approved associate degree is generally earned prior to initial enrollment at Western (on or off campus) as a transfer student. If any student wishes to complete such a degree in order to have it

satisfy the GUR while enrolled at Western, it must be earned by the time the student has 1) completed 45 credits at Western, or 2) one calendar year has passed from initial enrollment, whichever comes later.

**Associate of Science-Transfer Degree.** Washington State community college students intent on earning a bachelor's degree in biological sciences, chemistry, computer science, engineering technology, geology, or physics may be best served by completing the appropriate Associate of Science-Transfer degree prior to admission. While this degree will **not** fulfill Western's GURs, it is the most efficient route in preparing for upper-division study in most science and engineering majors. Students who complete this degree will enter Western with 90 credits and preparation for upper-division program study; however, it does not guarantee admission to the major. Up to 5 credits not normally transferable may transfer if used as part of this associate degree. Western will not accept any non-transferable credit earned after the AS-Transfer Degree is awarded.

#### ***General Education Transfer Agreement***

Completion of lower-division General University Requirements (GURs) will be granted to students who have completed all of the lower-division General University Requirements at another Washington state public baccalaureate institution, provided the sending institution so certifies.

#### **Post-Baccalaureate Admission**

Space for students wishing to pursue teaching certification or a second bachelor's degree is limited, and therefore admission is competitive. Cumulative GPA, nature of previous course work, proposed program of study, related experience, residency and individual circumstances are considered. Many post-baccalaureate students will find their educational needs can be met through enrollment options offered through Extended Education and Summer Programs or Western's program for non-matriculated students. For more information, see the Extended Education and Summer Programs and Registration sections in this catalog.  
Post-baccalaureate applicants interested in pursuing a residency teaching certificate must simultaneously apply to Woodring College of Education.

#### ***International Student Admission***

Western's student body includes representation from more than 35 countries. In addition to meeting admissions standards comparable to those required of other applicants, international students must demonstrate English proficiency and provide proof of full financial support for all expenses for one academic year. Taking the ACT or SAT exam is required for freshman applicants and transfer applicants with fewer than 45 credits at time of application.

English proficiency is generally demonstrated by a minimum TOEFL score of 550 (paper-based), 213 (computer-based), or 80 (internet-based). Applicants who include TOEFL results will be given the strongest consideration. However, applicants with lower TOEFL scores, and/or applicants who are unable to take the TOEFL, may be admitted with an Academic English Program (AEP) provision if they have previously studied in the United States, completed college-level English 101 and English 102 prior to enrollment earning grades of B (3.0) or better, and demonstrate strong academic achievement. Students who are admitted with an AEP provision enroll in regular university courses in their majors during the first quarter at Western, in addition to advanced Academic English courses offered through the Intensive English Program (IEP) at Western.

Western also offers a conditional admission option for international students who demonstrate strong academic potential but will benefit from Western's Intensive English Program prior to gaining full admission to Western. Due to application processing time constraints, out-of-country international student applications are not accepted for winter and spring quarters.

### ***Conditional Admission***

International undergraduate applicants who do not yet meet the minimum TOEFL requirement or who wish to have more language preparation before entering a degree program may apply for conditional admission, which requires English language course work to be completed prior to admission to Western. Students accepted for conditional admission must have a minimum TOEFL score of 500 (paper-based)/173 (computer-based)/68 (Internet-based) and must fulfill all other requirements for undergraduate admission. Before enrolling in their first credit class, conditional admission students attend Western's Intensive English Program (IEP) full time for at least one quarter, take the IEP Academic English classes (academic preparation, writing, reading, and oral communications) and score at least 520/190 on the TOEFL. Students may apply for conditional admission while enrolled in the IEP, or they may apply directly to the Office of Admissions.

For more information, contact the Intensive English Program office at 360-650-3755, send e-mail to [iep@wwu.edu](mailto:iep@wwu.edu) or visit the IEP webpage at [www.wwu.edu/depts/iep](http://www.wwu.edu/depts/iep).

### **Readmission of Former Students**

Undergraduates pursuing a first bachelor's degree after an absence from campus generally are guaranteed readmission as long as they left Western in good academic standing and follow readmission application instructions. Post-baccalaureate students returning after an absence from campus must include a detailed academic plan of study, as the post-baccalaureate readmission process is selective. Former students must submit a **Returning Student Application** that includes a list of all educational institutions attended since leaving Western and meet deadlines cited under **Application Deadlines and Procedures** section whenever possible. Students applying to return after dismissal from the University must follow reinstatement procedures detailed in the University Academic Policies section of this catalog.

A former Western student who returns to the University after an absence of five years or more may be given permission to start a new cumulative grade average. The Fresh Start application deadline is the end of the first week of the quarter in which the student returns. The application should be submitted to the Registrar's Office. Students who have been dropped for low scholarship, even if absent for five years or more, must pursue reinstatement. See **Reinstatement** section under University Academic Policies.

Former Western extension program students returning to the same Western Washington University extension program to pursue a first bachelor's degree or post-baccalaureate study must complete the appropriate Extension Program Returning Student Application and submit it with a \$50 nonrefundable application fee.

### **Extension Program Admission Information**

Western's general admissions requirements apply to all extension programs. Additional application procedures may be required. Extension program deadlines and fees may vary. The extension program sites offer informational sessions for prospective students. For specific program information, see the Extended Education and Summer Programs and Woodring College of Education sections in this catalog.

Applicants to Western's Extended Programs must complete the appropriate Extension Undergraduate Application and submit it with a \$50 nonrefundable application fee. International applicants to Western's extension programs must also complete the Extension International Supplement. Applications are available at all extension sites or online on the admissions website.

Former Western extension program students returning to a Western extension program must complete the Extension Program Returning Student Application and submit with a \$50 nonrefundable application fee.

## **Special Students and Auditors**

The Registrar's Office grants course registration privileges on a space-available basis, for one term at a time, to auditors, Washington state employees, and residents over 60 years of age who are eligible for tuition reduction. Special students and auditors must submit a Special Student Enrollment Form to the Registrar's Office each quarter. The form can be found online at: <http://www.wwu.edu/depts/registrar/forms.shtml>.

## ***Early Admission/Concurrent Enrollment While in High School***

Students who plan to graduate from high school early should follow standard freshman admission procedures.

Students interested in concurrently enrolling in courses while also attending high school may apply at the Registrar's Office to take courses as non-matriculated students. This program allows eligible students to enroll in courses on a space available basis. Students who are interested in being formally admitted as matriculated students while staying in high school must demonstrate superior academic achievement, fulfill all freshman admission requirements, and demonstrate that they have exhausted all academic opportunities available through their high school and local community college. Concurrently enrolled high school students are not eligible for financial aid or WWU scholarships.

# Registration

- Student Responsibility for Registration
- Registration Restrictions
- Registration Holds
- Late Registration
- Extension Registration
- Changes in Registration
- Student Records Security
- Directory Information/Confidentiality

*Registrar's Office, Old Main 230, 360-650-3430 [www.wwu.edu/depts/registrar/](http://www.wwu.edu/depts/registrar/)*

Registration for each quarter is conducted in three phases using Web for Student, [www.wwu.edu/web4u](http://www.wwu.edu/web4u):

- Phase I — A period of two to three weeks in which continuing and returning students and new graduate and transfer students register
- Phase II — A period before the start of classes when students can change their schedules. Except as noted elsewhere, new freshmen register on the last day of Phase II, which is the day before classes begin each term
- Phase III — Registration beginning the first day the quarter and ending at 5pm on the fifth day of the quarter. Students may register online during the first five days of the quarter; however, entering classes late may cause difficulty

Complete registration instructions can be found on the Registration icon on Western's home page and in the *Summer Bulletin* on the Web. It is very important that students make certain after registering that they have done so properly by checking their schedules via Web4U. Students are prohibited from attending a class without being registered.

Summerstart, a special orientation and registration program for new fall quarter freshmen, is conducted during the summer preceding fall quarter. Each freshman student who has accepted an offer of admission for fall quarter will be sent complete information about this program. New freshmen unable to attend Summerstart should plan to attend the orientation and advising program held at the beginning of each term.

Transitions, a special orientation and registration program for new fall quarter transfer students, is conducted during the summer preceding fall quarter. New transfer students unable to attend Transitions should plan to attend the orientation and advising program held at the start of each term. Each transfer student who has accepted an offer of admission will be sent complete information about orientation and advising.

## **Student Responsibility for Registration**

Students are responsible for completing their own registration each quarter. While faculty may provide permission with an override to enroll in a restricted course, the student must complete the process via Web4u. Schedule changes initiated after the first week of the quarter, and independent study registrations, must be submitted in person at the Registrar's Office. It is important for students to make certain they are not registering for a course in which they already received credit, either at Western or elsewhere. Unless the course is marked in this catalog as repeatable, it cannot be taken more than once for credit.

## **Registration Restrictions**

For pedagogical reasons, some courses are restricted to certain levels of students, to students who are declared majors, or to those who have received special permission from the instructor. Such restrictions are listed in the online *Timetable of Classes*.

The student is responsible for ensuring that he or she has satisfied all prerequisites before registering for a course. A student who has registered for a course without satisfying prerequisites may be required to withdraw from the course by the instructor.

Because of high demand for many courses, departments often must give enrollment priority to students for whom specific courses are requirements. If a department restricts a course to its declared majors the department must also allow in the course other declared majors for whom the course is listed as a requirement.

## **Registration Holds**

A "hold" is placed on registration for students who have any outstanding obligations to the university. These obligations can include outstanding debts, failure to comply with immunization policies, failure to comply with certain admissions requirements or academic regulations, and violations of conduct codes or other University rules.

## **Late Registration**

The deadline to register or to add a class is 5pm on the fifth day of the quarter (see the Summer Session website for summer quarter registration deadlines).

Late registration is permitted only in exceptional cases. After the first five days of a quarter (excluding summer), initial registration is allowed only by: 1) obtaining an override or written permission from the course instructor, and 2) paying the late registration fee. Students adding classes to an existing schedule beginning the sixth day of the quarter through the end of the second week must obtain an override or written permission from the course instructor but will not be charged a late-add fee until the beginning of the third week. (See Summer Session Bulletin for specific summer quarter dates).

## **Extension Registration**

Registration procedures for extension programs vary. Contact the appropriate program office for registration dates. See the *Extended Education and Summer Programs* section in this catalog.

Students may register for Independent Learning courses at any time, call (360) 650-3650. Enrollment in only correspondence courses does not qualify as continuing enrollment for WWU students. Contact the Registrar's Office for information regarding student status.

## **Changes in Registration**

Policies concerning changes in registration, such as withdrawal from a course or from the University, are described in the section titled *University Academic Policies*.

## **Student Records Security**

Washington Administrative Code 516-26-070 prohibits access to or misuse of a student's educational records. Any person who inappropriately gains access to a student's records, or tampers with a student's registration, will be subject to disciplinary action.

## **Directory Information/Confidentiality**

The University publishes an annual student directory, showing your name and local phone number. You may elect to have this information omitted by completing a Request for Confidential Status of Directory Information form in the Registrar's Office, Old Main 230. If this option is chosen, NO information will be released about you, including degrees and awards earned.

## Tuition and Fees

- Tuition and Fees
- Reviewing Student Accounts
- Billing Statements
- Paying Tuition and Fees
- Due Dates, Late Fees and Interest
- Nonpayment Penalty
- Changes in Student Credit Load
- Financial Obligations
- Tuition and Fee Refund Policy
- Refund Exceptions
- Description of Tuition and Fees
- Other Mandatory Fees
- Miscellaneous Fees
- Financial Aid and Other Support
- Tuition and Fees - Extended Education

*Student Accounts, 360-650-2865*

[www.wwu.edu/depts/sfs/StudentAccounts/index.shtml](http://www.wwu.edu/depts/sfs/StudentAccounts/index.shtml)

## Tuition and Fees

Tuition and fees include tuition, mandatory fees, course fees and additional fees. All fees are subject to change as the result of action by the state Legislature or the board of trustees. See the Description of Tuition and Fees section below for a detailed explanation of each fee.

By registering for classes, a student incurs a legal obligation to pay tuition and fees to Western Washington University. This debt may be canceled only if the student officially withdraws from Western before the quarterly deadline published on the Registrar's website under Dates and Deadlines.

At Western the various expenses of an undergraduate who is a resident of the state of Washington are about \$6,608 each quarter.

### Estimated Quarterly Costs for 2010-11

Tuition and Fees	2,293.00*
Room and Board	2,916.00
Books and Supplies	340.00
Personal Expenses	684.00
Transportation	375.00
Total	\$6,608.00

*\*Includes for students enrolled at least 6 or more credits: \$70 health services fee, \$37 nonacademic building fee, \$25 technology fee, \$95 recreation center fee, \$25 transportation fee, and renewable energy fee of \$0.70 per credit to a maximum of 10 credits.*

*For students enrolled in less than 6 credits \$12.50 technology fee and renewable energy fee of \$0.70 per credit.*

The table below shows the actual tuition rates by credit and student category. (Room and board and financial aid at Western are discussed in later sections of this catalog.)

**2010-11 Schedule of Tuition and Required Fees**

Classification	Per credit charge**	Number of credit	1-2** 3** 4** 5** 6** 7** 8** 9** 10-18**								
			1-2**	3**	4**	5**	6**	7**	8**	9**	10-18**
Resident <sup>1</sup> , Undergraduate	203	406		609	812	1015	1218	1421	1624	1827	2027
Resident <sup>1</sup> , Graduate	219	438		657	876	1095	1314	1533	1752	1971	2189
Nonresident <sup>1</sup> , Undergraduate	548	1096		1644	2192	2740	3288	3836	4384	4932	5476
Nonresident <sup>1</sup> , Graduate	541	1082		1623	2164	2705	3246	3787	4328	4869	5414

Classification	Amount per credit in excess of 18 credits**	Number of credits			
		19**	20**	21**	22**
Resident, Undergraduate	186	2213	2399	2585	2771
Resident, Graduate	202	2391	2593	2795	2997
Nonresident, Undergraduate	531	6007	6538	7069	7600
Nonresident, Graduate	525	5939	6464	6989	7514

**\*\*Required fees not included:**

Health Service	\$ 70.00
Non-Academic Building Fee	\$ 37.00
Recreation Fee	\$ 95.00
Technology Fee	\$ 25.00
Renewable Energy Fee <sup>^</sup>	\$ 7.00
Transportation Fee	\$ 25.00
Total	\$259.00

<sup>^</sup>The Renewable Energy Fee will be assessed at \$0.40 per credit hour to a maximum of \$4 per quarter.

Enrollment Fee (first-time students only) \$250.00

A tuition estimator can be accessed from the "Pay Tuition, Housing Fees" link on the main WWU Website to assist in projecting the amount of tuition and fees that will be due the University.

See the University Academic Policies section of this catalog for an explanation of full-time status and how that affects financial aid, athletic eligibility, and veterans' benefits.

<sup>1</sup>Residency — Under Washington State Law a resident student is defined as:

- A financially independent student who has had a domicile in the state of Washington for the period of one year immediately prior to the time of commencement of the first day of the quarter for which he/she has registered and has in fact established a bona fide domicile in this state primarily for purposes other than educational, or
- A financially dependent student, if one or both of his or her parents or legal guardians have maintained a bona fide domicile in the state of Washington for at least one year immediately prior to commencement of the quarter for which the student has registered,
- A student who is the spouse or a dependent of a person who is on active military duty stationed in the state or an active Washington National Guard member or spouse or dependent of a Washington National Guard member. Such a student is classified as a resident for tuition purposes only and is not eligible for other benefits provided to residents,

- *A student who is a member of one of 33 Native American tribes in Idaho, Montana, Oregon or Washington. Such a student is classified as a resident for tuition purposes only and is not eligible for other benefits provided to residents,*
- *A student who is not a U.S. citizen or U.S. permanent resident, but has lived in Washington at least three years prior to obtaining a high school diploma or equivalent, and has lived in Washington continuously since earning the high school diploma and has completed a Washington Higher Education Residency Affidavit.*

*Further information regarding residency classification and statutory exemptions from the requirement to pay nonresident fees may be obtained from the Registrar's Office, Old Main 230. Individuals seeking a change in residency classification must obtain a residency questionnaire from the Registrar's Office, attach the required documentation, and submit it to the Registrar's Office before the beginning of the quarter for which a residency reclassification is requested. In the absence of a completed questionnaire and supporting documentation, an individual's residency classification will remain unchanged.*

### **Auditing a Class**

Students enrolled for 10 or more non-audit credits may audit a course without an additional charge. Students enrolled for less than 10 credits will be charged \$10 per credit to audit a course. Students approved to register for an audit are responsible to pay any course fees attached to the course. Auditors are required to pay the full course fee for self-supporting extended education courses. See Selected Academic Regulations for restrictions on auditing. Audit fees are nonrefundable.

### **Reviewing Student Accounts**

Tuition and fees are charged to a student's account at the time they register for classes. Students are responsible for reviewing their account and for paying the balance due. Account detail can be accessed through Web4U. See the *Pay Tuition, Housing and Fees* link on Western's home page.

Western bills electronically and offers the option of paying student account charges (tuition, fees, housing, et cetera) online. Billing statements are available at Web4U, which may be accessed through the *Pay Tuition, Housing & Fees* link on Western's home page.

**Activate your WWU e-mail account.** Official University e-mail accounts are created for all enrolled students. A student must activate his or her account in order to access University correspondence.

Currently enrolled students will be sent an **electronic bill notification** to their assigned University e-mail account. This tells how much is owed or how much will be refunded. **No paper bills will be sent.** For full information on how to view and pay the student account, go to <http://www.wwu.edu/depts/sfs/paynow.shtml>. Or go to the Student Accounts website or the Student Accounts office in Old Main 360.

The University uses e-mail as its official form of communication; this is intended to meet the academic and administrative needs of the campus community.

The University expects that such communication will be received and read in a timely fashion.

**Students are responsible for maintaining their e-mail account and other contact information with WWU, including current address and telephone information.**

### **Billing Statements**

Western notifies students of all outstanding balances through an electronic billing notice sent to the official Western email account. This is Western's official means of billing. **The University does not mail student billing statements.** Students are notified of their outstanding financial

obligations via their University e-mail account. A copy of the e-bill notification can be sent to a second e-mail address. Additional information is available from the Pay Tuition, Housing and Fees link on Western's home page.

It is the student's responsibility to pay tuition and fees before the payment deadline whether or not a billing notice is received.

If courses are added after the statement date or after financial aid has been disbursed, it is important to check your account online or with Student Accounts to determine if additional payment is required.

Student account information is confidential (see Appendix E in the **Appendices** section of this catalog). Release of account information may be authorized by completing a Release of Financial Information form in the Student Accounts office or online through the Student Accounts **Important Forms** link.

### **Paying Tuition and Fees**

**E-Pay** is available 24 hours a day with immediate update to a student's account. Payment may be made online with a credit card. **NOTE:** Only MasterCard, Discover or American Express is accepted. A 2.75 percent convenience fee will be charged for using the credit card. Payment also may be made online with an E-check (an electronic check). E-checks are not subject to convenience fees. To pay, follow the links from the Pay Tuition and Housing link on the main WWU website. Parents or other third parties who will be paying an account must be set up as an Authorized payer by the student in order to access student account information and make payments online. Instructions are available online or by contacting Student Accounts.

**Mail** the remittance portion of the statement/invoice along with a check to the University Cashier, 516 High St., MS-9004, Bellingham, WA 98225-9004. Do not use campus mail for payments.

Allow seven to ten business days for mail to reach Western. Payments are credited when received, not when mailed.

#### **Remember**

- Write your WWU ID number on the check and make it payable to WWU
- Canadian checks **must** be made payable in U.S. funds
- There is a \$25 charge for the first returned check and a \$50 charge for each subsequent returned check

**Pay in Person** at the University Cashier, located in Old Main 245 (9 a.m. to 4 p.m. weekdays). Cash payments must be made in person.

Payment may be made with cash, check or a debit card.

**Drop Box** Write your WWU ID number on the check and place it in a sealed envelope. Deposit in the drop box located outside the University Residences office (Edens Hall South). Available 24 hours a day, seven days a week, except for the 4 p.m. cutoff on the quarterly payment deadline.

**Financial Aid** - All aid types, except private lender loans received as a check made payable to the student, will be applied to current quarter charges on the student's account. Only after University charges have been paid will a refund of excess aid be given to the student. **If a student incurs additional registration charges after financial aid has been applied to their account, the student is responsible for paying the additional charges by the tuition due date.**

Miscellaneous charges to a student's account, such as health center charges or athletic health fees, **will not be paid** by financial aid unless a student signs a form authorizing the University to use financial aid to pay these miscellaneous charges. Fill out an Authorization for Miscellaneous Charges form, available online or at Student Accounts, to allow financial aid to pay these charges.

### **Due Dates, Late Fees and Interest**

Tuition, fees, and housing charges are due on the first day of class. Payment is late if all charges are not paid by 5pm the 3rd Friday of each quarter. After the 3rd Friday of each quarter a monthly late fee and a 1 percent interest charge will be assessed monthly to all past due accounts.

The deadlines to avoid late fees are:

**Fall** — October 8  
**Winter** — January 21  
**Spring** — April 15  
**Summer** — July 8

Tuition due dates are posted on the Student Accounts website and the Registrar's Office website.

**Short-term emergency loans.** The Financial Aid Department can assist students with a short-term cash flow problem through a variety of emergency loan programs to cover a portion of their tuition and fees. For more information, contact Financial Aid, Old Main 265, 360-650-3470.

### **Nonpayment Penalty**

By registering, a student incurs a legal debt to the University and can be released from that obligation only by formally withdrawing within the full-refund period. The \$250 enrollment fee is **never refundable**.

Tuition and fees and housing payments are due the first day of the quarter. Charges incurred on or after the statement date are due immediately. After the third Friday of each quarter a fee of \$40 will be assessed each month there is a balance on the student's account. Tuition due dates are posted on the Registrar's Office and Student Account's websites. A one percent interest charge will be assessed monthly on all past due accounts.

### **Changes in Student Credit Load**

Students who have paid part-time tuition and fees and add courses bringing their total credit load to 10 or more will be assessed additional tuition charges, and will be charged the difference between the amount already paid and the total for full-time tuition.

It is the student's responsibility to review their student account and pay the balance owed. Accounts can be reviewed online through Web4U or at the Student Accounts office in Old Main 360. Any balance due may be paid online or at the University Cashier in Old Main 245.

### **Financial Obligations**

Students are responsible for reviewing their Western student account and are responsible for paying all charges owed to the University.

Financial obligations also include completing exit counseling with Western's loan department for students who had a federal loan or federal Teach Grant disbursed while attending the University. Federal loans include Perkins loans (formerly National Direct loans), and William D. Ford Direct Loans. The exit counseling requirement is designed to acquaint students with their rights and responsibilities regarding their student loans. Exit counseling must be completed before graduation, before withdrawing from Western, or when student credit load drops to less than

half time. Exit counseling is a federal mandatory requirement. Failure to complete your exit counseling constitutes failure to meet your financial obligation.

The University may withhold admission or registration privileges for students who fail to meet financial obligations to the University. The University may withhold conferring of the degree or issuing of transcripts. This action may be taken in accordance with WAC 516-60-006, filed 11/17/72.

Unpaid balances mean your account will be placed in collection status with the University Loans and Collections office. A service fee will be added to the amount you owe.

Accounts with past due unpaid balances may be forwarded to a contracted outside collection agency. Additional collection costs of 33.3% - 50% will be assessed. If necessary, it may include costs of litigation and may result in a judgment and/or wage garnishment.

### **Tuition and Fee Refund Policy**

*\*Fall, Winter and Spring quarters only (refer to the Summer Session website for Summer quarter refund policy)*

### **Official Withdrawal from the Quarter (School Withdrawal)**

To officially withdraw from Western for the quarter, a student must contact the Registrar's Office and make a written request to withdraw.

Students who officially withdraw from Western before the sixth day of the quarter will receive a full refund of tuition and fees. See the sections under University Academic Policies for information on withdrawing from the University. The \$250 enrollment fee is nonrefundable.

Students who officially withdraw on or after the sixth day of the quarter and within the first 30 calendar days will receive a credit of one-half of their tuition. After the fifth day of instruction, the health services, building, technology, recreation, transportation and renewable energy and course and audit fees are nonrefundable. A statutory pro rata return of financial aid is required for students who received Title IV federal financial aid. The refund policy is available in the Financial Aid Department.

Students who withdraw after the 30th day will not receive any refund of tuition and fees.

The refund deadlines for each quarter are published on the Registrar's website.

Students who received federal or state financial aid or other support may be required to return part or all of the aid. Refer to the Policies & Procedures located on Student Accounts websites for details: [http://www.wwu.edu/depts/sfs/StudentAccounts/sa\\_policies.shtml](http://www.wwu.edu/depts/sfs/StudentAccounts/sa_policies.shtml). See also see Withdrawal from the University in the University Academic Policies section.

#### **Also refer to the following resources:**

- Financial Aid Bulletin:  
*'Withdrawing' section*  
<http://www.finaid.wwu.edu/bulletin/>
- Federal Aid Repayment:  
*'Leaving Early' section*  
<http://studentaid.ed.gov/PORTALSWebApp/students/english/leaveearly.jsp?tab=attendig>
- State Aid Repayment:  
*'SNG Repayment' Policy search*  
<http://www.hecwa.org/index.asp>

## **Course Withdrawal**

Students who drop courses may be entitled to a refund or a portion of the tuition and fees for a given quarter depending on the time of the quarter the transaction is completed a) Courses dropped before the sixth day of the quarter may be entitled to a full refund b) Courses dropped after the sixth day of the quarter and within the first 30 calendar days may be entitled to one-half c) Courses dropped after the 30th day will not receive a refund. Refer to Tuition and Fees Rates table provided for credit load changes \*\*10-18 credits are considered flat rate tuition. See also **Withdrawal from a Course** in the University Academic Policies section.

## **Refund Exceptions**

Washington state law allows for exceptions to the above refund policy for medical and military reasons. Students who qualify for a refund based on one of these exceptions must contact the Student Accounts office at 360-650-2865 or in person in Old Main 360.

## **Description of Tuition and Fees**

Tuition rates and service and activities fees are set by the board of trustees within the parameters of the state Legislature. Tuition consists of the operations fee, the capital building fee, and the services and activities fee. In addition, 3.5 percent of tuition collected is allocated to fund student financial aid.

The operations fee, with the state's general fund appropriation, is used to support the University's primary mission, the education of its students. This money funds instruction, library, student services, administrative and maintenance functions.

The capital building fee is used for the construction of academic facilities. It is not used for both housing and dining buildings or to support the University's operating budget.

The service and activities fee is used to amortize, in part, residence halls, dining halls and student activities facilities; to provide the Associated Students administration; and to support student activities such as theatre, forensics, musical activities, intramural and intercollegiate activities, et cetera.

In addition to the 3.5 percent of tuition and services and activities fees used for institutional financial aid, one-seventh of the additional tuition revenue that would otherwise be collected as a result of the resident undergraduate tuition increases in excess of seven percent per year is used to provide additional financial aid to resident undergraduate students.

## ***Disclosure of State Support to Higher Education Students***

For 2009-10, Western received approximately \$5,283 per full-time equivalent resident undergraduate student and \$9,591 per full-time equivalent resident graduate student from the state of Washington. The appropriation received from the state represents approximately 53 percent of the educational costs for students. The remaining 47 percent is covered through the tuition operating fee.

In addition, state-funded financial aid per student was approximately \$1,103 for undergraduates and \$348 for graduate students.

This information was provided in compliance with RCW 28B.76.300.

## **Other Mandatory Fees**

### ***Enrollment Fee***

A one-time \$250 enrollment fee is charged to all newly matriculated students, not including extension or graduate students, upon registration for their first quarter of attendance. This fee is nonrefundable.

### ***Renewable Energy Fee***

This fee is assessed to all students at \$.70 per credit hour to a maximum of \$7.00 per quarter. The sole purpose of this fee is to fund the purchase of renewable energy. The renewable energy purchased from this fee will be used to reduce or eliminate the University's use of energy generated by traditional nonrenewable resources. This fee is refundable on the same schedule as tuition.

*The following fees are assessed each quarter to all students registered for 6 or more credits on the Bellingham campus and are nonrefundable after the fifth day of the quarter.*

### ***Health Service Fee***

\$70 per quarter

The Health Service fee is used to establish a standard of health care for Bellingham's campus and as a contingency for emergency services. For more information contact the Student Health Center at 360-650-3400.

### ***Recreation Fee***

\$95 per quarter

The student recreation fee is used for the construction, operation, and maintenance of the Wade King Student Recreation Center. For more information, visit [www.acadweb.wwu.edu/recreate/](http://www.acadweb.wwu.edu/recreate/).

### ***Nonacademic Building Fee***

\$37 per quarter

This fee is used to fund the improvement and development of the Viking Union Complex on the Bellingham campus. For more information, visit [www.as.wwu.edu](http://www.as.wwu.edu).

### ***Technology Fee***

\$25 per quarter for students enrolled in 6 or more credits, \$12.50 enrolled in 1-5 credits per quarter

This fee is used to upgrade and expand the University's technology equipment, facilities, and software on the main WWU campus. For more information, visit [www.wwu.edu/stf/](http://www.wwu.edu/stf/).

### ***Transportation Fee***

\$25 per quarter

This fee is used to provide transportation resources, including WTA bus passes and daily late night and Sunday daytime student shuttle service. For more information, visit <http://www.wwu.edu/transportation> or contact the Sustainable Transportation Office by phone at (360) 650-7960 or email [transportation@wwu.edu](mailto:transportation@wwu.edu)

## **Miscellaneous Fees**

### ***Parking Permits***

For parking and traffic regulations, see Appendix I. Quarterly 2010-11 Rates. All parking rates are subject to change. Rates do not include sales tax. [www.ps.wwu.edu](http://www.ps.wwu.edu).

Quarterly Total	
Campus resident parking	\$83.96
Adjacent (C zone) commuter permit	73.27
Peripheral (CR) resident	73.27
C-Car pool permit	54.67
Motorcycle Parking	14.94

***Extended Student Services Fee***

\$7 per credit

This fee is charged on self-support extension (see Self-Supporting Tuition and Fees section under Tuition and Fees- Extended Education heading). This fee is used to purchase equipment, interpreters, and resources for students with certified learning needs, and to fund the development of distance education activities for self-support courses.

***Student Health Center***

An optional medical insurance plan is available to eligible students. Contact the Student Health Center for details.

***Special Examination Charges***

Course challenge, \$30 per credit.

***Residency Teacher Certification***

\$85 teacher certificate application fee.

The Residency teacher certificate fee includes Washington State and WWU processing fees.

***Official Transcripts***

\$10

Requests should be submitted to the Registrar's Office one week in advance of need. A transcript will not be issued for persons who owe money to the University. Unofficial faxed transcripts are \$15. There are additional fees and charges for FedEx transcript orders. Transcript ordering information and options may be found on the Registrar's website.

***Degree Application Fee***

\$40 degree application fee

Late fee for applying after the deadline: \$25.00

***Other Special Course Fees***

Students registering in certain courses are charged additional fees for purchase of special laboratory and studio supplies and for special services such as music practice room rentals. These fees are listed with each course in the online Timetable of Classes.

***Audit Fees***

Full fee-paying students (10 or more non-audited, main-campus credits) may audit a course without an additional fee (excluding course fees). Part-time students may audit courses for \$10 per credit.

***Late Registration/Late Course Adds***

\$10 per credit

A fee of \$10 is charged if a student registers initially after the fifth day of instruction in a quarter.

A fee of \$10 per credit is charged if a student adds a class after the second week of instruction.

Either action requires written permission of the course instructor, department chair, and Registrar.

***Associated Student Legislative Action Fund (LAF)***

\$2 per quarter

During registration, students are given the option of contributing \$2 to support the Associated Student Legislative Action Fund (LAF). This fee can be added or removed from a student's account until the quarterly tuition due date. The WSL represents student interests in the state Legislature. For more information, call 360-650-7349.

## **Financial Aid and Other Support**

Students who have applied for financial aid should receive a "Financial Aid Award Letter" from the Financial Aid Department. The Award Letter will show the amount of financial aid and other support a student will be receiving.

Financial aid (Federal Direct Stafford Loans, Federal Perkins Loans, scholarships, grants and waivers) and other support is applied to tuition and fees first, then to University housing, and then to miscellaneous charges (if the Miscellaneous Charges form has been completed).

Financial aid and other support in excess of University charges will be disbursed by:

1. **Direct Deposit** into the student's checking or savings account. Enrollment forms are available in the Student Accounts office, Old Main 360, or online through Student Accounts "Important Forms" link, or
2. **Check** mailed to the student's mailing address (this may take three to four days longer than direct deposit).

If financial aid does not pay everything the student owes, the student is responsible for paying the balance by the tuition date.

Students who withdraw from some or all classes may be required to return part or all of their aid. See Student Accounts for details regarding treatment of federal student aid when withdrawing.

## **Tuition and Fees - Extended Education**

### ***2010-11 Self-Supporting Tuition and Fees***

Extension Education:

Undergraduate	\$216 per credit*
Graduate	\$270 per credit*
Online Certificate	\$216 per credit*
Online (Independent Learning)	\$186 per credit*
Correspondence (Independent Learning)	\$100 per credit
Correspondence registration fee (nonrefundable)	\$25
Individual credit option	\$50 per credit

Summer Session - See *Summer Session* website for summer Tuition & Fees.

\*Does not include \$7 per credit Extended Student Services fee.

All self-supporting tuition and fees are subject to change without notice. Variable course fees apply to the Professional Certificate programs. Contact Extended Education and Summer Programs for current rates.

Fee reductions and tuition waivers are not applicable to self-supporting extension courses.

### ***Self-Supporting Tuition and Fees Refund Policies***

A full refund of all tuition and fees paid are given if a class is canceled or a registration is not accepted. All requests for refunds must be in writing (e-mail requests are acceptable).

### ***Credit and Online Courses***

**Full refund** — same as regular Western policy or before the second class meeting, whichever is later.

**50 percent refund** — same as regular Western policy

**No refund** — same as regular Western policy. No refunds are given after the first 30 calendar days following the first day of Western's Bellingham campus quarter.

***Independent Learning course***

*(including correspondence and contract courses)*

No refunds are given after 30 days from the date of registration. If assignments have been submitted, a prorated service fee is deducted from the refund. The registration fee is nonrefundable.

***Non-credit and Professional Development Courses***

**Full refund** – is available until registration closes. After the 1st class and before the 2nd class, a full refund (minus registration fee and processing fee.)

**No refund** – will be given except in cases of documented personal/family, health, or unavoidable job issues after the 2nd class. Such refunds will be prorated based on attendance.

***Summer Session***

See Summer Session website for the refund policy for summer fees.

## Financial Aid

- What is Financial Aid
- How to Apply for Financial Aid
- General Eligibility Requirements for Financial Aid
- Summer Financial Aid
- Self-Support Courses
- Graduate Students
- Short-Term Cash-Flow Problems
- Western Repayment Policy
- Lock Dates
- Withdrawing from Western
- Veterans Information

*Old Main 265, 360-650-3470*

[www.finaid.wvu.edu](http://www.finaid.wvu.edu)

Western Washington University makes every effort to provide financial assistance to eligible applicants through grant, scholarship, work study, and loan programs. It is expected that students will meet part of their expenses through earnings from employment in the summer and academic year, and that parents will contribute in proportion to their financial ability.

**NOTE:** Students should be prepared to use *some of their own money* to pay for their initial expenses, even if they expect to receive financial aid.

### What is Financial Aid

Financial aid is monetary assistance to help meet educational costs, including: tuition and fees, books and educational supplies, housing and food, transportation, personal, and dependent care expenses. The total amount of aid cannot exceed the budgeted cost of attendance used to determine financial aid eligibility. Eligibility for aid is determined by federal formulas from the U.S. Department of Education and the State of Washington Higher Education Coordinating Board. Applicants complete the Free Application for Federal Student Aid (FAFSA), which is evaluated to determine each student's relative financial need, and awards are made with careful adherence to federal, state and institutional guidelines. Western Washington University students who enroll in an approved program of study abroad may be considered for funding from many, but not all, aid programs.

Applicants who submit the FAFSA form to the federal processor by the priority deadline (see How to Apply for Financial Aid section) are considered for priority aid based on available funding.

**Grants** are gift aid and do not have to be repaid. Grants are awarded on the basis of calculated need and other eligibility criteria from the applicant's FAFSA. Most grants are restricted to undergraduate students, with greater eligibility for students who meet the priority deadline. Some partial tuition and fee waivers are available to students in master's degree programs.

**Scholarships** usually are awarded on the basis of merit criteria, but some may also use financial need as a factor. Western Washington University offers merit scholarships to entering freshmen, transfers and returning students in recognition of outstanding academic ability or talent.

Individual scholarships are available through University departments and colleges. Through the Multicultural Achievement Program Scholarship, the University recognizes outstanding students who demonstrate a commitment to multicultural issues and activities in school or the

community. Additional information is available in the Scholarship Center, Old Main 275, 360-650-3471, or online at [www.finaid.wwu.edu/scholarships](http://www.finaid.wwu.edu/scholarships).

Enrollment in self-support courses may not meet the eligibility criteria for all scholarship programs. Students enrolled in self-support courses or applying to self-support programs are urged to contact the Scholarship Center to determine whether they remain eligible for scholarships they have been awarded.

**Loans** for education feature competitive interest rates. The federal government subsidizes the interest on some loans. Payments may be deferred until after the student leaves school in some programs. Western Washington University participates in the Federal Perkins, Federal Direct Stafford, and PLUS loan programs. The Federal Perkins loan is targeted to undergraduate students with exceptional financial need.

**Student Employment and work study** offer work opportunities on campus and in the local community. Financial aid eligibility may or may not be a prerequisite for employment, depending upon the employment program. It is important to note the majority of student employment positions on Western's campus do not require work study eligibility. The University places a strong emphasis on providing quality work experiences for its students. Additional information is available in the Student Employment Center, Old Main 285, 360-650-3158, or online at [www.finaid.wwu.edu/studentjobs](http://www.finaid.wwu.edu/studentjobs).

Work Study is awarded to undergraduate and graduate students with calculated financial need. Work Study jobs have a portion of the employee's salary subsidized by federal or state funds.

Community Service involves the sharing of one's time, talent, hope and vision. Western Washington University encourages students to become involved in helping others. Whether it is in health care, child care, mentoring youth, adopting a grandparent, literacy training, tutoring or assisting in community projects, student involvement can make a difference. Community service and volunteer opportunities are available through the Student Employment Center's job posting website.

## **How to Apply for Financial Aid**

Students are required to file the Free Application for Federal Student Aid (FAFSA) each year to be considered for federal and state aid. The FAFSA can be filed online at [www.FAFSA.gov](http://www.FAFSA.gov).

To be considered for priority consideration for financial aid for the academic year from all available programs, students must complete and submit their FAFSA to the federal processor by the priority filing deadline of February 15 preceding that academic year. Applications submitted after the priority deadline are considered for aid on a funds available basis.

Many aid applicants are required to provide additional FAFSA verification documentation to make their files complete and allow their aid eligibility to be finalized. Examples of such documentation include but are not limited to verification worksheets, federal income tax returns, tax schedules, and W-2 forms. Students are asked to provide requested items as soon as possible to allow processing of their file to continue. The FAFSA and related application materials must be received in sufficient time to allow Financial Aid to finalize aid eligibility in accordance with federal requirements. Applicants who have totally withdrawn from all classes must also provide requested FAFSA verification documentation within 30 days after their last day of enrollment or they will forfeit their ability to receive aid for which they would have otherwise been eligible.

To prevent financial aid overawards that could require student repayment, aid applicants are required to immediately notify the Financial Aid Department in writing of any financial aid they are scheduled to receive or have already received from institutions or organizations other than Western Washington University. Such institutions and organizations may include, but are not limited to, other universities, colleges, educational loan lenders, and scholarship-granting organizations.

## **General Eligibility Requirements for Financial Aid**

Students may be considered for financial assistance if they:

- Are a citizen or permanent resident of the United States
- Submit the Free Application for Federal Student Aid
- Submit all required information and documentation
- Are admitted through the Admissions Office or Graduate School to a degree or certificate-granting program at Western Washington University
- Do not owe a refund on a previous grant or are not in default on a previous educational loan received at any institution of higher education
- Have registered with the Selective Service, if required to do so
- Are enrolled for the minimum credit hours required:
  - 12 credit hours for full-time undergraduates; 8 credit hours for full-time master's degree candidates
  - 9 credit hours for three-quarter-time undergraduates; 6 credit hours for three-quarter-time master's degree candidates
  - 6 credit hours for half-time undergraduates; 4 credit hours for half-time master's degree candidates
  - Some students may be eligible for limited amounts of assistance if they are enrolled less than half-time
- Maintain satisfactory academic progress and have not already exhausted eligibility under the maximum attempted credit component of Western Washington University's Satisfactory Academic Progress Policy; please refer to Appendix J in the Appendices section of this catalog for additional information regarding satisfactory academic progress
- Financial aid eligibility is suspended for students convicted under federal or state law for possessing or selling illegal drugs during a period of enrollment for which Federal Title IV aid was received. If you have a conviction or convictions for these offenses, call 800-433-3243 or go to [www.fafsa.ed.gov/worksheet.htm](http://www.fafsa.ed.gov/worksheet.htm) to see how this law applies to you

## **Summer Financial Aid**

Applicants for financial aid during summer quarter must meet the same eligibility requirements and submit the same application materials (FAFSA), required during the preceding academic year. In addition, the *Summer Financial Aid Application* is required. The Summer Financial Aid Application is available in mid-March from the Financial Aid Department at [www.finaid.wwu.edu](http://www.finaid.wwu.edu).

## **Self-Support Courses**

Financial aid may be granted for self-supported courses. Contact the Financial Aid Department for eligibility requirements and aid procedures. Fee reductions and tuition waivers are not applicable to self-supporting courses. Students enrolled in or applying to self-support courses or programs should contact the Scholarship Center for specific eligibility requirements. Self-support courses may not meet the eligibility requirements for all scholarships offered through the Scholarship Center.

## **Graduate Students**

To qualify for graduate-level Federal Direct Loan borrowing limits each quarter, students must enroll for at least 4 graduate-level credits each quarter.

## **Short-Term Cash-Flow Problems**

The Financial Aid Department can assist in solving short-term cash-flow problems through a variety of short-term loan programs.

### *Emergency Loan*

Students currently enrolled at least half time may borrow up to \$250 for up to 30 days to solve minor cash-flow problems. A \$5 loan origination fee will be charged on each loan advance, and will be deducted at the time of the disbursement. Emergency loans must be paid in full within 30 days.

### *Institutional Loan*

Students currently enrolled at least half time may borrow up to \$600 for a maximum of 90 days. This loan requires a co-signer. Proceeds will be applied to the student's account balance, including all charges due within 30 days from the date of disbursement before a refund check will be issued. A \$10 loan origination fee will be deducted at the time of the disbursement. The institutional loan must be repaid within 90 days.

The Financial Aid Department reserves the right to refuse any of the short-term loan programs to students who do not show an ability to repay the loan or who have a poor repayment history.

## **Western Repayment Policy**

Overpayment occurs when a student has received more aid than the student is eligible to receive. The most common reason for overpayment is full or partial withdrawal from classes by the student after financial aid has disbursed. A student who fully or partially withdraws from classes after aid has been disbursed may be required to repay all or a portion of that aid. The student will be held to Satisfactory Academic Progress requirements for the quarter.

Additional information on repayment requirements is available at the Financial Aid Department and the Student Accounts Office.

Students must maintain the minimum number of credits associated with the enrollment status that they reported to the Financial Aid Department to receive aid. Otherwise, aid could be delayed or reduced. On the second Friday of each quarter, the enrollment status is recorded and used as the final basis for determining eligibility for the following programs: Federal Pell Grant, Federal Academic Competitiveness Grant, Federal National Smart Grant, Federal Teach Grant, State Need Grant, State Educational Opportunity Grant, Federal Supplemental Educational Opportunity Grant, Federal Work Study, State Work Study, Federal Perkins Loan, Federal Direct Loan, Western Grant, Viking Assistance Grant, tuition waiver, and some scholarship programs. This recording date is commonly referred to as the quarterly enrollment status "lock" date.

Students who receive aid from the above programs at the beginning of the quarter, based on a higher enrollment status than their enrollment status at the lock date, may have their aid reduced to correspond to their locked enrollment status. In such circumstances, a repayment would likely be owed. Students whose enrollment status increases by the lock date may be eligible for additional funding.

**Lock Dates:**

Fall Quarter	October 1, 2010
Winter Quarter	January 14, 2011
Spring Quarter	April 8, 2011
Summer Quarter	July 1, 2011

	<b>Graduate</b>	<b>Undergraduate</b>	<b>Post-bac</b>
Full time	8 or more	12 or more	12 or more
3/4 Time	6-7	9-11	9-11
1/2 Time	4-5	6-8	6-8
<1/2 Time	3 or less	5 or less	5 or less

**Withdrawing from Western**

If a student withdraws from all classes during the first 60 percent of any given quarter, eligibility for federal, state, and institutional aid will be recalculated in accordance with federal, state, and institutional requirements.

The withdrawal date will be the earliest of: the date the student began the withdrawal process, the date related to the circumstance leading to withdrawal, the actual withdrawal date, or the date the student began an official leave of absence signed by a University representative. When students withdraw after rescinding a previous official notification of withdrawal, their original withdrawal date will be used. The withdrawal date is used to determine whether a repayment of aid is owed or the student is due a post-withdrawal aid disbursement for the quarter. Students planning to withdraw from all classes who have applied for financial aid must provide official notification to the Financial Aid Department and the Registrar's Office of their intent to withdraw as soon as possible (even prior to totally withdrawing). Notification will facilitate closure to financial aid issues the student may have for the quarter and help the student resolve any aid eligibility concerns for future quarters.

Students who totally withdraw from classes will be placed on financial aid suspension. Students may petition for financial aid reinstatement if unusual circumstances beyond their control prevented them from meeting satisfactory academic progress requirements. Reinstatement is not guaranteed. For more information, please refer to Appendix J in the Appendices section of this catalog for the complete satisfactory academic progress policy. For complete withdrawal procedures, see University Academic Policies.

**Veterans Information**

Each Veteran/dependant enrolling at Western for the first time on the GI Bill must either apply for educational benefits with the Veterans Administration or fill out a change of program form, if you have used your benefits at another educational institution. In order for you to receive your payments on time, this should be done well in advance of the academic quarter you wish to attend.

All Veteran/dependants using Veterans Benefits at Western Washington University are encouraged to apply for financial aid through the Free Application for Student Aid (FAFSA).

Western Washington University's academic programs of study are approved by the Washington State Higher Education Coordinating Board's State Approving Agency for students eligible to receive educational benefits under Title 38 and Title 10 USC.

Veterans/dependants should make certain the academic objective they plan to pursue is one authorized by the Veterans Administration.

Please review additional information for Veterans/dependants attending Western Washington University at our web site <http://www.wwu.edu/dept/registrar/veterans.shtml>

See the Award Bulletin online at: <http://www.finaid.wwu.edu/bulletin/> for more detailed financial aid information.

## **University Residences and Dining Services**

*Edens Hall, 360-650-2950*

[www.housing.wwu.edu](http://www.housing.wwu.edu)

[infodesk@wwu.edu](mailto:infodesk@wwu.edu)

Students in University Residences enhance their Western Experience in diverse and inclusive communities that foster active learning and leadership, social responsibility, civic engagement and effective citizenship, supported by a high-quality, attractive and sustainable campus environment. The residential communities include 15 residence halls, one apartment complex for upper-division students, a small number of apartments leased off-campus, and three residential dining centers.

The residential program supports Western's vision to become the premier public comprehensive university in the country through engaged excellence by investing in programs for new freshmen and transfers that ensure successful academic and social integration into the culture of the academy. Research indicates that students who live in university housing typically have higher GPAs are more connected to the university, feel better about their university experience and are more likely to graduate.

Residential students will find leadership opportunities: appointed, elected, hired, paid and volunteer; particularly returning students, who provide peer relationships for first-year freshmen and transfer students. Social and recreational activities support students making friends and personal connections. Programs are specifically designed to help students transition to life at Western.

The residential communities support students who have historically experienced discrimination, including members of groups who have been marginalized due to their race, gender, ethnicity, disability, sexual orientation, gender expression or identity, or other social identity. Diversity enriches the educational experience, and inclusive learning helps educate all students, increases college retention, and better prepares graduates to participate in society. Western students arrive on campus with a broad array of backgrounds, cultures, values, ideals and interests, and our goal is to incorporate the uniqueness of each student into the fabric of the community.

Professional staff and upper-division student staff members live in residence to provide academic support, personal advisement, information on University resources, conflict management and crisis intervention. They assist residents in developing a sense of community where students can feel "at home" at Western.

University Dining Services provides a high-quality environment that complements the learning community on a sustainable and attractive campus that is designed to support student learning and environmental stewardship. The quality and character of all of the dining experiences reflects the culture of the campus and active healthy lifestyle of Western's students, faculty, and staff.

The dining program strives to enhance Western's commitment to quality, diversity, and community, the hallmarks of Western's reputation as an undergraduate institution with private quality at a public cost. The dining program supports the University's sustainability initiatives in a variety of creative ways from plenty of vegetarian and vegan options, to food composting. Western's dining program is a leader in efficient resource use and at the same time creating an excellent dining experience.

Residence hall students are required to have a meal plan. A meal plan is optional for students in Birnam Wood, leased off campus apartments and students who live off-campus. Meal plans

include an “all you care to eat” option and several plans with a set number of meals. Meal plans include dining dollars used like cash at retail and residential dining venues. University Dining Services operates three residential facilities that include late-night dining options, and 10 retail venues located on campus in academic and support areas. Students with meal plans will experience campus-wide services while having the convenience of being minutes away from their residence hall and academic buildings. Residential dining meals are not served during intersession (break) periods; however limited dining is available in campus retail locations.

## **Residence Hall and Apartment Information**

All residence halls and apartments are coeducational by floor, wing or suite. Residential communities maintain courtesy and quiet hours which help create an academic atmosphere. The typical residence hall room is designed for occupancy by two people. A limited number of single occupancy and triple occupancy rooms are available. Student rooms are furnished with a:

- Twin bed with mattress and pad
- Wardrobe or closet
- Desk and desk lamp
- TV cable
- High-speed Internet connection
- Optional local phone service

*Students furnish linens, towels, alarm clocks, telephone and other personal necessities.*

Birnam Wood apartments can accommodate up to four people, or one family. Public areas provide lounge, study and recreational space. Each furnished, two bedroom apartment includes all utilities, and has a:

- Kitchen
- Bathroom
- Living room
- Dining area
- Deck
- TV cable
- High-speed Internet connection
- Optional local phone service
- 

*Students furnish items such as dishware, silverware and appliances.*

Generally, the residence halls are open only during the academic terms. Buchanan Towers is open during winter and spring breaks: Birnam Wood apartments have a 12-month living option for students continuing their residency through the following academic term.

Applications to live in the residence halls and apartments are made online at [www.housing.wwu.edu](http://www.housing.wwu.edu). To obtain a hard copy application call (360) 650-2950 or email [infodesk@wwu.edu](mailto:infodesk@wwu.edu).

Apply early to ensure an early priority in housing. Space in a particular hall or apartment is assigned according to the date of the receipt of the application and upon student status. Actual room assignments are based upon student responses to the roommate assignment questionnaire and requests for roommates made via the Roommate Request form at [www.housing.wwu.edu](http://www.housing.wwu.edu) in the application section. Students who wish to search for a roommate are encouraged to use the roommate search tool at the website.

An assignment to a University apartment or residence hall does not guarantee a parking space or permit. Students should apply for on-campus parking at [www.ps.wwu.edu/parking/](http://www.ps.wwu.edu/parking/).

### *Deposits, Cancellations and Refunds*

No deposit is required with the housing application. A deposit is required when a housing offer is signed. The security deposit will be retained by the University as a damage and/or reservation deposit for as long as the student lives in the housing system. At the end of the agreement, the student's account will be cleared and a refund of the deposit made after all housing and other University charges are paid in full.

### **Costs**

#### *On-Campus Housing*

The trustees of Western Washington University set room-and-board rates and apartment rents. The standard double room/125 block meal plan rate for the 2010-2011 academic year is \$8,419. Residence hall rates include room, food and utilities. 2010-2011 apartment rates are \$2,775 for a double with two persons and \$11,100 for a family. Birnam Wood apartments have two double rooms. Some limited off-campus leased apartment space is also available. Contact University Residences for more information. Apartment rates do not include the cost for food service, but optional meal plans are available. Summer housing rates are posted at the website:

[www.housing.wwu.edu/financial/ratesheets/](http://www.housing.wwu.edu/financial/ratesheets/)

Housing rates are subject to increase each academic year. For more information call 360-650-2950 or e-mail [infodesk@wwu.edu](mailto:infodesk@wwu.edu).

#### *Off-Campus Housing*

The Off-Campus Housing Listing Service allows students to find local housing. There are two services for off-campus housing: the Viking Union has a Website with an off-campus registry at [www.union.wwu.edu/](http://www.union.wwu.edu/), and a bulletin board on the fifth floor. Bulletin board listings may be made in person between 10 a.m. and 5 p.m. Monday-Friday. The Website has 24-hour login capacity for eligible users.

#### *Evacuation Guide*

Western's *Evacuation Guide for Persons with Disabilities* is now available. You are encouraged to obtain this publication and learn about tips for the person with a disability for responding in an evacuation; for assisting persons with disabilities in an evacuation; and a guide for establishing an individual written evacuation plan. To read or download a copy, go to <http://www.acadweb.wwu.edu/hr/disability/EvacGuideForPWD.pdf>.

## **Student Affairs and Academic Support Services**

The Division of Student Affairs and Academic Support Services advances Western's commitment to engaged excellence by providing effective student-centered programs and services that build a foundation for maximizing students' academic and personal success. Programs and services offered by the Division include admissions, registration, residence hall life, academic and career development services, tutoring, financial aid, disability resources, student activities, dining services, new student and parent programs, counseling, health and wellness services, recreation programs, student outreach services, and athletics.

The Division's mission, goals, and priorities align closely with Western's mission and goals, as set forth in the WWU Strategic Action Plan. Working collaboratively, departments in the Division play a key role in bringing together an increasingly diverse and talented student body that involves its members in active learning and reflection. Division departments also create opportunities for students to display leadership, social responsibility, and effective citizenship through co-curricular programs, and are strongly committed to facilitating students' development.

### **Office of the Vice President for Student Affairs and Academic Support Services**

*Old Main 445, 360-650-3839*  
[www.wwu.edu/depts/vpsa](http://www.wwu.edu/depts/vpsa)

The Vice President's Office is the central administrative office for the Division of Student Affairs and Academic Support Services. The Vice President and staff provide leadership to ensure that the ongoing needs of students at Western are addressed. This is accomplished by maintaining effective student-centered programs and services, working closely with academic departments to create an integrated and comprehensive student experience, and assessing students' needs and concerns. Students with general questions regarding University policies, procedures, and resources may contact the Vice President's office for assistance.

### **Campus Community Coalition**

*Old Main 555, 360-650-6863*  
[www.coalition.wwu.edu](http://www.coalition.wwu.edu)

The mission of the Campus Community Coalition is to promote working relationships and communication between the campus and community, and to enhance shared responsibility through collaborative education and problem solving. The Coalition's philosophy is that shared problems require shared solutions. Coalition partners include neighborhood associations, the Bellingham Police Department, the Liquor Control Board, rental property owners, City of Bellingham officials, local bar owners, and students, faculty, and staff from Western Washington University, Whatcom Community College, Bellingham Technical College, and Northwest Indian College. Some of the Coalition's projects include:

- Let's Talk "Living Together in Bellingham" forums, which bring students and community members together to discuss the issues facing students and long-term residents living together in Bellingham's neighborhoods
- Think Locally-Act Neighborly educational door hangers distributed in neighborhoods near campus
- Off-Campus WWU: A Student Roadmap to Neighborhood Living, a website ([www.offcampuswwu.com](http://www.offcampuswwu.com)) full of resources for students considering moving off-campus or already living in the community; and
- The Hospitality Resource Alliance, a group of local bar owners and staff, law enforcement, and others working together to address downtown public safety issues.

## **Student Right-to-Know and Campus Security Act**

The Student Right-to-Know and Campus Security Act, also known as the "Jeanne Clery Disclosure of Campus Security Policy and Campus Crime Statistics Act," requires institutions of higher education to disclose information about campus safety to all current and prospective students and employees. Western distributes an annual security report – In Brief – that contains information regarding campus safety and security, including crime statistics for the most recent three-year period. In Brief is available online at [www.wwu.edu/depts/vpsa/campus\\_safety.shtml](http://www.wwu.edu/depts/vpsa/campus_safety.shtml). Printed copies are available upon request by contacting the Vice President's Office, Old Main 445, at 360-650-3839.

## **Voter Registration**

In compliance with the Higher Education Reauthorization Act of 1999, Western has made Washington State Voter Registration Forms available at the following main campus locations: the Associated Students Board Office (VU 504), disAbility Resources for Students (Old Main 110), New Student Services/Family Outreach (Old Main 330F), the Viking Union Administration Office (VU 547), and the Viking Union Information Desk (VU 6th floor lobby). Residents of Washington may also register to vote online, via the Secretary of State's website, at [www.secstate.wa.gov/elections](http://www.secstate.wa.gov/elections). If you are not a resident of Washington and would like to register to vote, call your local County Auditor's office or visit the federal Election Assistance Commission's voter registration page at [www.eac.gov/voter](http://www.eac.gov/voter) to obtain a copy of the National Mail Voter Registration Form.

## **"Western Alert" Emergency Notification System**

Western Alert is an emergency notification system designed to share critical health and safety information with members of the campus community quickly – by e-mail and cell phone text messaging. Students, faculty, and staff receive e-mail alerts automatically via their official university e-mail account, but must "opt in" to receive Western Alert text messages.

To "opt in," students, faculty, and staff must log in to their Web4U account at [www.wwu.edu/web4u](http://www.wwu.edu/web4u) and update their personal information to include a cell phone. Phone numbers will be kept confidential, and will only be used in two circumstances: during an emergency and during occasional tests of the Western Alert system.

The university will test the Western Alert emergency notification system two to three times a year to ensure that it is working properly; these tests will be carefully identified and widely publicized. Individuals should be advised that their cell phone service may apply a small standard text messaging fee when they receive an emergency alert.

## **Academic and Career Development Services**

WWU is committed to helping students succeed in their academic pursuits at Western, and achieve their personal and professional goals. Academic and Career Development Services is comprised of three units: the Academic Advising Center, the Career Services Center, and the Tutoring Center. The integrated services offered by these three units are focused on providing:

- Accurate and accessible advising to help students establish their academic goals and make effective plans to meet graduation requirements;
- Tutoring support to help students achieve their highest academic potential; and
- Career services to help students relate academic decisions to career goals, gain career-related experience, and transition successfully to graduate/professional education or career employment after completing their studies at Western.

### ***Academic Advising Center***

Old Main 380, 360-650-3850

[www.wwu.edu/advising](http://www.wwu.edu/advising)

The Academic Advising Center focuses on supporting first year freshman and transfer students, students who are undecided about their academic goals, and students experiencing academic difficulties. The center helps students:

- Set academic goals and make academic plans
- Understand academic policies, graduation requirements, and General University Requirements (GUR), and graduation requirements
- Explore Western's curriculum
- Choose majors consistent with interests and abilities
- Select and schedule courses to make effective progress in meeting GUR's and gaining access to desired majors
- Address challenges impeding academic progress

### ***Career Services Center***

Old Main 280, 360-650-3240

[www.careers.wwu.edu](http://www.careers.wwu.edu)

The Career Services Center provides a full range of services to assist students at all stages of the career development process — from self assessment and initial academic and career planning to the job search process.

All Western students, regardless of degree or college, are encouraged to seek and use the Career Services Center early in their university experience. The center maintains an open-door recruitment policy and upholds federal and state nondiscrimination statutes.

## **Career Planning Services**

Career planning services focus on helping students select academic majors consistent with their interests, abilities, and personal goals. Individual counseling, career assessment, workshops, and resource materials are provided to assist students in:

- Assessing interests, temperaments, skills, and values as they relate to academic and career decision-making
- Exploring career and job market trends
- Relating career goals to educational options

## **Internship Services**

Internships provide an opportunity for students to gain valuable career-related experience by expanding their education into the work world. Internships allow students to put classroom theory into practice, test tentative career choices, and gain valuable experience and contacts to enhance their employment opportunities after graduation.

The Career Services Center provides online listings of internship openings and advises students seeking internship opportunities. The center's fall internship fair, quarterly career fairs, and on-campus recruiting program provide opportunities for students to connect with employers recruiting for interns.

## **Job Search Services**

The Career Services Center offers a variety of services to assist students in identifying job opportunities and developing the skills necessary to conduct an effective job search, including:

- Individual job search counseling
- Workshops on résumé writing, job search correspondence, and interview techniques
- On-campus interviews
- Job market and salary information
- Mock interviews

## **Special Programs**

The Career Services Center offers three career fairs each year during the fall, winter, and spring quarters. Other special programs offered annually include: the Graduate and Professional School Information Fair, the Community Internship and Volunteer Fair, the Law School Information Fair, the International Opportunities Fair, the Majors Fair (co-sponsored with the Academic Advising Center), the Communication Sciences and Disorders Special and Rehabilitation Services Career Fair, the Huxley Environmental Career and Internship Fair, Educator Job Search Seminars, and the Etiquette Dinner.

## **Advising for Students Considering Post-Graduate Study**

The Career Services Center provides advising for students planning to pursue graduate or professional studies. Students are assisted in weighing the value of further study, exploring options, and preparing graduate/profession school applications through individual counseling, workshops, resource materials and information fairs.

Students interested in learning more about graduate programs at Western are encouraged to contact the Graduate School, Old Main 530, at 360-650-3170, or visit their website at [www.wwu.edu/depts/gradschool](http://www.wwu.edu/depts/gradschool).

### **Career Services for Western Alumni**

The Career Services Center provides services to alumni seeking to change jobs or careers. Alumni can receive automatic e-mails of job openings and participate in on-campus interviewing and workshops. Alumni who register with the center are eligible to receive individual counseling and use the reference file service. Additional information is available online at [www.careers.wwu.edu/alumni.shtml](http://www.careers.wwu.edu/alumni.shtml).

### ***Tutoring Center***

*Old Main 387, 360-650-3855*  
[www.wwu.edu/depts/tutorialcenter](http://www.wwu.edu/depts/tutorialcenter)

The Tutoring Center helps WWU undergraduates achieve their highest academic potential by providing tutoring support for General University Requirement (GUR) courses, primarily in math and science.

The center also helps students develop academic skills such as time management, test taking, note taking, and textbook comprehension. Workshops and individual sessions provide instruction and support to students seeking to improve their intellectual abilities and achieve academic goals.

### **Admissions**

*Old Main 200, 360-650-3440*  
[admissions.wwu.edu](http://admissions.wwu.edu)

See the Undergraduate Admission section of this Catalog.

### **Associated Student Bookstore**

*501 High St. 360-650-3655*  
[bookstore.wwu.edu](http://bookstore.wwu.edu)

Western's Associated Students Bookstore is the official bookstore for Western Washington University. It operates much like a student cooperative, keeping prices lower than the industry average and partnering with student groups to support campus programs and activities. The AS Bookstore provides value by offering discount prices on course materials; a wide selection of used textbooks; academically priced computer software; general books, school, office, and art supplies; a variety of "Western Gear" sportswear; and more. Shopping the AS Bookstore keeps dollars on campus and this money helps support student activities at Western.

## **Athletics**

*Carver Gym 100, 360-650-3109*

[wwuvikings.cstv.com](http://wwuvikings.cstv.com)

Intercollegiate athletics involves many students as participants and spectators. Men's sports include basketball, soccer, cross country, golf, and indoor and outdoor track and field. Women's sports include volleyball, soccer, cross country, basketball, indoor and outdoor track and field, golf, rowing, and softball. Western's athletic program is a member of the National Collegiate Athletic Association Division II, and the Great Northwest Athletic Conference. For ticket information, call 650-BLUE (2583).

Students are encouraged to join The Blue Crew, Western's student sports fan organization. There is no cost to join and free Blue Crew prizes are awarded to all Western students attending Viking athletic events. For further information, contact the Department of Athletics, Carver Gymnasium, at 360-650-3109, or visit the Blue Crew website at [wwuvikings.cstv.com/genrel/wwubluecrew.html](http://wwuvikings.cstv.com/genrel/wwubluecrew.html).

## **Campus Recreation Services**

*Wade King Student Recreation Center 138, 360-650-3766*

[www.wwu.edu/campusrec](http://www.wwu.edu/campusrec)

Campus Recreation Services provides each student, faculty, and staff member the opportunity to become actively involved in organized sports and recreation programs. Services provided by Campus Recreation include intramural sports, noncredit fitness classes, open recreation, and sport clubs.

## **Wade King Student Recreation Center**

Offering a wide variety of fitness and leisure activities, the Wade King Student Recreation Center (SRC) is designed to meet the recreation needs of the campus community. The SRC offers students, alumni, faculty, and staff a dynamic and inviting place to stay fit. All undergraduate and graduate students currently enrolled in six or more credits automatically become SRC members by paying the mandatory student recreation center fee. Paid memberships are available for faculty/staff, spouses/dependents/partners, and alumni and affiliates. The center features a climbing wall; a three-court gym; three weight and cardio areas; an indoor jogging track; a multi-activity court for basketball, floor hockey, tennis, volleyball, and soccer; a six-lane lap/leisure pool and 32-person whirlpool; two group exercise rooms; an equipment checkout counter; and the Rock's Edge Café.

## **Intramural Sports**

Intramural sports are competitive and recreational activities designed to encourage participation by all members of the campus community. Leagues and tournaments are offered in a wide variety of sports and are generally played on campus or at nearby facilities. Various local, regional and national organizations co-sponsor events and provide opportunities for promotional materials, special prizes, and invitational playoff berths. Intramural sports are structured for different skill levels and conducted in a safe, supervised environment.

## **Noncredit Fitness Classes**

Noncredit fitness classes provide participants an opportunity to develop, grow, and maintain a healthy lifestyle in a fun and friendly atmosphere. Instructional classes include aerobics, Pilates, cardio kickboxing, yoga, hip-hop dance, step aerobics, water aerobics, and more. Classes are taught by qualified student and non-student instructors, and are designed with the individual differences of the student population in mind.

## **Sport Clubs**

WWU sport clubs are student organizations formed to promote non-varsity team sports and recreational activities. Sport clubs participate in intercollegiate and extramural competition at the local, regional, and national level while offering opportunities for instruction, skill development, and practice. Some of the sport club programs are co-recreational and allow members to be involved in scheduling and hosting events, arranging transportation and lodging, purchasing equipment and uniforms, and serving on the Sport Club Council. All WWU students, faculty, staff and alumni are eligible to become sport club members. Current WWU sport clubs include baseball, cycling, men's crew, equestrian, fencing, ice hockey, judo, lacrosse, rugby, sailing, swimming, tennis, ultimate disc, water polo, and water skiing. Additional information is available online at [www.wwu.edu/campusrec/sportclubs.shtml](http://www.wwu.edu/campusrec/sportclubs.shtml).

## **Counseling, Health and Wellness Services**

[www.wwu.edu/chw](http://www.wwu.edu/chw)

Being a healthy college student means having the confidence and energy to live each day to its fullest. Health is achievable when people care about themselves, make decisions and practice skills to enhance their well-being, and respect one another as unique, worthwhile individuals.

The Counseling Center, Prevention and Wellness Services, and the Student Health Center are dedicated to the provision of quality physical and emotional care for Western students. Through utilization of services, students can learn ways to care about their own health and to improve and maintain their overall well-being so that personal, academic, and career goals may be achieved.

### ***Counseling Center***

*Old Main 540, 360-650-3164*

[www.wwu.edu/depts/chw/counseling](http://www.wwu.edu/depts/chw/counseling)

Personal problems can interfere with school and life. The Counseling Center provides professional counseling for a wide variety of concerns students may have while at Western. Students sometimes get depressed or lonely or anxious. Relationship problems may occur: couples break up, roommates argue, friends leave, parents divorce. Problems can develop with procrastination, low motivation, and/or lack of direction. Anxiety may interfere with academic success. Eating disorders may develop or worsen. Self-esteem can slip. Stress may erode performance. The Counseling Center's staff of professionally trained and experienced psychologists, counselors, and graduate trainees is here to help students work through these problems in a caring and confidential environment. All counseling services are voluntary, free, and confidential.

In addition to individual counseling, the Counseling Center also provides workshops each quarter aimed at meeting the special needs of college students, such as dealing with stress, math anxiety, and enhancing interpersonal skills. There also are many self-help books, CDs, and other materials available in the Counseling Center.

The Counseling Center provides brief and focused individual counseling. The staff is also knowledgeable about community referrals when campus resources cannot provide the longer-term or specialized services a student desires or needs. The center is open 8:30 a.m. - 4:30 p.m. Monday through Friday when classes are in session and provides same-day appointments for students whose concerns are urgent. An on-call counselor is available when the Counseling Center is closed. To access the on-call counselor, call the University Police dispatcher at 360-650-3555.

### ***Prevention and Wellness Services***

*Old Main 560, 360-650-2993*

[www.wvu.edu/chw/preventionandwellness/au\\_overview.shtml](http://www.wvu.edu/chw/preventionandwellness/au_overview.shtml)

Prevention and Wellness Services (PWS) offers Western students opportunities to get involved in improving their own health and the health of their community. PWS offers numerous professional and peer-led health promotion programs that can help students achieve optimal well-being and specific services to those who may face challenges to their well-being, such as alcohol and drug concerns or sexual assault.

Some of the services available to students include:

- Alcohol and drug risk reduction consultation
- CPR/First Aid training classes (Red Cross certification)
- HIV testing and prevention
- Lifestyle Advisor Program
- Quitting Tobacco Program
- Stress reduction

Additional student service programs offered through PWS include Alcohol & Drug Consultation and Assessment Services (ADCAS), Crime and Sexual Assault Services (CASAS), the Men's Violence Prevention Project, Sexual Health Consultation Services, and the Wellness Outreach Center.

### ***Alcohol and Drug Consultation and Assessment Services (ADCAS)***

*Old Main 560, 360-650-3642*

[www.wvu.edu/chw/preventionandwellness/ad\\_adcas.shtml](http://www.wvu.edu/chw/preventionandwellness/ad_adcas.shtml)

ADCAS offers confidential assessment of personal substance use patterns; referral to appropriate support, counseling or treatment resources; and one to one discussion of personal use issues or concerns about friends, family members, partners, or roommates. Services are designed to assist students in identifying and reducing unwanted and unintended risks associated with alcohol and drug use.

The use of alcohol, drugs and tobacco can have both immediate and long-term consequences including increased health risks, increased risk for accidents, forced and/or regretted sex, poorer academic performance, unacceptable social behavior, and possible legal sanctions. Individual ADCAS services are provided by professional staff specializing in alcohol and drug concerns. Group format services are provided by skilled peer educators and professional staff.

### **Crime and Sexual Assault Support Services (CASAS)**

*Old Main 585B, 360-650-7982*

*24-Hour Helpline 360-650-3700*

[www.wwu.edu/chw/preventionandwellness/vp\\_casas.html](http://www.wwu.edu/chw/preventionandwellness/vp_casas.html)

CASAS is Western's caring and compassionate 24-hour resource to assist students who have in childhood, adolescence, or adult life, experienced any of the following: relationship or dating violence, unwanted touching, attempted assault or rape, sexual assault, stalking, obscene phone calls or text messages, harassing e-mail or calls, indecent exposure, incest, molestation, hate crimes, or threatened or actual physical violence.

CASAS staff works with survivors to access all available resources in an effort to ensure that student continue to be academically successful and have the support necessary to heal from the incident(s). Resources and support are also available to assist students whose partner, friend or family member has experienced an act of violence.

CASAS provides a 24-hour help line and professional staff assistance to guide students through the details of available services, including:

- Medical/legal referral assistance
- Professional advocacy
- Academic support services
- Accompaniment to the hospital or police station
- Support group
- Information and referral

Anyone who has ever experienced any form of violence is strongly encouraged to utilize this service. To reach CASAS, call the 24-hour help line at 360-650-3700, or send questions by e-mail to [casas@wwu.edu](mailto:casas@wwu.edu).

### **Men's Violence Prevention Project**

*Old Main 565, 360-650-3290*

[www.wwu.edu/chw/preventionandwellness/la\\_mvpp.shtml](http://www.wwu.edu/chw/preventionandwellness/la_mvpp.shtml)

The Men's Violence Prevention Project is dedicated to creating a campus and community free of violence, promoting healthy relationships based on equality and respect, encouraging positive healthy expressions of masculinity, and being visible outspoken allies for all who experience prejudice and discrimination. The project includes a group of trained peer educators who facilitate workshops, discussions and events on campus to address issues of sexual violence, masculinity, feminism, and relationship abuse, and work to leave every person with new tools on how to be an active member of our community.

### **Sexual Health Consultation Services**

*Campus Services Building 2nd floor, 2001 Bill McDonald Parkway, 360-650-2961*

[www.wwu.edu/chw/preventionandwellness/sh\\_overview.shtml](http://www.wwu.edu/chw/preventionandwellness/sh_overview.shtml)

Sexual Health Consultation Services are provided by a group of well trained and supervised Peer Sexual Health Educators. Their services include confidential HIV testing; consultations on sexual health, sexually transmitted infections, and birth control; and, tips on how to communicate with a partner regarding sexual decisions. Appointments are in an individualized setting and are free, with the exception of HIV testing which costs \$16.00. To schedule an appointment, contact the Student Health Center at 360-650-3400. This service is located on the second floor of the Campus Services Building adjoining the Student Health Center lobby.

### **Wellness Outreach Center**

*Viking Union 432, 360-650-4321*

[www.wwu.edu/chw/preventionandwellness/sc\\_woc.shtml](http://www.wwu.edu/chw/preventionandwellness/sc_woc.shtml)

The Wellness Outreach Center is a welcoming space dedicated to helping Western students improve their quality of life. The center specializes in helping students find the tools to optimize their health and well being. Many students come to the center for a stress-break – a cup of hot tea and a comfortable couch. The center also offers stress-reduction tools, a Seasonal Affective Disorder (SAD) light, a lending library and information on homesickness, nutrition, body image, sexual health, alcohol and other drugs, mental health, and social justice, and free cold-care kits that include cold/flu risk reduction tips. The Wellness Outreach Center is open from 10:00 a.m. - 4:00 p.m., Monday through Friday during the academic year.

### **Student Health Center**

*Campus Services Building 2nd floor, 2001 Bill McDonald Parkway, 360-650-3400*

[www.wwu.edu/chw/student\\_health](http://www.wwu.edu/chw/student_health)

The Student Health Center provides students with a broad range of primary medical care services including, but not limited to: evaluation and treatment of common illnesses, contraceptive services, immunizations, mental health, sports medicine, evaluation/referral for specialized conditions, men's and women's health care, monitoring and treatment of chronic illnesses, rapid lab tests (such as influenza, mono and pregnancy tests), preventive medicine, sexually transmitted disease testing and treatment, travel consultation, and well-physical exams. The center is staffed by a team of physicians, nurse practitioners, a nutritionist, and support staff.

The Student Health Center is open from 8:30 a.m. - 4:00 p.m. on Monday, Tuesday, Wednesday, and Friday and from 9:30 a.m. - 4:00 p.m. on Thursday when classes are in session. Summer quarter hours are 8:30 a.m. - 12:00 p.m. and 1:00 p.m. - 4:00 p.m. Monday through Friday when summer classes are in session. When the Student Health Center is closed, a telephone consulting nurse is available at no cost and students are advised to seek clinical services from available after-hour medical facilities in the Bellingham area. NOTE: The University assumes no financial responsibility for care dispensed at other health care facilities. Students who seek treatment at off-campus health facilities must use private funds or their health insurance policy to cover resulting charges.

A comprehensive medical insurance policy is available for eligible students. Brochures with enrollment cards are available at the Student Health Center, the Cashier's Office (Old Main 245), and online at [www.wwu.edu/chw/student\\_health/billing.shtml](http://www.wwu.edu/chw/student_health/billing.shtml). Students who enroll in the plan for spring quarter have the option to purchase coverage for summer quarter even if they do not enroll in summer courses. The medical director strongly recommends that all students have some form of health insurance to defray the substantial costs associated with serious accidents and illness.

### **Measles Immunity Requirement**

Western requires all students born after January 1, 1957 to provide medical documentation of immunity to rubeola measles to the Student Health Center before they will be allowed to register for classes or live in on-campus housing. Acceptable options for documentation include:

- Provide the dates for two individual doses of measles vaccine (usually referred to as "MMR vaccine"). The doses must have been given: (1) after January 1, 1968, (2) at least 30 days apart, and (3) on or after 12 months of age; or
- Provide verification of a physician documented case of measles (rubeola) disease; or
- Provide a copy of evidence of measles immunity by demonstrating high positive antibody levels from a blood test (rubeola titer). A copy of the actual test results is required.
- Request a waiver from the immunity requirement for legitimate religious, personal, or medical reasons. To request a waiver, call 360-650-4839 or visit the Health Center website at [www.wwu.edu/chw/student\\_health/measles.shtml](http://www.wwu.edu/chw/student_health/measles.shtml). The form requires verification from your current health care provider for medical requests. Please note: in the event of a measles outbreak, students with an approved waiver may be excluded from attending classes and living on campus.

Questions about the measles (rubeola) immunity requirement may be directed to the Student Health Center.

### **Reporting Communicable Diseases**

Western is committed to the ongoing health and safety of our campus community. Individuals who know or who have reason to believe that they are infected with a communicable disease have an ethical and legal obligation to conduct themselves in ways that minimize exposure in order to protect themselves and others and to inform the appropriate university administrator. Students should contact the Student Health Center or the Office of the Vice President for Student Affairs & Academic Support Services.

Any employee, student, prospective student, volunteer or visitor who knowingly arrives from a country outside the United States that has been issued a Travel Health Warning by the Centers for Disease Control *must* contact the Student Health Center's Medical Director for medical clearance *before* being allowed on campus to attend classes, work or other activities.

Individuals with communicable diseases shall be excluded from enrollment or employment or restricted in their access to university facilities, programs or services *if* a medically based judgment, in an individual case, establishes that exclusion or restriction is necessary to ensure the health and safety of the infected individual and/or other members of the university community.

For a complete review of this policy, visit the University's Policy and Procedures website at  
<http://www.wwu.edu/policies/docs/1000%20University%20Administration/POL-U1000.12-Reporting-Communicable-Diseases.pdf>

## **disAbility Resources for Students**

*Old Main 110, 360-650-3083 (voice), 360-350-3725 (TTY)*

[www.wwu.edu/depts/drs/](http://www.wwu.edu/depts/drs/)

disAbility Resources for Students provides disability management counseling, enabling resources and referral information to enrolled students who possess a temporary or permanent disabling condition.

For service eligibility, a complete diagnostic description from a qualified professional is required. Specific academic accommodations and services are determined on an individual basis and are modified to meet the unique needs of students and their academic experience.

## **Evacuation Guide**

Western's Emergency Evacuation Guidelines for Persons with Disabilities is now available.

Students are encouraged to obtain this publication and learn about preparing for an emergency on campus and establishing an individual written evacuation plan. The guide is available online at [www.acadweb.wwu.edu/hr/disability/EvacGuideForPWD.pdf](http://www.acadweb.wwu.edu/hr/disability/EvacGuideForPWD.pdf).

## **Financial Aid**

*Old Main 265, 360-650-3470*

[www.finaid.wwu.edu](http://www.finaid.wwu.edu)

See the Financial Aid section of this catalog.

## **New Student Services/Family Outreach**

*Old Main 330F, 360-650-3846*

[nssfo.wwu.edu](http://nssfo.wwu.edu)

New Student Services/Family Outreach fosters student learning and development by supporting new students and family members in their transition to the academic, personal, and social experience of Western, as well as the greater Bellingham community. Programs and services provided include:

- Coordination of new student programs, services, and orientation, including Summerstart, Transitions, Fall Orientation, quarterly orientation, weekly e-mails, and ongoing programs. Orientation provides students an opportunity to receive academic advising and course registration assistance, become familiar with services, meet faculty, staff and current students, and complete placement tests.
- Coordination of family orientation and outreach, including summer orientation programs, Fall Family Open House, Western Showtime Family Weekend, and the Parent Connection.
- Online and in-person referral to campus and community resources.

- Leadership opportunities for current students (orientation student advisors and student coordinators).

## **Office of the Dean of Students**

*Viking Union 547, 360-650-3775*

[www.wwu.edu/depts/dos/](http://www.wwu.edu/depts/dos/)

The Office of the Dean of Students Unit supports Western Washington University's role and mission and contributes to intentional student development by providing programs, services and facilities; within an environment that supports the practice of community, including student leadership, civic engagement, citizenship, programming, creative expression, student well being, growth, personal safety, realization of personal success and engagement of communities. The Office of the Dean of Students oversees the Western Leadership Advantage program, the Student Life Office, Student Outreach Services, Viking Union Facilities, and Viking Union Student Activities.

## **Western's Leadership Advantage**

*Viking Union 506, 360-4187*

[www.wwu.edu/depts/dos/leadership/](http://www.wwu.edu/depts/dos/leadership/)

Western's Leadership Advantage program involves campus-wide programming, including co-curricular leadership development activities through student government, residence life, and other campus units; leadership lectures and retreats featuring national speakers, alumni, and parent leaders; and the development of an electronic leadership portfolio process. The Western Leadership Advantage Program is open to all students. The Leadership Intensive Program, a four-year institute for select students, provides the opportunity to attend weekly meetings, participate in experiential learning, and engage in self-reflection.

## **Student Life Office**

*Viking Union 506, 360-650-3706*

[www.wwu.edu/depts/dos/stulife](http://www.wwu.edu/depts/dos/stulife)

The Student Life office is comprised of Student Assistance Services and University Judicial Affairs and is dedicated to the promotion of student development, academic integrity and success, and creating an environment that fosters student success and graduation.

## **Student Assistance Services**

Staff in the Student Life Office are available to provide advice to students about academic and administrative policies, procedures and grievances (i.e., the academic grievance procedure) as well as information about campus and community resources. In addition, the Student Life Office assists students with hardship withdrawals and approves emergency leaves of absence for non-medical emergencies and personal crises. Additional information about hardship withdrawals and non-medical emergency leaves of absence is available in the University Academic Policies section of this catalog.

## **University Judicial Affairs**

University Judicial Affairs is responsible for the review and adjudication of alleged violations of the Student Rights and Responsibilities Code. Students, faculty and staff can report alleged violations to the University Conduct Officer at 360-650-7957 or by e-mail at [student.life@wwu.edu](mailto:student.life@wwu.edu).

Western Washington University affirms student standards of behavior to ensure respectful and lawful behavior, to enhance personal safety on campus, and to maintain the institution's educational mission. The conduct system works with students to address behaviors which violate the rules and norms of the University and provides educational sanctions with the goal of helping students become more effective members of the campus community. Copies of the Student Rights and Responsibility Code can be found in Appendix C of this catalog, in the Student Life Office, or online at [www.wwu.edu/depts/dos/jud\\_affairs/the\\_code.shtml](http://www.wwu.edu/depts/dos/jud_affairs/the_code.shtml)

## **Student Outreach Services**

*Old Main 110, 360-650-3843*

[www.wwu.edu/depts/sos](http://www.wwu.edu/depts/sos)

Student Outreach Services supports the educational needs of all students, particularly first generation, non-traditional and multicultural students. Student Outreach Services works with freshmen and transfer students to help ensure their successful transition to and graduation from Western, as well as with former students interested in returning to Western. Advisors provide students with personalized academic advising, assistance in developing educational plans, and positive intervention for those in academic risk. Student Outreach Services also serves as a resource to the campus community on issues of diversity and student success. The office is committed to the academic success, retention, and graduation of all students.

## **Viking Union Facilities**

*Viking Union 547, 360-650-3450*

[vu.wwu.edu](http://vu.wwu.edu)

*"The Viking Union welcomes and engages students, faculty, staff, and guests in building a diverse community. We continually strive to enhance the Western Experience through supporting student leadership, campus involvement and creative expression, and by providing services and events in our venues."*

*— Viking Union Mission Statement*

As the community center of the campus, the Viking Union plays an integral role in students' out-of-class experience. The Union houses offices for the Associated Students' government, services and activities, and the Viking Union/Student Activities administrative office. Also located in the Viking Union are the Dean of Students and Student Life offices, meeting rooms, lounges, an outdoor equipment rental shop, a bicycle repair facility, several food service areas, a post office, an information center/sundry sales shop, two cash machines, an art gallery, KVIK-TV, Vendors' Row, KUGS-FM, a publicity center/print shop, and program areas. Viking Union food service locations include the Viking Union Market, the VU Café, the Underground Coffeehouse, and Vendor's Row.

## **Viking Union Student Activities**

*Viking Union 547, 360-650-3450*

[www.as.wwu.edu](http://www.as.wwu.edu)

Student activities at Western are designed to provide maximum opportunities for student engagement in a wide range of co-curricular experiences. Student activities are an integral and important part of the total range of educational experiences offered by the University. Students are encouraged to become involved in some aspect of the activity program since these activities provide leadership and social experiences that build on classroom learning.

Many student activities are initiated and administered by students through the Associated Students. Students who participate in the governing bodies of student-administered services, activities, and facilities not only determine the quality of co-curricular life, but also gain valuable leadership experience. Students may also participate in the University governance system as elected or appointed members of its various councils and committees.

### **Associated Students Productions**

From socializing to civil dialogue, Associated Students Productions (ASP) is a student-run programming office that brings major events to campus. There are six divisions of ASP: Pop Music, Films, Special Events, Underground Coffee House, Viking Union Gallery, and Civil Controversy. The students that staff these offices work hard to bring top-quality events to campus, including local, regional and national music performances, films, comedians, authors, lecturers, art exhibits, and all kinds of other fun and intellectually stimulating engagements.

### **Associated Students Representation and Engagement Programs**

The AS Representation and Engagement Programs provide resources, services, and support necessary to ensure student representation in decisions that impact students at the university, local, state, and federal levels. The programs also promote effective citizenship and civic engagement through services, programs, and collaboration. For more information, contact the Information Coordinator at 360-650-3450.

### **Child Development Center**

*Fairhaven College Stack 11/12, 360-650-3021*

[cdc.as.wwu.edu/](http://cdc.as.wwu.edu/)

The Child Development Center is provided by the Associated Students of Western Washington University and serves the children of students, faculty and staff, ranging in ages from 2-5. The center is open from 7:30 a.m. - 5:30 p.m. on the days Western is in session, as well as during winter and spring breaks. Tuition is based on a sliding-scale fee for students.

### **Clubs and Organizations**

[www.as.wwu.edu/clubs/](http://www.as.wwu.edu/clubs/)

More than 200 clubs and organizations exist within the Associated Students, providing a wide range of involvement opportunities for all students. AS clubs come in all varieties, including service, environmental, recreational, academic/departmental, social issues, religious, cultural and

ethnic, arts, music and dance, political, gaming, pre-professional and honorary, and special interest areas. Some clubs have long histories at Western; others are brand new. If you don't find the right club for you, it is easy to start a new one of your own. Students at Western enjoy being involved in clubs for the opportunities to meet new people, develop new skills, make positive changes in the world, and just have fun.

### **Environmental & Sustainability Programs (ESP)**

*Viking Union 424, 360-650-6129*

[AS.ESP@wwu.edu](mailto:AS.ESP@wwu.edu)

The purpose of the AS Environmental & Sustainability Programs (ESP) is to inform, educate, and provide resources regarding a variety of issues surrounding environmentalism and sustainable practices. The following offices comprise the ESP:

#### **Alternative Transportation**

*Viking Commons 25, 360-650-7960*

[AS.Transportation@wwu.edu](mailto:AS.Transportation@wwu.edu)

Western Student Transportation provides services funded by the Student Alternative Transportation Fee. These include a WTA Viking Xpress Bus Pass good for all WTA bus routes, a daily late night and Sunday daytime Student Shuttle, and assistance for any questions students may have concerning transportation at Western.

#### **Environmental Center**

*Viking Commons 424, 360-650-6129*

[AS.Earth@wwu.edu](mailto:AS.Earth@wwu.edu)

The Environmental Center presents lectures, seminars, music events and other programs to educate the campus community about environmental topics and to illustrate the interconnections between environmentalism and other social concerns. The Center maintains a library of current books, newspapers, brochures, videos and magazines and acts as a networking center for campus and community activists.

#### **Outback Outdoor Experiential Learning Program**

*Viking Union 424, 360-650-2433*

[AS.Outback@wwu.edu](mailto:AS.Outback@wwu.edu)

The Outback, a joint program of the Associated Students and Fairhaven College, is a 5 acre farm and wetland restoration site. The purpose of the Outback OELP is to coordinate a wide range of opportunities for students to learn about, develop, and implement sustainable land use practices. These opportunities include personal and collaborative events and projects involving habitat restoration, organic gardening, green building, academic partnerships, independent study projects (ISPs), workshops, lectures and classes. The OELP also provides job-related skill building and community networking opportunities for students. These include serving on the Outback Governing Council, volunteering, and participating in work-study, AmeriCorps Students in Service, and salaried employment.

**Ethnic Student Center**

*Viking Union 420, 360-650-7271*

[www.esc.as.wwu.edu/](http://www.esc.as.wwu.edu/)

The Ethnic Student Center serves as a cultural community hub for gathering and programming. Some of the cultural clubs include: the African-Caribbean Club, Black Student Union, Brown Pride, Chinese Student Association, Filipino American Student Association, Hui `O Hawai'i, Latino Student Union, MEChA (Movimiento Estudiantil de Aztlan), Mixed Identity Student Organization, Native American Student Union, Queer People of Color, South Asian Student Association, and the Vietnamese Student Association.

**KUGS Radio**

*Viking Union 7th Floor, 360-650-KUGS (5847)*

[www.kugs.org](http://www.kugs.org)

Operated by the Associated Students, KUGS broadcasts in stereo at 89.3 on the FM dial and on Comcast Cable channel 980 on campus and throughout Western Washington. A general manager and student staff coordinate the efforts of 100 volunteers in all facets of station operation. With a complete range of music, news, and educational programming, KUGS offers students opportunities for participation as disc jockeys, newsreaders, producers, and managers.

**KVIK Western Television Production Organization**

*Viking Union 423, 360-650-2343*

[kvik.as.wwu.edu](http://kvik.as.wwu.edu)

Operated by the Associated Students, KVIK Television creates and maintains broadcast programs to highlight the work of Western students. KVIK provides firsthand experience for those interested in the fields of television broadcasting and video production. KVIK productions represent students' original work and serve the campus community by providing interesting, informative, and entertaining media.

**Lakewood Watersports Facility**

*2410 Lake Whatcom Blvd*

[www.vu.wwu.edu/lakewood/](http://www.vu.wwu.edu/lakewood/)

The Lakewood Watersports Facility – located approximately 7 miles from Western's campus at 2410 Lake Whatcom Blvd. – offers sailing, canoeing, kayaking, windsurfing, and rowing, as well as a sand volleyball court, picnic tables and BBQ's, and hiking trails. For-credit PE classes and private instruction in sailing are available during the academic year. An informal lounge with a kitchenette and fireplace is also available.

**Lakewood E.D.G.E.**

*2410 Lake Whatcom Blvd, 360-650-3731*  
[www.theedge.as.wwu.edu/lakewood.php](http://www.theedge.as.wwu.edu/lakewood.php)

Co-located at Lakewood, the E.D.G.E. (Encouraging the Development of Groups through Experience) program offers teams, clubs, and groups of students, as well as faculty and staff groups, a facilitated opportunity to work on goal setting, leadership, effective communication, problem solving, trust-building, consensus-building, group roles, confidence and other valuable group and individual skills. The E.D.G.E. program offers a sequence of activities specifically designed to increase social and individual awareness and appreciation through safe physical and mental challenges, discussion and reflection.

**Outdoor Center**

*Viking Union 150 (outdoor access available from North Garden Street), 360-650-3112*  
[www.outdoor.as.wwu.edu/](http://www.outdoor.as.wwu.edu/)

The Outdoor Center provides a variety of outdoor-related opportunities and activities for all students, faculty, staff, and alumni. Emphasis is placed on developing and refining skills and responsible environmental practices, fostering diversity, enriching the academic experience, and promoting life-long learning. Resources include a knowledgeable staff, equipment rentals, a bike shop, excursions, educational resources, and instructional clinics.

**Publicity Center**

*Viking Union 411*  
[www.publicity.as.wwu.edu/](http://www.publicity.as.wwu.edu/)

The Publicity Center is a full-service advertising facility provided by the Associated Students for use by all students, as well as Associated Students programs and clubs; The center also publishes the AS Review.

**Resource and Outreach Programs**

*Viking Union, 5th Floor*  
[www.rop.as.wwu.edu/](http://www.rop.as.wwu.edu/)

Resource and Outreach Program's eight offices – including the Drug Information Center, Legal Information Center, Environmental Center, Veteran's Outreach Center, Women's Center, Social Issues Resource Center, Sexual Awareness Center, and Lesbian Gay Bisexual Transgender Alliance – provide unbiased and confidential information and referrals to students in a safe, peer-to-peer environment. They also present a range of events, workshops, and activities each year that provide students with engaging and empowering opportunities to learn about themselves as well as our local and global community. Students can gain valuable work and life experiences through salaried student employment, work-study, and volunteer positions.

## **Recycle Center**

[www.recycle.as.wwu.edu/](http://www.recycle.as.wwu.edu/)

The mission of the Associated Students Recycle Center is to provide the opportunity for faculty, staff and students to recycle on campus, to educate the University community on the recycling process at Western, and to continually increase collection efforts in order to reduce Western's waste stream. The center also provides student employment opportunities and work experience, specifically in recycling and waste management.

## **Viqueen Lodge**

*Sinclair Island, 360-650-613 (VU Reservations Office)*

[www.viqueen.as.wwu.edu/](http://www.viqueen.as.wwu.edu/)

Viqueen Lodge, located on 13 acres at Sinclair Island and provided by the Associated Students, offers overnight accommodations in a unique location for students, faculty, staff and alumni.

## **Registrar's Office**

*Old Main 230, 360-650-3430*

[www.wwu.edu/depts/registrar/](http://www.wwu.edu/depts/registrar/)

See the Registration section of this catalog for information.

## **University Residences**

*Edens Hall 100, 360-650-2950*

[housing.wwu.edu](http://housing.wwu.edu)

See the University Residences section of this catalog.

## **The Writing Center**

*Wilson Library (adjacent to Media Desk), 360-650-3219*

[www.acadweb.wwu.edu/writingcenter](http://www.acadweb.wwu.edu/writingcenter)

Monday-Thursday: 10:00 a.m. - 4:00 p.m.; Friday: 10:00 a.m. - 2:00 p.m.; Evenings: Open Sun - Thurs evenings; call for hours. Always open for online draft submissions at [www.acadweb.wwu.edu/writingcenter](http://www.acadweb.wwu.edu/writingcenter)

*"I know what it feels like to write — the feelings of isolation, fatigue, helplessness. I know what it feels like to be stuck, and I know what happens when I can talk about my writing to an interested person."*

*— A Writing-Center Writer*

A free resource for students, the Writing Center provides academic support to writers of all disciplines and abilities. The Center welcomes writers engaged in the writing process in various stages – from brainstorming topics to polishing final drafts. Writers may conference with our qualified writing assistants first to clarify ideas (thesis and organization) and then to identify patterns of error (grammar and punctuation). Services include:

- Face-to-face response on course papers, essay exams, and applications/résumés
- Oral or written response to drafts submitted online
- Resources for writers, including books, handouts, and software
- Group conferences for writers with collaborative writing assignments
- Specialized assistance for writers with English as an additional language, learning differences, or accommodation requests

## **Department - Related Activities**

Department-related activities provide opportunities for students to participate in a wide range of programs. Although faculty from related departments work closely with these activities, students do not need to be affiliated with the departments in order to participate. In many cases, students may receive academic credit for their involvement. The individual programs are outlined below.

### **Forensics Program**

*Communication Facility 295, 360-650-4879*

[www.wwu.edu/depts/communication/debate.shtml](http://www.wwu.edu/depts/communication/debate.shtml)

The forensics program provides opportunities for participation in local, regional and national competitions, including Cross-Examination Debate Association/National Debate Tournament policy debate and National Parliamentary Debate Association parliamentary debate. The program encourages achievement in tournament participation at all levels of competition, ranging from novice to championship. Western's program enjoys a strong national reputation. Annual activities also include sponsoring several local events, including campus programs and high school and college tournaments. All students are welcome to participate.

### **Music Activities**

*Performing Arts 273, 360-650-4091*

[www.wwu.edu/music/shtml/areas.shtml](http://www.wwu.edu/music/shtml/areas.shtml)

A wide range of vocal and instrumental groups on campus provides musical activity for students at acceptable levels of ability, and musical entertainment to satisfy listeners of all tastes. Some of the opportunities for participation available to students include the Symphonic Band, Wind Symphony, University Choir, Concert Choir, Symphony Orchestra, Viking Pep Band, jazz ensembles, opera, Collegium Musicum, and numerous smaller ensembles. Membership in all of these ensembles is attained through either a performance audition or consent of the instructor. For more information see the Department of Music section of this catalog or contact the Department of Music, Performing Arts Center 273, at 360-650-3130.

### **Publications**

*Communications Facility 230, 360-650-6763*

[www.wwu.edu/depts/journalism/student%20publications.shtml](http://www.wwu.edu/depts/journalism/student%20publications.shtml)

Student publications include The Western Front, a twice-weekly newspaper; Klipsun, a twice-quarterly magazine; Jeopardy, the annual literary magazine; and The Planet, a quarterly environmental journalism magazine. Student contributions of time and talent are essential to these publications, and new students at all academic levels are encouraged to join their staffs

each quarter. Students may receive credit for working on these publications through the Journalism and English Departments, as well as the Huxley College of the Environment.

### **Theatre and Dance**

*Performing Arts 395, 360-650-3876 or 360-650-7310*

[www.wwu.edu/depts/theatre](http://www.wwu.edu/depts/theatre)

The Theatre and Dance Department offers students a rich variety of opportunities in faculty- and student-directed productions – both on stage and off – to write, act, stage manage, and design. The broad range of productions during the academic year includes musicals, dramas, and comedies from a variety of periods. The Theatre and Dance Department provides ongoing concentrated applied theatre experiences for both the beginner and the advanced student. Previous theatre experience is not required for participation and all auditions are open. The theatre arts program is affiliated with the American Association of Theatre in Higher Education and participates in the Kennedy Center's American College Theatre Festival.

*Carver 60, 360-650-7293*

[www.wwu.edu/depts/dance/](http://www.wwu.edu/depts/dance/)

The dance program offers a wide variety of experiences for students interested in performing, directing, teaching, producing and choreographing. These experiences come in a number of forms, including faculty- and student-choreographed events, traditional dance concert events, and collaborations between the art, music, and dance departments. Students also have an opportunity to perform for the dance outreach program that visits public schools in Whatcom County. The dance program frequently attends the American College Dance Festival with works performed by students and choreographed by faculty, guests, or students. Previous experience is not a requirement for placement in a technique class. Auditions are announced regularly on the Dance Program website at [www.wwu.edu/depts/dance](http://www.wwu.edu/depts/dance).

### **Western View (Video)**

*Communication Facility 295, 360-650-3870*

Western View offers students the opportunity to gain digital video production and editing experience. Informational and educational video instruction includes hands-on course work. Students produce videos shown on the campus and for special off-campus audiences. Credit is available through the Department of Communication.

# University Academic Policies

## Student Responsibility for Observing Policies

Students are directed to the Appendices in this Catalog for information on university policies and administrative rules (Title 516 WAC), academic honesty, academic grievances, and other important policies. Information on university policies is also located on the university policy website: <http://www.wwu.edu/depts/policies/>. Information on WWU's administrative code rules (Title 516 WAC) is located at <http://apps.leg.wa.gov/wac/default.aspx?cite=516>.

The University attempts to make students aware of academic policies through the publication of the Catalog, the online Timetable of Classes, other materials, and in advising sessions. It is the student's responsibility to become familiar with those policies and to be aware of any policy changes that may occur.

Once application materials have been submitted, they become the property of Western Washington University.

## E-Mail as Official Means of Communication

Recognizing the expanding reliance on electronic communication, WWU has determined that e-mail will be one of the University's official means of communication. See POL-U7100.02 Using E-mail Accounts for Official Correspondence with students at

[http://www.wwu.edu/policies/s\\_affairs.shtml](http://www.wwu.edu/policies/s_affairs.shtml). E-mail correspondence will be sent to students' WWU e-mail addresses. Departments, faculty and staff may use e-mail instead of the U.S. Postal Service to provide students with information relating to official University business. U.S. Postal Service or campus mail can still be used as appropriate. This policy only applies to e-mail messages sent by the University to students that are designated as "WWU Official Notice."

## Advanced Placement and Course Challenge

College Board Advanced Placement Examinations			
Department	Score	Subject Examination	WWU Courses/Credit/GUR
Art	3, 4, 5	Art History	A/HI Electives (4 credits) Humanities GUR
	3, 4, 5	Studio Art: Drawing	ART Electives (4 credits)
	3, 4, 5	Studio Art: 2-D or 3D Design	ART Electives (4 credits)
Biology	3, 4, 5	Biology	BIOL 101, 102 (8 credits) Lab Science GUR
Chemistry	3, 4, 5	Chemistry	CHEM 121, 122 (10 credits) Lab Science GUR
Computer Science	3, 4, 5	Computer Science A/AB	CSCI 141 (4 credits) Quantitative & Symbolic Reasoning GUR
Economics	3, 4, 5	Microeconomics	ECON 206 (4 credits) Social Science GUR
	3, 4, 5	Macroeconomics	ECON 207 (4 credits) Social Science GUR

English	3	English Lit & Comp. or English Lang. & Comp. *	ENG Electives (4 credits) Humanities GUR
	4, 5	English Lit & Comp. or English Lang. & Comp. *	ENG 101 (5 credits) Communication GUR - Block A plus ENG Electives (4 credits) Humanities GUR
*Student may receive credit for either English exam, but not both			
Environmental Science	3, 4, 5	Environmental Science	ESCI 101 (3 credits) Science GUR
Geography	3, 4, 5	Human Geography	EGEO 201 (4 credits) Social Sciences GUR
History	3, 4, 5	U.S. History	HIST 103, 104 (8 credits) Humanities GUR
	3, 4, 5	European History	HIST 113 (4 credits) Humanities GUR
	3, 4, 5	World History	HIST Electives (4 credits) Humanities GUR
Mathematics	3, 4, 5	Calculus AB or BC**	MATH Electives (5 credits) Quantitative & Symbolic Reasoning GUR
	3, 4, 5	Statistics	MATH 240 (4 credits) Quantitative & Symbolic Reasoning GUR
**Student may receive credit for either AB or BC, but not both unless recommended by Mathematics Department after placement.			
Languages	3	Lang. or Lit. exam in Chinese, French, German, Italian, Japanese, Latin, Spanish***	101 (5 credits)
	4, 5	Lang. or Lit. exam in Chinese, French, German, Japanese, Latin, Spanish***	101, 102 (10 credits)
	4, 5	Italian Language & Culture	101 (5 credits) plus Electives (5 credits)
***Student may receive credit for either Lang. or Lit., but not both			
Music	3, 4, 5	Music Theory	MUS Electives (3 credits)
Physics	3, 4, 5	Physics B	PHYS 114 (5 credits) Lab Science GUR
	3, 4, 5	Physics C: Mechanics	PHYS 121 (5 credits) Lab Science GUR
	3, 4, 5	Physics C: Electricity and Magnetism	PHYS 123 (5 credits) Lab Science GUR
Political Science	3, 4, 5	U.S. Government & Politics	PLSC 250 (5 credits) Social Science GUR
	3, 4, 5	Comparative Government and Politics	PLSC 291 (5 credits) Social Science GUR
Psychology	3, 4, 5	Psychology	PSY 101 (5 credits) Social Science GUR

The maximum credit granted for Advanced Placement and Course Challenges is 45 total credits. A regularly enrolled full-fee-paying student may apply to challenge any course covering knowledge or materials with which the student has acquired a demonstrable level of familiarity or understanding from prior experience (except conferences, special projects and physical education activities courses). If achievement commensurate with the expectations of a given course is demonstrated, the student receives credit for the course. Such achievement may be demonstrated by:

1. *One quarter of successful performance in an advanced course in a sequence* which is developmental in nature can, upon departmental recommendation, qualify a student for credit in the preceding course; admission to the advanced course is subject to permission of the department.
2. *Challenge examination or procedures prepared by the department concerned.*  
The following regulations govern course challenges:
  - Students desiring to challenge a course should apply to the director of the Testing Center by the fourth week of the quarter. The time and procedure to be followed in completing the evaluative process will be announced by the director.
  - A special fee is charged for each challenge examination. See Tuition and Fees.
  - The result of the challenge is recorded as "Satisfactory" or "Unsatisfactory" on the student's permanent record and is not used in computing grade point averages
  - The challenge application will normally be denied:
    - If the student is currently enrolled in the course
    - If the student has previously established credit for a similar course at this or another university
    - If the student has previously failed the course
    - If the student has previously challenged the course and failed
    - If the student has previously audited the course
    - If, in the judgment of the director of the Testing Center, in consultation with the department concerned, the challenge procedure is inappropriate
    - If the student is in his/her final quarter prior to graduating and the course is part of the General University Requirements
    - If, in the judgment of the academic department, the student has not demonstrated sufficient familiarity or understanding to have a reasonable chance of passing a challenge examination
3. *International Baccalaureate (IB).* Western Washington University will grant credit for appropriate higher level International Baccalaureate (IB) subject examinations passed with a score of four (4) or above according to the chart. A student may earn up to 15 credits per exam for the maximum of 45 total credits allowed. Higher level subject exams may earn a student General University Requirement (GUR) credit or elective credit, according to the following chart. Not all subject exams earn credit. The departments of Art and Modern and Classical Languages do not grant credit for IB exams, but may use the exam results for purposes of program placement and/or course waivers. Students who have passed higher level exams in subjects not listed on the chart will need to consult with the Registrar's Office. Such exams will be considered on an individual basis to determine eligibility for elective or GUR credit.
4. *College Board Advanced Placement Examinations in certain subjects.* The department concerned has determined the minimum acceptable score and credit as shown on previous page.
5. *Cambridge International Exams.* Western Washington University will grant up to 45 credits for A level examinations and up to half a year of credit for AS Levels. Students should

submit official results to the Office of Admissions for determination of transfer credit. Credit is awarded on a case by case basis and not all exams earn credit.

International Baccalaureate (IB) Credit		
Higher Level Subject Exam	Score	WWU Equivalency, Credits and GUR status if applicable
Biology	4 or higher	BIOL elective (15 credits) - Satisfies Natural Science GUR
Chemistry	4 or higher	CHEM elective (15 credits) - Satisfies Natural Science GUR
Economics	4 or higher	ECON elective (10 credits) - Social Science GUR and ECON elective (5 credits)
English	4 or higher	ENG 101 (5 credits) - Communication Block A GUR and ENG elective (10 credits) - Humanities GUR
Geography	4 or higher	EGEO elective (5 credits) - Natural Science non-lab GUR and EGEO elective (10 credits) - Social Science GUR
History <i>The Americas</i>	4 or higher	HIST elective (10 credits) - Humanities GUR and HIST elective (5 credits) - CGM Block B GUR
History <i>European</i>	4 or higher	HIST elective (10 credits) - Humanities GUR and HIST elective (5 credits) - CGM Block A GUR
History <i>World</i>	4 or higher	HIST elective (10 credits) - Humanities GUR and HIST elective (5 credits) - CGM Block A GUR
Physics	4 or higher	PHYS elective (15 credits) - Satisfies Natural Science GUR
Psychology	4 or higher	PSY elective (5 credits) - Social Science GUR

## Course Numbering

Courses numbered from 100 to 299 are classified as lower division; those numbered from 300-499 as upper division. Generally, the first digit of a course number indicates its intended class level:

- 100-199 — First-year (freshman) courses
- 200-299 — Second-year (sophomore) courses
- 300-399 — Third-year (junior) courses
- 400-499 — Fourth-year (senior) courses
- 500-699 — Graduate-level courses

Only courses numbered 100 or above appear on the official transcript.

Except in unusual circumstances, students are not permitted to take courses more than one year above their class standing.

The numbers 197, 297, 397, 497 and 597 are used for temporary courses generally offered only once.

## *International Studies*

The numbers 137, 237, 337, 437, 537 are reserved for International Studies (2-15). These courses are offered through the WWU International Studies program or through colleges.

Contact the Office of International Programs and Exchanges, College Hall 104, for information. Repeatable with different subject matter.

The number 117 is reserved for First Year Experience (FYE) courses.

***Directed Independent Study***

The numbers 300, 400, 500 are reserved to designate Directed Independent Study (1-15), enabling students to pursue, on an individual basis, topics not covered by the curriculum.

The number 699, continuous enrollment, is reserved for master's degree students in their final quarter who have registered for all their course work. Contact the Graduate School for further information.

Details regarding titles, prerequisites, number of credits and grading for specific courses can be found in the online Timetable of Classes, or the Summer Bulletin.

In some cases, a new course may be offered in the Summer Session prior to appearing in the General Catalog. Such a course would be described in the Summer Bulletin on the web. Any undergraduate student wishing to enroll in a course numbered 500 or higher must obtain the written approval of the dean of the Graduate School. (See the Graduate School section of this catalog.)

***Courses listed in this General Catalog constitute a record of the total academic program of the University.*** Except for unforeseen scheduling and personnel circumstances, it is expected that each course will be offered during the period of this catalog. For an exact scheduling of courses at Western, students should consult the annual online Timetable of Classes or the Summer Session website.

**Prerequisites**

The student is responsible for ensuring that he or she has satisfied all prerequisites, with a grade of C- or better, before registering for a given course. Although some prerequisite enforcement is driven by the Web registration system, students should not assume they are eligible to enter a course without having taken the prerequisite just because the system allows them to register for the course. A student who has registered for a course without satisfying prerequisites or obtaining permission may be required by the instructor to withdraw from the course.

**Credits and Credit Loads**

Credit hours are assigned to a class based on the amount and type of work expected from a typical student in class. Credit is awarded for courses only in the quarter in which the student is registered for the classes and completing the work.

Classes will be assigned one credit for each hour per week of classroom discussion or lecture, and one credit for every two hours per week of laboratory or practice/rehearsal involving some preparation or reporting.

Classes using different formats for at least part of the course will be assigned credit for amounts and types of work equivalent to those described above. When such a component is proposed, the type and amount of work involved must be described in detail. In particular, the activity for which credit is assigned must be structured and occur at regular or periodic intervals throughout the course, and faculty must supervise and evaluate students' work in this activity.

Since each hour in a course requires at least two additional hours of study, and since students usually register for several courses, Western has established the following credit load policies for undergraduate students:

- The standard load per quarter for undergraduates is 15 credits. In order to graduate in four years, students must average 15 credits per quarter. **NOTE:** some majors require more than four years of study.
- During the first quarter of residence, a load must not exceed 17 credits; before registering for more than 15 credits, students should consult with their advisors
- After the first quarter of residence, the maximum allowable load is 20 credits per quarter; students are limited to 17 credits during Phase I of registration
- An employed student is expected to reduce his or her academic program and credit load accordingly

### **Correspondence Credit**

Correspondence credit earned through a fully accredited college or university, including Western's Independent Learning program, may be accepted toward the bachelor's degree. Some departments limit the number of correspondence credits that may apply toward the major. Enrollment in only correspondence courses through Western's Independent Learning program does not qualify as continuing enrollment for Western students. Contact the Registrar's Office for information regarding student status.

### **Non-Matriculated Students and Credit Limitations**

A program for non-matriculated students allows those not admitted to Western and undergraduate/certificate extension program students to enroll in Bellingham campus courses on a space available basis. Students who have been dismissed from Western due to low academic standing may not enroll as non-matriculants.

A student must be admitted to Western to apply credit to a degree. A maximum of 45 credits earned as a non-matriculant may be accepted toward a bachelor's degree at Western. Contact the Graduate School for information on applying credit to graduate programs.

Students enrolled as non-matriculants are subject to all University academic policies as enumerated in this section of the catalog. They must maintain good academic standing according to University scholarship standards. Continued low scholarship will result in the loss of registration privileges.

### **Auditing Courses**

Auditors are persons who desire to attend courses without earning credit. Admission as an auditor requires prior approval of the instructor and the Registrar's Office.

Since auditors are not active participants, certain courses may not be audited: those include, but are not limited to physical education activities, laboratory courses, studio courses, independent study courses, modern language courses, courses not taught in a group setting, and any other course the Registrar deems ineligible. Auditing a course cannot be used toward successful completion of academic credit.

Auditors are not allowed to register until the first day of the quarter, and the limit of the course must not have reached the maximum. Changes to or from audit cannot be made after the first week of the quarter.

Students enrolled for 10 or more non-audited credits may audit a course without an additional charge. Students enrolled for less than 10 credits will be charged \$10 per credit to audit a course. Students approved to register for an audit are responsible for paying any course fees attached to the course. Students enrolled in off-campus, self-supporting programs, who choose to audit are required to pay the full amount of tuition and fees.

The Registrar's Office grants course registration privileges on a space-available basis, for one term at a time, to non matriculated applicants, Washington state employees, WWU staff, and residents over 60 years of age who are eligible for tuition reduction. Special students and non matriculated students must submit a Special Student Enrollment Form to the Registrar's Office each quarter. This form can be found online at: <http://www.wwu.edu/depts/registrar/forms.shtml>

## Class Standing

An undergraduate student is classified as a freshman when his or her total completed credits (including transferred credits) range from 0 to 44, a sophomore with credits of 45 to 89, a junior with credits of 90 to 134, and a senior with credits of 135 or more.

## Full-Time Status

180 credits are the minimum number of credits required to graduate with a bachelor's degree from Western Washington University. Many majors require more than the minimum of 180 credits. In order to graduate in four years, a student should plan to enroll in an average of 15 credits each quarter. Undergraduate students must be enrolled for a minimum of 12 credits in order to be considered full-time (e.g., eligibility for financial assistance, full-time veterans' benefits, participation in intercollegiate athletics, etc.) Graduate students, officially admitted to the Graduate School must be enrolled in a minimum of 8 credits for financial aid purposes and veterans' benefits. *Students are advised to check carefully to determine that they meet the definition of "full-time enrollment" for the program in which they are participating.*

The following table illustrates the minimum number of credits to be considered full time, three-quarter, or half time each quarter.

	Undergraduate	Graduate
Full time (for financial aid eligibility, veteran's benefits, athletic eligibility, enrollment verification to outside agencies)	12 credits	8 credits
Three-quarter time (for financial aid eligibility, veteran's benefits, enrollment verification to outside agencies)	9 credits	6 credits
Half-time (for financial aid eligibility, loan deferments, enrollment verification to outside agencies)	6 credits	4 credits

Full fees are assessed to all students enrolled in 10 credits or more. Students enrolled in at least 10 credits are eligible to live in on-campus housing, hold Associated Student office and obtain on-campus student employment.

The Student Health Center is available to all students enrolled in 6 or more credits on WWU's Bellingham campus. Students registered for 3 to 5 credits have the option of paying the counseling, health and wellness fee to use the services during a quarter. Former students, students on leave, dependents of students, faculty and staff of WWU, and Whatcom Community College students living on WWU's campus are not eligible for these services.

Graduate students must be enrolled in a minimum of 8 credits to be eligible for graduate teaching assistantships (TAs). If a graduate student has completed all the course work listed on

the approved plan of study with the exception of the thesis (690) or research (691), the graduate student may remain eligible for the TA appointment by enrolling for as few as 2 credits (with prior approval from the Graduate School). Other graduate students who have completed all the course work listed on the approved plan of study with the exception of the thesis (690) or research (691) should consult with the Graduate School regarding the minimum credit requirements.

This table applies to fall, winter and spring quarters only. Enrollment status and requirements for summer may differ. Please consult the appropriate program office.

### **Adding a Course**

A student may add a course as late as the fifth day of the quarter. After that time, course additions are allowed only under unusual circumstances and require written permission of the course instructor. A special late-add fee is charged when adding after the second week (see Tuition and Fees section).

### **Class Attendance**

Course attendance normally is required by the instructor. Any student who fails to attend the first meeting of a course may be required to drop it if another student, previously unable to register for the course due to enrollment limitations, seeks admission.

A student absent from any exam or class activity through sickness or other cause judged by the instructor to be unavoidable shall be given an opportunity to take a rescheduled exam or make up the class assignment in a timely manner agreed upon by the instructor (see Leaves of Absence). Examples of unavoidable cause may include participation in University-sponsored activities such as debating contests, musical or theatrical performances, or intercollegiate athletic competition.

University policy does not allow a student to attend a class without formally being registered for it. It is the student's responsibility to ensure that he or she is properly registered for each course.

### **Withdrawal from a Course**

Single course withdrawals that occur prior to 5 p.m. on the fifth day of the quarter are considered to be a change of initial registration and results in no entry on the permanent record (transcript). To withdraw from a course during the first five days of the quarter, a student must complete the transaction on Web4U. If withdrawing from **all** courses after the first day of class, it is considered a 'school withdrawal' and it is recorded on the official transcript as a grade of SW (see Withdrawal from the University).

Course withdrawals that occur from the beginning of the sixth day of the quarter to the end of the second week (prior to 5 p.m. on Friday of the second week) will result in no entry on the permanent record (official transcript), but a mark of XM will appear with the withdrawn course on the unofficial record (academic history). Withdrawals that occur beginning the sixth day of the quarter may affect a student's tuition charges and may result only in a half-tuition refund. There also may be implications for financial aid recipients' awards. To withdraw from a course after the first five days of a quarter, a student must present the request in person at the Registrar's Office. Beginning the third week of the quarter, a mark of "W" is posted for each withdrawn course.

Course withdrawal from the beginning of the third week to the end of the seventh week is permitted only if the student has an unused annual withdrawal privilege. Each student is granted two annual withdrawal privileges at the beginning of the academic year in fall quarter. The

annual withdrawal privileges can be used during fall, winter, spring or summer quarter. (See note on summer below.) Unused annual withdrawals cannot be used in subsequent years. To use an annual withdrawal privilege, a student must present the request in person at the Registrar's Office.

After the seventh week of the quarter, course withdrawal is not permitted. Discontinued attendance without official withdrawal results in a failing grade (Z or F). Course withdrawal deadlines are published in the dates and deadlines section of the Registrar's Office website and the Summer Session website.

To withdraw from an extension course, a student must file the appropriate form through the extension office. For specific site information, see the Extended Education and Summer Programs section in this catalog.

Students may drop an Independent Learning course at any time by contacting the Independent Learning Office in writing. There is no refund 30 days after registration.

### **Withdrawal from the University**

Formal withdrawal from the University, including a self-supporting program, may be made at any time before the final two weeks of a quarter. Students must initiate the withdrawal process in the Registrar's Office or at their extension site. A student must contact the appropriate extension office for formal withdrawal from a self-supporting course. Beginning the first day of classes, a grade of SW (school withdrawal) is posted for each course for which the student was registered.

Students who leave the University during a quarter without formal withdrawal receive failing grades.

A student who is unable to complete the quarter due to hardship may petition to withdraw from the University after the stated deadline. Hardship is considered to be an incapacitating illness or injury requiring extensive recuperation or a significant personal emergency such as a death in the immediate family. Verification of the hardship is required. Petitions for withdrawal due to hardship are available in the Office of Student Life and must be submitted by the last day of the week prior to finals.

If a student completes the official withdrawal process prior to the deadline, SW (School Withdrawal) grades are issued for the quarter.

A withdrawing student who will be away from Western a full quarter or more must apply for readmission prior to the deadline stated in the Undergraduate Admission section of this catalog.

### **Hardship Withdrawal**

A student who is unable to complete the quarter or a class due to a significant hardship may petition to withdraw from the University or a course after the stated deadline. Hardship is considered to be an incapacitating illness or injury requiring extensive recuperation or a significant personal emergency such as a death in the immediate family. **Verification of the hardship is required.**

Petitions for the withdrawal due to hardship are available in the Student Life Office and must be submitted by the last day of the week prior to finals. A complete school withdrawal results in grades of SW for each course for which the student was registered. If the student qualifies for a partial withdrawal, a grade of W is posted for those courses.

Summer withdrawal deadlines and policies are published on the Summer Session website.

## **Emergency Leaves of Absence**

A leave of absence from classes may be granted when psychological or family emergency, illness or injury requires a student to be absent from class. Leaves of absence are issued only upon request from the student and may be granted for two days, but no more than five days during an academic quarter or summer session. If a faculty member requires medical or emergency leaves of absence, the faculty member will inform the students in his/her courses of that fact in the course syllabus. Non-medical leaves of absence are available through the Student Life office and medical leaves through Student Health Center. **All leave of absences require proper verification.**

While a leave of absence generally makes it possible for the student to make up work missed, in some instances the amount of time lost makes course completion impractical. In those cases, withdrawal or incomplete grades may be appropriate. A student absent from any exam or class activity through sickness or other cause judged by the instructor to be unavoidable shall be given an opportunity to take a rescheduled exam or make up the class assignment in a timely manner agreed upon by the instructor. Examples of unavoidable cause may include participation in university-sponsored activities such as debating contests, musical or theatrical performances, or intercollegiate athletic competition. The student should consult with the course instructors and/or the Student Life office.

## **Insufficient Progress Toward Degree and Registration Holds**

The University reserves the right to deny access to classes by students who make insufficient progress toward a degree. Students who are declared in a major but make insufficient progress in the major may be removed from the major. Students who fail to make progress toward a degree or who repeatedly withdraw from the University after registering may have their enrollment privileges revoked. Students on probation who repeatedly register for Pass/No Pass or Satisfactory/Unsatisfactory courses may have their registration privileges revoked. Students who fail to declare a major by the time they reach 120 credits will not be permitted to register. Students who reach 210 credits without graduating or submitting a degree application or plan of study will not be permitted to register.

## **Finals Preparation Week**

The week immediately preceding final examination week is known as finals preparation week and provides the following protections which enable students to complete their studies without undue hardships:

- Final examinations must be administered at the date and time specified in the final examination schedule, with the exception of laboratory-section final exams
- During finals preparation week, no examinations shall be administered; exceptions may be made if there is agreement of the instructor, the appropriate department chair and/or dean, and the entire class membership
- No graded assignments shall be introduced during finals preparation week
  - Students may consent, on an individual basis, to accept new graded assignments for purposes of extra credit and/or makeup for previous assignments
  - Instructors must have notified students in writing, by the end of the course's fifth week, of any graded assignments whose due dates fall during finals preparation week

The term "graded assignments" refers to written or oral presentations which are a required component of class performance and which are utilized in determining students' letter grades or evaluations for the quarter. Examples include essays, papers, research projects and class presentations or quizzes.

## **Final Examinations**

Final examinations, given in most courses at Western, are administered according to a schedule published in the online Timetable of Classes. **The scheduled days and hours for these examinations may not be changed. The final examination is normally held where the course meets.**

All final examinations are scheduled during the last week of the quarter, which is known as final examination week. No final examinations except laboratory finals — whether for a whole class or part of a class or an individual — may be given before final examination week. This means that students may not petition faculty for early final examinations and that students should plan their end-of-quarter schedules in the expectation of final examinations in all courses. In the rare cases where final examinations are not given, instructors will notify students at the beginning of the quarter.

A student who fails to take a final examination without making prior arrangements acceptable to the instructor receives a failing grade for the course. Under unusual circumstances, an instructor may allow a student who has been making satisfactory progress in the course to take a late final examination and receive a temporary incomplete (K) grade. This privilege is available only to students who have been making satisfactory progress in the course. The incomplete grade given in this manner should be removed early during the next quarter.

If the final examinations schedule causes a student to take three or more examinations in one day, any of his or her instructors may arrange an examination **later** during finals week.

There is no final examination week in summer session. Course requirements are determined by each instructor.

## **Grades and Grade Reporting**

At Western, grades describe both a student's mastery of subject matter and the ability to communicate that mastery in examinations, essays, demonstrations and discussions. The three grading systems are described below. (Fairhaven College is authorized to follow a different system described in the Fairhaven College of Interdisciplinary Studies section of this catalog.)

### **A-F Grading**

Most courses at Western are graded on the traditional A-F system. The grades that may be earned under this system, and their values for GPA calculation (see "Grade Averages" below), are as follows:

A (excellent), 4.00; A-, 3.70; B+, 3.30; B (good), 3.00; B-, 2.70; C+, 2.30; C (fair), 2.00; C-, 1.70; D+, 1.30; D (poor), 1.00; D-, 0.70; F (failure), 0.00; Z (failure due to discontinued attendance without withdrawal), 0.00; K (incomplete), X (missing grade); XM (course withdrawal during second week of quarter; mark appears on academic history, but not on official transcript); W (course withdrawal after the second week of the quarter; mark appears on both the academic history and official transcript); SW (school withdrawal; mark appears on each course when school withdrawal occurs on first day of quarter or later).

### **Satisfactory/Unsatisfactory Grading**

Some courses are graded on the Satisfactory/Unsatisfactory system. For these courses, appropriate curricular agencies have determined that the traditional A-F system is inappropriate. If a course has been approved for S/U grading, the only grades that may be assigned are S, U and K. Neither S nor U is considered in the calculation of grade averages.

All S/U courses are identified in the course descriptions of this catalog and in the online Timetable of Classes.

### **Pass/No Pass Grading**

Students may choose the Pass/No Pass grading option in certain elective courses. The minimum level of performance required to receive a grade of P varies from course to course and is determined by each instructor or department. Students should not assume that performance equal to a grade of D or higher will result in a passing mark. Often performance at the level of C or higher is required. Regulations pertaining to Pass/No Pass grading are as follows:

- Courses graded Pass/No Pass may not be applied to the major and minor, supporting courses, professional education requirements, upper-division writing proficiency requirement and General University Requirements
- Graduate courses taken for the graduate degree cannot be taken Pass/No Pass
- Courses graded Satisfactory/Unsatisfactory cannot be taken Pass/No Pass
- To designate a course as Pass/No Pass students must submit a request at the Registrar's Office after registering for the course; they may change this designation by submitting the change to the Registrar's Office at any time through the fourth week of a quarter; for extension program courses, pass/no pass grading designation may be elected up to the end of the fourth week for regular quarter-long courses, or prior to the second class meeting for shorter courses
- Prerequisites, work required and credit allowed may be affected by election of the Pass/No Pass option
- In computing grade averages, neither the P nor NP grade in Pass/No Pass courses is counted
- Should a student change his or her major or minor, the academic departments involved are the sole judges of the acceptability of any Pass/No Pass courses already completed in the newly chosen major or minor
- Once a student has earned NP grades in courses totaling 10 credits, he or she may no longer register for courses under the Pass/No Pass option

**NOTE:** Excessive use of the Pass/No Pass grading system may negatively influence admission to some graduate or professional schools.

### **The Incomplete (K) Grade**

The grade of K (incomplete) may be assigned under all grading systems. It may be assigned only upon request of the student and agreement of the course instructor. Normally it is given only to a student who has been in attendance and has been doing passing work until the final two weeks of the quarter when extenuating circumstances beyond his or her control make it impossible to complete course requirements on schedule. (Extenuating circumstances do not include mere lateness in completing work, the desire of a student to do extra work to raise a poor grade, et cetera.)

To receive a K grade, a student must print a contract form and negotiate a formal agreement with the course instructor specifying the work done and the remaining work to complete the course and earn a grade. One copy is kept by the student and one by the faculty member.

Normally, the student completes the work agreed upon during the next quarter and a final grade is submitted by the instructor. After one year, however, if a final grade has not been submitted, the K automatically reverts to a failing grade (Z), and the student may establish credit only by registering again for the course. (Grades of K earned in thesis courses numbered 690 do not lapse to failure.) Once a final grade has been submitted, the student's record will show the K

grade as well as the final grade. In no case will a final grade replacing a K affect the student's academic standing in the quarter in which the final grade is assigned.

Removing a K grade (and replacing it with a final grade) will not affect the student's faculty action (scholarship standing) for the quarter in which the K was assigned, nor will it affect the faculty action for the quarter in which the final grade is recorded if the grades and faculty action for that quarter have already been submitted. However, it will affect the cumulative grade point average as soon as the final grade is recorded.

A student who receives an incomplete in a required course the final quarter before graduating must complete the course within two weeks of the end of that quarter in order to graduate at that time. If the course is completed after two weeks, the prospective graduate is subject to resubmitting the degree application, payment of another degree application fee, and registration in another course to satisfy the final-quarter-in-residence rule.

### **Grades and Academic Honesty**

Grades are given for the student's work and achievement. Fair evaluation of students' work and helpful instruction are possible only when students submit work which genuinely reflects their own reading, computation, research and thoughts and is their own production, whether in writing or other format(s). Academic dishonesty can result in a failing grade and the placement of a note in the student's permanent record. For the University's policy on academic honesty, see Appendix D

### **Grade Averages (GPA)**

To determine a grade average, points are assigned to each grade earned under the A-F grading system (A = 4.00, B = 3.00, et cetera. See A-F Grading). The point value of each grade is multiplied by the number of credits assigned to the course. Total points are then divided by total credits attempted. Thus, a student who earns a five-credit A, five-credit B and a five-credit F has earned a quarterly average of 2.33 (35 points divided by 15 credits attempted).

A grade average of 2.00 (C) represents the minimum acceptable level of performance to remain in good standing at the University. Higher grade averages may be required for admission to or retention in certain major programs.

Only grades earned at Western are calculated in determining a student's quarterly or cumulative grade average.

Grades of S, U, P, NP, AU, K, X, W, XM, and SW are not included in GPA calculation.

### **Grades Yielding Credit**

Credit is granted for courses completed with grades of D- or higher on the A-F grading system and for grades of P and S. The grades of D+, D and D-, however, represent a level of work that is unacceptable in a student's major or minor, supporting courses for majors and minors, ENG 101, and the courses that satisfy a student's upper-division writing proficiency requirement.

Professional education courses, the educational psychology courses required for teacher education programs and courses required for state teaching endorsements must be completed with a grade of C (2.0) or better.

### **Repeating a Course**

A few courses are approved to be repeated for credit. Such approval is included with the course descriptions in this catalog. If a course not designated as repeatable for credit is retaken, the following will apply:

- Credit will be awarded only once for a repeated course
- All grades earned for a given course will be considered in calculation of the student's cumulative grade average and all grades remain on the record; a failing grade assigned subsequent to earning a passing grade in a repeated course will nullify the credit earned initially with the passing grade
- Students wishing to repeat a class in which they already received a P, S, or C- or better grade may not register for the class until Phase III of registration, except in the case of students needing to retake English composition for admission to teacher education. The repeat registration for English composition prior to Phase III requires the written permission of the chair of the department.

The student who registers to repeat a course should file a "Course Repeat Card" with the Registrar's Office. Unless this card is filed, the repeat may not be detected until the senior evaluation, at which time cumulative credits will be reduced.

Master's degree students are not permitted to repeat courses.

### **Final Grades**

Final grades are assigned at the end of each quarter and are available to students on Web4U.

### **Grade Changes**

Once a grade has been filed with the registrar, it is regarded as final. Except for the conversion of incomplete (K) marks, grade changes are accepted only under the following circumstances:

It is discovered that the grade resulted from clerical error in transcription or recording. Requests for change to correct these errors may be made only by the course instructor and only during the quarter immediately following original issuance of the grade.

The registrar may be instructed to change a grade as the result of the academic grievance procedure.

The registrar may be instructed to change a grade if it is determined that the grade resulted from academic dishonesty.

### **Fresh Start**

A former Western undergraduate student who returns to the University after an absence of five years or more may be given permission to start a new cumulative grade average. To be eligible, the student must be returning to Western as an undergraduate and cannot have taken any Western courses (including extension, correspondence, and cyber) during the five-year absence. The absence begins from the last day of the quarter of previous enrollment.

The Fresh Start application deadline is the end of the first week of the quarter in which the student returns. **The application should be submitted to the Registrar's Office.** Students who have been dropped for low scholarship, even if absent for five years or more, must pursue reinstatement. See Reinstatement section below.

Undergraduates who might be considering applying for the master's degree at WWU should contact the Graduate School office for information about the implications of having been given an undergraduate Fresh Start.

Post-baccalaureate students and students in graduate programs are not eligible for Fresh Start. An undergraduate student can be granted only one Fresh Start.

## **Scholarship Standards**

The following scholarship standards apply to each academic division of Western Washington University, except Fairhaven College. Students should note that transfer between academic divisions is restricted in cases of low scholarship.

Low- and high-scholarship standings are not changed as a result of the removal of incomplete (K) grades and late grades received in correspondence courses.

### *Good Academic Standing*

A student is in good academic standing if he or she has a cumulative grade point average that is not below 2.00.

### *High Scholarship*

#### *Graduation Honors*

Graduation **cum laude or magna cum laude** is possible from those divisions of Western Washington University which employ the A-F grading system: College of Business and Economics, College of Fine and Performing Arts, College of Humanities and Social Sciences, Huxley College of the Environment, College of Sciences and Technology, and Woodring College of Education, and University Interdisciplinary Programs. Fairhaven College of Interdisciplinary Studies, which employs a different grading system, may develop alternate ways to honor outstanding graduates, subject to approval of the Academic Coordinating Commission.

The Graduate School does not confer graduation honors on graduate students although some graduate programs recognize meritorious graduate students.

To be eligible for **cum laude or magna cum laude** status upon graduation, the student must have earned at least 90 credits from Western Washington University, at least 65 of which must be for courses completed under the A-F grading system while in junior or senior standing. Only students who earn a first bachelor's degree are eligible for graduation honors.

Within each division which awards **cum laude or magna cum laude** status upon graduation, the determining factor in granting such distinction shall be based on the honors grade average. The honors grade average is computed using only the grades earned at Western Washington University after the quarter in which the student attains junior standing, but excluding grades in courses subsequently repeated and excluding all grades earned prior to approval of a "fresh start" grading average.

**Magna cum laude** shall be awarded to each student whose honors grade average places him or her at the 97th percentile or higher among graduating seniors during the previous academic year. Cum laude shall be awarded to each student whose honors grade average places him or her from the 92nd through 96th percentiles among graduating seniors during the previous academic year.

To receive honors recognition at Western's commencement exercises, it is necessary for a student to have qualified for honors by the end of the quarter prior to graduation.

### *Quarterly President's List*

Each undergraduate student whose quarterly grade average places him or her at the 90th percentile or higher among students of the same class (freshman, sophomore, et cetera) shall be placed on the President's List. The term "honor roll" shall be affixed to the student's permanent academic record for that quarter. To be eligible for the quarterly President's List, a student must be enrolled officially in a division of Western Washington University which employs the A-F grading system and must complete at least 14 credits that quarter on the A-F grading system.

### *Low Scholarship*

The University has set the standards described below to ensure that students who are earning poor grades will examine their objectives carefully before continuing enrollment. In some cases, students will be dropped from the University. The standards are designed to ensure that a student will examine their objectives and seek assistance before grades deteriorate to the point that continued enrollment or admission to another college or university becomes impossible. In all cases involving poor scholarship, students are encouraged to consult with the Academic Advising Center, their instructors, or major advisor.

The low scholarship categories below apply to all divisions of Western Washington University except Fairhaven. (See the Fairhaven College section for that division's scholarship standards.) Students dropped from one college division may not transfer to another college division without reinstatement by the Scholastic Standing Committee. These standards apply to students enrolled in self-supporting courses.

### *Academic Warning*

A warning is issued to a first-quarter freshman or a first-quarter transfer student (who has not previously attended Western) whose grade average is below 2.00 and to any continuing student whose quarterly grade average is below 2.00 but whose cumulative grade average is 2.00 or higher.

### *Academic Probation*

Any student except a first-quarter freshman or first-quarter transfer student (who has not previously attended Western) whose cumulative grade average falls below a 2.00 is placed on academic probation. A student who begins the quarter on probation must earn at least a quarterly grade average of 2.00 to avoid academic dismissal (see below).

### *Continuing Probation*

A student who begins a quarter on probation and, during that quarter, earns a grade average of 2.00 or higher without raising his or her cumulative grade average to at least 2.00 is placed on continuing probation. The student must then improve his or her cumulative grade average to at least 2.00 or attain at least a 2.30 quarterly average during the next quarter of enrollment.

Students on probation or continuing probation who repeatedly withdraw or register for Pass/No Pass or Satisfactory/Unsatisfactory courses may have their registration privileges revoked.

### *Academic dismissal*

A student will be dropped from the University if he or she a) begins a quarter on probation and earns a quarterly grade average below 2.00 or b) begins a quarter on continuing probation and fails to raise his or her cumulative grade average to at least 2.00 or, alternatively, fails to attain at least a 2.30 quarterly average.

Under unusual circumstances involving consistent patterns of course withdrawal or course repeats, a student whose cumulative grade average is 2.00 or higher may be dismissed from the University. The provost may authorize dismissal in these unusual cases after reviewing records presented by the registrar.

A student who has been dismissed for low scholarship may not petition for immediate reinstatement and may not enroll in Western courses except through Summer Session and the Independent Learning Office. Course work through these programs does not guarantee future reinstatement as a degree candidate.

*Removal from probation* occurs at the end of a quarter during which a student has improved his or her **cumulative** grade average to 2.00 or higher.

### **Reinstatement**

Students who have been dismissed for low scholarship can seek reinstatement (but not for the quarter immediately following the quarter of dismissal). Responsibility for reinstatement to the University rests with the Scholastic Standing Committee. Petitions for reinstatement and information on the procedure are available in the Academic Advising Center, Old Main 380.

Factors considered in determining reinstatement may include measures of academic aptitude, lapse of time since dismissal, change of major goals, nature of academic or other experience since dismissal or extenuating circumstances.

There are two options for seeking reinstatement. One is a review and decision by the Scholastic Standing Committee. The other is guaranteed reinstatement through the Scholastic Standing Committee by achieving all of the following: 1) since dismissal, earning 3.3 cumulative GPA in all course work taken, and 2) completing four classes toward a bachelor's degree, and 3) completing a minimum of 15 credits.

Petitions are due in the Academic Advising Center on April 6 for summer quarter or for summer continuing to fall quarter, July 6 for fall quarter, October 6 for winter quarter and January 6 for spring quarter.

### **Academic Honesty Policy**

Academic dishonesty is not tolerated at Western Washington University. Someone commits an act of academic dishonesty when he or she participates in representing something as the work of a student that is not in fact the work of that student. A Western student who is caught committing such an act at Western typically fails the course in which it occurred, and repeated such acts can lead to dismissal from the University. For a full description of the academic honesty policy and procedures at Western, see Appendix D in this catalog.

### **Academic Grievance Policy**

The text and procedures of Western's Academic Grievance Policy are contained in Appendix F in this catalog.

### **Satisfactory Academic Progress for Financial Aid**

The text of Western's policy on Satisfactory Academic Progress for Financial Aid is contained in Appendix J in this catalog.

### **Family Educational Rights and Privacy Act**

The Family Educational Rights and Privacy Act (FERPA), passed by Congress in 1974, protects the confidentiality of student records against disclosure to third parties and guarantees access to those records by the student. FERPA allows the university to release certain "directory information", which includes the student's name, local address and phone number, whether the student is enrolled, dates of attendance, degrees earned, and most recent previous institutions attended. However, Western Washington University is more restrictive, releasing to third parties only whether the student is currently enrolled, dates of attendance, and degrees awarded. For students who have requested a confidential block, no information is disclosed, not even whether the student is enrolled.

When a student enrolls in a postsecondary institution, rights of access are transferred from the parents to the student. Thus parents who wish to have access to their students' educational information must present the written consent of the student for each request.

Individuals whose work requires access, such as university faculty and staff and government officials who work to improve instruction, also are allowed by FERPA to view student records.

For more complete information about FERPA and Western's Student Records Policy, see Appendix E in this catalog.

### **Student Records Policy**

For the complete text of this policy, see Appendix E in this catalog.

# **University Graduation Requirements**

## **Student Responsibility for Completion of Requirements**

Every effort is made by the University to notify students of degree requirements. However, it is the student's responsibility to become familiar with all requirements upon entry to the University.

## **WWU Graduation Requirements for Bachelor's Degrees**

### *Effective Catalog*

A student should expect to graduate according to the general requirements in the catalog current at the time of initial matriculation. However, if the student interrupts enrollment for more than two consecutive quarters (summer quarter not included), he or she shall meet the demands of the catalog in force at the time of readmission. Correspondence enrollment is defined as interrupted enrollment.

While the University reserves the right to change the regulations concerning admission and requirements for graduation, it shall be the policy of the University to give adequate notice prior to effecting any significant changes and to make reasonable adjustments in individual cases where there may be a hardship.

### *Declaring a Major*

Students should expect to meet the specific requirements for majors and minors in the catalog current at the time they declare the major and minor to the appropriate department. Early declaration of a major is essential to graduating in a timely manner. Soon after their arrival at Western, students should contact a departmental adviser to discuss the course of study leading to a major. Students are expected to meet with the adviser of the department of their choice for individualized assessment or visit the Academic Advising or Career Services centers regarding choice of a major by the time they complete 60 credits or during the first quarter of enrollment if 60 or more credits are being transferred to Western. Students are expected to apply to the department in which they wish to declare a major no later than the quarter following the quarter in which they reach their 90th credit. Students who fail to declare a major by the time they reach 120 credits will not be permitted to register.

Students must submit a new major declaration if they interrupt enrollment for more than one year or are dropped for low scholarship.

### *Minors*

Minors are available in most major disciplines but students are not required to complete a minor, unless a minor is required by the major. Requirements for each minor are listed in each department's section. To declare a minor, a student should contact the department. Although there is no limit on the number of minors a student may earn, it is not possible to minor in two areas that involve essentially the same constellation of courses.

### *Common Requirements*

The following requirements are common to all undergraduate divisions of Western Washington University. For requirements unique to a given University division, see sections concerning the College of Business and Economics, Fairhaven College of Interdisciplinary Studies, the College of Fine and Performing Arts, the College of Humanities and Social Sciences, Huxley College of the Environment, the College of Sciences and Technology, and Woodring College of Education.

- **Minimum of 180 quarter hours of credit.** Western Washington University's baccalaureate degrees require a minimum of 180 credit hours. Some fields require a larger number of credit hours, and students who major in these fields should anticipate

that they may require more than four years to complete their programs. Students majoring in these fields are encouraged to seek advisement early in their academic careers. Also, programs that are highly sequential necessitate careful planning, the lack of which may result in extended work beyond the minimum required. Western allows a maximum of 135 quarter (90 semester) credits to transfer from any combination of regionally accredited institutions, including no more than 105 quarter (70 semester) lower-division credits. Additional course work which exceeds this amount may be used to meet specific requirements but additional credits will not be allowed to count toward the 180 credit requirement for graduation; no more than 15 credits taken in the Extended Programs (EXT) subject area can be applied toward a degree at Western Washington University

- **Minimum of 45 credits through Western Washington University.** Correspondence, including Western's Independent Learning program, credit by examination and advanced placement credit are not included in this total
- **At least 60 credits in upper-division study** (courses 300 or above at the institution where the course was taken)
- **Complete a minimum of three upper-division writing proficiency points in approved upper-division writing proficiency courses at WWU** with a minimum grade of C-.
- **General University Requirements** - These general requirements must be satisfied by all students except those enrolled in Fairhaven College of Interdisciplinary Studies, where a separate core program is required
- **Approved academic major.**
  - At least 50 percent of the credit hours required in a student's major must be earned at Western Washington University
  - Students must declare a major before reaching 120 credits
- **A minor, if required by the major**
  - At least 50 percent of the credit hours required for a minor must be earned at Western Washington University
- **Professional education sequence, if required by the major**
- **A grade of C- or better in a student's major or minor**, supporting courses for majors and minors, ENG 101, and courses taken to fulfill the upper-division writing proficiency requirement
- **Professional education courses and the educational psychology courses** required for teacher education programs and courses required for state teaching endorsements must be completed with a grade of C (2.0) or better
- **Scholarship meeting minimums** prescribed by the University divisions and academic departments, including a cumulative WWU GPA of at least 2.00 (or higher, as required by individual departments)
- **Final quarter.** Must be registered for at least one Western course in the quarter in which degree is to be awarded; correspondence courses are allowed only by exception
- **Submit an application for the degree** no later than the last day of classes two quarters prior to quarter of intended graduation. The degree is not granted without formal application. **NOTE:** Students who reach 210 credits without graduating or submitting a degree application or plan of study will not be permitted to register

## **On-Line Degree Evaluation - Curriculum Advising and Program Planning (CAPP)**

Curriculum, Advising, and Program Planning (CAPP) Degree Evaluation is an advising tool available to both students and advisors that evaluates course work against degree requirements. CAPP produces a report reflecting academic progress toward completion of an undergraduate or graduate degree in a student's declared or proposed major. The CAPP degree evaluation report shows how Western Washington University courses, transfer courses, and courses in progress

apply toward degree requirements. You can initiate a degree evaluation, view results, and print evaluation reports via Web4U.

Visit the Online Degree Evaluation website for additional information.

### **Extension Program Time Limits**

All graduation requirements for an extension program must be completed within five years of the initial quarter of registration. Students who have not completed their program after four years of study are required to file a plan for completion of the degree within the five-year limit. Otherwise it is understood that the student has decided to withdraw from the program.

### **Procedures for Applying for a Bachelor's Degree**

Degrees are not automatically awarded when requirements are completed. It is the responsibility of the student to make application in the Registrar's Office. Students must apply for a baccalaureate degree no later than the last day of classes two quarters prior to the final quarter. Complete instructions and deadlines are available on the Registrar's Office Website.

### **Procedures for Applying for a Residency Teacher Certificate**

Teaching certificates are not automatically issued at program completion. It is the responsibility of the student to apply for the Residency Teacher Certificate through the Woodring College of Education Teacher Certification Office by the due date approximately two quarters before the start of full-time student teaching internship. Upon verification that certification requirements have been met, recommendation is made to the state Office of Superintendent of Public Instruction for issuance of the Residency Teacher Certificate.

Complete application instructions and deadlines are available at <http://www.wce.wwu.edu/Resources/Certification/Res/> or Teacher Certification, Student Services, Miller Hall 250, and through applicable extension program offices.

### **Commencement**

Formal commencement exercises for degree candidates are held each quarter on the Saturday following finals week. Commencement information and signup forms are available by the third week of the quarter on the Registrar's Office website. To be eligible for commencement, all candidates must apply for their degree by the appropriate deadline. University policy requires bachelor's degree candidates to be enrolled in their final quarter's requirements and master's candidates to have completed all requirements in order to participate in commencement.

### **Baccalaureate Degrees with Two Majors**

Any undergraduate student at Western Washington University may attempt to earn a bachelor's degree with two majors. While there is no requirement that such a degree program include more than 180 credits, it may be impossible to complete within this minimum. The student's application for such a degree must indicate both majors and be approved by both departments or academic units involved. The majors involved must be distinct and may not be based on essentially the same constellation of courses. A general studies major cannot be earned concurrently with or subsequent to another major.

After earning a bachelor's degree, a student may complete an additional major without earning a second bachelor's degree. The student must enroll officially in the college which offers the major and submit an application for a major evaluation to the Registrar's Office during the quarter in which the major is completed.

Students with two majors that would result in the same type of degree (for example, a bachelor of arts in English and a bachelor of arts in business) will receive one degree and one diploma.

Since the diploma indicates the college awarding the degree, students must choose the college they prefer. In this example, the student must choose between a bachelor of arts from the College of Humanities and Social Sciences or a bachelor of arts from the College of Business and Economics. Majors are not printed on the diploma but are listed on the transcript once the student graduates.

### **More than One Baccalaureate Degree**

A student may earn from Western only one of each type of degree offered (BA, BS, BAE, BFA, BMus).

#### *Two Baccalaureate Degrees Concurrently*

Two distinct bachelor's degrees associated with different majors may be earned simultaneously but the total number of academic credits earned must be at least 225, and the student must satisfy all requirements of each degree program. The majors involved may not be based on essentially the same constellation of courses.

#### *Second Baccalaureate Degree*

A student who has already earned a baccalaureate degree from Western Washington University may enroll to earn a different type of undergraduate degree associated with a different major. Such a student must enroll officially in the college which offers a major associated with the new degree, earn at least 45 academic credits beyond the number earned when the first degree was granted, maintain a cumulative grade point average of at least 2.00 on the last 45 credits earned and satisfy all requirements of the second degree program.\*\*

Holders of a bachelor of arts degree from a regionally accredited institution in the United States will have fulfilled all General University Requirements (GURs). Holders of bachelor's degrees other than the Bachelor of Arts from an accredited institution in the United States must have the degree evaluated for GUR on a course-by-course basis. Post-baccalaureate students pursuing another bachelor's degree must complete a minimum of three writing proficiency points in approved upper-division writing proficiency courses at WWU with a minimum grade of C-.

*\*\*Exception: The BFA in art degree or the BFA in design degree may be awarded to a student who has earned fewer than 45 additional credits since completing a BA degree, provided the student has earned at least 225 total credits.*

#### *Baccalaureate Degree After Graduate Studies*

A student may not earn a baccalaureate degree from Western Washington University while enrolled in its Graduate School. A student may earn a baccalaureate degree after the completion of the master's degree program provided: 1) that 45 credits are earned at Western subsequent to the previous bachelor's degree and exclusive of those credits that are a part of the master's program, 2) that the major is different from that associated with any prior degree, 3) that the student has completed a minimum of three writing proficiency points in approved upper-division writing proficiency courses at WWU with a minimum grade of C-, and 4) that the final-quarter-in-residence requirement is met.

### **Baccalaureate Degree and Teacher Certification**

The prospective teacher may earn the Bachelor of Arts in Education degree, completing one or more of the appropriate teaching majors offered within the various schools, colleges and departments of Western. A Bachelor of Arts in Education program requires completion of all teacher certification requirements as well as other University requirements prior to the granting of the degree. The student (usually with plans to teach at the secondary school level) who wishes to complete an appropriate Bachelor of Arts or Bachelor of Science degree program may also earn

teaching credentials without earning the BAE degree. Some programs allow requirements for teacher certification to be completed at the same time the BA or BS degree is earned. Such students must be admitted officially to the professional education program of the Woodring College of Education and complete the required professional sequence. They must also maintain a cumulative grade average at the level required for the BAE degree.

## **Writing Requirements at Western Washington University**

Western Washington University believes that development of writing proficiency should be pursued systematically throughout the course of study. To that end Western has established a program of writing courses and support services beginning in the freshman year and extending to upper-division writing proficiency courses offered throughout the University.

### *GUR Writing Requirement*

- Block A of the GUR communications requirement: to be completed, with a grade of C- or better, prior to the accumulation of 45 credits; ENG 101, Writing and Critical Inquiry, (5), (waived for students demonstrating high English competency on college entrance exams); all students must satisfy Block A except Fairhaven College of Interdisciplinary Studies students
- Block B or C of the GUR communications requirement: to be completed prior to accumulation of 135 credits; see the GUR section for details

### *Upper-division Writing Proficiency Requirement*

- Upper-division writing proficiency requirement: complete a minimum of three writing proficiency points in approved upper-division writing proficiency courses at WWU with a minimum grade of C-. Students must complete Block B or C of the Communications GUR requirement before enrolling in a writing proficiency course.  
All Western writing proficiency courses should follow these University-wide guidelines:
  - students write multiple drafts of assigned papers
  - instructors provide suggestions for revision of drafts, and
  - instructors assign course grades based on revised versions of assigned writings and according to the writing proficiency points table

Upper-division writing proficiency courses emphasize research and writing. In writing proficiency courses, students learn the writing style and conventions of their disciplines, as well as the techniques for integrating evidence into scholarly papers. Writing proficiency courses are listed in the online Timetable of Classes.

<b>Writing Proficiency Points Fulfilling the Upper-division Writing Proficiency Requirements (Minimum 3 points required)</b>		
	Credit Hours of course	% of Grade Based on Writing Assignments
WP1	1 Credit	75%
	2 Credits	50%
	3 Credits	25%
	4 Credits	20% (18.75%)
	5 Credits	15%
WP2	2 Credits	75%
	3 Credits	50%
	4 Credits	40% (37.5%)
	5 Credits	30%
	3 Credits	75%
WP3	4 Credits	55%
	5 Credits	45%

## **General University Requirements (GURs) at Western Washington University**

The General University Requirements (GURs) embody Western's belief that liberal education - education in breadth - is as important for informed and effective participation in contemporary life as specialized education.

Graduates of Western must be prepared for a complex, rapidly changing world. Students must be skilled communicators, able to critically analyze and use information, able to recognize and address the complex issues of the modern world, and able to become informed and effective citizens.

GURs engage first-year students immediately in the intellectual life of the University and helps them connect their disciplinary expertise to wider academic and cultural contexts. Western graduates complete not only a formal major in an academic or professional field, they also devote a significant part of their study to courses that are part of their GURs. Through the GURs, it is believed that students will lead fuller and more interesting lives, perceive and understand more of the world around and within them, and become engaged citizens of the world.

The program is designed to develop academic competencies and perspectives that give students the ability to:

- Analyze and communicate ideas effectively in oral, written, and visual forms
- Analyze and interpret information from varied sources, including print and visual media
- Use quantitative and scientific reasoning to frame and solve problems
- Identify and analyze complex problems
- Apply tools of technology, with an understanding of their uses and limitations
- Explore, imagine and create
- Recognize the rights, responsibilities, and privileges of participating in, and contributing as a citizen in, a diverse society
- Understand and evaluate assumptions, values, and beliefs in context of diverse local, national and global communities
- Work collaboratively and manage projects to effective completion
- Reflect on one's own work and on the ethical dimensions of academic pursuits
- Understand and assess the impacts of interactions among the individual, society, and the environment

The General University Requirements apply to all students in the College of Humanities and Social Sciences, the College of Business and Economics, the College of Sciences and Technology, the College of Fine and Performing Arts, Woodring College of Education, and Huxley College of the Environment. Students enrolled in Fairhaven College of Interdisciplinary Studies, see the Fairhaven College section of the University catalog for requirements.

### *Exceptions*

- Students transferring to Western with a Washington community college Direct Transfer Agreement Associate Degree.
- Students transferring to Western from another Washington state public baccalaureate institution whose General University Requirements were complete at the sending institution, provided the sending institute so certifies.

## **Four-Course Maximum**

A maximum of four courses from any one department may be applied to the combination of Humanities; Social Sciences; and Comparative Gender and Multicultural Studies sections of the General University Requirements. (*Art, Design, and Art History are considered to be one department, as are all foreign languages.*)

## **Grades in GUR Courses**

Courses which are to apply to General University Requirements must be taken on an "A" through "F" grading scale, except for courses designated S/U grading. They may not be taken with pass/no pass grading. Except for ENG 101, which requires a C- or better, the minimum passing grade for a GUR course is D-.

## **Attributes**

Please note the use of GUR attributes in the online Timetable of Classes. Courses which qualify as General University Requirements are designated by the appropriate attribute (ACOM, BCOM, CCOM, QSR, HUM, SSC, ACGM, BCGM, LSCI, or SCI).

## **List of General University Requirements**

The detailed list containing the full General University Requirements for the 2010-11 academic year is located at the end of this document and is also available online in the PDF format.

## **Transfer Credit to Satisfy GUR**

Transfer students from Washington state community colleges may satisfy the GUR by taking courses listed on the transfer admission section of Western's website.

Approved associate degrees from community colleges in Washington state may fulfill all General University Requirements. Students at community colleges who wish to satisfy the General University Requirements by earning an associate degree should check carefully with advisers, as only certain approved degrees will apply.

To meet the GUR, an approved associate degree is normally earned prior to initial enrollment at Western (on or off campus) as a transfer student. If any student wishes to complete such a degree in order to have it satisfy the GUR at Western, it must be earned by the time the student has 1) completed 45 credits at WWU, or 2) one calendar year has passed from initial enrollment at WWU, whichever comes later.

Western allows a maximum of 135 quarter (90 semester) credits to transfer from any combination of regionally accredited institutions, including no more than 105 quarter (70 semester) lower-division credits. Additional course work which exceeds this amount may be used to meet specific requirements, but additional credits will not be allowed to count toward the 180 credit requirement for graduation.

Completion of lower-division General University Requirements will be granted to students who have completed all of the lower-division General University Requirements at another Washington state public baccalaureate institution, providing the sending institution so certifies.

Students pursuing a second baccalaureate degree at Western after completing a Bachelor of Arts at another regionally accredited institution will have fulfilled all General University Requirements. Those who have bachelor's degrees other than the Bachelor of Arts must have their degree evaluated on a course-by-course basis to determine completion of the GUR.

**NOTE:** Certain programs may have admission standards which require the completion of the GUR prior to beginning study. Consult program advisers for details.

All degree-seeking students, on or off campus, must complete all other common requirements for baccalaureate degrees.

### **Scheduling of GUR Courses**

The first year's schedule ordinarily should investigate potential majors, explore subjects in which a student has little or no experience, sample the main fields represented in the GUR (humanities, social sciences, natural sciences), and meet basic requirements in writing and mathematics.

Students who are interested in a particular major should begin the basic work of that major. Concurrently, they should use the GUR and other courses to investigate areas of potential interest besides that major. Students who are unsure about what their major will be should explore fields in which they are, or may become, interested, by taking introductory courses in those fields. Some GUR courses will serve this purpose. It is perfectly permissible, in this exploration, to take non-GUR courses also.

This strategy may be pursued in the sophomore year. By the third quarter of the sophomore year (more or less), students who take this approach should be ready to proceed in one of several majors, and will have also laid the basis for a liberal education.

It is strongly recommended that students continue the GUR into their junior and senior years, taking courses from the GUR list in which they have become interested, and also taking non-GUR electives. By doing this, students benefit from the interplay of "liberal" and "specialized" components of their education throughout their time at Western. A few majors require completion of the GUR before entering the major.

The student should study carefully the requirements of his or her major and the course descriptions before planning courses to satisfy the General University Requirements, as some required courses in the major may also apply to General University Requirements. If questions arise, the student should confer with a credit evaluator in the Registrar's Office, OM 230.

## **University Personnel**

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#### Vice Provost for Research and Graduate Dean

Moheb Ghali, BCom, MA, PhD

#### Vice Provost for Undergraduate Education

Steven L. VanderStaay, BA, MA, PhD

Director of Academic Budgeting

Barbara Fasser, BBA, MBA

Director of Institutional Research

Ming Zhang, MS, PhD

Administrative Assistant to the Provost

Lin Stefan

Assistant to the Provost

Bev Jones

## **Academic Affairs**

Business and Economics, College of

Dean, Brian K. Burton, BA, MBA, PhD

Education, Woodring College of

Dean, Stephanie Salzman, BA, MA, EdD

Fairhaven College of Interdisciplinary Studies

Dean, Roger Gilman, BA, MA, PhD

Fine and Performing Arts, College of

Dean, Daniel Guyette, BS, MFA

Humanities and Social Sciences, College of

Dean, Brent J. Carbajal, BA, MA, PhD

Huxley College of the Environment

Dean, Bradley F. Smith, BA, MA, PhD

Sciences and Technology, College of

Dean, Arlan D. Norman, BS, PhD

Vice Provost for Research and Graduate Dean

Moheb Ghali, BCom, MA, PhD

Libraries

Dean of Libraries, Christopher Cox, BA, MA, MLS

Shannon Point Marine Center

Director, Stephen D. Sulkin, AB, MS, PhD

Extended Education and Summer Programs

Interim Executive Director, Terrell G. Williams, BS, MS, PhD

Center for International Studies

Executive Director, Douglas C. Nord, BA, MA, PhD

## **University Relations**

Associate Vice President for University Relations and Director for Government Relations

Sherry Burkey

Administrative Assistant to the Vice President

Lorie McNeill

Office of University Communications

    Director, Paul Cocke

Publishing Services

    Director, Rosemary Sterling

## **Business and Financial Affairs**

Assistant to the Vice President

    Nancy L. Phillips

Assistant Vice President for Financial Services

    Vacant

Director of Division Budgets

    Vacant

Business Services

    Director, Sally McKechnie, BA

Financial Services

    Director, Teresa Mroczkiewicz, BA, CPA, CPP

Environmental Health and Safety

    Director, Gayle Shipley, BS, MS

Human Resources

    Director, Chyrel Wolfe-Lee, BA, PHR

Facilities Management

    Director, Donald (Tim) Wynn, PE, BS, MBA, MS

Public Safety

    Director, Randy Stegmeier, BS, MPA

Capital Budget

    Director, Renée Y. Roberts, BBA, MBA

## **Student Affairs/Academic Support Services**

Administrative Assistant to the Vice President

    Elizabeth Mason, BA

Assistant Vice President for Student Affairs and Academic Support Services/Special Assistant to the President for Diversity

    Kunle Ojikutu, BS, MPA, PhD

Assistant Vice President for Student Affairs and Academic Support Services/Registrar

    Susanna Yunker, BA, MEd

Budget and Administration/Student Affairs and Academic Support Services

    Director, Linda P. Beckman, BA, MBA

Dean of Students

    Ted Pratt, BA, MEd

Special Assistant to the Vice President for Student Affairs and Academic Support Services

    Sara Wilson, BA, MS

Academic and Career Development Services

    Director, Tina Loudon, BEd, MEd

Admissions and Enrollment Planning

    Director, Karen Copetas, BA, MS

Athletics

    Director, Lynda Goodrich, BA, MEd

Bookstore

    General Manager, Peg Godwin, BA

Campus Community Coalition

    Coordinator, Lyndie Case, BA

Campus Recreation Services

    Director, Marie Sather, AA, BA, MEd

Counseling Center

    Director, Nancy Corbin, AB, MEd, PhD

disAbility Resources for Students

    Director, David Brunnemer, BA, MSpEd

Financial Aid

    Director, Clara Capron, BS, MEd

New Student Services/Family Outreach

    Director, Anna Carey, BA, MEd

Prevention and Wellness

    Director, Elva Giddings, BA, MS

Student Health Center

    Director, Emily Gibson, AB, MD

Student Life Office

    Associate Dean, Sherry Mallory, BA, PhD

Student Outreach Services

    Director and Associate Dean, Renee Collins, BA, MEd

University Residences

    Director, Willy Hart, BA, MS

University Dining Services

    Resident District Manager, Ira Simon, BS

Viking Union Facilities

    Director, Jim Schuster, AA, BA, MEd

Viking Union Student Activities

    Director, Kevin Majkut, BA, MA

**Presidents of the Faculty Senate**

2009-10

Daniel Larner

2008-09

Matthew Liao-Troth

2007-08

Jeff Newcomer

2006-07	Ira Hyman
2005-06	William Lyne
2004-05	Jim Stewart
2003-04	James Loucky
2002-03	John Purdy
2001-02	Kathleen Kennedy
2000-01, 1989-90	Christopher A. Suczek
1999-00	Mark Bussell
1998-99	E. Leroy Plumlee
1997-98	James W. Hearne
1996-97	George T. Cvetkovich
1995-96	Kenneth Hoover
1994-95	Kris A. Bulcroft
1993-94	Kathleen M. Knutzen
1991-93	John Mason (2terms)
1990-91	Richard W. Thompson
1987-89	George E. Mariz (2terms)
1986-87	Harry Jackson
1985-86	Robert M. Thorndike

Assistant to the Faculty Senate: Rose Marie Norton-Nader

### **Presidents Emeritus**

KAREN W. MORSE

President Emeritus. BS, Denison University; MA, PhD, University of Michigan.

PAUL J. OLSCAMP

President Emeritus. BA, MA, University of Western Ontario; PhD, University of Rochester.

CHARLES J. FLORA

President Emeritus. BS, Purdue University; MEd, EdD, University of Florida.

KENNETH P. MORTIMER

President Emeritus. AB, MBA, University of Pennsylvania; PhD, University of California-Berkeley.

### **Dean Emeritus**

DENNIS R. MURPHY

Dean Emeritus of College of Business and Economics, BA, MA, Western Washington University; PhD, Indiana University (Bloomington).

### **Distinguished Service Professor of Western Washington University**

PETER J. ELICH

Distinguished Service Professor Emeritus of the University. BA, University of Washington; MEd, Western Washington College of Education; PhD, University of Oregon.

PAUL J. OLSCAMP

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## **RETIRED FACULTY - EMERITUS**

### **A**

#### **HENRY L. ADAMS**

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#### **PHILLIP R. AGER**

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#### **M. CHAPPELLE ARNETT**

Professor Emeritus of Physical Education. BS, Centenary College; MS, Purdue University; EdD, University of Missouri.

### **B**

#### **HERBERT L. BAIRD, JR.**

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#### **BONNIE J. BARTHOLD**

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#### **MYRL E. BECK, JR.**

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#### **JOSEPH D. BETTIS**

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**BRUCE D. WONDER**

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**EVELYN C. WRIGHT**

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**Z****DAVID W. ZIEGLER**

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**LINDA A. ZURFLUH**

**FACULTY****A**

Abedi, Amir / Political Science  
Abel, Troy / Environmental Studies: Policy, Planning, Education and Geography  
Acevedo-Gutierrez, Alejandro / Biology  
Akinrinade, Babafermi / Fairhaven College  
Alfers, Sandra / Modern and Classical Languages  
Aller, Warren / Educational Administration  
Alper, Donald / Political Science  
Amiran, Edoh Y. / Mathematics  
Amundson, Garth / Art  
Anderson, Amy / Mathematics  
Anderson, Kathryn L. / Fairhaven  
Anderson, Kristin L. / Sociology  
Anderson, Roger A. / Biology  
Antil, Laurence / Teacher Education Outreach Programs  
Antholt, Sharron / Art  
Anthony-Cahill, Spencer J. / Chemistry  
Armstrong, Jeanne / Library  
Askari, Kaveh / English  
Avila Cervera, Carmen / TESOL/Elementary Education

**B**

Babcock, Scott / Geology  
Bach, Andrew J. / Environmental Studies: Policy, Planning, Education and Geography  
Baharav, Eva / Communication Sciences and Disorders  
Baker-Sennett, Jacquelyn / Human Services and Rehabilitation  
Bajuk, Mike / Dance  
Bajwa, Deepinder / Decision Sciences  
Barrett, W. Louis / Physics and Astronomy  
Beasley, Bruce H. / English  
Bedi, Robinder / Psychology  
Beisenherz, Paul / Teacher Education Outreach Programs  
Bendetti, Dina / Teacher Education Outreach Programs  
Benson, Earl D. / Finance and Marketing  
Berardi, Gigi / Environmental Studies: Policy, Planning, Education and Geography  
Bianco, Christopher / Music  
Bingham, Brian L. / Environmental Sciences  
Biswas, Bidisha / Political Science  
Bodensteiner, Leo R. / Environmental Sciences  
Boland, Elizabeth / Human Services and Rehabilitation  
Borda, Emily / Science Education  
Bornzin, Gary / Fairhaven College  
Boudreaux, Andrew/Physics and Astronomy  
Bover, David / Computer Science  
Bower, John L. / Fairhaven College  
Boxberger, Daniel L. / Anthropology  
Bradley, Karen / Sociology  
Brand, Rob / Elementary Education  
Braun, Janet / Engineering Technology  
Briggs, Roger D. / Music  
Brilla, Lorraine / Physical Education, Health and Recreation  
Broadhagen, Marion / Biology  
Brown, Nicole / English  
Brown, Richard / Theatre Arts  
Buckley, Patrick H. / Environmental Studies: Policy, Planning, Education and Geography  
Bulcroft, Richard / Sociology  
Bunn, Andrew / Environmental Sciences  
Burgess, Donald / Secondary Education

Burton, Brian K. / Management  
Burtz, Randall / Physical Education, Health and Recreation  
Bussell, Mark E. / Chemistry  
Byrne, Christina A. / Psychology  
Byrtek, Michelle / Mathematics

**C**

Camlin, Cynthia / Art  
Campbell, Sarah K. / Anthropology  
Cancilla, Devon / Environmental Sciences  
Caplan-Auerbach, Jacqueline / Geology  
Carbajal, Brent J. / Modern and Classical Languages  
Carnell, Cher / Dance  
Carney, Joanne / Instructional Technology and Elementary Education  
Carroll, David / Elementary Education  
Chalice, Donald R. / Mathematics  
Chalmers, Gordon / Physical Education, Health and Recreation  
Chan, Victor / Mathematics  
Chen, Paul / Political Science  
Chu, Marilyn / Elementary Education  
Clark, Douglas / Geology  
Clark, Timothy / Chemistry  
Clark-Langager, Sara / Canadian-American Studies  
Cohen, Jessica / Mathematics  
Conton, Leslie / Fairhaven  
Coskie, Tracy / Elementary Education  
Costanzo, Susan / History  
Coughlin, Eileen / Adult and Higher Education  
Coulter, Gail / Special Education  
Cox, Christopher / Library  
Crider, Juliet / Geology  
Cunningham, Mick / Sociology  
Curgus, Branko / Mathematics  
Curley, David L. / Liberal Studies  
Currier, Deborah Greer / Theatre Arts  
Czopp, Alexander / Psychology

**D**

Daffron, Sandra / Educational Leadership - Continuing and College Education  
Dale, Carolyn / Journalism  
Danysk, Cecilia A. / History  
Darling, Rieko M. / Communication Sciences and Disorders  
Davis, Nanette / Sociology  
de Almeida, Cristina / Art  
de la Paz, Oliver / English  
Dean, James / Canadian-American Studies  
DeBari, Susan / Geology  
DeChaine, Eric / Biology  
Deguchi, Masanori / Linguistics and Modern and Classical Languages  
Deiro, Judith Anne / Human Services and Rehabilitation  
Denham, Kristin / English  
Dennett, Nolan A. / Dance  
Derrington, MaryLynne / Educational Administration  
Devenport, Jennifer / Psychology  
Deylami, Shirin / Political Science  
Diehl, Peter D. / History  
Dietrich, Dawn Y. / English  
Dietrich, William / Environmental Studies: Policy, Planning, Education and Geography  
Dillman, Steven H. / Technology

Dinnel, Dale L. / Psychology  
Donnellan, Grant / Music  
Donovan, Deborah / Biology  
Donovan, Todd A. / Political Science  
Douglas, Kendra / Modern and Classical Languages, and Linguistics  
Downing, Thomas E. / Philosophy  
Dozier, Raine / Human Services and Rehabilitation  
Dubenion-Smith, Shannon / Modern and Classical Languages  
Dunn, Craig / Management  
Dupont, Brandon / Economics  
Durham, Yvonne / Economics  
Du Rocher Schudlich, Tina / Psychology

**E**

Eaton, Marie D. / Fairhaven  
Eblen, Anna / Communication  
Emory, Steven R. / Chemistry  
Engebretson, David C. / Geology  
Englesberg, Paul / Educational Foundations/Special Education  
Estrada, Lawrence / Fairhaven

**F**

Fabiano, Patricia / Educational Leadership - Student Affairs Administration  
Fast, Margaret / Library  
Fein Berg, Seth /  
Feingold, David / Music  
Feodorov, John / Fairhaven College  
Fewings, David R. / Finance and Marketing  
Fiero, Petra / Modern and Classical Languages  
Finlay, Janet / Psychology  
Fitzpatrick, Timothy / Music  
Fizzano, Perry / Computer Science  
Fleishman, Steven / Engineering Technology  
Flores, Maria Timmons / TESOL/Elementary Education  
Folk, Holly / Liberal Studies  
Forgays, Deborah K. / Psychology  
Fox, Sheila / Special Education  
Freeman, Jeanne / Physical Education, Health and Recreation  
French, Kristen / Elementary Education  
Friday, Christopher C. / History  
Friesen, John / Music  
From, Milton / Physics and Astronomy

**G**

Gammon, Steven / Chemistry  
García, Hugo / Modern and Classical Languages  
García, Joseph E. / Management  
Gardner, Richard J. / Mathematics  
Garfinkle, Steven J. / History  
Geisler, Marc S. / English  
Gentile, Lisa N. / Chemistry  
Ghali, Moheb A. / Economics/Vice Provost for Research and Dean, Graduate School  
Giffen, Allison / English  
Gilbertson, David / Accounting  
Gilbertson, John / Chemistry  
Gilliam, Jeffrey P. / Music  
Gleeson, Madge / Art  
Globerman, Steven / Economics/Kaiser Professor of International Business and Director, Center for International Business  
Goebel, Bruce / English

Gogröf-Voorhees, Andrea / Liberal Studies  
Goodvin, Rebecca / Psychology  
Gossett, J. Gabriel / Library  
Goto, Stanford / Educational Leadership - Continuing and College Education  
Grady, Thomas / Engineering Technology  
Graham, James / Psychology  
Green, Gaye Leigh / Art  
Grimm, Jeffrey / Psychology  
Gruman, Diana / Psychology  
Guelker-Cone, Leslie / Music  
Guess, Carol / English  
Guyette, Charlotte / Theatre Arts  
Guyette, Daniel G. / Theatre Arts  
Gynan, Shaw N. / Modern and Classical Languages

**H**

Hagen, Daniel A. / Economics  
Haines, Susan / Dance  
Hall, Pamela L. / Finance and Marketing  
Hamblin, Vicki L. / Modern and Classical Languages  
Hamilton, Bruce / Music  
Hammond, Joyce D. / Anthropology  
Hanania, Cecile / Modern and Classical Languages  
Hansen, Julia / Economics  
Hansen, Thor A. / Geology  
Harris, F. David / Engineering Technology  
Harris, John / Journalism  
Hartenstine, David / Mathematics  
Hartsfield, Nora A. / Mathematics  
Harwood, Angela M. / Secondary Education  
Haskell, Todd / Psychology  
Haug, Peter / Decision Sciences  
Hazard, Erin / Art  
Hearne, James W. / Computer Science  
Heckathorn, Jill / Physical Education, Health and Recreation  
Helfield, James / Environmental Sciences  
Helfgott, Leonard M. / History  
Helling, Julie / Fairhaven  
Helms, Ronald / Sociology  
Hendryson, MaryAnn / Economics  
Henniger, Michael L. / Associate Dean/Elementary Education  
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Henson, Steven / Economics  
Hirsch, David / Geology  
Hochstetler, Laurie / History  
Hodges, Hart L. / Economics/Director, Center for Economics and Business Research  
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Hoelscher, Karen J. / Elementary Education  
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Homann, Peter S. / Environmental Sciences  
Hooper, David / Biology  
Horne, Cynthia / Political Science  
Hossain, Kimberly / Liberal Studies  
Housen, Bernard A. / Geology  
Howard, Brad / Journalism  
Howard-Snyder, Daniel / Philosophy  
Howard-Snyder, Frances / Philosophy  
Howell, Kenneth W. / Special Education  
Hsueh, Vicki / Political Science

Hua, Stella / Decision Sciences  
Hudson, Hud / Philosophy  
Hughes, Eileen / Elementary Education/Early Childhood Education  
Hutchinson, Penny / Dance  
Hutton, Marguerite R. / Accounting  
Hyatt, Keith / Special Education  
Hyman, Ira E. Jr. / Psychology

**I**

Inverarity, James / Sociology  
Israels, Chuck / Music

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Jack, Dana C. / Fairhaven  
Jancic, Mitchell / TESOL/Elementary Education  
Janson, Carol / Art  
Jantzen, Kelly J. / Psychology  
Jantzen, McNeel / Psychology  
Jaye, Cara / Art  
Jelaca Jovanovic, Milica / Music  
Jewett, Robert I. / Mathematics  
Jimerson, Randall C. / History  
Johnson, Brad L. / Physics and Astronomy  
Johnson, Diane / Modern and Classical Languages  
Johnson, James L. / Computer Science  
Johnson, Jerry L. / Mathematics  
Johnson, Mildred / Mathematics  
Johnson, Nancy J. / English  
Johnson, Paula / Elementary Education  
Johnson, Vernon D. / Political Science  
Jones, Diana / Human Services and Rehabilitation  
Jongejan, Anthony / Instructional Technology and Educational Leadership  
Jull, Pamela / Sociology  
Jusak, Debra S. / Computer Science

**K**

Kamena, T.H. / Canadian-American Studies  
Kanhai, Rosanne D. / English  
Kanov, Jason M. / Management  
Karlberg, Michael / Communication  
Kasprisin, Lorraine / Educational Foundations; Secondary Education  
Keppie, Christina / Modern and Classical Languages  
Keiper, Robert / Secondary Education  
Keiper, Timothy / Instructional Technology and Secondary Education  
Keller, Jennifer / Journalism  
Kelley, Bridget / Special Education  
Kennedy, Kathleen A. / History  
Kim, Ilhyung / Decision Sciences  
Kim, Jongwook / Management  
Kim, Jongwook / MBA  
Kincaid, Susan / Human Services and Rehabilitation  
King, Jeff / Psychology  
King, Rosalie Rosso / Art  
Kitto, Kathleen L. / Engineering Technology  
Kleinknecht, Ron / Psychology  
Knabb, Shawn / Economics

Koetje, Todd A. / Anthropology  
Kong, Sophie / Finance and Marketing  
Korsmo, John / Human Services and Rehabilitation  
Krieg, John / Economics/Director, Office of Survey Research  
Kriz, George S. / Chemistry  
Krogh, Suzanne L. / Elementary Education/Early Childhood Education  
Kuntz, Mark / Theatre Arts  
Kuntz, Pam / Dance

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Lambert, Michael Chuck / Special Education  
Landis, Wayne G. / Environmental Sciences  
Larner, Daniel M. / Fairhaven  
Larsen, Donald / Educational Administration  
Larson, Bruce E. / Secondary Education  
Larson, Kristen / Physics and Astronomy  
Lawrence, Molly / Secondary Education  
Lay, William H. / Educational Foundations/Special Education  
Leaf, David S. / Biology  
Lee, Ee Lin / Communication  
Leger, Janelle / Advanced Materials Science and Engineering  
Lehman, Barbara / Psychology  
Lemm, Kristi / Psychology  
Leonard, Kevin A. / History  
Leonhardt, Eric C. / Engineering Technology  
Lewis, Arleen C. / Psychology  
Lewis, L. Floyd / Decision Sciences  
Liao-Troth, Matthew / Management  
Lin, Ying / Engineering Technology  
Li, Ying / Physical Education, Health and Recreation  
Lindsey, Billie / Physical Education, Health and Recreation  
Linneman, Scott / Geology  
Livingston, Mary Morgan / Human Services and Rehabilitation  
Lobeck, Anne / English  
Lois, Jennifer / Sociology  
Lopez, A. Ricardo / History  
Lopresti, Robert / Library  
Lorenzen, Michael / Library  
Lortz, James E. / Theatre Arts  
Loucky, James / Anthropology  
Love, Edwin / Finance and Marketing  
Lundein, Kathleen / English  
Luo, Baozhen / Sociology  
Lyne, William / English

**M**

McClanahan, Lauren / Secondary Education  
McCormick, Patrick F. / Art  
McDonald-Miszczak, Leslie / Psychology  
McDowell, Stephen / Mathematics  
McInnis, Raymond / Library  
McKell, Eric K. / Engineering Technology  
McLaughlin, John F. / Environmental Sciences  
McLean, Kate C. / Psychology and American Cultural Studies  
Madsen, Leza (Elizabeth) / Library  
Madunic, Marko / Management  
Magee, Kelly / English  
Mahoney, Kristin / English

Majors, Diane / TESOL/Elementary Education  
Mana, Michael / Psychology  
Mancuso, Susan K. / Adult and Higher Education  
Mariz, George E. / History  
Markosian, Ned / Philosophy  
Markworth, Kimberly / Mathematics  
Marrs, Lawrence W. / Special Education and Educational Administration  
Marshall, Robert C. / Anthropology  
Martin, LeaAnn / Physical Education, Health and Recreation  
Mathers-Schmidt, Barbara / Communication Sciences and Disorders  
Matthews, Geoffrey B. / Computer Science  
Matthews, Robin A. / Environmental Sciences  
Mears, Derrick / Physical Education, Health and Recreation  
Medler, Michael / Environmental Studies: Policy, Planning, Education and Geography  
Meehan, J. Michael / Computer Science  
Melious, Jean O. / Environmental Studies: Policy, Planning, Education and Geography  
Mendes, Sebastian / Art  
Merrill, Rick / Dance  
Metzger, Mary J. / English  
Meyer, David / Music  
Miles, John C. / Environmental Studies: Policy, Planning, Education and Geography  
Miles, Scott / Environmental Studies: Policy, Planning, Education and Geography  
Miller, Barbara / Art  
Miller, Brenda / English  
Miller, Kate / Women Studies, and American Cultural Studies  
Miller, Matthew / Elementary Education  
Mills, Perry F. / Theatre Arts  
Miner, Benjamin / Biology  
Miran, Jonathan / Liberal Studies  
Mitchell, Robert J. / Geology  
Mogford, Liz / Sociology  
Montoya-Lewis, Raquel / Fairhaven College of Interdisciplinary Studies and American Cultural Studies  
Mookherjee, Debnath / Environmental Studies: Policy, Planning, Education and Geography  
Morris, Jason / Engineering Technology  
Morrow, Kacey / Art  
Morton, Todd / Engineering Technology  
Mottner, Sandra / Finance and Marketing  
Moulds, Cynthia / Women Studies  
Moulds, Lisa / Women Studies  
Moyer, Craig L. / Biology  
Muller-Parker, Gisèle / Biology  
Murphy, Amanda, / Chemistry  
Murphy, Dennis R. / Economics/Dean Emeritus, CBE  
Murphy, Sean / Liberal Studies  
Myers, O. Eugene / Environmental Studies: Policy, Planning, Education and Geography

## N

Naylor, Michael / Mathematics  
Neem, Johann / History  
Nelson, David M. / Economics  
Nelson, George / Science Education and Physics and Astronomy  
Nelson, Philip A. / Computer Science  
Newcomer, Jeffrey / Engineering Technology  
Nicholas, Trula / Human Services and Rehabilitation  
Nielsen, Carolyn / Journalism  
Nolet, Victor / Secondary Education  
Norman, Arlan / Chemistry  
Nyman, Adam / Mathematics

**O**

Ohana, Chris / Elementary Education  
Olney, Thomas J. / Finance and Marketing  
O Murchu, Niall / Fairhaven College  
O'Neil, Gregory / Chemistry  
O'Reilly, Maureen E. / Theatre Arts  
Osborne, Martin L. / Computer Science  
Oslapas, Arunas P. / Engineering Technology  
Otto, Joann / Biology  
Ousselin, Edward / Modern and Classical Languages

**P**

Paola, Suzanne L. / English  
Paredes Mendez, Maria F. / Modern and Classical Languages  
Park, Douglas / English  
Parker, Jennie / Special Education  
Parris, Kristen D. / Political Science  
Partsch, Cornelius / Modern and Classical Languages  
Patrick, David L. / Chemistry  
Pearce, Scott / Liberal Studies  
Penland, Diane / Teacher Education Outreach Programs  
Perry, Tara / Communication  
Peters, Kimberly / Communication Sciences and Disorders  
Peterson, Andrea / Library  
Peterson, Merrill A. / Biology  
Pierce, George / Adult and Higher Education  
Pilgrim, Tim A. / Journalism  
Pillitteri, Lynn / Biology  
Pine, Judith / Anthropology  
Piper, Paul / Library  
Poon, Cecilia Siu-Wah / Library  
Prim, Merle M. / Psychology  
Prody, Gerry A. / Chemistry  
Pulver, Gregory L. / Theatre Arts  
Purdue, Jeffrey / Library  
Purdue, Seiko Atsuta/ Art  
Purdy, John / English

**Q**

Qualley, Donna J. / English

**R**

Rangel Guerrero, Daniel / Modern and Classical Languages  
Raymond, Elizabeth / Chemistry  
Remmel, Ethan / Psychology  
Reynolds, Mary Ann / Accounting  
Richter, Wayne / East Asian Studies  
Riddle Buly, Marsha / Elementary Education  
Riemann, Andreas / Physics and Astronomy  
Rines, Kenneth / Physics and Astronomy  
Riordan, Catherine / Psychology  
Ritter, Harry R., Jr. / History  
Ritter, Marian B. / Library  
Rivera, Alicia Maria / English  
Robinson, Leanne / Instructional Technology and Special Education  
Roehl, Thomas / Management  
Roelofs, Matthew R. / Economics  
Romano, Rosalie / Secondary Education

Rose, Jacqueline / Psychology  
Ross, Steven C. / Decision Sciences  
Rossiter, David / Environmental Studies: Policy, Planning, Education and Geography  
Row, Brandi / Physical Education, Health and Recreation  
Rowe, Dan First Scout / Fairhaven College  
Russell, Keith / Physical Education, Health and Recreation  
Rutschman, Carla J. / Music  
Rutschman, Edward / Music  
Rybczyk, John M. / Environmental Sciences  
Rystrom, David S. / Finance and Marketing

**S**

Safavi, Farrokh / Finance and Marketing  
Salazar, Debra J. / Political Science  
Sampaio, Christina / Psychology  
Sanders, George D. / Accounting  
Sandvig, J. Christopher / Decision Sciences  
Sapin, Julia / Art  
Sarkar, Amites / Mathematics  
Sass, Mary / Management  
Sattler, David / Psychology  
Saxton, David / Theatre and Dance  
Schaeffer, Christine / Teacher Education Outreach Programs/Secondary Education  
Schermer, Elizabeth R. / Geology  
Schleef, Linda / Special Education  
Schiller, Preston / Canadian-American Studies  
Schudlich, Tina du Rocher / Psychology  
Schulze, Sandra / Biology  
Schwarz, Dietmar / Biology  
Schwartz-Dupre, RaeLynn / Communication  
Schwede, Walter / Music  
S'eiltin, Tanis M. / Fairhaven  
Senge, Stephen / Accounting  
Serrano-Moreno, José / Biology  
Shen, Yun-Qiu / Mathematics  
Sheppard, Shelby / Secondary Education  
Shipley, Dawn / Linguistics  
Shull, David / Environmental Sciences  
Sim, Khim / Accounting  
Simone, Genét / Teacher Education Outreach Programs  
Singh-Cundy, Anu / Biology  
Singleton, Sara / Political Science, and Canadian-American Studies  
Singleton, William R. / Accounting  
Skillman, Trish / TESOL/Elementary Education  
Slentz, Kristine L. / Special Education  
Smirnov, Serge / Chemistry  
Smith, Bradley F. / Environmental Sciences and Environmental Studies: Policy, Planning, Education and Geography  
Smith, Kenton D. / Art  
Smith, Peter / Library  
Smith, Steven H. / Accounting  
Smith, William E. / English  
Sofield, Ruth / Environmental Sciences  
Sommer, Lesley / Music  
Spiegel, Paul / Chemistry  
Springer, Mark C. / Decision Sciences  
Stangl, Paul / Environmental Studies: Policy, Planning, Education and Geography  
Stephan, Elizabeth / Library  
Stevens, Scott / English

Stevenson, Joan C. / Anthropology  
Stewart, James E. / Physics and Astronomy  
Stewart, Mart / History  
Stickley, Beth / Special Education  
Stoops, Robert F., Jr. / Liberal Studies  
Storer, Paul A. / Economics/Chair, Departments of Economics  
Stout, Karen Rohrbauck / Communication  
Suczek, Christopher A. / Geology  
Sula, Ozan / Economics  
Sulkin, Stephen / Shannon Point Marine Center / Biology  
Suprak, David / Physical Education, Health and Recreation  
Sylvester, Charles D. / Physical Education, Health and Recreation  
Symons, Lawrence / Psychology

**T**

Tag, Stan / Fairhaven  
Tag, Sylvia / Library  
Takagi, Midori / Fairhaven  
Takele, Seda / Physics and Astronomy  
Taylor, Audrey / Accounting  
Teachman, Jay / Sociology  
Terich, Thomas A. / Environmental Studies: Policy, Planning, Education and Geography  
Thomas, Bob / Library  
Thompson, Philip / Economics  
Thompson, Roger R. / History  
Thorndike-Christ, Tracy / Special Education  
Tomasi, Massimiliano / Modern and Classical Languages  
Tomlonovic, Kathleen / Modern and Classical Languages  
Trenee, Stephanie / Mathematics  
Trent, Carol / Biology  
Trimble, Joseph E. / Psychology/Educational Administration and Foundations  
Trueblood, Kathryn / English  
Truschel, Louis W. / History  
Tsunokai, Glenn / Sociology  
Tuxill, John / Fairhaven College  
Tyran, Craig K. / Decision Sciences  
Tyran, Kristi / Management

**U**

Ural, Saim / Computer Science

**V**

Vajda, Edward J. / Modern and Classical Languages  
van Boer, Bertil H., Jr. / Music  
VanderStaay, Steven L. / English  
Van Epps, Heather / Biology  
Vassdal Ellis, Elsi M. / Art  
Vawter, Richard D. / Physics and Astronomy  
Vernacchia, Ralph A. / Physical Education, Health and Recreation  
Verner, Jane / Human Services and Rehabilitation  
Vohs, Rosemary / Elementary Education  
Vulic, Kathryn / English  
Vyvyan, James R. / Chemistry

**W**

Wallin, David O. / Environmental Sciences  
Wang, Grace / Environmental Studies: Policy, Planning, Education and Geography  
Wang, Jianglong / Communication

Warner, Daniel M. / Accounting and Management  
Watt, Peggy / Journalism  
Wayne, Kate / Elementary Education  
Webb, Sheila / Journalism  
Weir, Sara J. / Political Science  
Whalley, Pamela / Economics/Director, Center for Economic and Financial Education  
Whitcomb, Dennis / Philosophy  
Wilhelm, Wendy J. / Finance and Marketing  
Wise, Christopher / English  
Wolpow, Ray / Secondary Education  
Woods, Steven / Communication  
Wonder, Nicholas X. / Finance and Marketing  
Wright, Diana E. / History

**X**

Xing, Zhiqun Janet / Modern and Classical Languages

**Y**

Yip-Hoi, Derek / Engineering Technology  
Young, Jeff / Biology  
Young, Kathleen / Anthropology  
Ypma, Tjalling J. / Mathematics  
Yu, Ning / English  
Yusa, Michiko / Modern and Classical Languages

**Z**

Zaferatos, Nicholas / Environmental Studies: Policy, Planning, Education and Geography  
Zeine, Lina / Communication Sciences and Disorders  
Zhang, Jianying / Mathematics  
Zhang, Zhe George / Decision Sciences  
Zhu, David / Accounting  
Zoro, Eugene S. / Music

## Libraries

### Librarians

**CHRISTOPHER COX** (2008) Dean and Professor. MLS, The State University of New York; MA, University of Connecticut; BA, Susquehanna University.

**JEANNE ARMSTRONG** (1997) Associate Professor. BA, University of Dayton; MA, Rosary College Graduate School; PhD, University of Arizona.

**MARGARET FAST** (1997) Associate Professor. BA, Mills College; MA, University of British Columbia; MLS, State University of New York-Albany.

**GABRIEL GOSSETT** (2009) Instructor, BA, University Wisconsin-Milwaukee; MLIS, University Wisconsin-Madison

**ROBERT LOPRESTI** (1987) Associate Professor. BA, Juniata College; MLS, Rutgers, The State University.

**MICHAEL LORENSEN** (2010) Asst Dean for Public Services and Associate Professor; PhD, Central Michigan University; ME, Ohio University; MLS, Kent State University

**LEZA (ELIZABETH) MADSEN** (2002) Associate Professor. BA, Western Washington State College; MLS, University of Hawaii; MA, Stanford University.

**ANDREA PETERSON** (1999) Associate Professor. BA, University of Utah; MLS, Indiana University.

**PAUL PIPER** (1997) Associate Professor. BS, MFA, University of Montana; MLIS, University of Hawaii.

**CECILIA SIU-WAH POON** (2000) Associate Professor. BA, University of South Florida; MLS, Indiana University.

**JEFF PURDUE** (1999) Associate Professor. BA, MA, University of Illinois at Chicago; MLS, Dominican University, River Forest, Illinois.

**MARIAN A. RITTER** (1969) Associate Professor. BME, MLS, University of Portland.

**PETER A. SMITH** (1990) Associate Professor. BA, MA, MLS, Wayne State University.

**ELIZABETH A. STEPHAN** (2008) Assistant Professor. BA, Northwest Missouri State University; MLS, University of Wisconsin-Madison.

**SYLVIA TAG** (1997) Associate Professor. BA, The Colorado College; MLIS, University of Iowa.

**BOB THOMAS** (2006) Assistant Professor. BS, University of the State of New York; MLIS, University of Washington.

## Degrees and Certificates

Degrees granted from August 2008 to June 2009, inclusive:

Master of Education	83
Master of Arts	69
Master of Science	64
Master of Music	5
Master of Business Administration	30
Master in Teaching	52
Bachelor of Arts in Education	161
Bachelor of Arts	2,348
Bachelor of Science	564
Bachelor of Fine Arts	11
Bachelor of Music	19
Total	3,406
<i>Recommended for certification to the State Superintendent for Public Instruction — August 2008 to June 2009, inclusive:</i>	
Residency Teacher Certificate	286

# **Appendix A- WWU Policies on Equal Opportunity/Nondiscrimination, Affirmative Action, Sexual Harassment, Reasonable Accommodation**

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## **PROVIDING EQUAL OPPORTUNITY AND NONDISCRIMINATION (POL-U1600.02)**

Policy applies to all employees, students, agents, groups, individuals, and organizations that use university facilities and other members of the university community to the extent provided by law.  
Authority: Titles VI and VII of the Civil Rights Act of 1964, Title IX of the Education Amendments of 1972, Sections 503 and 504 of the Rehabilitation Act of 1973, the Age Discrimination of 1967, the Vietnam Era Veterans Readjustment Assistance Act of 1972, the Americans with Disabilities Act of 1990, ADA Amendments Act of 2008, the Civil Rights Act of 1991, the Veteran's Employment Opportunities Act of 1998, and the Washington State Law Against Discrimination, Chapter 49.60 RCW.

1. The University is Committed to Providing Equal Employment Opportunity and Prohibiting Illegal Discrimination in All Aspects of Employment and for Students in Academic Programs
2. Illegal Discrimination is Prohibited - Discrimination on the basis of race, color, creed, religion, national origin, sex, age, disability, marital status, veteran status, and sexual orientation including gender expression or identity is illegal and prohibited.
3. The President, as Delegate of the Board of Trustees, Affirms the University Shall Comply With Applicable Laws

The President or the President's delegate shall:

- A. Develop, monitor and enforce university policies governing recruitment and selection to remove barriers to equal employment opportunity and prevent illegal discrimination.
  - B. Ensure that promotion and hiring decisions are in accordance with the principles of equal employment opportunity.
  - C. Administer personnel actions such as hiring, promotion, separation, compensation, benefits, transfers, layoffs, returns from layoff, university-sponsored training, education, tuition assistance, and social and recreational programs with fairness and equity.
  - D. Prohibit illegal discrimination in the recruitment and admission of students, and in the operation of all university programs, activities and services.
  - E. Cooperate with federal and state agencies in fulfilling its obligations under the laws of the United States and the State of Washington.
4. All Members of the University Community Ensure That Commitment to Equal Opportunity and the Nondiscrimination is an Integral Part of WWU
  5. The Board of Trustees Pledges That Every Reasonable Effort is Made to Provide The Resources Necessary to Implement This Policy
  6. The University Provides an Internal Procedure for Reporting Discrimination Individuals who believe they have been subject to discrimination based on a legally protected category are encouraged to report incidents to the proper internal and/or external authorities, as outlined in the PRO-U1600.02A Discrimination Complaint Procedure.
- Effective Date: June 9, 2009. Approved By: President Bruce Shepard and Executive Policy Group

## **IMPLEMENTING AFFIRMATIVE ACTION PROGRAM (POL-U1600.05)**

Policy applies to university employees

Definition: The Affirmative Action Program (AAP) shall include: ♦ equal opportunity and affirmative action policies and methods for their dissemination ♦ responsibility for implementation ♦ identification of problem areas ♦ action-oriented programs designed to recruit, employ and promote qualified members of targeted populations, to include women, minorities, people with disabilities and veterans ♦ internal audit and reporting systems.

The Affirmative Action Plan is a working document that identifies areas of underutilization in the work force, proportional to availability, analyzes personnel actions, hiring practices; and goal achievement, and serves as a basis for updating the Affirmative Action Program

1. The University Establishes an AAP and Reports the Results of its Efforts in an Affirmative Action Plan (Plan)  
The results of the AAP shall be reported annually in an updated Plan.  
The content of the Plan shall conform to current state and federal guidelines and will represent the university's good faith efforts to eliminate barriers to recruit and retain targeted populations for equal employment opportunity.
2. The Board of Trustees Pledges its Commitment to Affirmative Action  
The Board of Trustees delegates responsibility for promoting and enforcing the AAP to the President of the university.
3. The President Carries Out This Responsibility by:
  - A. Designating the Vice Provost for Equal Opportunity & Employment Diversity as the official responsible for preparation of the Plan and overall implementation of the AAP.
  - B. Delegating responsibility for ensuring the success of the AAP to other university employment officials, managers and supervisors.
  - C. Ensuring that the resources necessary for the implementation of this policy remain a priority in the university budget.
4. The Vice Provost for Equal Opportunity and Employment Diversity (Vice Provost) Reports to the President on Matters Regarding Affirmative Action
5. The Vice Provost has the Authority to Administer the AAP by:
  - A. Making the affirmative action policy available to all employees and the public.
  - B. Maintaining discrimination compliant procedures.
  - C. Facilitating the informal resolution of discrimination complaints.
  - D. Receiving and investigating complaints of illegal discrimination and making recommendations for solutions.
  - E. Serving as liaison between the university and the state and federal enforcement agencies regarding externally filed complaints and compliance reviews.
  - F. Keeping the university informed concerning developments in discrimination law and taking appropriate steps to assure timely applications of new regulations in all administrative or operating units of the university.
  - G. Monitoring employment recruitment processes and work climate for continual compliance with the requirements of anti-discrimination law.
  - H. Facilitating compliance with equal opportunity regulations in programs and services provided to students and the public.
  - I. Preparing the annual Plan which measures progress, identifies problem areas, and sets goals and providing the Plan to the President for review and signature.
  - J. Preparing reports, statistics, and data which delineate and quantify various aspects of the policy, and planning for internal analysis as required by federal and state agencies.
  - K. Maintaining internal and external awareness of the existence and value of the AAP.
  - L. Developing and overseeing effective affirmative action/equal employment opportunity training programs.
6. Vice Presidents and Deans Are Responsible to Ensure the Success of the AAP in Their Divisions by:
  - A. Participating in the development and implementation of action-oriented programs focused on underutilized groups.
  - B. Ensuring appropriate non-discrimination clause in all contracts.
  - C. Annually reviewing with the Equal Opportunity Office the effectiveness of the AAP in their respective units.
  - D. Ensuring employees participate in the university's affirmative action/equal employment opportunity training.
  - E. Ensuring affirmative actions efforts and results shall be a part of the evaluation of the performance of administrators and supervisors.
7. University Employees and Supervisors Facilitate the Affirmative Action Program

All university employees and supervisors will, by creating and maintaining an atmosphere conducive to recruiting, hiring, promoting and retaining members of underrepresented groups, in working to reach the university's affirmative action goals.

8. University Search Committees and Hiring Authorities Will Design Equal Employment Opportunity and Affirmative Action Goals by Reflecting Them in Their Recruitment Plans

Effective Date: June 9, 2009. Approved By: President Bruce Shepard and Executive Policy Group

**PREVENTING SEXUAL HARASSMENT (POL-U1600.04)**

Policy applies to all employees, students, volunteers, agents, groups and individuals. It also applies to organizations that use university facilities and other members of the university community to the extent provided by law.

Definition: Sexual harassment is a form of sex discrimination and is therefore prohibited by law. Sexual harassment is unwelcome sexual advances, requests for sexual favors, or other verbal or physical conduct of a sexual nature when:

- a) Submission to such conduct or activity is made either explicitly or implicitly or implicitly a term or condition of an individual's employment or academic progress;
- b) Submission to or rejection of such conduct or activity is used as the basis for employment or academic decisions affecting such individuals, or
- c) Such conduct or activity unreasonably interferes with an individual's work or academic performance or creates an intimidating, hostile or offensive working or learning environment.

Sexual harassment can occur between persons without regard to gender, age, appearance, or professional status.

1. The University Provides a Positive Learning and Working Environment for Student and Employees and Will Not Tolerate Sexual Harassment

2. The Vice Provost for Equal Opportunity & Employment Diversity Provides Education and Training on Sexual Harassment Prevention In accordance with state law and this policy.

3. The University Provides an Avenue for Reporting Sexual Harassment  
Individuals who believe they have been the subject of sexual harassment are encouraged to report incidents to the proper authorities as outlined in PRO-U1600.02A Discrimination Compliant Procedure.

4. The Vice Provost for Equal Opportunity and Employment Diversity Investigates Allegations of Sexual Harassment  
The university takes measures to ensure a working and learning environment that is free of sexual harassment. When the university becomes aware of allegations of sexual harassment it investigates those allegations.

5. The University Takes Action Towards Violators of This Policy  
Anyone who is found to be in violation of this policy will be subject to a range of sanctions, including written reprimand, termination, or expulsion.

6. Supervisors and Others in Leadership Positions have Special Responsibilities  
Persons in supervisory and leadership roles may face personal liability if they fail to take appropriate action when they become aware of instances of sexual harassment.

7. The University Prohibits Retaliation

The university prohibits retaliation against anyone reporting or thought to have reported sexual harassment or encouraging others to retaliate. Such retaliation will be considered independently, whether a charge or informal complaint or sexual harassment is substantiated.

Effective Date: June 9, 2009. Approved By: President Bruce Shepard and Executive Policy Group

**ACCOMODATING PERSONS WITH DISABILITIES (POL-U1600.03)** Policy applies to: Applicants or employees who, with or without reasonable accommodation, can perform the essential functions of a position, Qualified students, prospective students and individuals who wish to participate in university-sponsored events which are open to the public.

**Authority:** 42 U.S.C. §12101 et seq. (the Americans with Disabilities Act (ADA) of 1990), the ADA Amendments Act of 2008, 29 CFR §1630 (Regulations to Implement Equal Employment Provisions of the ADA), 28 CFR §35 (Nondiscrimination on the Basis of Disability in State and Local Government Services), 45 CFR 84 (Nondiscrimination on Basis of Handicap in Programs and Activities Receiving or Benefitting from Federal Financial Assistance), Section 504 of the Federal Rehabilitation Act of 1974, Chapter 49.60.040 RCW (the Washington State Law Against Discrimination), WAC 162-22 (Employment-handicapped persons), WAC 357-26 (Reasonable Accommodation), WA Executive Order 96-04 (Implementing the ADA and Superseding 93-03)

**Definitions:**

**Persons with a Disability means:** Under 42 USC §12102, a person with a physical or mental impairment that substantially limits one or more major life activities; and/or Under chapters 49.60.040 RCW and 162-22 WAC, the presence of a sensory, mental or physical impairment (temporary or permanent) that is: Medically cognizable or diagnosable, or Exists as a record or history; or Known or shown through an interactive process to exist in fact, and: Has a substantially limiting effect upon the individual's ability to perform his or her job, the individual's ability to apply or be considered for a job or the individual's access to equal benefits, privileges, or terms or conditions of employment; or The employee must have put the employer on notice of the existence of an impairment, and medical documentation must establish a reasonable likelihood that engaging in job functions without an accommodation would aggravate the impairment to the extent that it would create a substantially limiting effect.

**Disability Status Definitions:**

**Impairment (federal definition):** Any physiological disorder, or condition, cosmetic disfigurement, or anatomical loss affecting one or more of the following body systems: neurological, musculoskeletal, special sense organs, respiratory (including speech organs), cardiovascular, reproductive, digestive, genitor-urinary, hemic and lymphatic, skin, and endocrine; or any mental or psychological disorder, such as mental retardation, organic brain syndrome, emotional or mental illness, and specific learning disabilities.

**Impairment (state definition):** Any physiological disorder, or condition, cosmetic disfigurement, or anatomical loss affecting one or more of the following body systems: neurological, musculoskeletal, special sense organs, respiratory, including speech organs, cardiovascular, reproductive, digestive, genitor-urinary, hemic and lymphatic, skin, and endocrine; or any mental developmental, traumatic, or psychological disorder, including but not limited to cognitive limitation, organic brain syndrome, emotional or mental illness, and specific learning disabilities.

**Major Life Activities:** Activities that include, but are not limited to, caring for oneself, performing manual tasks, seeing, hearing, eating, sleeping, walking, standing, lifting, bending, speaking, breathing, learning, reading, concentrating, thinking, communicating, and working and operation of a major bodily function, including but not limited to, functions of the immune system, normal cell growth, digestive, bowel, bladder, neurological, brain, respiratory, circulatory, endocrine, and reproductive functions.

**Substantially Limits:** Unable to perform a major life activity that the average person in the general population can perform or significantly restricted as to the condition, manner or duration under which you can perform a particular major life activity as compared to the condition, manner, or duration under which the average person in the general population can perform that same major life activity.

**Essential Functions** means the fundamental job duties of the position that the individual with the disability holds or desires. The term "essential functions" does not include the marginal functions of the position.

Qualified Employee with a Disability means an individual with a disability who meets the skill, experience, education, or other job-related requirements of the position held or desired, and who, with or without reasonable accommodation, can perform the essential functions of the job.

Qualified Student with a Disability means an enrolled student with a documented disability and completed Needs Assessment who complies with applicable university policies on student rights and responsibilities and who meets the admission requirements and technical standards of the academic program, activity, or service.

Reasonable Accommodation means a modification or adjustment to a job, work environment, policies, practices, and procedures that enables a qualified individual with a disability to enjoy equal employment or academic opportunities.

Undue Hardship means an excessively costly, extensive, substantial, or disruptive modification, or one that would fundamentally alter the nature or operation of the institution.

1. The University Provides Reasonable Accommodations
  - a) The university provides reasonable accommodation to the known physical or mental limitations of otherwise qualified individuals except where such accommodation would impose undue hardship on the institution.
  - b) The Vice Provost for Equal Opportunity and Employment Diversity, the Vice President for Business and Financial Affairs and the Vice President for Student Affairs, through their procedures, inform the campus and public of the ability to request accommodation.
2. The Vice Provost for Equal Opportunity/ADA Coordinator Provides Compliance Oversight, Advice and Consultation Regarding the ADA and Architectural Access. See ADA Access Accommodation
3. Vice President for Business and Financial Affairs is Responsible for Employment Accommodation Services
  - a) The Vice President will:
    1. Ensure the appropriate services are available to process requests for reasonable accommodation to qualified applicants and employees with disabilities.
    2. Delegate full authority for implementing these services to the Director of Human Resources.
  - b) Qualified applicants and employees with disabilities who require an accommodation should refer to guidance on the Human Resources web page. See [www.disabilityresources.wvu.edu](http://www.disabilityresources.wvu.edu) for procedures and additional resources.
4. Vice President for Student Affairs is Responsible for Student Accommodation Services
  - a) The Vice President will:
    1. Ensure appropriate services are available to process request for reasonable accommodation to qualified students and prospective students with disabilities.
    2. Delegate full authority of implementing these services to the Director of disability Resources for Students (DRS)
  - b) Qualified students and prospective students with disabilities who require an accommodation should refer to guidance on the Disability Resources for Students web page. See [www.wvu.edu/depts/drs/](http://www.wvu.edu/depts/drs/) for procedures and additional resources.
5. The University Provides a Discrimination Compliant Procedure  
The Vice Provost for Equal Opportunity investigates complaints for individuals who believe they have been subject to discrimination based on their disability or their request for reasonable accommodations as outlined in discrimination complaint procedure (PRO-U1600.020A).

Effective Date: June 9, 2009. Approved By: President Bruce Shepard and Executive Policy Group

## **Appendix B - Sexual Misconduct Policy and Procedure**

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**Preamble.** Western is required to adopt policies and programs aimed at preventing and responding to allegations of sexual misconduct in accordance with the 1992 Federal Higher Education Act Amendment. Sexual misconduct has a serious impact on the quality of the educational and work experience. Western is committed to the prevention of sexual misconduct on campus and to the timely resolution of complaints.

**Policy.** It is the policy of Western Washington University to provide an environment in which students, staff, and faculty can work, live and study free from all types of sexual misconduct. The range of sexual misconduct includes sexual harassment, sexual intimidation, sexual coercion, sexual assault, and rape. The University will act to prevent and eliminate such behavior. Individuals who engage in such behavior will be subject to sanctions, including written reprimand, termination, or expulsion.

The University is committed to a comprehensive educational program to promote awareness and prevent the full range of sexual misconduct. The University will provide a range of on-campus or referral services to students, faculty, and staff who have experienced sexual misconduct. Services may include short-term personal counseling, health care assistance, and assistance in changing academic, employment, or living arrangements as appropriate. The campus community will be informed of appropriate reportage procedures for individuals who wish to bring a criminal charge, including the need to preserve physical evidence to document the situation.

The University will maintain a comprehensive response system for addressing individual cases of sexual misconduct. The system includes support and guidance services, as well as an integrated response system for reports received by the University. Those systems are referred to in the Sexual Misconduct Procedure section (Appendix G, Section B) of this document. Recognizing that individuals involved in situations of alleged sexual misconduct may have differing perceptions, the University has established clear definitions, processes, and consequences for addressing cases.

### ***Seeking Advice Recommended***

Persons who believe they have been subjected to a form of sexual misconduct are encouraged to seek advice, personal counseling, and information on reporting processes as detailed below. Individuals will be informed about medical assistance, supported in reporting to appropriate law enforcement agencies and filing a complaint with the University, and notified about procedures for changing academic, employment, and living arrangements.

### ***Services for Students***

Students who claim to have been subjected to sexual misconduct are encouraged to seek advice and assistance from the Counseling, Health and Wellness Services Center; the University judicial officer; or the Equal Opportunity Office, in cases of sexual harassment.

### ***Services for Employees***

Faculty, staff, and administrators who claim to have been subjected to sexual misconduct are encouraged to seek advice and assistance from the WWU Employee Assistance Program; the Equal Opportunity Office; or their health care provider.

### ***Complaints Against Students***

Sexual misconduct complaints against students will be subject to the policies and procedures detailed in the Student Rights and Responsibility Code. That code (Chapter 516-23 WAC) may be found in the University catalog. The University conduct officer may be contacted to initiate this procedure. For

incidents which occur in the residence halls, this process may also be initiated by contacting the appropriate residence hall director.

***Complaints Against Employees***

Complaints against any University employees shall be subject to the procedures outlined in this document or relevant disciplinary procedures. The Equal Opportunity Office shall be contacted to initiate this procedure if appropriate.

***Filing of Criminal Charge***

Individuals who wish to file a criminal charge related to sexual misconduct should contact the University Police or the police in the jurisdiction in which the incident occurred.

## **Appendix C - Student Rights and Responsibilities Code**

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*Chapter 516-23 WAC*

**WAC 516-23-200 Preamble.** Western Washington University students enjoy the basic rights of all members of society. At the same time students have an obligation to fulfill the responsibilities as members of the University. As stated in the University's mission, Western is dedicated to the pursuit of truth, learning and the dissemination and development of knowledge, and service to the community.

The objectives of the University conduct system are that students act in a manner consistent with the high standards of scholarship and behavior relevant to an institution of higher education, to sustain campus-wide safety, and to adhere to the University mission. Students are expected to abide by University policies and regulations, as well as federal, state and local laws. An alleged student violation will be resolved through a process as defined in the code respecting basic fairness for the accused and the victim.

**WAC 516-23-010 Definitions.** As used in this chapter, the following words and phrases mean:

1. *Appeals Board* refers to the Judicial Appeals Board.
2. *Bulletin* refers to the Western Washington University bulletin/catalog.
3. *Campus* refers to all property owned or supervised by the University, including adjacent streets and sidewalks and off-campus program sites.
4. *Code* refers to the student rights and responsibilities code.
5. *Dean of Students* refers to the director of Student Life/Dean Of Students, or the vice president of Student Affairs/Academic Support Services' designee.
6. *Student* includes all persons with active student status, full or part time. Matriculated students who have not enrolled are students under this code. Nonmatriculated international students attending language institutes or foreign study programs at the University shall also be considered students under this code.
7. *University* refers to the programs, activities, and current members of the Western Washington University community.
8. *Judicial Officer* refers to the University judicial officer.
9. *WAC* refers to the *Washington Administrative Code*.

**WAC 516-23-220 Jurisdiction.** Individual student alleged violations of this code are subject to disciplinary action. While the University does not act as a policing agent for students when they are off campus, the University reserves the right to take action if a student's behavior is determined to threaten the health, safety, and/or property of the University and its members.

Sanctions against student organizations are decided by the procedures established by the University administrative unit governing the recognition of each organization. Disciplinary proceedings against individual member(s) of a student organization can be initiated under this code independent of action taken against the student organization.

**WAC 516-23-230 Principles and Violations of the Code.** The standards of behavior under the code are higher than those imposed by civil and criminal law. Students must observe the following principles and expectations:

1. Western students observe the highest standards of academic integrity in the ethical pursuit of truth and learning;
2. Western students are respectful of the rights, welfare, and property of others;
3. Western students strive to be involved and productive citizens in a diverse, pluralistic, and democratic society;
4. Western students exercise their state and federal constitutional rights to free speech, petition

and assembly in means that do not disrupt the university's functions or interfere with the rights and well-being of others.

Students must comply with policies and regulations that may impact the educational, administrative, or university-sponsored programs or functions. The University may initiate disciplinary action against any student alleged to have committed inappropriate conduct on campus or otherwise under the jurisdiction of this code.

**WAC 516-23-240 Academic Dishonesty.** The policy and procedure regarding academic dishonesty is addressed in the academic dishonesty policy and procedure. Repeated violations of academic dishonesty will be addressed under the student rights and responsibilities code and can result in disciplinary action. Students may not appeal a decision of academic dishonesty through the student rights and responsibilities code.

Students shall not claim as their own the achievements, work, or arguments of others, nor shall they be party to such claims. According to the academic dishonesty policy and procedure, academic dishonesty consists of misrepresentation by deception or by other fraudulent means. Academic dishonesty compromises the instructor's ability to fairly evaluate a student's work or achievement. For a list of actions that are examples of academic dishonesty, see the catalog, academic dishonesty policy and procedure. Furthermore, students found to have violated canons of ethical research and scholarship, as defined in the policy and procedure guidelines for misconduct in research and scholarship, may also be subject to disciplinary action. See catalog, Academic Dishonesty Policy and Procedure.

**WAC 516-23-250 Disruptive Behavior.** Disruptive behavior is whenever a student engages in any behavior which interferes with the rights of others or which materially or substantially obstructs or disrupts teaching, learning research, or administrative functions. While students have the right to freedom of expression, including the right to dissent or protest, this expression cannot interfere with the rights of others. Disruptive behavior includes, but is not limited to:

1. Substantial disruption of classes, laboratories, offices, services, meetings, or ceremonies;
2. Obstructing free movement of people or vehicles: Peaceful picketing is permitted only as long as it takes place outside buildings and does not interfere with the flow of traffic to and from buildings;
3. Conduct which threatens harm, incites violence, or endangers the health and safety of any person;
4. Creating noise in such a way as to interfere with university functions or using sound amplification equipment in violation of appropriate use of amplification sound, as administered by the Viking Union, see policy on exterior space use;
5. Intentionally or recklessly interfering with any university or student program or activity, including teaching, research, administration, or meetings;
6. Inciting others to engage in prohibited conduct.

See WAC 516-24-130 Demonstrations

**WAC 516-23-260 Student Responsibility for Guests.** Students are responsible for the actions of their guests while on campus, at University events and programs, and in other areas supervised by the University. See WAC 516-24-001 Conduct of Campus Guests and Visitors.

**WAC 516-23-270 Sexual Misconduct.** Student sexual misconduct includes, but is not limited to:

1. Sexual harassment;
2. Sexual intimidation;
3. Sexual coercion;
4. Sexual exploitation;
5. Sexual assault; and
6. Any unwanted sexual contact without clear verbal and/or physical prior consent.

Consent for sexual contact must be given in absence of force, threat of force, coercion and cannot be given while a person is intoxicated, impaired, or mentally incapacitated. Consent must be clearly communicated to both parties, and it must be current to any mutually agreed sexual contact. See catalog, Sexual Misconduct Policy and Procedure.

**WAC 516-23-280 Violence.** Violence includes, but is not limited to, physical abuse and/or intentional injury or harm of another person.

**WAC 516-23-290 Harassment and/or threats of violence.** Harassment and threats of violence are behaviors that create a hostile or threatening educational or working environment, to include, but are not limited to:

1. Unwanted and/or intimidating contact and/or communication of a threatening nature;
2. An expressed or implied threat to an individual's personal safety or property, academic efforts, employment, or participation in University activities;
3. Intentionally and/or repeatedly following or contacting another person in a manner that intimidates, harasses, or places another in fear for their personal safety or to their property; and
4. Behavior that threatens or intimidates that is motivated on the basis of race, national or ethnic origin, creed, age, sex, marital status, status as a veteran, sexual orientation, or disability.

**WAC 516-23-300 Theft and Intentional Damage of Property.** Taking, attempting to take, or aiding another to take property belonging to any member of the University community, the University or its guests is a violation of the code. It is prohibited to possess stolen property or to intentionally damage the property of others or the University.

**WAC 516-23-310 Misuse of Computers, Electronic Data or Communication Systems.** Improper use of computers, electronic data or communication systems is a violation of the code. Improper use of computer resources includes, but is not limited to, the following:

1. Interference with University computers or communication functions, the work of other students, faculty members, or University officials;
2. Gaining unauthorized access to computer or communication systems, altering data, or misusing computer facilities;
3. Using University computing facilities to send harassing messages or generate unwanted e-mails (as defined in *WAC 516-23-290 Harassment and/or Threats of Violence*);
4. Commercial use of University computer resources; and
5. Failure to comply with posted policies including providing officials with current student identification.

See policy for responsible computing and the user agreement for WWU network and computer resources.

**WAC 516-23-320. Hazing.** Hazing is defined as any act by members of a student organization or individuals which endangers, or is likely to endanger, the mental or physical health or safety of a student, for the purpose of initiation, affiliation with, and as a condition for continued membership and/or participation in an activity, a group or university organization. This includes violation of laws and the destruction or removal of public or private property as requested by a student group or activity.

**WAC 516-23-330 Student Violation of Law.** Students are expected to abide by federal, state, and local law while on the University campus or at related programs and activities. Failure to comply with the law is a violation of the code. The University reserves the right to take action on criminal behaviors that have an impact on the educational or administrative functions or the general well-being of the University and its members.

Proceedings under this code may be carried out prior to, simultaneously, or following civil or criminal proceedings in the courts. Since the standard of proof, preponderance of the evidence, under this code is different than criminal law, the disciplinary decision is not subject to challenge on the ground that criminal charges involving the same incident have been dismissed or reduced by court of law.

**WAC 516-23-340. Failure to Comply with Proper Official Requests.** Failure to comply with a proper official request is a violation of the code. A student must comply with proper requests of University officials who are acting in performance of their duties.

**WAC 516-23-350 Forgery and Fraud.** Maintaining accurate and credible records and documents is necessary for the University to fulfill its educational mission and to assure the welfare of its students. Providing and/or creating false information is considered a violation of the code. Violations include, but are not limited to, the following:

1. Falsely making, completing or altering any University document, record, or identification;
2. Possessing or presenting as authentic any falsified document, record or identification; and
3. Providing any University official, including University police, information known to be false.

**WAC 516-23-360 Illegal Possession and/or Use of Alcohol.** Substance abuse by members of the University community impacts the quality of the educational experience of all students. Consumption or possession of alcohol by students in public areas of any University-owned or controlled property may occur for students of legal age at University-approved events with an approved liquor permit. It is a violation to illegally possess and/or consume alcoholic beverages, including, but not limited to:

1. Buying, selling, serving, or otherwise furnishing alcoholic beverages to minors; and
2. Consumption of alcoholic beverages by minors

*See catalog, Policy Concerning Alcohol and Other Drugs.*

**WAC 516-23-370 Illegal Drugs and Misuse of Drugs.** Substance abuse by members of the University community impacts the quality of the educational experience of all students. It is a violation to possess, use, manufacture, cultivate, package, distribute, sell, and/or provide a controlled or illegal substance; or to misuse prescription and/or nonprescription drugs on campus. It is a violation to use drug paraphernalia. See catalog, Policy Concerning Alcohol and Other Drugs.

**WAC 516-23-380 Explosives and Weapons Prohibited from Campus.** Possession or use of firearms, other weapons or explosives on campus is a violation of the code, unless authorized by the University. Explosives, dangerous chemicals, and fireworks are prohibited on campus or on property supervised by the University or at University-sponsored activities, unless authorized by the University. Students may not possess firearms on campus at any time, other than to secure them with the police.

Weapons include, but are not limited to:

1. firearms of any sort;
2. Look-alike weapons;
3. BB, pellet, and paintball guns;
4. Swords, knives (other than small closed-blade, three and one-half inch pocket knives or smaller or kitchen utensils);
5. Martial arts weapons;
6. Projectile devices, i.e., catapult or slingshot;
7. Objects used as a weapon to distress or injure another.

See *WAC 516-52-020 Firearms and Dangerous Weapons*.

**WAC 516-23-390 Obstructing Police and Safety Personnel.** Obstructing police, improper use of safety equipment, and interference with safety personnel is a violation of the code. Students who obstruct, hinder or delay police and other emergency service personnel in the discharge of their duties are subject to disciplinary proceedings. Violations include, but are not limited to, the improper use or disabling of safety equipment and emergency signs.

**WAC 516-23-400 Interference with the Judicial Process.** Interference of the judicial process is a violation of the code and includes, but is not limited to:

1. Giving reports or claims known to be false;
2. Attempting to influence the impartiality of witnesses or judicial member(s);
3. Failure to properly complete a sanction(s) as specified;
4. Participating in, and/or encouraging, retribution against complaints or witnesses; and
5. Threatening and/or harassing complainants or witnesses.

**WAC 516-23-410 Freedom of Expression.** The University recognizes, respects, and protects all expressions of opinion and ideas, whether individual or collective, that are within the limits of law and University regulations. An exercise of the right to speak requires the freedom of the speaker to make his or her statement. Both the speaker and the audience are entitled to proceed without being subjected to substantial interference.

**WAC 516-23-430 Proceedings for Violations of the Code.** The University does not follow the same procedures used by civil or criminal courts nor the same rules of evidence. Simple preponderance of the evidence is used to determine responsibility under the code. Any student, faculty, or staff member of the University alleging a violation of this code shall deliver or e-mail to University Judicial Affairs a written statement of the allegations against the student.

If both parties agree to mediate the complaint, and the judicial officer agrees, mediation may be substituted for a conduct meeting. If mediation is unsuccessful, the original complaint will be considered and decided by the judicial officer.

If in the judicial officer's judgment, there is sufficient basis to consider the charge(s), the judicial officer shall:

1. Provide the student with the student rights and responsibilities code;
2. State the nature and date of the alleged violation;
3. Specify the portion of the code the student is alleged to have violated;
4. Notify the accused student of the availability of procedural advice regarding the code; and
5. Notify the accused student in writing of the time, date, and place of a meeting (the meeting will occur no less than three and no more than ten business days from the date of notification). The student may elect to waive the three-day notice if an earlier date is mutually agreed upon.

The judicial officer will determine the accuracy and responsibility of the allegations in a meeting with the accused student. Within ten business days of the meeting, the judicial officer shall notify the student in writing of the decision. If there are multiple individuals involved in the incident, and if it is deemed necessary to determine responsibility, individual decision letters will be mailed to each student ten business days after the final meeting for the specific incident. The decision letter will include a statement of the student's option for a review by the Appeals Board or the Dean of Students.

A student formally charged with a violation may not avoid judicial proceedings by withdrawing from the University. The student shall be prohibited from enrolling for subsequent quarters until such time as the student does appear for a meeting to consider the allegation. If the student fails to meet with the judicial officer after receiving proper notification, the judicial officer may render a decision on the allegations in the student's absence.

If there is insufficient basis to consider the charge, the individual initiating the complaint will be informed.

**WAC 516-23-440 Victim Rights.** The University is committed to protecting the rights of those who suffer from student misconduct, that is, persons who have been physically, psychologically, and/or financially injured by the student responsible for the misconduct.

Rights include:

1. To obtain information and procedural advice from the University;
2. To decline to participate in University conduct proceedings;
3. When appropriate, to be advised of their options to bring civil or criminal charges against the accused;
4. To be accompanied by an advocate of their choice throughout the judicial process. The advocate may advise the student, but may not address the judicial officer, the appeals board, or the dean of students;
5. To make a statement regarding the impact of the student's conduct, either orally or in writing, to be considered during the sanctioning portion of the conduct and/or the review meetings;
6. To be informed when a review is made of the judicial officer's decision;
7. To not be subjected to discussion of his or her history or behavior that does not bear instrumentally on the case being heard;
8. In cases involving violence, including sexual misconduct/assault, the student will be informed of the findings by the judicial officer and/or the judicial review board or dean of students within ten business days of its conclusion; and
9. If appropriate, restitution will be provided by the accused.

**WAC 516-23-450 Rights of Accused.** The University is committed to ensuring the rights of a student who is accused of violating the code throughout the judicial process. A student accused of misconduct under this code has certain, specific rights in the disciplinary process.

An accused student:

1. Is entitled to a fair judicial process.
2. Will receive proper written notice of the charge(s) with a clear description of the basis for the charge(s).
3. Has an opportunity to meet with the judicial officer or designated representative.
4. May obtain information and procedural advice from the University.
5. May have one advocate present at the meeting(s). The advocate may give advice to the student but may not address the judicial officer, Appeals Board, or the Dean of Students.
6. Must give written permission to record statements made during the meeting.
7. May present witnesses and be able to request questions of witnesses, prior to or after a meeting.
8. Will receive written notification of the judicial officer's decision within ten business days from the date of the meeting; and

9. May request a review of the judicial officer's decision to the appeals board or the Dean of Students within ten days after receiving the decision letter.

**WAC 516-23-460 Sanctions.** The following disciplinary sanctions may be given to a student found in violation of the code. A decision may include a combination or modification of the following sanctions that correspond to the circumstances of each particular case.

1. *Warning:* A written reprimand that the student has violated the student rights and responsibilities code;
2. *Disciplinary Probation:* Probation is for a designated period of time. Students who violate the code during the probationary period are subject to more severe disciplinary sanctions;
3. *Loss of privileges:* Denial of specific privileges (i.e., participation in specific activities, restriction from specific areas of campus) for a designated period of time;
4. *Restriction from contacting others:* Restricting the student from direct or indirect physical and/or verbal contact with another person/group;
5. *Educational activities:* Activities designed to encourage student development may include, but are not limited to, community service, attendance at educational programs, or written assignments.
6. *Assessment, counseling, and treatment programs:* Interventions to assist students with possible substance abuse or other types of unsafe behaviors;
7. *Restitution:* Compensation for loss, damage, or injury. This may take the form of appropriate service and/or monetary or material replacement;
8. *Residence hall relocation:* Transfer of living arrangements to another University residence hall or apartment;
9. *Termination of University Residences agreement:* Removing the student from University residences;
10. *Disciplinary Suspension:* Removing the student from the University for a designated period of time, after which the student is eligible to return. Conditions for readmission may be specified. In addition to disciplinary suspension, see Chapter 516-28 WAC, Standards and Procedures for Involuntary Administrative Withdrawal of Students at Western Washington University for Behavior from Mental Disorders;
11. *Deferred Suspension:* Notice of suspension from the University with the provision that the student may remain enrolled contingent on meeting specific conditions. Failure to meet the conditions of the sanctions will result in immediate suspension; or
12. *Disciplinary Expulsion:* Permanent and complete dismissal of the student from the University.

**WAC 516-23-470 Procedures for Immediate Interim Suspension.** In order to prevent danger to individuals, substantial destruction of property, or significant disruption of teaching, research, and/or administrative functions, the Dean of Students or designated representative may temporarily suspend (interim suspension) a student. An interim suspension will be pending a full review and discussion between the student and the Dean of Students or designee. An interim suspension becomes effective immediately upon written notice. The written notice of an interim suspension must include the stated violation, as determined by the Dean of Students, and the time, date, and location of the meeting. The written notice will be sent by certified mail or delivered in person to the student.

In all cases of interim suspension, the student is entitled to a meeting before the Judicial Officer or the Dean of Students. The meeting shall take place within three business days after the beginning date of interim suspension. During the interim suspension period, the student will be allowed on University property only to the extent deemed necessary by the Dean of Students and/or the Judicial Officer. If a student fails to appear at his or her meeting, the suspension will stay in effect until the meeting has been completed and a new decision is made regarding all of the information and the student's status.

**WAC 516-23-480 Basis for Appeal.** The accused student is allowed one appeal of the judicial officer's decision to either the Appeals Board or the Dean of Students. The appeal must be made in writing to the dean of students within ten business days of receiving the written decision of the charges. The appeal must include a statement whether the accused student wishes to have the appeal considered by either the Appeals Board or the Dean of Students.

The basis for review is:

1. The original meeting was not conducted in conformity with prescribed procedures;
2. The University judicial officer misinterpreted the code;
3. The sanction(s) imposed is disproportionate to the student violation; or
4. The decision reached did not properly consider the information presented.

No sanction will begin while an appeal is pending, except as provided in *WAC 516-230-470, Procedures for Immediate Interim Suspension*. Temporary relocation of the student to alternative on-campus housing and restrictions between the affected parties may be enforced during the appeal.

**WAC 516-23-490 Appeal Procedures.**

1. Upon acceptance of the appeal, the Dean of Students or designated representative shall include in the notification to the accused student:
  - a. Time, date and location of hearing;
  - b. Identification of the section of the code that the student has allegedly violated;
  - c. Nature and date of the alleged violation; and
  - d. A copy of the code.
2. The appeal hearing shall not be less than three or more than ten business days from the date of notification. The student may elect to waive the three-day notice if an earlier date is mutually agreed upon. If the student fails to appear at the hearing, the Appeals Board or Dean of Students may proceed with the appeal based upon consideration of the available information without the student's presence, or may dismiss the appeal. The rights of the accused student are listed under *WAC 516-23-450*.
  - a. The Appeals Board chair or Dean of Students and the accused student may call any person to speak concerning the alleged violation.
  - b. The board chair or Dean of Students may limit or exclude testimony that is irrelevant, immaterial, or repetitious.
  - c. Five members shall constitute a quorum of the Appeals Board. Actions by the Appeals Board require agreement by the majority of those members present at the time of the hearing.
  - d. Any member of the board that is unable to render an impartial decision in a particular case shall excuse himself or herself from the board's deliberations in advance and may be replaced by an alternate.
  - e. The decision of the Appeals Board or Dean of Students may eliminate, reduce, maintain, modify and/or increase the original decision and sanction.
  - f. New substantive information that was not provided at the time of the original conduct meeting will not be considered during the appeal. When new substantive information is present prior to the appeal hearing and the new evidence could impact the original decision, the allegation(s) will be reheard by the judicial officer.
3. The Appeals Board chair or Dean of Students shall notify the accused student in writing of the disposition of the case within ten business days of the appeal hearing.

**WAC 516-23-500 Deviations from Established Procedures.** Deviations from these procedures will not invalidate a decision or proceedings unless it results in clear prejudice against the accused student. Deviations from the timeline may be granted by request for good cause to the Dean of Students.

**WAC 516-23-510 Confidentiality of Conduct Proceedings and Records.** Confidentiality will be maintained in compliance with the University student records policy and state and federal law. Conduct records prepared by the judicial officer, Appeals Board, and/or the Dean of Students:

1. Will be held in the Office of Student Life for six years, except in cases of suspension, interim suspension, or expulsion, which are permanent records; and
2. Will not be shared with any member of the public except upon the informed written consent of the student(s) involved or as stated in the student records policy.

The disciplinary outcome may be shared with the victim and those within the University involved in the completion and/or supervision of the sanction and/or student. See *catalog* and *Chapter 516-26 WAC, Student Records*.

**WAC 516-23-520 Administrative Withdrawal Due to Mental Disorders.** As provided in *Chapter 56-28 WAC*, a student who, because of mental disorders, is unable to abide by University policy, regulations, and procedures and who represents a serious threat to themselves or others, may be involuntarily withdrawn from the University. A student accused of misconduct under the student rights and responsibilities code may be diverted from that disciplinary process and withdrawn according to the standards of *Chapter 516-28 WAC, Involuntary Withdrawal Due to Mental Disorders*. Those standards include:

1. The student lacks the capacity to respond to pending disciplinary charges due to a mental disorder; and/or
2. The student does not know the nature of the wrongfulness of the conduct due to a mental disorder at the time of the alleged offense.

Students otherwise subject to disciplinary charges who wish to introduce relevant information of any mental disorder must inform the Dean of Students or designated representative in writing at least one business day prior to any judicial meeting. The Dean of Students shall make a determination within five business days after the student's written submission. Verification of any mental disorder may not be considered in any judicial proceeding under this code other than involuntary withdrawal. See *Chapter 516-28 WAC, Involuntary Withdrawal Due to Mental Disorders*.

**WAC 516-23-530 University Conduct System.** The Vice President for Student Affairs and Academic Support Services is responsible for administration of this code.

1. The supervision of the code has been delegated to the Dean of Students or designated representatives.
2. The judicial officer shall be appointed and supervised by the Dean of Students.
3. The Judicial Officer shall have the authority to adjudicate and administer sanctions for violations of this code.
4. The Appeals Board or the Dean of Students shall have authority to review the judicial officer's decision and to render decisions under the code.
5. A six-member Appeals Board shall be appointed at the beginning of each fall quarter term. The Appeals Board will consist of the following:
  - a. Two faculty members nominated by the Dean of Students and confirmed by the Faculty Senate;
  - b. Three students appointed by the Associated Students board; and
  - c. One member of the Student Affairs and Academic Support Services staff nominated by the Dean of Students and confirmed by the Vice President for Student Affairs and Academic Support Services.

There will be one alternate for each of the three areas represented on the Appeals Board. The alternates will be appointed at the same time by the same authority. Student appointments shall be for one academic year. Faculty and staff appointments shall be for staggered two-year terms.

The Dean of Students shall request that all appointments be initiated during the first full month of the fall quarter. Should the need arise during the summer term, appeals of the code will be heard by the Dean of Students or an interim board appointed by the Dean of Students.

**WAC 516-23-540 Relationship of the Code to University Residences.** University Residences is responsible for adjudicating most violations of the code committed by residents on University Residences' premises or at University Residences-sponsored events. In the best interest of the University, the Dean of Students has the authority to designate which area, University Residences and/or University Judicial Affairs, will consider an alleged violation of the code. General referral of conduct cases is made after consensus between University Residences and University Judicial Affairs. Conduct cases referred by University Residences to University Judicial Affairs include, but are not limited to:

1. Alleged acts and threats of physical violence, and/or sexual misconduct;
2. Alleged violations of distribution or sale of illegal drugs or other controlled substances;
3. Alleged violations by nonresidential students while on University Residences premises or while at events sponsored by University Residences;
4. Alleged policy violations initiated near the end of or after a student's contract with University Residences;
5. Alleged computer misconduct when nonresidents are the victims (e.g., sending mass unsolicited e-mails, copyright violations); and
6. Alleged violations serious enough to result in suspension or expulsion from the University.

**WAC 516-23-550 Interpretation of the Code.** Final determination in response to any question of interpretation regarding the code, whether in content, procedure, or intent, shall be the responsibility of the Dean of Students or designee.

**WAC 516-23-560 Revision of the Code and the Committee on Student Rights and Responsibilities.** The code shall be reviewed and recommendations made by the University Service's Council's student rights and responsibilities committee to the Vice President for Student Affairs and Academic Support Services for submission and final approval by the board of trustees. A review of the code should be completed every five years or earlier, if needed. The committee on student rights and responsibilities will be comprised of:

1. Five students, three appointed by the Associated Students board of directors, including at least one graduate student, and two students appointed by the University Residence Hall Association;
2. One member from the Student Affairs Division appointed by the Vice President of Student Affairs and Academic Support Services;
3. One faculty member appointed by the Faculty Senate;
4. the judicial officer;
5. One member of the University Public Safety Department appointed by the director of public safety; and
6. One member of the University Residences staff.

**WAC 516-23-570 Referenced Policies and Regulations in the Code.** Policies or regulations referenced in the code must be made available, upon request, in the Office of Student Life and University Judicial Affairs. [Statutory Authority: RCW 28B.35.120(12).03-01, G123 § 516-23, effective 1/19/03.]

Approved by the Board of Trustees December 13, 2002.

# Appendix D - Academic Honesty Policy and Procedure

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## 1. Policy

Western Washington University students have an obligation to fulfill the responsibilities of their particular roles as members of an academic community. Honesty is essential to learning. Without it, fair evaluation for all is impossible. Academic integrity is demanded, and academic dishonesty at Western Washington University is a serious infraction dealt with severely. Students shall not claim as their own the achievements, work or arguments of others, nor shall they be a party to such claims. It is the instructor's responsibility to confront a student and to take appropriate action if academic dishonesty, in the instructor's judgment, has occurred.

## 2. Academic Dishonesty

Academic dishonesty is not qualitatively different from other types of dishonesty. It consists of misrepresentation by deception or by other fraudulent means. Academic dishonesty compromises the instructor's ability to fairly evaluate a student's work or achievement. **It includes, but is not limited to, the following:**

- a. Giving unauthorized information to another student or receiving unauthorized information from another student during any type of assignment or test.
- b. Obtaining or providing without authorization questions or answers prior to the time of an assignment or test.
- c. Using unauthorized sources for answers during any assignment or test.
- d. Asking or arranging for another person to complete an assignment or take a test in one's place.
- e. Giving or receiving answers by use of signals during a test.
- f. Altering answers on a scored test and submitting it for a higher grade.
- g. Collaborating with others in a required assignment without the approval of the instructor.
- h. Stealing class assignments or portions of assignments, including electronic files, and submitting them as one's own.
- i. Not crediting participants for their part in a group project or claiming credit for work not done on a group project.
- j. Plagiarism, which is presenting as one's own in whole or in part the argument, language, creations, conclusions, or scientific data of another without explicit acknowledgment. Examples include, but are not limited to:
  1. Using another person's written or spoken words without complete and proper citation.
  2. Using information from a World Wide Website, CD-ROM or other electronic source without complete and proper citation.
  3. Using statistics, graphs, charts and facts without acknowledging their source.
  4. Submitting a paper purchased from a term-paper service.
  5. Paraphrasing, which is imitating someone else's argument using other words without acknowledging the source.
  6. Claiming credit for someone else's artistic work, such as a drawing, script, musical composition or arrangement.
  7. Using someone else's lab report as a source of data or results.
  8. Using one's own or substantially similar work, produced in connection with one course, to fulfill a requirement in another course without prior permission. A student may use the same or substantially the same work for assignments in two or more courses only with written permission from the instructors of all the classes involved.
  9. Submitting the results of a machine translation program as one's own work.

### **3. Procedures**

Although instructors should make every effort to ensure that students are aware of the policies for academic dishonesty, it is the responsibility of students to read, understand, and uphold the standards of academic honesty.

- a. An instructor suspecting an act of academic dishonesty shall discuss the matter thoroughly with the student involved. Arrangements for this discussion shall be made by the instructor within ten (10) working days after discovering the alleged violation. If the incident occurs at the end of a quarter, or in the event the student is absent from campus, the instructor shall attempt to contact the student in writing at the most recent permanent address available in the Registrar's Office.

Should the instructor be unable to arrange a meeting with the student to discuss the incident in question before final grades are due, the instructor shall submit a grade of X with a note to the registrar. The registrar shall in turn inform the student of his/her responsibility to contact the instructor. Should the student not respond to the faculty member by the 10th working day of the next academic quarter, not including summer, the grade will be changed to an F.

During the discussion between the instructor and the student, the student may be asked to explain his or her thought process and the sources of the information, ideas, data, or calculations presented in the work under dispute. Failure to give an adequate explanation can influence the instructor's decision.

Following this discussion, the instructor shall determine whether or not an act of academic dishonesty has occurred, and if so, whether it is a minor or major violation. If in the instructor's judgment there has been a minor violation, in which the offenses are either 1) purely technical in nature, 2) an honest misunderstanding, or 3) the instructor does not perceive an intent to deceive and/or achieve an academic advantage, the instructor shall, according to his or her professional judgment, proceed in one or more of the following ways:

- Explain or clarify the standards of the assignment and ask the student to redo it.
- Issue the student a written warning and give the student a zero on the assignment in question.

If in the instructor's judgment there has been a major violation, in which the offenses include a substantial misrepresentation and/or apparent intent to deceive and gain an academic advantage, or if the instructor intends to give a grade of zero on the assignment and that grade will result in an F in the course, the instructor shall assign a grade of F for the course.

Within five (5) working days of giving a zero on an assignment or an F in a course, the instructor will submit the standard form summarizing the evidence. This form will be sent to the Vice President for Academic Affairs, the Registrar, the unit head (the department chair or, in the case of Fairhaven, the Dean, or, in the case of the Library, the Dean of Libraries), and the student. A record of the violation is maintained in the Office of the Vice President for Academic Affairs and the Registrar's Office. Repeated or significant acts of academic dishonesty shall make a student subject to disciplinary action — including dismissal — through the "Student Rights and Responsibilities Code," available from University Judicial Affairs.

No student shall be allowed to withdraw from a course or from the University to avoid the consequences of academic dishonesty.

- b. Appeal: A student who receives a zero on an assignment or an F in a course due to a charge of academic dishonesty and who feels wrongly accused by an instructor has recourse to an appeals process. Within five (5) working days of the finding of academic dishonesty the student may appeal to the unit head. The unit head shall make a ruling on the case as to whether 1) the student in question committed an act of academic dishonesty and, if so, 2) whether the violation was a major or minor one, within ten (10) working days of the appeal.

Either the student accused or the faculty member who initiated the charge may within five (5) working days appeal to the Dean, who shall make a ruling on the case as to whether 1) the student in question committed an act of academic dishonesty; and if so 2) whether the sanction was appropriate, within ten (10) working days of the appeal.

Either the student or the faculty member who initiated the charge may appeal the findings of the Dean to the Academic Honesty Board within five (5) working days.

The Academic Honesty Board shall consist of one faculty member and two students to be selected from a pool of students and faculty appointed by the Vice President for Academic Affairs. Its findings are restricted to determining: 1) whether the student in question committed an act of academic dishonesty, and if so, 2) whether the violation was a major or minor one. A hearing shall be called within fifteen (15) working days of the filing of the appeal to the Academic Honesty Board unless both parties agree to a delay. Both the student and the instructor may be accompanied by one person, but that person may not speak on behalf of the student or the instructor. Both the student and the faculty member shall be invited to present evidence, make oral arguments, and call witnesses, all of which shall be restricted to the issues under consideration and matters already in the record. Members of the board may question either party. If the faculty member is on leave or is no longer employed by Western the unit head shall appear in lieu of the faculty member. If the faculty member is available, but does not appear at the hearing, the form that he or she submitted will be considered to be her or his statement. If the student does not attend the hearing, the student's appeal shall be considered withdrawn, and the original finding of the faculty member shall be considered final. At the conclusion of the hearing, the board shall, in writing, a) find that there is insufficient cause to overrule the unit head's decision, or b) find that there is sufficient cause to modify or overrule the unit head's decision. The Academic Honesty Board shall send a written copy of its decision to the student, the faculty member, the unit head, the dean, the registrar, and the Vice President for Academic Affairs.

Within five (5) working days of the ruling of the Academic Honesty Board, either side may appeal all findings to the Vice President for Academic Affairs, whose decision is final.

## Appendix E - Student Records

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*Chapter 516-26 WAC*

**WAC 516-26-010 Preamble.** The purpose of this student records policy is to establish rules and procedures that appropriately implement the Family Educational Rights and Privacy Act of 1974 (FERPA), 20 USC 123g. Western Washington University is committed to safeguarding appropriate access to student education records as well as maintaining individual student privacy. The University records officer works to ensure that information contained in student records is treated responsibly with due regard to its personal nature, and for the students', University's and community's needs. Questions regarding this policy should be addressed to the University records officer.

1. Generally, students have the right to review and copy their education records. Students also have the right to challenge the content of, release of, or denial of access to their education records.
2. The University will normally not permit access to the public without a student's permission; some exceptions exist as detailed in this policy.
3. The University may release directory information concerning a student unless the student requests in writing that it not be released.

Please read below for a complete description of the policy.

**WAC 516-26-020 Definitions.** For purposes of this chapter the following terms shall have the indicated meanings:

1. "Student" shall mean any person, regardless of age, who is or has been officially registered at and attending Western Washington University and with respect to whom the University maintains education records or personally identifiable information.
2.
  - a.
    - i. "Education records" shall refer to those records, files, documents and other materials maintained by Western Washington University or by a person acting for Western Washington University which contain information directly related to a student.
    - ii. Records relating to an individual in attendance at the university who is employed as a result of his or her status as a student are considered education records. Records made and maintained by the University in the normal course of business which relate exclusively to a person's capacity as an employee and are not available for any other purpose are not considered education records.
  - b. The term "education records" does not include the following:
    - i. Records of instructional, supervisory or administrative personnel and educational personnel ancillary to those persons, which are kept in the sole possession of the maker of the record and which are not accessible or revealed to any other person except a substitute;
    - ii. Records of the University's public safety office maintained solely for law enforcement purposes, disclosed only to law enforcement officials of the same jurisdiction, and maintained separately from education records in (a) of this subsection; but only if said law enforcement personnel do not have access to education records under WAC 516-26-080; or
    - iii. Records concerning a student which are created and maintained by a physician, psychiatrist, psychologist or other recognized professional or paraprofessional acting in his or her professional or paraprofessional capacity or assisting in that capacity, and which are created, maintained or used only in connection with the provision of treatment to the student and are not available to anyone other than persons providing such treatment, except that such

- records may be personally reviewed by a physician or other appropriate professional of the student's choice.
3. "Personally identifiable information" shall refer to data or information which includes either (a) the name of a student, the student's parent or other family member, (b) the address of the student, (c) the address of the student's family, (d) a personal identifier, such as the student's social security number or student number, (e) a list of personal characteristics which would make it possible to identify the student with reasonable certainty, or (f) other information which would make it possible to identify the student with reasonable certainty.
  4. "Vice President for Student Affairs" shall refer to the Vice President for Student Affairs/Dean for Academic Support Services or his or her designee.
  5. "University records officer" shall refer to that individual (or his or her designee) responsible for the policies safeguarding the access, release, or copying of education records and for informing students and parents of their rights.
  6. "Records center manager" shall refer to that individual (or his or her designee) responsible for the facilitation of the development of records retention schedules.
  7. "Records coordinator" shall refer to that individual (or his or her designee) designated by the department or unit head to be responsible for the custody of the education record(s) in that office, department or unit.
  8. "Unit head" shall refer to that individual (or his or her designee) responsible for the supervision or management of an institutional department or unit.

#### **WAC 516-26-030 Access to Education Records.**

1. Except as provided in WAC 516-26-035, each student at Western Washington University shall have access to his or her education records. The right of access shall include the right to inspect, review and obtain copies of education records.
2. The records coordinator is responsible for maintaining an up-to-date records retention schedule which lists the types of student education records maintained by that office, department or unit. The said records retention schedule is also filed with the records center manager and the state archives in Olympia.
3. A student wishing access to his or her education records shall submit a written request for access to the appropriate records coordinator. The records coordinator shall respond to a request for access within a reasonable period of time, not to exceed five days.
4. The records coordinator shall provide students of the University with an opportunity for reasonable access to education records, and shall be responsible for taking appropriate measures to safeguard and ensure the security and privacy of the institution's records while being inspected by students.
5. The records coordinator will inform in writing a student who has requested access to his or her education records of the nature of any records which are being withheld from the student on the basis of the exceptions set forth in WAC 516-26-035. A student may file with the University records officer a request to review the decision by the records coordinator and/or by the unit head as per WAC 516-26-055 to withhold certain of the student's records. A student may also request a review of the university records officer's decision to withhold certain of the student's records by filing an appeal with the student academic grievance board, refer to WAC 516-26-060.

#### **WAC 516-26-035 Access to Education Records — Limitations On Access.**

1. Western Washington University shall not make available to a student the following types of materials:
  - a. The financial records of the student's parents or any information contained therein, if the parents have requested in writing that such information remain confidential.
  - b. Letters or statements of recommendation, evaluation or comment which were provided to the University in confidence, either expressed or implied, prior to January 1, 1975, provided that such letters or statements shall not be used for purposes other than those for which they were originally intended.
  - c. If a student has signed a waiver of the student's right of access in accordance with subsection (2) of this section, confidential records relating to the following:

- i. Admission of any educational agency or institution;
  - ii. An application for employment; or
  - iii. The receipt of an honor or honorary recognition.
2. A student, or a person applying for admission to the University, may waive his or her right of access to the type of confidential records referred to in subsection (1)(c) of this section, provided that such a waiver shall apply only if the student is, upon request, notified of the names of all persons making confidential recommendations, and such recommendations are used solely for the specific purpose for which the waiver has been granted. The University is not allowed to require such a waiver as a condition for admission to, receipt of financial aid from, or receipt of other services or benefits from the University.
  3. If any material or document in the education record of a student includes information concerning more than one student, the student shall only have the right either to inspect and review that portion of the material or document which relates to the student or to be informed of the specific information contained in that portion of the material or document.

**WAC 516-26-040 Right to Copy Education Records.**

1. The records coordinator shall, at the request of a student, provide the student with copies of the student's education records. The fees for providing such copies shall not exceed the actual cost to the University of providing the copies.
2. Official copies of transcripts from other educational institutions, such as high school or other college transcripts, will not be provided to students by the University.

**WAC 516-26-045 Request for explanation or interpretation of record.** The records coordinator shall respond to reasonable requests for explanations or interpretations of the contents of student education records.

**WAC 516-26-050 Challenges — to Content of Education Records — to Release of Education Records — or to Denial of Access to Education Records.**

1. Any student who believes that inaccurate, misleading or otherwise inappropriate data is contained within his or her education records shall be permitted to have included within the record a written explanation by the student concerning the content of the records.
2. A student shall have the right, in accordance with the procedures set forth in WAC 516-26-055 and 516-26-060, to:
  - a. Challenge the content of education records in order to ensure that the records are not inaccurate, misleading or otherwise in violation of the privacy or other rights of the student;
  - b. Have the opportunity to request correction or deletion of inaccurate, misleading or otherwise inappropriate data contained within education records;
  - c. Challenge the release of education records to specific persons as contrary to the provisions of this chapter; and
  - d. Challenge a decision by the University to deny the student access to particular types of records.
3. A student shall not be permitted under this chapter to challenge the validity of grades given in academic courses, except on the grounds that, as a result of clerical error, the student's records fail to accurately reflect the grades actually assigned by an instructor.

**WAC 516-26-055 Challenges — Informal Proceedings.** A student wishing to exercise the rights set forth in WAC 516-26-050(2) shall first discuss with the records coordinator the nature of the corrective action sought by the student. Failing resolution, the student shall next discuss with the department unit head the corrective action sought by the student. Failing resolution, the student shall next discuss with the university records officer the corrective action sought by the student, as outlined in WAC 516-20-030(5).

**WAC 516-26-060 Challenges — Hearing Before Student Academic Grievance Board.**

1. If informal proceedings fail to resolve the complaint of a student, the student may file a written request for an appeal to the Student Academic Grievance Board of the University.
2. The Student Academic Grievance Board shall process the appeal according to procedures outlined in the student academic grievance policy.
3. If a student demonstrates that the student's education records are inaccurate, misleading or otherwise in violation of the privacy or other rights of the student, the Student Academic Grievance Board shall have authority to order the correction or deletion of inaccurate, misleading or otherwise inappropriate data contained in the records.
4. If a student demonstrates that the release of the student's education records would be improper under this chapter, the student academic grievance board shall have authority to order that the records not be released.
5. If a student demonstrates that the student is entitled to access to particular documents under this chapter, the Student Academic Grievance Board shall have authority to order that the student be permitted access to the records.
6. The decision of the Student Academic Grievance Board shall be rendered in writing within a reasonable period of time after the conclusion of the hearing.

**WAC 516-26-070 Release of Personally Identifiable Information or Education Records.** The University shall not permit access to or the release of a student's education records or personally identifiable information contained therein to any person without the written consent of the student, except as provided in WAC 516-26-080, 516-26-085, or 516-26-090. Misuse or inappropriate access to student education records may result in disciplinary action.

**WAC 516-26-080 Release of Personally Identifiable Information or Education Records — Exceptions to Consent Requirements.**

1. The University may permit the access to or release of a student's education records or personally identifiable information contained therein without the written consent of the student to the following parties:
  - a. University officials, including faculty members, when within the scope of the recipient's official responsibilities with the University and will be used only in connection with the performance of those responsibilities;
  - b. Federal or state officials requiring access to education records in connection with the audit or evaluation of federally or state supported educational programs or in connection with the enforcement of federal or state legal requirements relating to such programs. In such cases the information required shall be protected by the federal or state officials in a manner which shall not permit the personal identification of students or their parents to other than those officials, and such personally identifiable data shall be destroyed when no longer needed for the purposes for which it was provided;
  - c. Agencies or organizations requesting information in connection with a student's application for, or receipt of, financial aid;
  - d. Organizations conducting studies for or on behalf of the University for purposes of developing, validating or administering predictive tests, administering student aid programs, or improving instruction, if such studies are conducted in a manner which will not permit the personal identification of students by persons other than representatives of such organizations, and the information will be destroyed when no longer needed for the purposes for which it was provided;
  - e. Accrediting organizations in order to carry out their accrediting functions; or
  - f. Any person or entity authorized by judicial order or lawfully issued subpoena to receive such records or information, upon condition that the student is notified of all such orders or subpoenas in advance of compliance therewith by the University. Any University employee or official receiving a subpoena or judicial order for education records or personally identifiable information contained therein shall immediately notify the assistant attorney general representing the University.
  - g. An alleged victim of any crime of violence (as defined in section 16 of Title 18, United States Code) may have disclosed the results of any disciplinary proceeding conducted

- by the university against the alleged perpetrator of such crime with respect to such crime, without the consent of the alleged perpetrator.
2. Education records of a student, or personally identifiable information contained therein which are released to third parties, with or without the consent of the student involved, shall be accompanied by a written statement indicating that the information cannot subsequently be released in a personally identifiable form to any other party without the written consent of the student involved.
  3. The University shall maintain a record, kept with the education records of each student indicating all parties, other than those parties specified in WAC 516-26-080(1)(a), which have requested or obtained access to the student's education records, and indicating the legitimate interest that each such party has in obtaining the records or information contained therein. This record of access shall be available only to the student, to the employees of the University responsible for maintaining the records, and to the parties identified under WAC 516-26-080(1)(a) and (c).

**WAC 516-26-085 Release of Information in Emergencies.**

1. The vice president for student affairs or his or her designee may, without the consent of a student, release the student's education records or personally identifiable information contained therein, to appropriate parties in connection with an emergency if the knowledge of such information is necessary to protect the health or safety of the student or other persons.
2. The university police, during instances of emergency pertaining to individual students, may have access to those student's education records or personally identifiable information.
3. The following factors should be taken into consideration in determining whether records may be released under this section:
  - a. The seriousness of the threat to the health or safety of the student or other persons;
  - b. The need for personally identifiable information concerning the student to meet the emergency;
  - c. Whether the parties to whom the records or information are released are in a position to deal with the emergency; and
  - d. The extent to which time is of the essence in dealing with the emergency.
4. If the University, pursuant to subsection (1) of this section, releases personally identifiable information concerning a student without the student's consent, the University shall notify the student as soon as possible of the identity of the parties and to whom the records or information have been released and of the reasons for the release.

**WAC 516-26-090 Release of Directory Information.**

1. The University may release "directory information" concerning a student to the public unless the student requests in writing of the University registrar that the student's directory information not be released except as provided in WAC 516-26-070, 516-26-075, 516-26-080 or 516-26-085.
2. The term "directory information" shall include information relating to the student's name, local telephone number, dates of attendance, degrees and awards received, participation in officially recognized sports and activities, weight and height if a member of an athletic team, and the most recent previous educational institution attended.

**WAC 516-26-095 Destruction of Education Records.**

Except as otherwise provided by law, the University shall not be prevented under this chapter from destroying all or any portion of a student's education records in accordance with established record retention schedules, provided that no education record to which a student has requested access shall be removed or destroyed by the University prior to providing the student with the requested access.

**WAC 516-26-100 Notification of Rights Under This Chapter.**

The University shall annually notify students currently in attendance of their rights under this chapter and the Family Educational Rights and Privacy Act.

The notice shall include a statement of the following students rights:

1. Inspect and review the student's education records;
2. Request the amendment of the student's education records to ensure that they are not inaccurate, misleading, or otherwise in violation of the student's privacy or other rights;
3. Allow or deny disclosures of personally identifiable information contained in the student's education records, except to the extent that these regulations and the regulations promulgated pursuant to the Family Educational Rights and Privacy Act allow;
4. File a complaint with the United States Department of Education under 34 CFR 99.64 concerning alleged failures by the University to comply with the requirements of the act;
5. Access information concerning the cost to be charged for reproducing copies of the student's records; and
6. Access a copy of the regulations in this chapter (Chapter 516-26 WAC).

The notice shall indicate the places where copies of these regulations are located.

# **Appendix F - Academic Grievance and Appeal Policy and Procedures**

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## **1. Policy**

Students have protection, through orderly procedures, against arbitrary or capricious actions or decisions by their instructors; students also have protection against erroneous actions or decisions by academic units. At the same time, students are responsible for achieving and maintaining the standards of academic performance and excellence which are established by their instructors and for complying with all relevant policies, standards, rules and requirements which are formulated by the University and the University's academic units. A student wishing to pursue an academic grievance or appeal must use the following grievance procedure once having received notice of the action or decision which gives rise to the grievance. The emphasis of the grievance procedures is on informal resolution of the grievance. Grievances which involve hearings before the Student Academic Grievance Board should be rare.

Students who do not meet the deadlines given in the procedures shall be deemed to have waived their right to appeal. If any officer of the University or the Board fails to meet the deadlines established, the student may continue to the next level in the procedures. The deadlines are set to provide a rapid resolution of the grievance. However, unforeseen circumstances such as illness or absence from the campus may result in an extension of a deadline. Such extensions shall be recorded in writing by the unit head, dean or secretary to the Board, as appropriate.

## **2. Academic Grievances**

Academic grievances are limited to the following:

1. A claim by the student that an assigned grade is the result of arbitrary or capricious application of otherwise valid standards of academic evaluation, or
2. A claim by the student that the standards for evaluation are arbitrary or capricious, or
3. A claim by the student that the instructor has taken an arbitrary or capricious action which adversely affected the student's academic progress, or
4. A claim by the student that an academic unit has reached a decision not in keeping with University policy or taken an erroneous action which adversely affects the student's academic standing or academic career.

**NOTE:** Where an action is claimed to be in violation of affirmative action, a separate set of procedures are used (see *Appendix A, WWU Policies on Equal Opportunity/Nondiscrimination, Affirmative Action, Sexual Harassment, Reasonable Accommodation*).

## **3. Procedures**

### **A. Resolution and Appeals**

A student with an academic grievance against an individual instructor shall first thoroughly discuss the matter with the instructor involved. The student must meet with the instructor within ten (10) days of receiving written notification of the action or decision which gives rise to the grievance. In the case of absence from the campus of either of the parties, the student shall inform the academic unit head, in writing, of the existence of the grievance and the unit head shall arrange for consultation between the parties concerned at the earliest possible opportunity. Should the faculty member be on extended leave, or have resigned from the University, the unit head shall act for the instructor.

The instructor and the student should make a good faith effort to resolve the grievance. Grievances resolved at this stage do not require a written record unless the resolution involves a grade change or involves academic dishonesty. Grade changes require the approval of the department chairperson or the dean in the case of Fairhaven, who then directs the Registrar to make the specific grade change. A copy of the memo to the Registrar will be sent to the student and faculty member.

If a resolution is not achieved between the student and the instructor within five (5) days after the first meeting between the student and instructor, the student has five (5) days to ask the academic unit head, or designee, to attempt to informally resolve the issue. The unit head, or designee, will meet with both parties to clarify the issues and attempt to resolve them. If the issue is resolved within five (5) days after the student has sought the assistance of the unit head, the unit head, or designee, shall prepare an informal agreement, in writing, for both sides to sign. No reasons need be given. Such an agreement, once signed by both parties, may not be appealed.

If an agreement cannot be reached within the five-day review period, and the student still wishes to pursue the grievance, the student shall request the unit head or designee to present the case to the dean of the college. The unit head has five (5) days to present the material to the dean. The material presented should include all of the documents relevant to the case and an analysis of the issues. The dean shall continue the process of seeking an informal resolution and collect more material as necessary. If a resolution can be reached, the dean shall prepare an informal agreement as above. Such an agreement, once signed by both parties, may not be appealed.

If the student has a grievance against an academic unit, the student shall first thoroughly discuss the matter with the unit head. The student must meet with the unit head within ten (10) days of receiving notification of the action or decision of the unit which gives rise to the grievance. If the grievance is not resolved information is required for a legitimate educational purpose within ten (10) days of the initial meeting between the student and the unit head, the student may request, in writing, further review by the dean of the college, following the procedures for grievance against individual faculty.

If the grievance against a faculty member or academic unit is not resolved at this stage, the dean shall make a decision based on the merits of the case. The reasons for the decision shall be in writing and shall be given to both the student and the instructor or unit head. The dean's decision must be rendered and given to both parties within five (5) days of receiving the material. The written decision of the dean will include: (1) a statement of the grievance, (2) a statement of the efforts made to resolve the issue and (3) a statement of action, with reasons.

Either side may appeal a decision of the dean to the Student Academic Grievance Board. The appeal must be filed within five (5) days after the receipt of the dean's written decision.

#### B. Appeal to the Board

1. *Composition of the Board.* The Student Academic Grievance Board shall consist of six (6) members: three students and three faculty. An administrator appointed by the Vice President for Student Affairs will serve as executive secretary to the board and will be responsible for the arranging of meetings and the collection and maintenance of necessary documents. The board, for any hearing, will be selected in the following manner:
  - a. The pool of board members shall consist of six (6) faculty appointed by the Faculty Senate for three-year terms; six (6) undergraduate students and six (6) graduate students appointed by the Associated Students board for one-year terms.
  - b. Each party to the grievance shall have the right to reject two faculty and two students from the list of the pool of board members.
  - c. From the remaining members, the Vice President for Academic Affairs or designee shall select the board members for the hearing, and shall appoint the chairperson. If the grievance involves a graduate student, at least two of the

board members must be graduate students.

2. *Appeal Procedures*

- a. *Lodging appeal.* The party appealing to the board shall present the appeal to the executive secretary of the board within five (5) days after issuance of the dean's written decision. The letter of appeal shall state the basis of the appeal. The secretary will send a copy of the appeal to the second party to the grievance, who may respond in writing. All materials used at any stage of the grievance shall be made available to both parties and to the dean.
- b. *Mediation.* A mediator may be appointed by the Vice President for Academic Affairs or designee from a list of four persons previously appointed by the Faculty Senate. The mediator has five (5) days from the time of appointment to attempt to resolve the issue to the satisfaction of both parties; otherwise the appeal proceeds to a hearing.
- c. *Hearing.* A hearing shall be called within fifteen (15) days of the filing of the appeal unless both parties agree to a delay, or unless the grievance is resolved through mediation.

A quorum is four (4) members of the board. Both the student and the instructor may be accompanied by an advocate (although not a legal professional).

Both the student and the faculty member shall be invited to present oral arguments which shall be restricted to matters already in the record. New causes for grievance may not be raised at the hearing. Members of the board may question either party.

No testimony may be taken by the board unless both parties are present, or have waived their right to be present.

At the conclusion of the hearing, the board shall, in writing,

- a. Request additional information, to be considered at a future hearing, or
- b. Find that there is insufficient cause to overrule the dean's decision and recommend to the Vice President for Academic Affairs that it be upheld, or
- c. Find that there is sufficient cause to modify or overrule the dean's decision and recommend appropriate action to the Vice President for Academic Affairs.

C. Appeal to the Vice President for Academic Affairs

Either party may appeal to the Vice President for Academic Affairs from a decision by the board. Such appeal shall be made, in writing, within five (5) days after the issuance of the board's written decision. The board chairman has the right to make a written response to the appeal within five (5) days of filing the appeal. The vice president may overrule or modify the decision of the board only if that decision was arbitrary, capricious, based on insufficient information, or was beyond the scope of these procedures as defined in Section 2. The decision of the Vice President for Academic Affairs is final. Copies of the vice president's decision will be sent to the student, faculty member, unit head, dean, chairperson and secretary of the board.

D. Maintenance of Records

All written statements and testimony considered in the grievance process and a copy of the final written decision of the board or academic vice president shall be retained on file in the academic vice president's office for a period of one (1) year following final disposition of the grievance.

Where a solution or decision results in a grade change, the unit head shall inform the registrar of the grade change.

#### ***4. Definitions***

These definitions are for the purposes of these procedures only:

1. "Academic unit" is Fairhaven College of Interdisciplinary Studies or a department within the Colleges of Business and Economics, Fine and Performing Arts, Humanities and Social Sciences, Sciences and Technology, Huxley College of the Environment, or Woodring College of Education.
2. "Unit head" is the department chairperson, or, in the case of Fairhaven college, the chairperson of the college personnel committee.
3. The unit head "designee" can be any faculty member or administrator from the academic unit.
4. Reference to "days" means "school days" and includes the registration period and the week in which exams are scheduled.

# **Appendix G - Code of Ethics for the Faculty of WWU**

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*This Code of Ethics was adopted by vote of the faculty of Western Washington University on May 14, 1993, and was endorsed for inclusion in the Faculty Handbook by the Board of Trustees on July 8, 1993.*

## **Preface**

Membership in the academic community and in the faculty of Western Washington University imposes upon faculty a range of obligations beyond that currently accepted by the members of the wider society. These obligations, which ensue from the faculty member's commitment to learning and to the role of teacher, include obligations to respect the dignity of others; to acknowledge the right of others to express differing opinions; to foster learning; to defend intellectual honesty, freedom of inquiry, learning and teaching; and to support freedom of expression on and off campus. An obligation to protest injustices and seek correction of inequities carries with it the corollary responsibility to do so in ways which do not intentionally, persistently or significantly impede the functions of the institution.

A professional faculty, as guardian of academic values, serves as the instrument of disciplinary action against unjustified assaults upon those values by its own members. The traditional faculty role of limiting participation in disciplinary action to assurance of academic due process is inadequate to protect the conditions enumerated in the 1940 AAUP Statement on Academic Freedom. This function must be preserved but must also be strengthened by faculty assumption of responsibilities in adopting, practicing and promoting adherence to those principles of conduct essential to academic endeavor.

In recognition of this responsibility, the faculty of Western Washington University have adopted this Code of Ethics as a guide for present and future members of the University faculty.

## **Section 1**

Western faculty members, guided by a deep conviction of the worth and dignity of their role in the advancement and dissemination of knowledge, recognize the special responsibilities placed upon them as scholars. Their primary responsibility to their respective subjects is to seek and to state the truth as they, in consequence of their academic competence, perceive it. To this end faculty energies are devoted to developing and improving their scholarly competence. They accept the obligation to exercise self-discipline and judgment in using, extending and transmitting knowledge. They practice intellectual honesty. When subsidiary interests are followed, they must ensure that these interests do not seriously compromise freedom of inquiry nor the fulfillment of academic responsibilities.

## **Section 2**

As teachers, the Western faculty encourage the free pursuit of learning by students, and demonstrate by example the best scholarly standards of their respective disciplines. The faculty respect students as individuals and adhere to their designated role as intellectual guides and counselors, make every effort to foster honest academic conduct and to assure that evaluations of students reflect their actual performance. The faculty avoid and condemn sexual harassment, intimidation, and exploitation of students. The confidential nature of the relationship between professor and student is respected, and any exploitation of students for private advantage is avoided by the faculty member who acknowledges significant assistance from them. Faculty strive to help students develop high standards of academic competency and respect for academic freedom.

## **Section 3**

A teacher's mastery of his/her subject and scholarship entitles the teacher to a classroom and to

freedom in the presentation of a subject. Faculty thus avoid injecting into classes material which has no relation to the subject and conscientiously develop the content of a course as announced to students and as approved by the faculty in their collective responsibility for the curriculum.

#### **Section 4**

As a colleague, the Western faculty member has special obligations that derive from membership in the community of scholars. These include respect for, and defense of, the free inquiry of associates and, in the exchange of criticism and ideas, the respect for the opinions of others. Faculty members acknowledge the contributions of their colleagues and strive to be fair in their professional judgment of colleagues. Each accepts his/her share of faculty responsibilities for the governance of this institution.

#### **Section 5**

As a member of this institution, each Western faculty member seeks above all to be an effective teacher and scholar. Although all regulations of the institution that do not contravene academic freedom are observed by the faculty, the right to criticize institutional regulations and to seek their revision is maintained. The amount and character of work done outside the institution is determined by the faculty member with due regard to the paramount responsibilities within it. When considering the interruption or termination of service, the faculty member recognizes the effect of such decisions upon the program of the institution and gives due notice of such intentions.

#### **Section 6**

As a member of a larger community the Western faculty member maintains the same rights and obligations as does any other citizen. The urgency of these obligations is measured in the light of responsibilities to the discipline, to the students, to the profession, and to the institution. When speaking or acting as a private individual, each faculty member avoids creating the impression of speaking or acting for the University. As a citizen engaged in a profession that depends upon freedom for its integrity and welfare, the Western faculty member exercises a special obligation to promote conditions of free inquiry and to further public understanding of academic freedom.

#### **Section 7**

Academic freedom has traditionally included the instructor's full freedom as a citizen. Most faculty members face no insoluble conflicts between the claims of conscience and of social and political action, on the one hand, and the claims and expectations of students, colleagues and the institution on the other. If such conflicts become acute, and the instructor's attention to obligations as a concerned citizen precludes the fulfillment of academic obligations, he/she should either request a leave of absence or resign his/her academic position.

Relationships of a romantic or sexual nature between a faculty member and a student under that faculty member's supervision always endangers the faculty-member's decision-making abilities and the student's need for a non-intimidating learning environment. Even if both parties in such a relationship are capable of separating their personal and professional relationships from one another, the faculty member cannot exhibit the professionalism that is expected of him/her. Consequently, a faculty member is obliged to disengage himself/herself from a supervisory role over any student with whom he/she has established or seeks to establish a romantic or sexual relationship. No faculty member at Western Washington will evaluate, grade, or supervise a student with whom the faculty member is romantically or sexually involved.

## **Section 8**

The expression of dissent and the attempt to produce change on campus and in the larger society are legitimate, but they must be carried out in ways which do not violate academic freedom, injure individuals, disrupt the classes of colleagues, intrude on the individual rights of others, or damage institutional facilities or private or public property. All members of the academic community and visitors to the University must be assured of the right to be heard in an atmosphere of free inquiry and in a situation devoid of violence.

## **Section 9**

It is presumed that members of the Western faculty will find this Code of Ethics an adequate guide for the choices they must make in the fulfillment of their academic functions. If rules are needed to implement the principles inherent in this code, they shall be developed by the faculty within the spirit of the code, shall be in accordance with the 1940 AAUP Statement on Academic Freedom, and shall carry full provision for due process.

# **Appendix H - WWU Administrative Procedures**

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Western Washington University is required to develop and implement procedures, which ensure equal opportunity, and to effectively address situations which violate its nondiscrimination policies. The following section outlines the University's internal procedures for handling illegal discrimination complaints and making requests for reasonable accommodation.

## **A. Discrimination Complaint Procedure**

### **1. Introduction**

The University is committed to resolving complaints of illegal discrimination at the earliest and most informal level, conducting internal investigations in a timely and effective manner, adhering to the principles of due process in all investigations and hearings, and providing prompt corrective action if discrimination is found to have occurred. No individual shall be penalized, or retaliated against in any way by a member of the University community for his or her participation in this complaint procedure.

### **2. Purpose and Jurisdiction**

This procedure is limited to complaints which allege discrimination on the basis of race, color, creed, religion, national origin, sex (including sexual harassment), sexual orientation, age, marital status, disability (including failure to provide reasonable accommodation), or status as a disabled veteran or Vietnam-era veteran. Aggrieved parties will be referred to as complainants. Persons alleged to have engaged in illegal discrimination will be referred to as respondents.

This procedure is internal to the University and applies to incidents that take place at the University or are related to University operations. Individuals who may use this procedure include, but are not limited to:

- individuals applying for enrollment or employment to the University;
- students;
- faculty, with or without rank;
- graduate assistants;
- classified employees;
- University administrators;
- exempt professional employees; and
- users of University services.

Supervisors, unit heads, department chairs and others in leadership are charged with the responsibility of ensuring nondiscrimination in the employment and academic environment. Therefore, complainants are encouraged to bring their concerns to such leaders for resolution.

To facilitate investigation, complaints should be brought forward as soon as possible after the alleged act of discrimination.

Individuals also have the right to file complaints of discrimination with the appropriate state or federal agency or a lawsuit in a court with jurisdiction.

### **3. Responsibility for Implementation**

The Vice Provost for Equal Opportunity and Employment Diversity has overall responsibility for assuring University compliance with nondiscrimination laws and regulations, and receives formal complaints.

The Equal Opportunity Office (EOO) receives informal complaints and requests for clarification on what constitutes illegal discrimination.

The Vice President for Student Affairs has responsibility for administration of the student conduct system and for determination of any disciplinary actions against students which might arise from a complaint of student misconduct. Procedures for this action are detailed in the Student Rights and Responsibilities Code, found in the University *General Catalog* and in the Washington Administrative Code at Chapter 516-23 WAC.

### **4. Procedure**

Confidentiality is essential in matters involving allegations of illegal discrimination. Complainants, respondents, and participants in these processes are urged to treat all information as confidential and to disclose information about the case only when it is absolutely essential to making the determinations involved in this procedure. Breaches of confidentiality may be the basis for claims of unprofessional conduct, student conduct code violations, or charges of slander and retaliation.

#### **A. Informal Resolution**

1. *Discussion with respondent.* Complainants are urged to discuss with the respondent or bring to the attention of the respondent any inappropriate behavior in order to make the respondent aware of the manner in which his/her action is received and allow for self-corrective action.
2. *Discussion with leadership encouraged.* If attempts to discuss their concerns with the respondent are unsuccessful or ill-advised, complainants are encouraged to discuss their concerns with the appropriate supervisor or department chair who is responsible for taking corrective action. The matter may be concluded by mutual consent at this point. Supervisors and chairs are encouraged to utilize the expertise of the EOO when handling such matters and are advised to maintain documentation sufficient to demonstrate a timely, appropriate and adequate response.
3. *Role of the Equal Opportunity Office.* If resolution satisfactory to the complainant does not occur, the complainant may contact the next person in the administrative line or the EOO to seek resolution. The center will assign a staff member to discuss options for handling the situation and make referrals to appropriate resources and support services. If the EOO has jurisdiction over the complaint, the complainant may authorize an attempt at informal resolution which shall be concluded within 15 working days after jurisdiction is determined.

At any point in the process, the complainant may provide written notification to the EOO that the situation is resolved or that no further University action is desired. Written materials will be retained in active files for three years, and in the University Records Center for four years.

#### **B. Formal Complaints**

1. *Filing the formal complaint.* A complainant who is not satisfied with the outcome of the informal resolution process may file a written complaint with the Vice Provost for Equal Opportunity and Employment Diversity. The complainant will submit a formal complaint form (available from the EOO) which will include a written statement describing the alleged discrimination. Upon receipt by the EOO, the complaint shall be marked with the date received. That date shall be referred to as the case filing date. Time limits set forth in these procedures may be extended by the Vice Provost for Equal Opportunity and Employment Diversity at his or her discretion, or upon written application to the EOO Vice Provost by the

complainant, respondent, or the unit Vice President. The Vice Provost shall inform the parties when extensions of the time limits are made. Only in extremely unusual circumstances may an extension prevent the procedure from being completed within 100 working days of the case filing date.

2. *Determination of whether complaint is subject to procedures.* Within ten (10) working days of the case filing date, the Vice Provost for Equal Opportunity and Employment Diversity or designee shall determine whether the facts alleged in the complaint fall within the purview of these procedures. If not, the complainant shall be notified in writing. No appeal may be taken internally of this determination. A complainant or respondent who feels that action is warranted even though the EOO has found otherwise may make a complaint through other internal procedures, such as the appropriate grievance committee, or externally to an agency such as the Equal Employment Opportunity Commission.
3. *Steps taken to proceed with complaint.* If the Vice Provost for Equal Opportunity and Employment Diversity determines that the complaint falls within the purview of these procedures, s/he shall:
  - a. Provide a copy of the complaint to the respondent(s), together with a copy of these procedures, and request a written response to the allegations;
  - b. Provide a copy of the complaint to the appropriate Vice President and the respondent(s)' Dean or unit head;
  - c. Consult with the complainant, the department chair or unit head, and the respondent(s), all of whom may identify other persons having personal knowledge of the alleged incidents and all of whom will be advised of the necessity for confidentiality.
4. *Written response may be filed.* Within ten (10) working days after receiving notification of the complaint, the respondent may submit to the Vice Provost for Equal Opportunity and Employment Diversity a written response to the complainant's allegations. The respondent is encouraged to provide a written response; however, refusal to answer a charge or to participate in an investigation will not prevent the process from proceeding. Refusal to respond may result in the investigation proceeding solely on the basis of the complainant's testimony and evidence.
5. *Investigation and report.* Within forty-five (45) working days after determining jurisdiction, the Vice Provost for Equal Opportunity and Employment Diversity or her/his designee shall:
  - a. Conduct an investigation, which may include interviews with those identified by the parties as having personal knowledge of the alleged incidents and others identified in the investigation whose testimony may shed light on the complaint;
  - b. Review written responses as appropriate;
  - c. Prepare a written investigative report and findings which detail the investigation process, lists the persons interviewed or consulted, and summarizes the information obtained.
  - d. Provide a copy of the investigative report and findings to the complainant(s), respondent(s), the appropriate Vice President, the appropriate dean, and the department chair or unit director.
6. *Review by Vice President.* Within 10 working days after receiving the investigative report, the appropriate vice president or designee will determine appropriate actions in response to the findings. The vice president's response shall be documented in writing and provided to all appropriate parties, including the EOO. Should the resolution of a complaint result in disciplinary action(s) for the respondent, the respondent(s) may seek review of the action(s) using the appropriate appeal procedures.
  - a. *Sanctions.* Sanctions to be considered by the vice president can vary in type, intensity and duration, depending on the specifics of each case. All sanctions, with the exception of termination or dismissal, may include mandatory training sessions. Upon request from a faculty respondent, the vice president may seek the advice of selected members of the Senate Executive Council in determining a sanction. Dismissal procedures will conform to the specifications in the *Faculty Handbook*, including the AAUP guidelines referenced therein. Examples of sanctions to be considered are:
    - Letters of reprimand;
    - Community/public service;
    - Monetary compensation to complainant;

- A reduction of job responsibility or demotion;
- Denial or postponement of leaves or salary increases;
- Suspension from employment;
- Dismissal or suspension from the University.

#### **C. Complaint Initiated by Administration**

The President, Provost, Vice Presidents, Deans, Directors, Supervisors or Chairs, if given sufficient cause, may request that the EOO conduct an investigation. The administrator requesting the investigation will then act as the complainant and must specify the persons, with their permission, who are alleged to be the victims of the questionable conduct. The EOO will use the same notification and process guidelines outlined in the internal complaint procedure. In the event that the investigation indicates that illegal discrimination has occurred, appropriate disciplinary action may be taken. The administrator who initiated the complaint will not be involved in reviewing the findings or determining sanctions. Appeal of any such action may be filed under the appropriate grievance procedure or relevant disciplinary process.

#### **D. Investigative Record**

1. *Records custodian.* The EOO shall maintain the investigative records for complaints filed pursuant to these procedures. The investigative records shall include the written complaint, the written response, investigative summaries of the Vice Provost for Equal Opportunity and Employment Diversity, other written materials considered in the course of the investigation, the Vice Provost's written report, the vice president's written response to the investigative report, and any documentation which confirms that actions recommended by the vice president were taken. The investigative records shall be maintained under appropriate security in the EOO.
2. *Records retention.* The investigative file will be retained in the Equal Opportunity Office files for three (3) years and in the Records Center for four (4) years.
3. *Investigative records not subject to public disclosure.* Investigative records pertaining to claims of discrimination in employment or unfair practices under chapter 49.60 RCW, the state's Law Against Discrimination, are not subject to public disclosure under the Public Records Disclosure Law, Chapter 42.17 RCW. In the event disciplinary action is taken against an employee, those personnel records relating to specific instances of misconduct may be subject to disclosure pursuant to the Public Records Disclosure Law.

#### **E. Filing a False Complaint or Retaliating Against Participants in the Process**

Filing a false complaint is considered to be serious misconduct and such offenses will be subject to the full range of sanctions. A finding that discrimination did not occur will not in itself be the basis for a charge of false complaint. Similarly, retaliating against participants in these proceedings is serious misconduct, and is subject to sanction. The procedure described in this document will be available to anyone who wishes to allege that a false complaint has been filed or that retaliation has taken place.

#### **F. Alternative Complaint Process**

1. *Internal.* The complainant may not elect to use other internal grievance procedures (such as the faculty grievance procedure, student conduct code, or labor agreement grievance procedure) for complaints pertaining to claims of illegal discrimination.
2. *External.* A person who believes that s/he has been the subject of discrimination prohibited by state or federal law may choose to file a discrimination complaint by contacting one of the following agencies within their established time limits.

Washington State Human Rights Commission  
1511 Third Avenue  
Melbourne Tower, Suite 921  
Seattle, WA 98101-1626  
Phone: (800) 605-7324  
TTY: (206) 587-5168

Equal Employment Opportunity Commission  
Seattle Field Office  
909 First Avenue, Suite 400  
Seattle, WA 98104-1061  
Phone: (206) 220-6883  
TTY: (206) 220-6882

U.S. Department of Education  
Office of Civil Rights  
915 2nd Avenue  
Room 3310  
Seattle, WA 98174-1099  
Phone: (206) 220-7900  
TTY: (206) 220-7907

U.S. Department of Health and Human Services  
Office for Civil Rights  
2201 Sixth Avenue, Suite 900, MS: RX-11  
Seattle, WA 98121-1831  
Phone: (206) 615-2290  
TTY: (206) 615-2296

Office of Federal Contract Compliance Programs  
Seattle Office  
1111 Third Avenue., Suite 745  
Seattle, WA 98101-3212  
Phone: (206) 393-8000

Adopted by the Board of Trustees on April 1212, 1996. Updated by the Equal Opportunity Office on February, 2010. Updated by the Equal Opportunity Center on August 23, 2001.

## **B. Procedure for Requesting Reasonable Accommodation**

Employing officials, search committee chairs, supervisors, program directors, deans, faculty and department chairs may all receive requests for accommodation from persons with disabilities. Such requests may be submitted by employees, students, applicants for employment, individuals seeking admission to the University or its academic programs, and persons wishing to use University services or participate in University activities and events. The appropriate University contact varies, depending on whether the person requesting the accommodation is a student, employee, applicant, or a member of the general public.

It is the obligation of an individual with a disability to request reasonable accommodation from an appropriate University contact, and to provide documentation of the disability if needed.

- a. *Students.* Students with documented disabilities who are enrolled at the University may request accommodation directly from faculty or staff. However, it is highly recommended that students with disabilities seek assistance through the Disability Resources for Students (DRS) office. For more information: DRS is located in Old Main Room 110 at (360) 650-3844 (voice) or (360) 650-3725 (TTY), or [drs@wwu.edu](mailto:drs@wwu.edu) or their Website, [www.wwu.edu/depts/drs/index.htm](http://www.wwu.edu/depts/drs/index.htm).
- b. *Employees.* Employees with disabilities are encouraged to inquire about reasonable accommodations to perform the essential functions of their job, meet performance and conduct standards, and enjoy equal benefits and privileges of employment. The policies and procedures for requesting a reasonable accommodation can be found on Western's Human Resources Website under Disability Resources or by contacting the Disability Resources for Employees Unit at (360) 650-3774 (voice) or (360) 650-7696 (TTY).
- c. *Job Applicants.* Job applicants with disabilities are encouraged to inquire about reasonable accommodations if needed for the application and employment screening process. The policy and procedures for requesting a reasonable accommodation can be found on Western's Human Resources Website under Disability Resources or by contacting the Disability Resources for Employees Unit at (360) 650-3774 (voice) or (360) 650-7696 (TTY).
- d. *Applicants for Admission.* Applicants may request accommodation during the application process from the Admissions Office or contact the Disability Resources for Students office (see contact information above) for assistance and advice.
- e. *Members of the General Public.* Persons with disabilities from the general public needing a reasonable accommodation to participate in a University activity, service or event open to the public are encouraged to contact the program coordinator or the University ADA coordinator. The policy and procedure for requesting a reasonable accommodation can be found on Western's Human Resources Website under Disability Resources or by contacting the Disability Resources for Employees Unit at (360) 650-3774 (voice) or (360) 650-7696 (TTY).

All University representatives who receive accommodation requests shall contact Human Resources for assistance and advice. The ADA coordinator is responsible for ensuring that requests for accommodation are considered on a case-by-case basis in accordance with state and federal regulations, and that appropriate University officials are involved in evaluating the request, identifying funds and resources and implementing the accommodation. The right to reject an accommodation because of undue hardship is reserved for the University president or his/her designee.

The ADA coordinator is Dr. Sue Guenter-Schlesinger. She may be reached at (360) 650-3307 (voice) or (360) 650-2535 (TTY).

Adopted by the Board of Trustees on April 12, 1996. Revised by the EOC on December 7, 1998.  
Revised by Human Resources and Equal Opportunity Services on April 15, 2003.

## **Appendix I - Transportation Services**

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WWU is committed to supporting sustainable transportation options and reducing automobile-dependent transportation. All students, faculty, and staff are encouraged to utilize the variety of transportation options available and minimize the use of motor vehicles. Alternatives to driving alone include walking, bicycling, public transit, park and ride, and ride sharing. The Sustainable Transportation Office offers information and assistance to help students find the transportation options that best fit their needs while attending Western Washington University. WWU is bordered by residential neighborhoods within easy walking distance of downtown, and is well served by public transportation. For information, contact Western's Sustainable Transportation program at 360-650-7960, [transportation@wwu.edu](mailto:transportation@wwu.edu) or go to [www.wwu.edu/transportation](http://www.wwu.edu/transportation).

### ***Western Student Transportation***

The student transportation program provides transportation resources for students including a Viking Xpress Bus Pass for each student\*, a daily late night and Sunday daytime Student Shuttle service, and a student Alternative Transportation Coordinator. The program is funded by a \$25 quarterly Student Transportation Fee. For more information, visit the student transportation website at <http://transportation.as.wwu.edu>.

\*Students taking 6 or more credits are automatically assessed the \$25 Student Transportation Fee; students taking 1-5 credits can opt in to the student transportation program by paying the fee. Fee and eligibility do not apply to online or off-site classes or non-credit programs.

### ***Viking Xpress Student Bus Pass***

The Viking Xpress bus pass is valid for unlimited rides on all Whatcom Transportation Authority bus routes, including routes serving the Lincoln Creek Transportation Center and the 80X route serving Mount Vernon and Bellingham. Student Viking Xpress bus passes are magnetically encoded on student ID cards through the Western Card office in Eden's Hall. Lost ID cards can be replaced at the Western Card office.

### ***Student Shuttle***

The WWU Student Shuttle is a late night and Sunday bus service open only to Western students. The shuttle system consists of two routes that serve WWU, Downtown Bellingham, Bill McDonald Parkway, Lincoln Creek Transportation Center, and Lakeway Center. The WWU Student Shuttle stops at all WTA bus stops along its route, but does not serve WTA's Downtown Station. Instead, the shuttle stops on Railroad Avenue just outside the WTA station. The Student Shuttle makes two express runs to the Fairhaven Transportation Center on Sunday evenings to meet Amtrak and Greyhound arrivals.

### ***Walking***

WWU is located within a mile of the Bellingham Central Business District and is surrounded by friendly residential neighborhoods. The campus is accessible via trails and an extensive sidewalk network through the neighborhoods. Walking is the cheapest way to go, and for trips of less than a mile, walking from door to door is usually just as fast as driving, parking and walking.

### ***Bicycles***

Bellingham is a featured bicycle destination, and the community supports bicycle transportation. With more than 900 bike racks adjacent to residence halls and academic buildings, you are encouraged to

bring your bicycle to Western. There are some restrictions on bicycling in campus pedestrian areas during high-traffic times. The WWU Bicycle Commuting Guide and Washington state bicycle traffic laws are available at <http://www.wwu.edu/transportation>. Bicycles can be registered at no charge with University Police at the Campus Services Building. Bicycle locks, lights, parts and repair assistance are available at the Outdoor Center bike shop in the Viking Union.

### ***Public transit***

Whatcom Transportation Authority (WTA) provides safe, high-quality, cost-effective, and accessible public transportation. WTA offers WWU convenient service with multiple routes Monday-Saturday. Routes serving Western connect with other routes at the downtown Bellingham Transit Station including regional transit connections at Skagit Station in Mount Vernon. Evening service connects WWU with other Bellingham destinations until 10 p.m. six days a week. Easy to use bike racks are installed on every WTA bus. For WTA route and schedule information, call 360-676-RIDE or visit [www.ridewta.com](http://www.ridewta.com).

### ***Persons with disabilities service***

All WTA buses (except emergency backup vehicles) are wheelchair accessible. Transit service is available for those unable to access or use fixed route buses through WTA Specialized Transportation by calling (360) 733-1144 (TTY call (360) 676-6844).

### ***Park and Ride***

The off-campus Lincoln Creek Transportation Center is convenient to Interstate 5 and a 10-minute bus ride to the center of campus. WTA routes serve the park and ride lot, providing a convenient means for commuters to avoid the parking hassles on and near campus.

## **Parking Services**

360-650-2945

[www.ps.wwu.edu](http://www.ps.wwu.edu)

Parking Services is located in the Campus Services Building at the intersection of Bill McDonald Parkway and 21st Street, at the south end of campus. Parking Services hours are 7:15 a.m. to 4:30 p.m. Monday-Friday. The Visitor Information Drive Thru hours are 9:30 a.m. to 2:30 p.m. Saturdays during fall, winter, and spring quarters when WWU is in session.

Parking space is limited. Anyone using campus parking facilities is required to purchase and display a valid University parking permit on any motorized vehicle. Parking regulations are strictly enforced. Drivers are encouraged to become familiar with the University parking and traffic regulations. Parking maps, regulations, and fees are available online [www.ps.wwu.edu](http://www.ps.wwu.edu) or at Parking Services.

### ***Quarterly and Annual Parking Permits***

Early application is necessary but does not guarantee a permit for all students who apply. Parking permit applications for fall quarter are available online the last week of May, with a deadline of July 31st. Applications can be mailed upon request. Parking assignments are made on the basis of class seniority and date submitted. Nonresident student parking lots at WWU are located a 10-minute walk from the center of campus. For those needing to drive on occasion, daily short-term parking permits can be purchased by stopping by our office.

### **Parking for persons with disabilities**

Parking access throughout the campus is available to those with state disability permits. A WWU permit is also required at the same price as a regular permit during business hours. Accessibility guides to the WWU campus are available at our office. For further information, contact us.

### **Parking for visitors/Temporary Parking/loading and unloading**

Visitors to campus can purchase a visitor permit at our office during business hours or may park (with payment) in meter spaces, 6V, 12A or C West pay station lots. (Call us for information on arranging for guest parking). A 20 minute unloading/loading permit can be obtained at our office at no charge.

### **Evening parking**

For after hours parking, pay stations and meters are located in various locations throughout central campus for your convenience. All lots are enforced as posted on the sign at the entrance of each lot. Regular spaces in the C lots and 12A lot are not enforced evenings M-F, 4:30p.m. to 7a.m. or all day on weekends. Disability-accessible spaces in those lots require a state permit all hours. Payment is required at all meters all hours.

Parking permit fees	Quarterly total
Campus resident parking	\$91.10
Adjacent (C Zone) commuter permit	\$79.50
Peripheral (CR) resident permit	\$79.50
Carpool permit	\$59.32
Motorcycle parking	\$16.21
Disability Permit	\$79.50

Daily parking (7 a.m. to 4:30 p.m.)	\$2 per hour
Meter parking (all hours)	\$2 per hour
Motorcycle parking	\$2 per day
Pay box lots after 4:30 p.m.	\$1 per hour

# **Appendix J - Satisfactory Academic Progress Policy for Financial Aid Recipients**

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*POL-U7600.01*

The primary purpose of financial aid programs is to help students successfully complete their degree or certificate program in a timely manner. Students are required to meet satisfactory academic progress requirements while earning their degree or certificate programs to receive aid. Financial aid programs include grants, tuition and fee waivers, work study employment, need-based and non-need-based loans, and scholarship programs. Specialized academic progress requirements associated with specific scholarship programs may exceed the general policy requirements outlined below. Questions about the academic progress requirements of individual scholarship programs should be directed to the Scholarship Center.

The academic progress of all students is measured on a quarterly basis. Financial aid recipients failing to meet academic progress requirements for aid programs will be among the first to receive word that their academic goals are at risk. Students placed on financial aid probation or suspension under the satisfactory academic progress policy will be notified after the end of the quarter in which probation or suspension occurs. Notification may be delivered via mail or via email to the official WWU email address of record. Financial Aid staff will inform students in this situation of a number of specific, on-campus resources to help them meet satisfactory academic progress requirements.

Failure to meet satisfactory academic progress requirements will result in financial aid probation or suspension. Students whose aid is suspended may petition for aid reinstatement. Reinstate ment is not guaranteed. Please read on for further details.

## ***General Policy Requirements***

1. Maintain the required grade point average (GPA).
2. Complete the minimum number of credits associated with the enrollment status for which aid was received.
3. Complete your degree or certificate within the maximum allowable timeframe.

## ***Grade Point Average Requirements***

Students must meet the scholastic standards of the University. Undergraduate students must maintain at least a 2.00 cumulative GPA. Academic standards allow for a probationary period during which an undergraduate student's cumulative GPA may fall below 2.00. Students on academic probation are eligible for financial aid, with the expectation that they bring their GPAs to acceptable levels within University timeframes. Scholastic standards for under-graduate and graduate students are fully described in the University catalog.

## ***Minimum Credit Requirements***

Academic progress is reviewed for financial aid purposes at the end of each quarter for aid recipients and non-aid recipients alike. To establish and maintain financial aid eligibility, all students must successfully complete at least the minimum number of credits associated with their enrollment level at lock (see "Changes in Enrollment" on page 4). The following grades do not indicate successful completion of academic credit: F, Z, U, NP, K, W, I, X, XM, NX, XW and audited classes or absence of a grade.

If a student's coursework does not meet minimum requirements, the student will be placed on financial aid probation or financial aid suspension, depending upon the extent of the credit deficiency.

Students who request that the Financial Aid department re-examine their academic progress upon satisfactory completion of a K grade must first confirm that the Registrar has made the grade change, and then notify the Financial Aid department of the change in writing. In order for satisfactorily completed correspondence course credits to apply toward minimum credit requirements, the correspondence course must be completed within the term for which it was registered. Credits earned for repeated coursework may count toward current quarter academic progress requirements. However, justification for repeating specific courses may be requested by the Financial Aid department at any time and a determination will be made as to the reasonableness of counting credits derived from repeated coursework toward academic progress requirements for aid purposes.

Students who fail to meet satisfactory academic progress criteria for a given quarter will be placed on financial aid probation or suspension.

<b>Credit Completion Requirements</b>		
Enrollment Status	Undergraduate Students	Graduate Students
Full Time	12	8
Three-fourths time	9	6
One-half time	6	4
Less than one-half time	All credits attempted	N/A

### ***Maximum Attempted Credit Requirements***

For purposes of receiving financial aid, students are allowed to attempt a specified number of credits in order to complete their degree or certificate program. As soon as it is clear that a student will not graduate within this period, the student becomes ineligible for aid. Western determines whether students have reached or exceeded their maximum timeframes by totaling the number of credits they have attempted. Attempted credits are defined as all credits which appear on the academic history record. These credits include repeated, failed, incomplete, withdraws, and transcribed transfer credits. If the Financial Aid learns that graduation is imminent, aid eligibility must be calculated and is limited solely to enrollment in courses required for graduation. Second majors and elective minors are not eligible to be funded with financial aid.

#### **Undergraduate students**

- May attempt up to 125% of the minimum credit requirements for their baccalaureate program of study, as defined in the University catalog. No additional allowance is granted for concurrent completion of a double major or an elective minor, unless it is included in the official university registration record.

#### **Graduate Students**

- May attempt up to 125% of the number of credits required by their program. Graduate students are advised to consider limiting their enrollment to the courses appearing on their Plan of Study for aid purposes. Additional coursework cannot be funded, and may jeopardize continued financial aid eligibility under the Maximum Attempted Credit policy.

## **Post-baccalaureate Students Pursuing a Second Undergraduate Degree or a Certificate Program**

- May attempt up to 125 percent of the credits required for the completion of the degree or certificate program.

Students may petition for aid reinstatement if unusual circumstances prevented the completion of the degree within the maximum timeframe limit; however, reinstatement is not guaranteed. Petitions must: a) explain why the student was unable to complete the degree within the allowable timeframe; b) provide the number of remaining credits required to complete the degree or certificate; c) specify the quarter and year that the student plans to graduate; and d) include a degree evaluation performed by the Registrar's Office. If a petition is approved, any additional financial aid is limited to funding only coursework required to complete the degree or certificate program as specified on the graduation evaluation.

### **Financial Aid Probation**

Undergraduate students who have satisfactorily completed at least 6 credits but have not completed the minimum quarterly credit requirements associated with the enrollment status for which aid was received will be placed on financial aid probation. Scheduled aid will be disbursed for the following probationary quarter; however, failure to meet minimum quarterly credit requirements during the probationary quarter will result in financial aid suspension.

Graduate students who have satisfactorily completed at least 4 credits but have not completed the minimum quarterly credit requirements associated with the enrollment status for which aid was received will be placed on financial aid probation. Scheduled aid will continue to be disbursed for the following probationary quarter; however, failure to meet minimum quarterly credit requirements during the probationary quarter will result in financial aid suspension.

### **Financial Aid Suspension**

Financial aid suspension is an aid-ineligible status, whereby aid for future quarters is canceled and processing to calculate future aid eligibility is put on hold until eligibility is regained.

Undergraduate students successfully completing fewer than 6 credits will automatically be placed on financial aid suspension.

Graduate students successfully completing fewer than 4 credits will automatically be placed on financial aid suspension.

Undergraduate or graduate students who fail to satisfactorily complete the minimum number of credits associated with the enrollment status for which aid was received during a probationary quarter will automatically be placed on financial aid suspension.

### **Reinstatement of Aid Eligibility**

Students placed on financial aid suspension may petition for aid reinstatement if unusual circumstances beyond their control prevented them from meeting satisfactory academic progress requirements. Reinstatement is not guaranteed.

If a student's petition for financial aid reinstatement is denied, the student may re-petition after having successfully completed a full-time quarter without the benefit of financial aid. The full-time credit load is 12 credits for undergraduate students and 8 credits for graduate students.

Part-time students may contract with the Financial Aid department in advance for the required number of credits necessary for financial aid reinstatement.

Students unable to reinstate their financial aid eligibility using the above options and who have been unable to attend Western for a full academic year may re-petition for aid reinstatement. Petitions for reinstatement must explain why the student has been unable to reinstate using the above options and how continued ineligibility would constitute an undue hardship.

If eligibility for financial aid is reinstated, the amount of financial aid the student receives is subject to the availability of funds. As a result, it is possible that some funds originally awarded will not be available for the reinstated award.

Students placed on financial aid probation or suspension under the satisfactory academic progress policy will be notified after the end of the term in which probation or suspension occurs. Notification may be delivered via mail or e-mail to the official WWU address on record.

It is the student's responsibility to notify the Financial Aid department if updated or corrected information becomes available that may re-establish their eligibility for financial aid.

### ***Withdrawals***

Aid recipients withdrawing from all coursework will lose their aid eligibility and may, based on the date of withdraw, be required to repay the financial aid they have received. Students are considered as having unofficially withdrawn from the University if they have received a combination of the following grades for a given quarter: F, Z, U, NP, W, X, XM. Aid recipients having unofficially withdrawn may be required to repay all, or a portion of their tuition and fees and financial aid for the applicable quarter.

### **Specific Requirements for Alaska Loan Recipients**

Satisfactory academic progress requirements for continued receipt of Alaska Student and Alaska Family Education loans differ from those associated with federal and Washington State programs:

- Full-time attendance is required for most Alaska Loan programs. Although the Alaska Supplemental Education Loan may allow for less-than fulltime attendance, students considering less-than fulltime attendance are urged to consult the Alaska Commission on Post-secondary Education because state residency and future loan eligibility may be jeopardized by such enrollment.

# **Appendix K - Policy Concerning Alcohol and Other Drugs**

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*POL-U7400.01*

## **Background**

*The Federal Drug-Free Workplace Act of 1988 and the Federal Drug-Free Schools and Communities Act amendments of 1989 require that universities promote reduction of risk associated with alcohol and other drug use through adoption and implementation of a policy and program designed to educate the university community about the dangers of alcohol and other drug abuse and to prevent the unlawful possession, use or distribution of illicit drugs and alcohol by students and employees on university property or while involved in university business or activities.*

## **Introduction**

Abuse of alcohol and other drugs can impair academic ability, work performance, relationships, and personal health and safety. Additionally, the safety of others may be placed at risk by an individual under the influence of alcohol and other drugs.

Diversity of opinion and freedom of choice are concepts which are essential parts of the university educational tradition. This freedom requires the exercise of personal responsibility, including the obligation to make informed decisions regarding the use of alcohol and other drugs. It also requires personal responsibility for the consequences of one's own actions.

## **Policy**

Western Washington University is committed to an environment which is free of alcohol and other drug abuse for students, faculty and staff. It maintains the commitment in support of academic excellence, work performance and quality of life as well as for the future well-being of all members of this community.

Western Washington University provides: (a) information about alcohol and other drug and the reduction of associated risks; (b) appropriate intervention when alcohol or other drug use creates unwanted or unintended consequences; and (c) support for members of this community in reducing the risk of consequences associated with alcohol and other drug abuse.

Western Washington University will uphold state and federal laws pertaining to alcohol and other drug use. All students, faculty and staff are required to comply with these laws. Action will be taken on any violation of state and federal law or University regulations concerning alcohol and other drugs which (a) occurs in or on property controlled or owned by Western Washington University; or (b) involves University business or activities; or (c) relates directly and materially to the fitness of staff of faculty members in their professional capacities.

Policy approved by the Board of Trustees April, 1999.

A complete set of University guidelines regarding implementation of this policy may be obtained from the Office of the Vice President for Student Affairs. The guidelines cover: 1) responses to violations of University regulations and state laws; 2) statements of federal and state law; 3) requirements of the Drug Free Workplace Act; 4) regulations on consumption, serving and sale of alcohol; 5) University event guidelines; and 6) marketing, advertising and promotion of alcoholic beverages.

## **Appendix L - Course Materials**

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*Chapter 516-40 WAC*

**WAC 516-40-010 Purpose.** The purpose of this chapter is to give students more choices for purchasing educational materials and to encourage faculty and staff to work closely with bookstores and publishers to implement the least costly option without sacrificing educational content.

**WAC 516-40-020 Definitions.** For the purposes of this chapter, the following words and phrases mean:

1. "Course materials." Any supplies or texts required or recommended by faculty or staff for a given course. Course materials may include, but are not limited to, texts, workbooks, study guides, CD-ROMs, art supplies, and other ancillary materials.
2. "Bundle." A group of course materials joined together by packaging or required to be purchased as an indivisible unit.

**WAC 516-40-030 Providing cost savings to students for course materials.**

1. The affiliated bookstore for Western Washington University is the Western Associated Students (AS) Bookstore. The AS Bookstore will:
  - a. Provide students the option of purchasing course materials that are unbundled whenever possible;
  - b. Disclose to faculty and students the retail costs of textbooks on a per book and per course basis and such information will be made publicly available;
  - c. Disclose publicly, when such information is available, how new editions vary from previous editions; and
  - d. Actively promote and publicize book buy-back programs.
2. To provide cost savings to students for course materials, Western faculty and staff members are required to consider the least costly option for such materials, including that they:
  - a. Are encouraged to consider adopting the least expensive edition of course materials available when educational content is comparable.
  - b. Are encouraged to work closely with publishers and the AS Bookstore to create bundles and packages if they provide a cost savings to students.

# GENERAL UNIVERSITY REQUIREMENTS(GURs)2010-11

The General University Requirements apply to all students in the College of Humanities and Social Sciences, the College of Business and Economics, the College of Sciences and Technology, the College of Fine and Performing Arts, Woodring College of Education, and Huxley College of the Environment. Students enrolled in Fairhaven College of Interdisciplinary Studies, see the Fairhaven College section of the university catalog for requirements.

## EXCEPTIONS:

- 1) Students transferring to Western with a Washington community college DTA (Direct Transfer Agreement) Associate Degree.
- 2) Students transferring to Western from another Washington state public baccalaureate institution whose General University Requirements were complete at the sending institution, provided the sending institute so certifies.

## FOUR-COURSE MAXIMUM

A maximum of four courses from any one department may be applied to the combination of Humanities, Social Sciences, and Comparative, Gender and Multicultural Studies sections of the General University Requirements. (*Art, Art History, and Design are considered one department as are all foreign languages.*)

## GRADES IN GUR COURSES

Courses which are to apply to General University Requirements must be taken on an A through F grading scale, except for courses designated as S/U grading. They may not be taken with Pass/No Pass grading. Except for Eng 101, which requires a C- or better, the minimum passing grade for GUR courses is D- (Math courses must be passed with a grade of C- or higher if used as a prerequisite to another course).

## ATTRIBUTES

Please note the use of GUR attributes in the online Timetable. Courses which qualify as General University Requirements are designated by the appropriate attribute (ACOM, BCOM, CCOM, QSR, HUM, SSC, ACGM, BCGM, LSCI, or SCI).

## COMMUNICATION

The Communications requirement provides an opportunity to develop the literacies and skills needed to convey ideas effectively in a variety of contexts. This area includes courses in writing, speaking and information technology literacy, and aims to foster an ability to reason critically by analyzing situations and adapting messages to particular audiences in particular contexts. The ability to express ideas clearly, creatively, and correctly is fundamental to a quality undergraduate education, and essential for active participation in a democracy,

### Complete Block A and one course from either Block B or Block C.

**Block A – (ACOM)** ENGLISH (ENG) 101, Writing and Critical Inquiry (5). This course must be completed with a grade of C- or better. Requirement will be waived for students demonstrating high English competency on Advanced Placement (CEEB English score of 4) or college entrance exams (SAT Critical Reading 710/ACT English 28).

#### Block B – (BCOM):

##### ❖ COMMUNICATION (COMM)

- 101–Fundamentals of Speech (4)
- 224–Small Group Processes (4)
- 235–Exposition and Argumentation (4)

##### ❖ COMPUTER SCIENCE (CSCI)

- 102–Computer-Mediated Communications (3)

##### ❖ EDUCATION (EDUC)

- 309–Storytelling: Oral Narrative in History, Culture, and Society (4)

##### ❖ ENGLISH (ENG)

- 202–Writing About Literature (5)

##### ❖ JOURNALISM (JOUR)

- 207–Newswriting (4)

##### ❖ MODERN AND CLASSICAL LANGUAGES

- Arabic (ARAB) 103 (5), 201 (5)
- Chinese (CHIN) 103 (5), 201 (5)
- French (FREN) 103 (5), 104 (5), 201 (5)
- German (GERM) 103 (5), 104 (5), 201 (4)
- Greek (GREK) 103 (5), 201 (4)
- Japanese (JAPN) 103 (5), 104 (5), 201 (4)
- Latin (LAT) 103 (5), 201 (4)
- Russian (RUSS) 120 (5), 201 (4)
- Spanish (SPAN) 103 (5), 104 (5), 201 (5)

##### ❖ PHILOSOPHY (PHIL)

- 107–Logical Thinking (3)

#### Block C – (CCOM):

##### ❖ ART HISTORY (A/HI)

- 275–Introduction to Writing and Critical Thinking (4)

##### ❖ COMMUNICATION (COMM)

- 322–Civil Discourse as Learning Interaction (4)

##### ❖ DANCE (DNC)

- 231–Introduction to Dance in Western Cultures (3)

##### ❖ ENGLISH (ENG)

- 201–Writing in Humanities (5)

##### ❖ HISTORY (HIST)

- 203–Writing About Gender and Race in the US:1492-1877 (5)

##### ❖ LIBERAL STUDIES (LBRL)

- 340–Sufism: The Islamic Mystical Tradition (4)

##### ❖ WOMEN STUDIES (WMNS)

- 212–Feminist Theory and Expression (4)

### OR—Complete Block A and one of the following sets:

##### ❖ HONORS (HNRS)

- 103, 104, 105 (4 ea) or
- 103, 104, 106 (4 ea)

## QUANTITATIVE AND SYMBOLIC REASONING (QSR)

Quantitative and symbolic reasoning is the ability to distinguish situations in which numerical or symbolic information is relevant, and to decide how to analyze and present numerical or symbolic information to reach valid conclusions. Specifically, a

through analyzing the relationships between/among components, connections and contingencies. An accomplished quantitative and symbolic reasoner has a sense of the relative size of numbers, is able to read and present graphs and charts, can decide whether an argument involving data is valid, understands the language of variable and relations, and understands how to model situations in order to make decisions and predictions.

Initial enrollment in beginning mathematics courses is based upon the results of the Math Placement Tests (*tests that show a student is ready to begin the study of a subject*). These tests must be taken prior to registration. Refer to the Mathematics Department for more information on academic placement and advanced standing.

All students must complete the QSR Requirement by accumulation of 90 credits.

### Complete one of the following options:

**Notes:** You may test out of Math 107 or Math 112, but not both. These tests do not result in credit

#### Option 1:

##### MATH 107–Mathematical Reasoning and Its Applications (4) and one course from:

##### ❖ ANTHROPOLOGY (ANTH)

- 335–Quantitative Methods in Anthropology (5)

##### ❖ COMPUTER SCIENCE (CSCI)

- 103–Introduction to Computer Game Development (4)
- 172–Introduction to Robotics (4)

##### ❖ MATH (MATH)

- 112–Functions and Algebraic Methods (5)

##### ❖ PHILOSOPHY (PHIL)

- 102–Introduction to Logic (3)

##### ❖ SOCIOLOGY (SOC)

- 215–Social Statistics (5)

#### Option 2:

##### MATH 112–Functions and Algebraic Methods (5) and one course from:

##### ❖ ANTHROPOLOGY (ANTH)

- 335–Quantitative Methods in Anthropology (5)

##### ❖ COMPUTER SCIENCE (CSCI)

- 103–Introduction to Computer Game Development (4)
- 172–Introduction to Robotics (4)

##### ❖ MATH (MATH)

- 107–Mathematical Reasoning and Its Applications (4)

##### ❖ PHILOSOPHY (PHIL)

- 102–Introduction to Logic (3)

##### ❖ SOCIOLOGY (SOC)

- 215–Social Statistics (5)

#### Option 3:

##### One transfer course with an MPAR attribute and one course from:

##### ❖ ANTHROPOLOGY (ANTH)

- 335–Quantitative Methods in Anthropology (5)

##### ❖ COMPUTER SCIENCE (CSCI)

- 103–Introduction to Computer Game Development (4)
- 172–Introduction to Robotics (4)

##### ❖ MATH (MATH)

- 112–Functions and Algebraic Methods (5)

##### ❖ PHILOSOPHY (PHIL)

- 102–Introduction to Logic (3)

##### ❖ SOCIOLOGY (SOC)

- 215–Social Statistics (5)

#### Option 4:

##### One course from:

##### ❖ MATH (MATH)

- 114–Precalculus I (5)

- 115–Precalculus II (5)

- 118–Accelerated Precalculus (5)

- 124–Calculus and Analytic Geometry I (5) (*Only one of Math 124 and Math 134 may be taken for credit*)

- 134–Calculus I Honors (5) (*Only one of Math 134 and Math 124 may be taken*)

symbolic reasoner has the ability to understand the logic and validity of an argument

for credit)

- 156–Algebra With Applications to Business and Economics (4)
- 157–Calculus With Applications to Business and Economics (4)
- 240–Introduction to Statistics (4)

❖COMPUTER SCIENCE (CSCI)

- 138–Programming Fundamentals in Visual Basic (4)
- 139–Programming Fundamentals in Python (4)
- 140–Programming Fundamentals in C++ (4)
- 141–Computer Programming I (4)
- 145–Computer Programming and Linear Data Structures (4)

**Option 5:**

One transfer course with an MSAT attribute

**Option 6:**

BAE-Elementary Education students only:

❖MATH (MATH)

- 381–Teaching K-8 Mathematics I (4) and
- 382–Teaching K-8 Mathematics II (4)

**HUMANITIES (HUM)**

The Humanities requirement provides an introduction to the subject matter, methods of inquiry and forms of expression of academic fields that treat language, literature, fine arts, history, philosophy and religion in the Western cultural tradition. The humanities study principal themes, issues and images concerning human beings and their place in the universe, as these have been shaped and expressed since ancient times, in thought, imagination and action.

Complete one of the following options:

**Option 1: Complete 3 courses from at least two departments; 12 credits minimum**

❖ART (ART)

- 109–Visual Dialogue (3)

❖ART HISTORY (A/HI)

- 220–Visual Culture in Ancient Greece and Rome (3)
- 221–Visual Culture in Medieval Europe (3)
- 230–Visual Culture in Western Europe 1400-1550 (3)
- 231–Visual Culture in Western Europe 1550-1700 (3)
- 240–Visual Culture in Western Europe in the 19th Century (3)
- 241–Visual Culture in Western Europe and America in the 20th Century (3)

❖CLASSICAL STUDIES (CLST)

- 117–The Ancient Legacy (5)
- 260–Masterworks of Ancient Greek Literature (4)
- 270–Literature of Rome and Her Empire (4)
- 350–Greek Mythology (4)

❖DANCE (DNC)

- 108–Introduction to the Fine Arts: the Classics (3)
- 230–Making Movement Art (3)

❖DESIGN (DSGN)

- 211–Foundations of Visual Communication (3)

❖ENGLISH (ENG)

- 214–Introduction to Shakespeare (5)
- 215–Introduction to British Literature (5)
- 216–Introduction to American Literature (5)
- 238–Society Through Its Literature (5) (*May be taken only once for GUR credit*)
- 270–Introduction to Language and Society (5)
- 281–Introduction to Global Literatures: Ancient (5)
- 282–Introduction to Global Literatures: Medieval (5)
- 283–Introduction to Global Literatures: Modern (5)
- 336–Scriptural Literatures (5) (*Only one of English 336 and Liberal Studies 334, 336 may be taken for GUR credit*)

❖EURASIAN STUDIES (EUS)

- 201–Introduction to Russian Civilization (5)

❖HISTORY (HIST)

- 103–Introduction to American Civilization: American History to 1865 (4)
- 104–Introduction to American Civilization: American History Since 1865 (4)
- 111–Introduction to Western Civilization: Prehistory to 476 (4)
- 112–Introduction to Western Civilization: 476-1713 (4)
- 113–Introduction to Western Civilization: 1713 to Present (4)
- 121–World History to 500 (5)
- 123–World History, 1500 to the Present (5)
- 151–Communities of the Ancient World (4)
- 155–The Idea of Utopia (4)
- 277–Canada: A Historical Survey (4)
- 314–The Enlightenment Tradition (5)

❖HONORS (HNRS)

- 103–Major Cultural Traditions I (4)
- 104–Major Cultural Traditions II (4)
- 201–Colloquium in Philosophy (4)
- 205–Colloquium in History (4)

❖JOURNALISM (JOUR)

- 340–History of U.S. Journalism (4)

❖LIBERAL STUDIES (LBRL)

- 110–Confession and Self-Promotion: Autobiography from Augustine to the Blogosphere (5)
- 121–The Western Tradition I: The Ancient World (5)

- 122–The Western Tradition II: Medieval and Early Modern Europe (5)

- 123–The Western Tradition III: Modern World (5)

- 231–Introduction to the Study of Religion (5)

- 232–Myth and Folklore (4)

- 243–Art and Ideas (4)

- 321–Between Renaissance and Inquisition: Censorship and Religious Conflict in Spain's Golden Age (5)

- 323–The Romantic Paradox: Love, Life, and Death (4)

- 325–Surveillance, Voyeurism and the Culture of Suspicion (4)

- 332–Universal Religions: Founders and Disciples (4)

- 333–Religion in America (5)

- 334–Hebrew Bible and the Religion of Ancient Israel (4) (*Only one of Liberal Studies 334, 336 and English 336 may be taken for GUR credit*)

- 336–New Testament and Early Christianity (4) (*Only one of Liberal Studies 334, 336 and English 336 may be taken for GUR credit*)

❖MODERN AND CLASSICAL LANGUAGES

European foreign language course numbered 200 and above and involving actual instruction in the foreign language. (*Advanced placement credit may not be applied.*)

- French (FREN) 200 level and above

- German (GERM) 200 level and above

- Greek (GREK) 200 level and above

- Latin (LAT) 200 level and above

- Russian (RUSS) 200 level and above

- Spanish (SPAN) 200 level and above

❖MUSIC (MUS)

- 104–The Art of Listening to Music (3)

- 105–Music in the Western World (3)

❖PHILOSOPHY (PHIL)

- 112–Introduction to Philosophy: Moral Issues (3)

- 113–Introduction to Philosophy: Philosophy of Religion (3)

- 114–Introduction to Philosophy: Knowledge and Reality (3)

- 340–Philosophy of Science (3)

- 350–Political Philosophy (3) (*Only one of Philosophy 350 and Political Science 261 may be taken for GUR credit*)

- 355–Aesthetics and the Philosophy of Art (3)

- 360–Society, Law and Morality (3)

❖POLITICAL SCIENCE (PLSC)

- 261–Introduction to Political Theory (5) (*Only one of Political Science 261 and Philosophy 350 may be taken for GUR credit*)

❖RECREATION (RECR)

- 301–Work and Leisure Through the Ages (4)

❖THEATRE ARTS (THTR)

- 101–Introduction to the Art of the Theatre (3)

- 201–Introduction to the Cinema (3)

- 202–Film Genre (3) (*May be taken only once for GUR credit*)

- 380–Theatre History I (4)

- 381–Theatre History II (4)

- 382–Theatre History III (4)

**Option 2: Complete one of the following sets**

❖LIBERAL STUDIES (LBRL) 121, 122, 123 (5 ea)

❖HISTORY (HIST) 111, 112, 113 (4 ea)

**SOCIAL SCIENCES (SSC)**

The Social Sciences requirement provides an introduction to the content, methods and applications of academic fields that treat psychological, social, political and economic behavior, development and variation of human culture, and uses of geographical space. Though differing in subject and approach, the social sciences insist in common on empirical investigation and seek to discover coherent patterns in human activity.

**Complete 3 courses from at least two departments; 12 credits minimum**

❖ANTHROPOLOGY (ANTH)

- 102–Introduction to Human Origins (5)

- 201–Introduction to Cultural Anthropology (5) (*Only one of Anthropology 201 and Honors 203 may be taken for credit*)

- 210–Introduction to Archaeology (5)

- 247–Introduction to Linguistic Anthropology (5)

❖CANADIAN-AMERICAN STUDIES (C/AM)

- 200–Introduction to Canadian Studies (5)

❖ECONOMICS (ECON)

- 101–Markets and Society (4)

- 206–Introduction to Microeconomics (4)

- 207–Introduction to Macroeconomics (4)

❖EDUCATION (EDUC)

- 109–Scholarship of Teaching and Learning (4)

❖ENVIRONMENTAL STUDIES (ESTU)

- 202–Introduction to Environmental Studies and Sustainability (3)

❖FAIRHAVEN (FAIR)

- 211B–The American Legal System (5), (*Only one of Fairhaven 211B, Management 271, Political Science 311 may be taken for GUR credit*)

❖FINANCE (FIN)

- 215–Personal Finance (4)

**❖GEOGRAPHY (EGEO)**

- 201–Human Geography (4)  
209–Geography and World Affairs (2)  
312–Geography of the World Economy (4)

**❖HEALTH EDUCATION (HLED)**

- 201–Perspectives of Human Lifestyle and Wellness (3)  
210–Introduction to Public Health (4)

**❖HONORS (HNRS)**

- 202–Colloquium in Economics (4)  
203–Colloquium in Anthropology (4) (*Only one of Honors 203 and Anthropology 201 may be taken for credit*)  
204–Colloquium in Psychology (4) (*Only one of Honors 204 and Psychology 101 may be taken for credit*)  
206–Colloquium in Political Science (4) (*Only one of Honors 206 and Political Science 101 may be taken for credit*)  
252–Colloquium in Sociology (4)

**❖JOURNALISM (JOUR)**

- 190–Introduction to Mass Media (5)

**❖LINGUISTICS (LING)**

- 201–Introduction to Linguistics Science (5)  
204–Sociolinguistics (4)

**❖MANAGEMENT (MGMT)**

- 271–Law and the Business Environment (4) (*Only one of Political Science 311, Fairhaven 211B, and Management 271 may be taken for GUR credit*)

**❖POLITICAL SCIENCE (PLSC)**

- 101–Government and Politics in the Modern World (5) (*Only one of Political Science 101 and Honors 206 may be taken for credit*)  
250–The American Political System (5)  
271–Introduction to International Relations (5)  
291–Introduction to Comparative Politics (5)  
311–Introduction to Law and Judicial Process (5) (*Only one of Political Science 311, Fairhaven 211B and Management 271 may be taken for GUR credit*)  
372–International Political Economy (5).

**❖PSYCHOLOGY (PSY)**

- 101–Introduction to Psychology (5) (*Only one of Psychology 101 and Honors 204 may be taken for credit*)

- 117–The Psychology of Identity (5)

- 341–Psychology and Culture (5)

**❖SOCIOLOGY (SOC)**

- 221–Introduction to Population Issues (5)  
251–Sociology of Deviant Behavior (5)  
255–Social Organization of Criminal Justice (5)  
260–The Family in Society (5)

**COMPARATIVE, GENDER, AND MULTICULTURAL STUDIES (ACGM & BCGM)**

This section of the GUR provides an introduction to civilizations of Asia, Africa, the Middle East and Latin America, to multicultural experience in North America, and to gender studies. Acquaintance with the values and viewpoints of a variety of cultures and societal roles helps overcome provincialism, aids self-understanding and is an important element in an educated outlook on the contemporary world.

Complete 2 courses, one from Block A and one from Block B.

**Block A—Primary emphasis outside North America:****❖ANTHROPOLOGY (ANTH)**

- 362–Peoples of Asia (5)  
365–Peoples of Latin America (5)

**❖ART HISTORY (A/HI)**

- 270–Visual Culture in South and Southeast Asia (3)  
271–Visual Culture in East Asia (3)

**❖DANCE (DNC)**

- 232–Movement and Culture (3)

**❖EAST ASIAN STUDIES (EAST)**

- 201–Introduction to East Asian Civilizations (5) (*Also taught as HIST 280*)  
202–East Asian History in the Early-Modern and Modern Eras (5) (*Also taught as HIST 281*)

- 210–Nomads of Eurasia (5) (*Also taught as EUS 210*)

- 230–Modern Chinese Society and Language (3)

**❖ENGLISH (ENG)**

- 335–Literary and Creative Expressions Across Cultures (5)

**❖EURASIAN STUDIES (EUS)**

- 210–Nomads of Eurasia (5) (*Also taught as EAST 210*)

**❖GEOGRAPHY (EGEO)**

- 321–Africa: Society and Environment (3)  
322–The Middle East: Society and Environment (3)  
323–South Asia: Society and Environment (3)

- 324–East Asia: Society and Environment (3)

**❖HISTORY (HIST)**

- 273–Latin America: 1492 to 1824 (4)

- 274–Latin America: 1824 to the Present (4)

- 280–Introduction to East Asian Civilizations (5) (*Also taught as EAST 201*)

- 281–East Asian History in the Early-Modern and Modern Eras (5) (*Also taught as EAST 202*)

- 285–Introduction to African Civilizations (5)

- 286–Modern Africa (5)

- 287–Introduction to Islamic Civilization (5)

- 385–Pre-Colonial Africa (5)

- 387–History of the Jews (5)

**❖HONORS (HNRS)**

- 105–Major Cultural Traditions III (4)

**❖INTERNATIONAL STUDIES (INTL)**

- 201–Introduction to Global Studies (5)

- 325–Global Literature (4)

**❖LIBERAL STUDIES (LBRL)**

- 271–Humanities of India (4)

- 272–Religion and Society in China and Japan (4)

- 273–Art and Society in China and Japan (4)

- 275–Humanities of Japan (4)

- 276–Humanities of Africa (5)

- 277–Humanities of China (4)

- 278–Humanities of Islamic Civilization (5)

- 281–Representations of Otherness (4)

- 283–Religion and Globalization (5)

- 338–Mysticism (5)

- 360–China and the Emerging World Economy: From Antiquity to the Early Modern (5)

- 362–Islam and Muslims in the Indian Ocean World (4)

- 372–Postcolonial Novels: Art, Rhetoric, and Social Context (4)

- 378–Religion and Society in India (4)

**❖MODERN AND CLASSICAL LANGUAGES**

Non-European foreign language course 200 and above and involving actual instruction in the foreign language. (*Advanced placement credit may not be applied*)

- Arabic (ARAB) (*200 level and above*)

- Chinese (CHIN) (*200 level and above*)

- Japanese (JAPN) (*200 level and above*)

**❖MUSIC (MUS)**

- 205–Survey of Non-Western Musical Cultures (3)

**❖POLITICAL SCIENCE (PLSC)**

- 346–Politics of Inequality (5)

**❖WOMEN STUDIES (WMNS)**

- 314–Global Women (4)

**Block B—Primary emphasis inside North America:****❖AMERICAN CULTURAL STUDIES (AMST)**

- 202–The American Indian Experience (3)

- 203–The Hispano/a-American Experience (3)

- 204–The African-American Experience (3)

- 205–The Asian-American Experience (3)

- 206–The Jewish-American Experience (3)

- 242–The Lesbian, Gay, Bisexual, Transgendered Experience (3)

- 301–Comparative Cultural Studies (4)

- 362–Asian-American History (5) (*Also taught as HIST 362*)

**❖ANTHROPOLOGY (ANTH)**

- 104–American Mosaic: The Cultures of the United States (4)

- 353–Sex and Gender in Culture (5)

- 361–Native Peoples of North America (5)

**❖ENGLISH (ENG)**

- 227–Introduction to Gay, Lesbian, Bisexual and Transgender Literature (5)

- 234–Introduction to African-American Literature (5)

- 235–Introduction to American Indian Literatures (5)

- 236–Introduction to Asian-American Literatures (5)

- 239–Introduction to Latina/o Literatures (5)

- 338–Women and Literature (5)

**❖HISTORY (HIST)**

- 158–Race and Identity in Modern America (4)

- 262–African American History to 1865 (5)

- 263–African Americans since 1865 (5)

- 265–Lesbian, Gay, Bisexual, and Transgender Experiences in U.S. History (5)

- 275–The Indian in American History (5)

- 278–Multiculturalism in Canada (4)

- 353–Latinas/os in the US West (5)

- 362–Asian-American History (5) (*Also taught as AMST 362*)

**❖HONORS (HNRS)**

- 106–Major Cultural Traditions IV (4)

**❖JOURNALISM (JOUR)**

- 375–Diversity, Mass Media & Social Change (4)

**❖PSYCHOLOGY (PSY)**

- 119–Psychology of Gender (4)

**❖SOCIOLOGY (SOC)**

- 268–Gender and Society (5)

- 269–Race and Ethnic Relations (5)

**❖WOMEN STUDIES (WMNS)**

- 211–Introduction to Women Studies (4)

## **NATURAL SCIENCES (LSCI & SCI)**

The Natural Sciences requirement provides an introduction to the content and methods of the physical and biological sciences. These fields investigate natural phenomena, ranging from the origin of the universe to development of life forms to the structure of the atom. Their methods include direct and indirect observation, experimentation, and construction of theoretical models of natural systems.

**Complete 3 courses. At least two of the courses must be from the LSCI list; the third course may be from either the LSCI list or SCI list.**

Note: Several of the courses in this list have prerequisites.

### **LSCI (courses with a laboratory component)**

#### **❖ANTHROPOLOGY (ANTH)**

215–Introductory Biological Anthropology (5)

#### **❖BIOLOGY (BIOL)**

101–Introduction to Biology (4)

102–Biological Diversity: Evolution and Systems (4)

204–Introduction to Evolution, Ecology and Biodiversity (4)

205–Introduction to Cellular and Molecular Biology (5)

206–Introduction to Organismal Biology (5)

#### **❖CHEMISTRY (CHEM)**

101–Chemical Concepts (4)

121–General Chemistry I (5)

122–General Chemistry II (5)

123–General Chemistry III (4)

125–General Chemistry I, Honors (5)

126–General Chemistry II, Honors (5)

225–General Chemistry III, Honors (5)

251–Elementary Organic Chemistry (5)

#### **❖COMMUNICATION SCIENCES AND DISORDERS (CSD)**

253–Speech and Hearing Sciences for the Liberal Arts (4)

#### **❖GEOGRAPHY (EGEO)**

203–Physical Geography (4)

#### **❖GEOLOGY (GEOL)**

101–Introduction to Geology (4) (*Only one of Geology 101 and Honors 212 may be taken for credit*)

211–Physical Geology (5)

212–Historical Geology (4)

252–The Earth and Its Weather (4)

#### **❖HONORS (HNRS)**

211–Colloquium in Physics (4) (*Only one of Honors 211 and Physics 101 may be taken for credit*)

212–Colloquium in Geology (4) (*Only one of Honors 212 and Geology 101 may be taken for credit*)

213–Colloquium in Biology (4)

#### **❖PHYSICS (PHYS)**

101–Physics Analysis (4) (*Only one of Physics 101 and Honors 211 may be taken for credit*)

104–Physics Applications (4)

115–Principles of Physics II (5)

116–Principles of Physics III (5)

121–Physics with Calculus I (5) (beginning fall 2009)

or 121–Physics with Calculus I (4) with PHYS 131 lab (1) (prior to fall 2009)

122–Physics with Calculus II (5) (beginning fall 2009)

or 122–Physics with Calculus II (4) with PHYS 132 lab (1) (prior to fall 2009)

123–Electricity and Magnetism (5) (beginning fall 2009)

or 123–Electricity and Magnetism (4) with PHYS 133 lab (1) (prior to fall 2009)

#### **❖SCIENCE EDUCATION (SCED)**

201–Matter and Energy in Physical Systems (4)

202–Matter and Energy in Earth Systems (4)

203–Matter and Energy in Life Systems (4)

### **SCI (courses without a laboratory component)**

#### **❖ASTRONOMY (ASTR)**

103–Introduction to Astronomy (4)

113–Sun, Moon, and Planets (3)

#### **❖BIOLOGY (BIOL)**

140–The Ecology and Economics of Salmon Recovery (4) (*Also taught as ECON 140*)

150–Marine Biology (3)

#### **❖ECONOMICS (ECON)**

140–The Ecology and Economics of Salmon Recovery (4) (*Also taught as BOL 140*)

#### **❖ENVIRONMENTAL SCIENCE (ESCI)**

101–Environmental Studies: A Scientific Approach (3)

204–The Oceans: Topics in Marine Science (4)

### **SCI (courses without a laboratory component) (continued)**

#### **❖GEOLOGY (GEOL)**

202–Plate Tectonics and Continental Drift (4)

204–Geology and Society (3)

214–Environmental Geology (3)

308–Earthquakes (3)

315–Minerals, Energy, and Society (4)

340–Geological Oceanography (3)

#### **❖INTERDISCIPLINARY SCIENCES, TECHNOLOGY AND MATHEMATICS (ISTM)**

201–Science Literacy (3)

#### **❖MATERIALS SCIENCE (MSCI)**

101–The Materials Revolution (4)

#### **❖PHYSICS (PHYS)**

102–Physics and Society (3)

114–Principles of Physics I (5)

## **Notice to Readers**

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Every effort has been made to provide accurate information. Policies and information may have changed since publication. Please consult with the appropriate University department or office for possible revisions. For department information, call the University at 360-650-3000.

This catalog is available in alternate formats by calling the ADA Coordinator at 360-650-3307 (voice) or 360-650-2535 (TTY).

### **Policy on providing equal opportunity and prohibiting illegal discrimination**

This policy governs all employees, students, agents, groups, individuals, and organizations who use University facilities, and other members of the University community to the extent provided by law.

Federal and state statutes prohibit discrimination on the basis of race, color, religion, national origin, sex, age, disability, status as a Vietnam era or disabled veteran, creed, and marital status. Western Washington University and a Governor's Executive Order also prohibit discrimination on the basis of sexual orientation.

The Board of Trustees has pledged to make every reasonable effort to provide the resources necessary to implement this policy. Questions can be directed to the Vice Provost for Equal Opportunity and Employment Diversity, 360-650-3307 (voice).

1. Definition. Personnel Actions – Decisions related to employment such as hiring, promotion, separation, compensation, benefits within the limits of the law, transfers, layoffs, return from layoff, University-sponsored training, education, tuition assistance, and social or recreational programs.
2. Western Washington University shall provide equal opportunity to its employees, students, applicants and users of its services and facilities.
3. Discrimination based on race, color, religion, national origin, sex, age, disability, status as a Vietnam era or disabled veteran, creed, marital status and sexual orientation is prohibited in the operation of all University programs, activities and services.
4. The President of Western Washington University ensures compliance with this policy.
5. All members of the University community are responsible for ensuring that equal opportunity and non-discrimination are integral parts of Western Washington University.
6. Recruitment and selection policies will be developed, monitored and enforced to remove barriers to equal employment opportunity and to prevent illegal discrimination.
7. Personnel actions will be administered with fairness and equity.
8. Promotion and hiring decisions shall be in accordance with the principles of equal opportunity.
9. Illegal discrimination in the recruitment and admission of students is prohibited.
10. Western will cooperate with federal and state agencies in fulfilling obligations under the law.

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# **Programs of Study**

## **College of Business and Economics**

### **Introduction**

*Dr. Brian K. Burton, Dean*

*Dr. Craig Dunn, Associate Dean*

*Dr. Craig Tyran, Associate Dean*

### ***Mission Statement of the College***

The College of Business and Economics provides high-quality programs in business and economics, focusing primarily on undergraduate instruction. The College serves the needs of students from throughout the region by offering programs that provide a global perspective, a knowledge of information technology and the ability to apply economic and business principles. The College also offers graduate programs in business administration and professional accounting and provides instruction to students from other colleges within the University. As a supporting part of this educational mission, the faculty of the College engages in applied, integrative, and pedagogical scholarship and provides services to their profession, the community and the University. The College seeks continuous improvement in the quality of its pedagogy, scholarship and service to its constituents.

### ***Objective of the College***

The College of Business and Economics prepares men and women for positions of leadership and stewardship in the management and administration of complex organizations — from small companies to large multinational enterprises. Students develop managerial skills, analytic economic skills and interpersonal sensitivities, as well as quantitative and accounting skills. All students earning a degree in one of the programs of the college will develop significant understanding of management information systems and computing.

The curriculum is primarily upper-division based upon a broad liberal arts education. Individual skills are developed sufficiently to achieve entry-level employment in many fields, but the College seeks to motivate and orient the student toward a lifelong learning experience. The College seeks to instill sensitivity to environmental aspects of business enterprise, promotes a commitment to ethical behavior, and provide a strong emphasis on forward-looking, goalsetting behavior in the business world while encouraging an active role in community leadership.

The College of Business and Economics is accredited by the AACSB International-The Association to Advance Collegiate Schools of Business at both the graduate and undergraduate levels.

### ***Academic Programs Leading to Undergraduate and Graduate Degrees***

Accounting	BA
Business Administration	BA
Economics	BA
Manufacturing Management	BS
Master of Business Administration	MBA
Master of Professional Accounting	MPAcc

Requirements for the master's degrees offered in CBE are listed in the Graduate School section of the catalog.

## **Major/Minors**

### ***Minor***

In addition to the majors provided by the five departments, a minor makes an excellent addition to a specialized program in other areas of the University. This gives relevant, realistic and applicable qualities to those valuable skills developed in other more abstract and theoretic departments. The combination of a minor with a major in speech, English, journalism, foreign languages or with other liberal arts majors provides an additional strength and resource to the individual's skills and educational development. See departments for details on minors.

### ***Combined Majors***

Interdepartmental majors are given in economics/accounting, economics/environmental studies, economics/mathematics, economics/political science, economics/social studies, financial economics and politics/philosophy/economics. See departments for details.

## **College Admission and Advisement**

### ***Admissions and Major Declaration***

Admission to programs in the College of Business and Economics is selective and based upon prior academic performance. All students intending to earn a degree in accounting or any area of business (except economics) must complete the foundation courses comprised of ACCT 240, 245; ECON 206, 207; MATH 157; DSCI 205; MGMT 271, or their approved equivalent, with a grade of C- or better. All foundation classes must be taken as graded credit and cannot be taken Pass/ No Pass. Students must successfully complete the foundation courses and meet the admission criteria below before they are admitted to the College and declared a business or accounting major. Students interested in majoring in economics must consult the economics section of this catalog.

For admission to the College of Business and Economics as a full major (except majors in economics) a student must meet the following requirements:

- Minimum GPA of 2.75 in the seven foundation courses **or**
- Minimum of 2.50 cumulative GPA after having completed all foundation courses. The cumulative GPA is calculated on all college-level course work completed by the student, including any transfer work.
- Students must be in good academic standing with the University.

Students who have not completed their foundation course work may apply to the College and be given pre-major status. Pre-major status is granted to students who are at least sophomore level, or who have been identified as top quintile students, and who are, at the time of application, making satisfactory progress in their course work.

Students with pre-major status may only enroll for foundation or core courses listed. Their progress will be monitored by the College and they will attain full major status upon successfully completing the foundation courses and meeting the admission criteria above. If after completing the foundation courses they do not meet the criteria for full major admission, they will be dropped from the College. They may reapply should they repair the deficiency.

Provisional full major admit status in the College is provided to students completing their last foundation course(s) and would be eligible to enroll for major restricted courses as a full major in the following quarter upon successful completion of their current course work. Students may be in provisional status only one quarter. Failure to advance to full major status will result in cancellation of major restricted courses registration and removal from major status.

For students to be considered for pre-major, full major or provisional status the College office needs to have an application on file. See Admissions Process below.

Following admission to the College, a student is assigned an advisor and is required to consult with that advisor.

#### ***Admission Process***

Students must confirm admission to Western Washington University before submitting an application to the College of Business and Economics. The application process originates with the College office when the student submits an on-line application form via the College of Business and Economics website, [www.cbe.wwu.edu/College/Application.asp](http://www.cbe.wwu.edu/College/Application.asp). Applications will be reviewed against admission criteria by College staff with every effort being made to inform the student of their status in a timely manner.

Students interested in either an economics major from the Department of Economics, or a BS degree in manufacturing management from the Department of Decision Sciences will submit an on-line application. Once an application is submitted, the student will be contacted by the department to schedule an interview.

Inquiries should be directed to College of Business and Economics, Western Washington University, 516 High Street, Bellingham, WA 98225-9072, or phone 360-650-3896.

#### ***Department Chairs***

Dr. George Sanders	Accounting
Dr. Paul Storer	Economics
Dr. Steve Ross	Decision Sciences
Dr. Sandra Mottner	Finance and Marketing
Dr. Bruce Wonder	Management

#### ***Directors***

Dr. Craig Dunn	MBA Program and MPAcc Program
Thomas W. Dorr	Center for Economic Vitality
Dr. Craig Tyran	Center for Excellence in Management Education
Dr. L. Hart Hodges	Center for Economic and Business Research
Pamela Whalley	Center for Economic and Financial Education
Dr. Steven Globerman	Center for International Business
Jennifer Shelton	Small Business Development Center

#### ***Other College Information***

##### ***World Wide Website***

Information concerning admission and application to the College of Business and Economics is available on the World Wide Web at [www.cbe.wwu.edu](http://www.cbe.wwu.edu).

## ***Retention***

All majors in the College of Business and Economics (CBE) must maintain good academic standing with the University. A student with a Western Washington University cumulative GPA average below 2.0 will be dismissed from the College and not permitted to take additional courses in the College of Business and Economics until the deficiency is repaired. Students with two successive quarters of a CBE GPA cumulative average below a 2.0 will be dismissed from the College.

## ***Requirements for Bachelor's Degree***

Besides the general requirement for graduation from the University, explained elsewhere in this catalog, CBE has the following specific requirements:

- **At least 50 percent of the business credit hours required for the business degree must be taken at Western Washington University**
- Electives may be selected as needed to ensure the required 180 quarter hours total credit, except that majors in accounting and business administration must complete a minimum of 90 credits in areas other than accounting, business administration and economics beyond the principles
- **Communication.** All students must consult their advisor regarding writing proficiency and communications requirements; all CBE majors are required to take one Communication Focus (CF) course and complete the upper-division Writing Proficiency (WP - 3 points) requirement, both within CBE, prior to graduation

Students are reminded that up to 32 hours of upper-division credit are elective. This provides significant opportunity to include courses in the arts, sciences and humanities. Early discussion with a CBE faculty advisor is strongly encouraged. Students desiring to take two concentrations, two majors, or two degrees must talk with an advisor in CBE for information related to the requirements and restrictions.

**Petitioning Procedure.** Any student who seeks either a variation from the strict application of the rules, regulations or requirements of the College, or a student-designed major from among the departments of the College, may petition the dean.

## ***Special Programs***

**Center for Economic Vitality (CEV).** The CEV provides individual counseling to small business firms, conducts research into general small business problems, and develops and offers educational programs geared to the needs of persons operating small businesses. Any small business firm, community group or individual may request assistance. There is no charge for the management and technical assistance services of counselors.

**Center for Economic and Financial Education.** The Center for Economic and Financial Education, coordinated by the economics department, is involved in providing economic knowledge, data and teaching aids to the grade schools and high schools throughout the state. Affiliated with the Washington State Council on Economic Education, this center assists in raising the standards of economic literacy of the state.

**Center for Economic and Business Research.** This center undertakes research activities related to developing a better understanding of the economic and business climate of the Pacific Northwest. The center is developing and maintaining an economic database for the area, has developed a regional model that will assist in forecasting certain economic variables for the region, and responds to specific research requests from local public and private entities.

**Center for Excellence in Management Education.** This center, through faculty, student and industry partner involvement, is committed to enhancing teaching and learning in fields of business, economics, and related disciplines in colleges and universities.

**Center for International Business.** The Center for International Business provides opportunities for faculty and students to deepen their understanding of international business management techniques and issues through a variety of activities including lectures and seminars, research projects, course curricula development and field studies.

**Small Business Development Center.** The Small Business Development Center is an appointment based, confidential, business advising service for local business owners. The SBDC director meets with business owners or managers, one-on-one, to work on a variety of business topics such as financing, technology, business plans, marketing & sales, cash flow management, production & operations, human resource concerns, and buying & selling a business.

***Departments, Courses and Programs***

Courses listed in this General Catalog constitute a record of the total academic program of the University. For an exact scheduling of courses at Western, students should consult the annual online *Timetable of Classes*, and the *Extended Education and Summer Programs Bulletin* on the Web.

**Business Administration Minor**

**40 credits**

**Admission and Declaration Process**

Admission and Major Declaration

**Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

**Requirements**

- ACCT 240 - Financial Accounting
- ACCT 245 - Managerial Accounting
- DSCI 205 - Business Statistics
- ECON 206 - Introduction to Microeconomics
- ECON 207 - Introduction to Macroeconomics
- FIN 341 - Principles of Finance
- MATH 157 - Calculus With Applications to Business and Economics
- MKTG 380 - Principles of Marketing
- MGMT 271 - Law and the Business Environment
- MGMT 311 - Introduction to Management and Organizational Behavior

# **Accounting**

[www.cbe.wwu.edu/acct](http://www.cbe.wwu.edu/acct)

## **Introduction**

Accounting is an important tool used by managers of economic organizations to plan, control and report financial activity. A thorough knowledge of accounting is, therefore, necessary to understand the operation and financial condition of any business, nonprofit organization or governmental agency.

The Department of Accounting offers a broad program of accounting courses that, coupled with required and elective courses in economics and business administration, provides the graduate with a sound educational foundation for an accounting career or post-graduate studies.

The accounting graduate can expect to find employment in a number of areas including private business, public accounting, not-for-profit organizations or governmental units. An accountant in private business or governmental service will typically work in such areas as cost analysis, taxation, auditing, accounting systems or cash management. Careers in public accounting typically involve work in taxation, auditing or management advisory services.

The accounting curriculum also provides a theoretical foundation for students who plan to take examinations to become a Certified Public Accountant (CPA) or a Certified Management Accountant (CMA).

Students are urged to consider the variety and breadth of career opportunities available to the accounting graduate when they select their accounting elective courses. Electronic spreadsheet competence is required in some 300/400-level accounting courses.

For those students planning to take the CPA exam, the state of Washington requires additional education. A good way to satisfy these requirements is through the Master's program. The Master of Professional Accounting degree (MPAcc) offers students the opportunity to earn a master's degree in Accounting while meeting the fifth year educational requirement to become a Certified Public Accountant. Please see the website at [www.cbe.wwu.edu/acct](http://www.cbe.wwu.edu/acct) for details.

## **Faculty**

**GEORGE D. SANDERS** (1995) Chair and Professor. BS, Louisiana State University; MBA, University of New Orleans; PhD, The University of Alabama; CPA (inactive), state of Louisiana.

**DAVID L. GILBERTSON** (1998) Associate Professor. BS, University of Southern California; MBA, University of Montana; PhD, University of Utah; CPA, state of Montana; CMA.

**MARGUERITE R. HUTTON** (1989) Professor. BBA, MPA, University of Texas at Arlington; PhD, University of Houston; CPA, states of Texas and Washington.

**MARY ANN REYNOLDS** (1996) Professor. BS, Brigham Young University; PhD, University of Utah.

**STEPHEN V. SENGE** (1985-2000; 2007) Professor. BA, California Western University; MPA, Denver University; MA; DBA, Kent State University, CMA.

**KHIM L. SIM** (2008) Assistant Professor. BS, Southeast Missouri State University; MA, Virginia Polytechnic Institute and State University; PhD, Drexel University.

**WILLIAM R. SINGLETON** (1976) Professor. BBA, Memphis State University; MBA, University of Portland; PhD, University of Hawaii; CPA, state of Washington.

**AUDREY G. TAYLOR** (2002) Associate Professor. BA, Smith College; MBA, University of Tennessee; MIE, PhD, Wayne State University; CPA, state of Michigan.

**DANIEL M. WARNER** (1978) Professor. BA, JD, University of Washington; MA, Western Washington University.

**XIAOZHOU (DAVID) ZHU** (2008) Assistant Professor. BS, Shanghai Institute of Mechanical Engineering; MBA, MS, PhD, Kent State University.

## **Departmental Mission**

The Department of Accounting provides high-quality, balanced accounting education to majors and other undergraduate and graduate students. Quality teaching is our most important function. We engage students in the development of communication, conceptual and technical skills. To exemplify an enthusiasm for professional activity, faculty maintain their own intellectual curiosity and community awareness. Faculty are active scholars and contribute positively to students' experience, and to the department, college, university, profession and community service.

Our objectives support the combined mission of teaching, scholarship and service.

### ***Teaching***

- Integrate a broad range of accounting skills with an appreciation of ethical, cultural and environmental issues as they relate to accounting and business law.
- Promote oral and written communication, computer, research and group skills.
- Prepare students to become productive accounting and business professionals.
- Review and modify the curriculum to meet changing societal needs.

### ***Scholarship***

- Produce, apply and disseminate knowledge in accountancy and business law and in the pedagogy of these disciplines. Faculty are encouraged to pursue scholarly projects that suit their professional talents and interests consistent with the mission of the College of Business and Economics.

### ***Service***

- Serve the professional and broader communities.

### **Declaration Process**

See the *College of Business and Economics* introductory section of this catalog for declaration of major procedure.

### **Other Departmental Information**

#### **Communication Requirements**

All accounting majors are required to take one communication focus (CF) course and complete the upper-division writing proficiency (WP-3 points) requirement. The CF and WP courses must be taken within CBE and can be completed as part of the required and elective courses. Consult the online Timetable of Classes for the specific course sections that fulfill the CF and WP requirements.

#### **Undergraduate Degrees and Programs**

Accounting, BA  
Accounting Minor  
Economics/Accounting, BA

## **Graduate Degrees and Programs**

Professional Accounting, Non-Thesis, MPAcc

The MPAcc program is a 48-credit graduate degree to be completed in three quarters.

## **Accounting Minor**

**24 credits**

### **Introduction**

The Department of Accounting's minor is open by special permission to students whose majors would be complemented by an accounting minor and who have completed prerequisites for the courses comprising the minor.

### **Admission and Declaration Process**

Admission and Major Declaration ([see CBE college page](#))

### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

### **Requirements**

- ACCT 240 - Financial Accounting
- ACCT 245 - Managerial Accounting
- ACCT 331 - Cost Management
- One course from:
  - ACCT 341 - Intermediate Accounting Theory and Practice I
  - ACCT 375 - Income Taxation I
  - 8 additional credits in accounting under advisement

## **Accounting, BA**

**100 credits**

### **Admission and Declaration Process**

Admission and Major Declaration ([see CBE college page](#))

### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

## Requirements

- ACCT 240 - Financial Accounting
- ACCT 245 - Managerial Accounting
- ACCT 321 - Accounting Information Systems I
- ACCT 331 - Cost Management
- ACCT 341 - Intermediate Accounting Theory and Practice I
- ACCT 342 - Intermediate Accounting Theory and Practice II
- ACCT 343 - Intermediate Accounting Theory and Practice III
- ACCT 375 - Income Taxation I
- ACCT 461 - Auditing Theory and Practice
- ACCT 470 - Law of Commercial Transactions
- DSCI 205 - Business Statistics
- ECON 206 - Introduction to Microeconomics
- ECON 207 - Introduction to Macroeconomics
- ECON 309 - Managerial Economics
- FIN 341 - Principles of Finance
- MATH 157 - Calculus With Applications to Business and Economics
- MGMT 271 - Law and the Business Environment
- MGMT 311 - Introduction to Management and Organizational Behavior
- MGMT 482 - Business and its Environment
- MKTG 380 - Principles of Marketing
- OPS 360 - Operations Management
- One course from:
  - MGMT 492 - Entrepreneurial Problems
  - MGMT 495 - Strategic Management
- 12 upper-division accounting credits under advisement
- Take one Communication Focus (CF) course and a minimum of three writing proficiency points in approved upper-division writing proficiency courses (WP) at WWU with a minimum grade of C-. The CF and WP courses must be taken within CBE and can be completed as part of the above required and elective courses, prior to graduation. Consult the Timetable of Classes for the specific course sections that fulfill the CF and WP requirements

## Economics/Accounting, BA (also see Economics Department)

**100-101 credits**

### Introduction

This major is designed for students wishing to obtain a strong preparation in both economics and accounting and especially those who intend to go into careers in business. It is an excellent undergraduate study for the MBA. Completion of the CBE foundation courses is required to receive major status.

### Admission and Declaration Process

Admission and Major Declaration ([see CBE college page](#))

## **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

## **Requirements**

- ACCT 240 - Financial Accounting
- ACCT 245 - Managerial Accounting
- ACCT 321 - Accounting Information Systems I
- ACCT 341 - Intermediate Accounting Theory and Practice I
- ACCT 342 - Intermediate Accounting Theory and Practice II
- ACCT 343 - Intermediate Accounting Theory and Practice III
- DSCI 205 - Business Statistics or equivalent
- ECON 206 - Introduction to Microeconomics
- ECON 207 - Introduction to Macroeconomics
- ECON 303 - The History of Economic Thought
- ECON 306 - Intermediate Microeconomics
- ECON 307 - Intermediate Macroeconomics
- ECON 311 - Money and Banking
- FIN 341 - Principles of Finance
- MGMT 271 - Law and the Business Environment
- MGMT 311 - Introduction to Management and Organizational Behavior
- MGMT 482 - Business and its Environment
- MKTG 380 - Principles of Marketing
- OPS 360 - Operations Management
- One course from:
  - MATH 124 - Calculus and Analytic Geometry I
  - MATH 157 - Calculus With Applications to Business and Economics or equivalent
- One Course from:
  - MGMT 492 - Entrepreneurial Problems
  - MGMT 495 - Strategic Management
- 8 additional credits in upper-division economics courses, under departmental advisement
- 8 additional credits in upper-division accounting courses, under departmental advisement
- Take one Communication Focus (CF) course and a minimum of three writing proficiency points in approved upper-division writing proficiency courses (WP-3 points) at WWU with a minimum grade of C-. The CF and WP courses must be taken within CBE and can be completed as part of the above required and elective courses, prior to graduation. Consult the Timetable of Classes for the specific course sections that fulfill the CF and WP requirements.

## **Professional Accounting, Non-Thesis, MPAcc**

### **Graduate Faculty**

**Gilbertson, David L.**, PhD, auditing/financial accounting.

**Hutton, Marguerite R.**, PhD, taxation.

**Reynolds, Mary Ann**, PhD, accounting.

**Sanders, George D.**, PhD, financial/governmental accounting.

**Senge, Stephen V.**, DBA, financial reporting.

**Sim, Khim L.**, PhD, managerial accounting.  
**Singleton, William R.**, PhD, taxation.  
**Taylor, Audrey**, PhD, managerial accounting.  
**Warner, Daniel M.**, JD, business law.  
**Zhu, David**, PhD, accounting information systems.

Graduate Program Office, Parks Hall 419, 360-650-3898

E-mail: dorothy.mccoy@wwu.edu; fax: 360-650-4844

Program Advisor: Dr. Stephen V. Senge

Department of Accounting: Dr. George D. Sanders, Chair

### **Accreditation**

The College of Business and Economics is accredited by the AACSB International-The Association to Advance Collegiate Schools of Business at both the graduate and undergraduate levels.

### **Goals**

The MPAcc program in CBE provides graduate education in accounting designed to:

- Provide opportunities for students to improve their expertise in a field that is rapidly becoming more complex.
- Provide students with an opportunity to acquire the knowledge and skills required in Washington for professional licensing as CPAs in an effective manner.
- Help meet the demand in Washington for well-trained professional accountants.

### **Admission and Prerequisites**

- A bachelor's degree with an accounting emphasis from an AACSB-accredited business school is required for admission to the program.
- Students must have a minimum 3.0 GPA (on a 4.0 scale) in the last 90-quarter or 60-semester hours of study.
- Students must achieve an acceptable score on the Graduate Management Admissions Test (GMAT). Test of English as a Foreign Language (TOEFL) must be submitted by applicants who are not native speakers of English.

### **Application Information**

- Application with a \$50 fee (subject to change).
- Two sets of official transcripts from all previous college-level work (no more than two years old).
- Personal statement of background and intention.
- Résumé showing work experience.
- Application deadline: March 15 for fall quarter admission only.

To apply for admission, send the application and supporting documents to the Graduate School. Further information is provided in the Graduate School section of this catalog.

### **Program Requirements:**

#### **Core Curriculum**

- MPAC 531 - Accounting Communications  
     Students may take six of the following courses:
- MPAC 521 - Seminar in Accounting Information Systems
- MPAC 535 - Seminar in Management Accounting
- MPAC 541 - Seminar in Advanced Financial Accounting

- MPAC 545 - Seminar in Accounting Theory
- MPAC 551 - Seminar in International Accounting
- MPAC 561 - Seminar in Professional Auditing
- MPAC 565 - Special Topics in Accounting
- MPAC 571 - Seminar in Law for Accountants
- MPAC 575 - Seminar in Taxation
- MPAC 581 - Ethics and Accountability
- MPAC 585 - Sustainability Accounting and Reporting  
(Course availability may vary from year to year.)

#### **Internship Option**

- MPAC 590 - Internship in Professional Accounting
- 8 elective MBA or other graduate credits under advisement

#### **Non-Internship Option**

- 20 elective MBA or other graduate credits under advisement

#### **Additional Information**

Additional information on the MPAcc is available in the College of Business and Economics, Accounting section of this catalog.

# **Decision Sciences**

## **Introduction**

The Department of Decision Sciences (DSCI) provides the opportunity for study in two related fields of business administration: Management Information Systems (MIS) and Operations Management (OPS). Additional course work is provided in Quantitative Methods. These fields cover a variety of responsibilities in both public and private organizations. Graduates from the decision sciences department will have completed a broad business program plus a wide range of nonbusiness subjects, reflecting the department's belief that education should prepare students for satisfying achievements in life as well as business.

## **Program Objectives**

Departmental programs have been designed to prepare students for leadership roles in business and the community. The educational objectives of the department are to:

- Offer innovative undergraduate and graduate curricula that reflect state-of-the-art knowledge in our areas of expertise
- Prepare students with the necessary skills and knowledge for professional careers
- Provide students with opportunities to improve their communication, team, and problem-solving skills to work effectively with different organizations and cultures
- Encourage students to develop critical thinking skills and an appreciation of intellectual inquiry
- Contribute to our disciplines by creating, publishing and presenting significant scholarly research in the individual fields
- Provide professional services to regional, national, and international academic institutions, businesses, professional organizations, and government agencies
- Encourage and support student professional organizations

## **Faculty**

**STEVEN C. ROSS** (1989) Chair and Professor. BS, Oregon State University; MS, PhD, University of Utah.

**DEEPINDER S. BAJWA** (1999) Associate Professor. BE, University of Mysore; MBA, PhD, Southern Illinois University at Carbondale.

**PETER HAUG** (1986) Professor. BA, State University of New York at Fredonia; MA, University of Maine; MBA, College of William & Mary; MPhil, University of Edinburgh; PhD, University of Washington.

**STELLA HUA** (2002) Associate Professor. BS, Shanghai Jiao Tong University; MBA, Baylor University; PhD, University of Wisconsin-Madison.

**ILHYUNG KIM** (2004) Associate Professor. BS, MS, Seoul National University; MBA, Oregon State University; PhD, University of California, Los Angeles.

**L. FLOYD LEWIS** (1983) Professor. BA, California State University, Sacramento; MS, San Jose State University; PhD, University of Louisville.

**J. CHRISTOPHER SANDVIG** (2001) Associate Professor. BS, University of Oregon; MBA, UCLA Graduate School of Management; PhD, University of Washington.

**MARK C. SPRINGER** (1987) Associate Professor. BA, University of Cincinnati; MBA, PhD, Vanderbilt University.

**CRAIG K. TYRAN** (2001) Professor. BS, MS, Stanford University; MBA, UCLA Graduate School of Management; PhD, University of Arizona.

**ZHE GEORGE ZHANG** (2000) Professor. BS, MA, Naukai University; MBA, York University; PhD, University of Waterloo.

## **Departmental Mission**

The mission of the Department of Decision Sciences is to advance and disseminate knowledge in management information systems, manufacturing and supply chain management, and quantitative methods. The DSCI department

provides high-quality educational programs, publishes theoretical and applied research, and serves university, professional, and community organizations.

### **Declaration Process**

See the *College of Business and Economics* introductory section in this catalog for complete procedures regarding major declaration. Applicants who have at least a 2.5 or higher cumulative GPA in all college-level course work or at least a 2.75 or higher GPA in the equivalent of the foundation courses will be assured of admission if space is available in the department program of choice.

### **Other Departmental Information**

#### **The Curriculum**

Development of the department's curriculum has been guided by the standards of the AACSB International—the Association to Advance Collegiate Schools of Business. Students normally devote most of the freshman and sophomore years of study to completion of the General University Requirements (GURs) and the business administration major foundation courses. Several foundation courses satisfy GURs, and careful planning can save time for additional elective course work. Electives that emphasize oral and written communication skills are particularly recommended.

The junior and senior years are devoted primarily to upper-division core requirements and elective course work. The Department of Decision Sciences offers two degrees: a Bachelor of Arts in Business Administration and a Bachelor of Science in Manufacturing and Supply Chain Management. Within the BA in Business Administration, students may choose to concentrate their major electives in management information systems, manufacturing and operations management, or general business. Students who wish to complete a concentration must pay close attention to class scheduling because of prerequisites and limited offerings of some courses.

#### **Certificate in Website Management**

Students concentrating in MIS may also be interested in earning a Certificate in Website Management through WWU's Internet Studies Center. Two of the six courses required for the certificate may be used as MIS concentration elective courses. More information about the certificate can be found on the ISC website, [www.cs.wwu.edu/ISC/](http://www.cs.wwu.edu/ISC/).

#### **Business Applications Software**

The use of personal computer systems to assist in data management, analysis and reporting of results is widespread in the curriculum of the decision sciences department. Students are expected to have some proficiency in word processing, spreadsheet and database software at the time they enter upper-division decision sciences classes. This proficiency can be gained through several means, including formal class work at a university or community college, work experience, or commercially offered classes. Proficiency can also be demonstrated by passing an exam which is offered for this purpose each quarter. Students who have not otherwise gained these skills are expected to register in MIS 220 prior to their registration in DSCI 305 or MIS 320.

#### **Communications Requirements**

All business majors must satisfy the upper-division writing proficiency requirement of the university (see University Graduation Requirements) and complete one communications focus (CF) course prior to graduation. These requirements must be satisfied by taking courses within the College of Business and Economics. Consult the online Timetable of Classes for the specific course sections that fulfill the CF and WP requirements. The requirements normally may be met by taking designated sections of required core or concentration courses, but may be met by taking any other designated CBE course as well.

## **Student Advising**

For answers to routine questions concerning preparation and progress through the major, students should consult the decision sciences department **Planning Guide**, available in Parks Hall 343. Nonroutine questions should be directed to the department chair. Questions concerning individual areas of study should be directed to faculty who teach in that area. After the declaration of a major, a student will be assigned a faculty adviser with whom the student must consult concerning mandatory and elective courses in the chosen major and concentration. The faculty adviser may also be a source of information concerning career objectives and opportunities.

## **Enrollment Priorities**

Because of high student demand for many business administration program courses, the department must give enrollment priority to students for whom these courses are requirements rather than electives. Priority is given to majors in CBE and other declared majors for whom the classes are required.

## **Undergraduate Degrees and Programs**

Business Administration, BA (Decision Sciences)

Business Administration — Management Information Systems, BA

Business Administration — Operations Management, BA

Manufacturing and Supply Chain Management Minor

Manufacturing and Supply Chain Management, BS

## **Business Administration — Management Information Systems, BA**

**91-92 credits**

### **Admission and Declaration Process**

Admission and Major Declaration (see CBE college page)

### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

### **Requirements**

- ACCT 240 - Financial Accounting
- ACCT 245 - Managerial Accounting
- DSCI 205 - Business Statistics
- DSCI 305 - Applied Business Statistics
- ECON 206 - Introduction to Microeconomics
- ECON 207 - Introduction to Macroeconomics
- ECON 309 - Managerial Economics
- FIN 341 - Principles of Finance
- MATH 157 - Calculus With Applications to Business and Economics
- MGMT 271 - Law and the Business Environment
- MGMT 311 - Introduction to Management and Organizational Behavior

- MGMT 482 - Business and its Environment
- MGMT 495 - Strategic Management
- MIS 320 - Principles of Management Information Systems
- MIS 321 - Systems Analysis and Design
- MIS 322 - Business Applications Development
- MIS 421 - Business Database Development
- MIS 495 - Corporate Information Systems Management
- MKTG 380 - Principles of Marketing
- OPS 360 - Operations Management
- One Course from:
  - MGMT 313 - Teamwork Basics
  - MIS 492 - Systems Implementation Project
  - OPS 461 - Project Management
- Select 8 credits from:
  - ACCT 421 - Accounting Information Systems II
  - DSCI 405 - Simulation Models for Decision Making
  - OPS 461 - Project Management
- Upper-division MIS courses  
other upper-division courses (including computer science) may be possible under advisement
- Familiarity with an additional programming language highly recommended
- Take one Communication Focus (CF) course and a minimum of three writing proficiency points in approved upper-division writing proficiency courses (WP) at WWU with a minimum grade of C-. The CF and WP courses must be taken within CBE and can be completed as part of the above required and elective courses, prior to graduation. Consult the Timetable of Classes for the specific course sections that fulfill the CF and WP requirements.
- Accounting and Business majors must complete a minimum of 90 credits in areas other than accounting, business administration and economics beyond the principles.
- NOTE: All MIS students must take MIS 322 — CSCI 140 is not an acceptable substitute. Students should talk to their advisors about other CSCI courses that may be appropriate as a second programming language.

## **Business Administration — Operations Management, BA**

**91-92 credits**

### **Admission and Declaration Process**

Admission and Major Declaration (see CBE college page)

### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

### **Requirements**

- ACCT 240 - Financial Accounting
- ACCT 245 - Managerial Accounting
- DSCI 205 - Business Statistics
- DSCI 305 - Applied Business Statistics
- ECON 206 - Introduction to Microeconomics

- ECON 207 - Introduction to Macroeconomics
- ECON 309 - Managerial Economics
- FIN 341 - Principles of Finance
- MATH 157 - Calculus With Applications to Business and Economics
- MGMT 271 - Law and the Business Environment
- MGMT 311 - Introduction to Management and Organizational Behavior
- MGMT 313 - Teamwork Basics
- MGMT 482 - Business and its Environment
- MGMT 495 - Strategic Management
- MIS 320 - Principles of Management Information Systems
- MKTG 380 - Principles of Marketing
- OPS 360 - Operations Management
- OPS 460 - Designing and Improving Operations
- OPS 461 - Project Management
- OPS 463 - Enterprise Resource Planning Systems
- OPS 465 - Quality Management
- OPS 468 - Manufacturing and Supply Train Strategy
- One course under advisement
- Take one Communication Focus (CF) course and a minimum of three writing proficiency points in approved upper-division writing proficiency courses (WP) at WWU with a minimum grade of C-. The CF and WP courses must be taken within CBE and can be completed as part of the above required and elective courses, prior to graduation. Consult the Timetable of Classes for the specific course sections that fulfill the CF and WP requirements.
- Accounting and Business majors must complete a minimum of 90 credits in areas other than accounting, business administration and economics beyond the principles.

## **Business Administration, BA (Decision Sciences)**

**91-92 credits**

### **Admission and Declaration Process**

Admission and Major Declaration ([see CBE college page](#))

### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

### **Requirements**

- ACCT 240 - Financial Accounting
- ACCT 245 - Managerial Accounting
- DSCI 205 - Business Statistics
- DSCI 305 - Applied Business Statistics
- ECON 206 - Introduction to Microeconomics
- ECON 207 - Introduction to Macroeconomics
- ECON 309 - Managerial Economics
- FIN 341 - Principles of Finance

- MATH 157 - Calculus With Applications to Business and Economics
- MGMT 271 - Law and the Business Environment
- MGMT 311 - Introduction to Management and Organizational Behavior
- MGMT 482 - Business and its Environment
- MGMT 495 - Strategic Management
- MIS 320 - Principles of Management Information Systems
- MKTG 380 - Principles of Marketing
- OPS 360 - Operations Management
- 27 to 28 elective credits under advisement
- Take one Communication Focus (CF) course and a minimum of three writing proficiency points in approved upper-division writing proficiency courses (WP) at WWU with a minimum grade of C-. The CF and WP courses must be taken within CBE and can be completed as part of the above required and elective courses, prior to graduation. Consult the Timetable of Classes for the specific course sections that fulfill the CF and WP requirements.
- Accounting and Business majors must complete a minimum of 90 credits in areas other than accounting, business administration and economics beyond the principles.

## **Manufacturing and Supply Chain Management Minor**

**27-28 credits**

### **Admission and Declaration Process**

Admission and Major Declaration ([see CBE college page](#))

### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

### **Requirements**

- MGMT 311 - Introduction to Management and Organizational Behavior
- OPS 460 - Designing and Improving Operations
- OPS 463 - Enterprise Resource Planning Systems
- One course from:
  - ETEC 327 - Manufacturing Economics (including prerequisites)
  - OPS 360 - Operations Management (including prerequisites)
- Three courses from:
  - MGMT 313 - Teamwork Basics
  - OPS 461 - Project Management
  - OPS 465 - Quality Management
  - OPS 466 - Supply Chain Management
  - OPS 467 - Global Operations Strategy
  - OPS 468 - Manufacturing and Supply Train Strategy

# **Manufacturing and Supply Chain Management, BS**

**131-132 credits**

## **Introduction**

The Department of Decision Sciences' unique Manufacturing and Supply Chain Management program focuses on more than the traditional operations management curriculum. It is the product of a cooperative effort between faculty and industry which has resulted in a curriculum that combines leadership, technology, and operations management. Students majoring in the program receive an integrated professional education. It is structured to provide them with the necessary social, technical and practical skills, and the experience to directly contribute to the leadership and continuous improvement of manufacturing operations. Students must undergo an interview with program faculty and have earned a GPA of 3.0 or above in the 38 credits of foundation courses listed below. Students failing to satisfy these requirements may petition for an exception with program faculty.

## **Admission and Declaration Process**

Admission and Major Declaration ([see CBE college page](#))

## **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

## **Requirements**

### **Foundation Courses (38 credits)**

- ACCT 240 - Financial Accounting
- ACCT 245 - Managerial Accounting
- CHEM 121 - General Chemistry I
- DSCI 205 - Business Statistics
- DSCI 305 - Applied Business Statistics
- ECON 206 - Introduction to Microeconomics
- ECON 207 - Introduction to Macroeconomics
- ECON 309 - Managerial Economics
- ETEC 110 - Engineering Design Graphics I
- ETEC 111 - Engineering Design Graphics II
- ETEC 220 - Introduction to Engineering Materials
- FIN 341 - Principles of Finance
- MATH 157 - Calculus With Applications to Business and Economics
- MGMT 271 - Law and the Business Environment
- MGMT 311 - Introduction to Management and Organizational Behavior
- MGMT 313 - Teamwork Basics
- MGMT 482 - Business and its Environment
- MIS 320 - Principles of Management Information Systems
- MKTG 380 - Principles of Marketing
- OPS 360 - Operations Management

- OPS 460 - Designing and Improving Operations
  - OPS 461 - Project Management
  - OPS 463 - Enterprise Resource Planning Systems
  - OPS 465 - Quality Management
  - OPS 468 - Manufacturing and Supply Train Strategy
  - OPS 469 - Seminar in Manufacturing and Supply Chain Management
  - PHYS 114 - Principles of Physics I
  - One of the following sets:
  - MGMT 495 - Strategic Management  
or
  - MGMT 491 - Small Business Entrepreneurship
  - MGMT 492 - Entrepreneurial Problems \*
- \*These two courses would substitute for MGMT 495 and one of the courses selected under advisement.*
- Two practica (8 credits)
  - Three courses under advisement (11-12 credits)
  - Take one Communication Focus (CF) course and a minimum of three writing proficiency points in approved upper-division writing proficiency courses (WP) at WWU with a minimum grade of C-. The CF and WP courses must be taken within CBE and can be completed as part of the above required and elective courses, prior to graduation. Consult the Timetable of Classes for the specific course sections that fulfill the CF and WP requirements.
  - Accounting and Business majors must complete a minimum of 90 credits in areas other than accounting, business administration and economics beyond the principles

# Economics

## Introduction

In a world without scarcity, economics as a field of study would be unnecessary. The most challenging task of economics is the study of how to best use resources in the satisfaction of human wants. Today, more than ever, the problems agitating society are predominantly economic. The problems of inequality, discrimination, pollution, energy, growth and stagnation are heavily economic, as are their solutions. Whether as intelligent citizens or as professional economists, we need the perspective and analysis of economics to understand and deal with the realities of life in the 21st century.

With appropriate preparation, particularly in the areas of economic theory, statistical methods and computer-assisted data analysis, the career opportunities for economists are diverse. Economists are most typically employed at all levels of government, in banking and financial institutions, other business firms, labor organizations, and as researchers and teachers in the educational system. One of the most dynamic career areas for economists has been in business. Business economists are typically involved in planning and forecasting, production and market analysis, pricing, and government policy analysis. While various employment opportunities are available to the university graduate with a baccalaureate degree, the person who wishes to pursue a high-powered career as a professional economist should plan to do some graduate study.

## Information

The department's faculty and staff invite questions about the program and career opportunities for economics majors. Interested persons are invited to visit the department office in Parks Hall 315 or to telephone 360-650-3910. Written inquiries should be directed to the Department of Economics, Western Washington University, Bellingham, WA 98225-9074. E-mail: Econ@wwu.edu. Website: [www.cbe.wwu.edu/deptHome.asp?dept=ECON](http://www.cbe.wwu.edu/deptHome.asp?dept=ECON).

## Faculty

Typically all economics faculty on ongoing appointments hold the PhD degree and are engaged in research and consulting activities at the local, state, national and international level. Faculty members have a commitment to quality teaching, personalized student contact and student advisement.

**PAUL A. STORER** (1996) Chair and Professor. BA, MA, University of Toronto; PhD, University of Western Ontario.

**BRANDON DUPONT** (2006) Associate Professor. BA, McNeese State University; MA, University of Iowa; PhD, University of Kansas.

**YVONNE DURHAM** (2000). Associate Professor. BA, University of Wyoming; MA, PhD, University of Arizona.

**MOHEB A. GHALI** (1993) Professor and Vice Provost for Research and Dean of the Graduate School. BCom, Cairo University; MA, University of California; PhD, University of Washington.

**STEVEN GLOBERMAN** (1994) Kaiser Professor of International Business and Director of the Center for International Business. BA, Brooklyn College; MA, University of California-Los Angeles; PhD, New York University.

**DANIEL A. HAGEN** (1988) Professor. BA, MA, PhD, University of California-Berkeley.

**JULIA HANSEN** (1988) Professor. BA, University of Vermont; MA, PhD, University of California-Berkeley.

**STEVEN E. HENSON** (1985) Professor. BA, California State University; MS, PhD, University of Oregon.

**L. HART HODGES** (2000) Associate Professor and Director of the Center for Economic and Business Research. BA, Williams College; MEM, Duke University; PhD, University of Washington.

**SHAWN KNABB** (2005) Associate Professor. BA, Miami University; MA, PhD, University of California-Santa Barbara.

**JOHN KRIEG** (2000). Associate Professor and Director of the Office of Survey Research. BA, Northwestern University; MA, PhD, University of Oregon.

**DENNIS R. MURPHY** (1979) Professor. BA, MA, Western Washington University; PhD, Indiana University.

**DAVID M. NELSON** (1977) Professor. BA, Whitworth College; MA, PhD, University of Oregon.

**MATTHEW R. ROELOFS** (1997) Associate Professor. BA, Calvin College; MS, PhD, Purdue University.

**OZAN SULA** (2006) Assistant Professor. BA, Marmara University; MA, PhD, Claremont Graduate University.

**PHILIP THOMPSON** (2009) Assistant Professor. BA, Kent State University; PhD, University of Arizona.

## **Departmental Mission**

The mission of the department is to provide students with an understanding of economic concepts and the functioning of the economy, and to equip them with the ability to apply economic analysis in problem solving. The department strives to provide a major program which gives students rigorous training in both economic theory and applications. The department plays an integral role in offering courses that are a component of Western's General University Requirements and that are part of other undergraduate and graduate programs in the college and in the University. The department views the conduct of research in economics, and applied research in particular, to be an integral part of its instructional mission. In addition, the department strives to serve both the profession and the community and to help raise the level of economic awareness among the public at large.

## **Declaration Process**

Students must have achieved a 2.50 cumulative college GPA (including transfer work) to declare a major in economics. Completion of the CBE Foundation courses is not required to declare a major in economics, except for the economics-accounting combined major. Students planning to major in economics should declare their major as early as possible, preferably during their first year at Western. Early declaration is costless and in no way restricts the student's options for changing plans later, but it provides many benefits. Advantages include faculty advising, and protection against possible future catalog revisions that change degree requirements. Declared majors are also eligible for departmental scholarships and other awards. Transfer students should contact the department prior to registering to be certain that they enter the course sequence correctly with the appropriate course equivalents from other institutions.

## **Other Departmental Information**

### **The Curricula**

The economics program at Western provides several options under the Bachelor of Arts degree.

The economics major requires a foundation in economic theory and quantitative skills and provides opportunities for pursuing in depth a number of important areas within economics, most notably financial, environmental, and resource economics.

### ***Combined majors***

A combined major is available as an option to students whose educational or professional interests may best be furthered by an integrated curriculum from two disciplines. A combined major may be fulfilled by the completion of requirements stipulated by both the Economics Department and a department with which Economics has established arrangements. A plan of study must be approved by both departments for completion of the major. Combined majors already exist with accounting, environmental studies, mathematics, philosophy and political science, social studies, and finance. Students are encouraged to explore the possibility of combining economics with other disciplines.

Students must consult with an advisor prior to the selection of a major option or the selection of elective credits in other departments of the College of Business and Economics (CBE) to be included as part of the economics major.

## **Undergraduate Degrees and Programs**

Economics Minor

Economics, BA

Economics/Accounting, BA

Economics/Environmental Studies, BA

Economics/Mathematics, BA

Economics/Political Science, BA

Economics/Social Studies, BA

Financial Economics, BA  
Politics/Philosophy/Economics, BA

## Economics Minor

**24 credits**

### Admission and Declaration Process

Admission and Major Declaration ([see CBE college page](#))

### Grade Requirements

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

### Requirements

- ECON 206 - Introduction to Microeconomics
- ECON 207 - Introduction to Macroeconomics
- Additional Economics courses selected under departmental advisement (may not include ECON 446 or ECON 447)

## Economics, BA

**66-69 credits**

### Admission and Declaration Process

Admission and Major Declaration ([see CBE college page](#))

### Grade Requirements

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

### Requirements

- DSCI 205 - Business Statistics or equivalent
- ECON 206 - Introduction to Microeconomics
- ECON 207 - Introduction to Macroeconomics
- ECON 303 - The History of Economic Thought
- ECON 306 - Intermediate Microeconomics
- ECON 307 - Intermediate Macroeconomics
- ECON 375 - Introduction to Econometrics
- One course from:
  - MATH 124 - Calculus and Analytic Geometry I
  - MATH 157 - Calculus With Applications to Business and Economics or equivalent
- One course from:
  - MIS 220 - Introduction to Business Computer Systems
  - CSCI 101 - Computers and Applications

- 32 credits of electives in CBE, under departmental advisement; at least 24 of these credits must be upper-division credits in economics; a minimum of 16 of these 24 credits must be at the 400 level
- Take one Communication Focus (CF) course and a minimum of three writing proficiency points in approved upper-division writing proficiency courses (WP-3 points) at WWU with a minimum grade of C-. The CF and WP courses must be taken within CBE and can be completed as part of the above required and elective courses, prior to graduation. Consult the Timetable of Classes for the specific course sections that fulfill the CF and WP requirements.

## **Economics/Accounting, BA**

**100-101 credits**

### **Introduction**

This major is designed for students wishing to obtain a strong preparation in both economics and accounting and especially those who intend to go into careers in business. It is an excellent undergraduate study for the MBA. Completion of the CBE foundation courses is required to receive major status.

### **Admission and Declaration Process**

Admission and Major Declaration (see CBE college page)

### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

### **Requirements**

- ACCT 240 - Financial Accounting
- ACCT 245 - Managerial Accounting
- ACCT 321 - Accounting Information Systems I
- ACCT 341 - Intermediate Accounting Theory and Practice I
- ACCT 342 - Intermediate Accounting Theory and Practice II
- ACCT 343 - Intermediate Accounting Theory and Practice III
- DSCI 205 - Business Statistics or equivalent
- ECON 206 - Introduction to Microeconomics
- ECON 207 - Introduction to Macroeconomics
- ECON 303 - The History of Economic Thought
- ECON 306 - Intermediate Microeconomics
- ECON 307 - Intermediate Macroeconomics
- ECON 311 - Money and Banking
- FIN 341 - Principles of Finance
- MGMT 271 - Law and the Business Environment
- MGMT 311 - Introduction to Management and Organizational Behavior
- MGMT 482 - Business and its Environment
- MKTG 380 - Principles of Marketing
- OPS 360 - Operations Management
- One course from:
- MATH 124 - Calculus and Analytic Geometry I

- MATH 157 - Calculus With Applications to Business and Economics or equivalent
  - One Course from:
- MGMT 492 - Entrepreneurial Problems
- MGMT 495 - Strategic Management
  - 8 additional credits in upper-division economics courses, under departmental advisement
  - 8 additional credits in upper-division accounting courses, under departmental advisement
  - Take one Communication Focus (CF) course and a minimum of three writing proficiency points in approved upper-division writing proficiency courses (WP-3 points) at WWU with a minimum grade of C-. The CF and WP courses must be taken within CBE and can be completed as part of the above required and elective courses, prior to graduation. Consult the Timetable of Classes for the specific course sections that fulfill the CF and WP requirements.

## Economics/Environmental Studies, BA

**103-104 credits (preparatory courses and major)**

### Introduction

Students wishing to complete an Economics/Environmental Studies major in four years should complete all GUR requirements in their first two years. The preparatory courses listed below may be used to fulfill both Huxley College and GUR requirements. All preparatory courses required for admission should be completed on a lettered or numeric grading scale, not P/NP, and must be completed with a grade of C- or better.

### Admission and Declaration Process

Admission and Major Declaration ([see CBE college page](#))

### Grade Requirements

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

### Requirements

#### Preparatory Courses (18-19 credits)

- One course from:
  - BIOL 101 - Introduction to Biology
  - BIOL 204 - Introduction to Evolution, Ecology and Biodiversity
  - CHEM 121 - General Chemistry I
- One course from:
  - MATH 114 - Precalculus I
  - MATH 156 - Algebra With Applications to Business and Economics
- Additional Lab Science course in BIOL, CHEM, GEOL or PHYS

#### Major (85 credits)

- ECON 206 - Introduction to Microeconomics
- ECON 207 - Introduction to Macroeconomics
- ECON 303 - The History of Economic Thought

- ECON 306 - Intermediate Microeconomics
- ECON 307 - Intermediate Macroeconomics
- ECON 383 - Environmental Economics
- ECON 384 - Energy Economics
- ECON 483 - Resource Economics
- ECON 493 - Senior Seminar: Economics, the Environment and Natural Resources
- ESTU 464 - United States Environmental Policy
- ESTU 468 - Environmental Law
- One course from:
  - DSCI 205 - Business Statistics
  - MATH 240 - Introduction to Statistics
  - MATH 341 - Probability and Statistical Inference
- One course from:
  - EGEO 310 - Developing World
  - EGEO 311 - Population and Resources
  - EGEO 312 - Geography of the World Economy
- One course from:
  - ESCI 302 - Environmental Pollution
  - ESCI 310 - Environmental Systems
  - ESCI 325 - Fundamentals of Ecology
  - ESCI 392 - Introduction to Global Change
- One course from:
  - ESCI 309 - Exploring Environmental Data
  - ESCI 321 - Oceanography
  - ESCI 330 - Natural History of the Pacific Northwest
  - ESCI 333 - Introduction to Environmental Toxicology
  - ESCI 361 - Water Quality
  - ESCI 463 - Wetlands for Wastewater Treatment
- One course from:
  - ESTU 436 - Environmental Impact Assessment
  - ESCI 436 - Environmental Impact Assessment
- One course from:
  - MATH 124 - Calculus and Analytic Geometry I
  - MATH 157 - Calculus With Applications to Business and Economics
- Electives under advisement (15-18 credits)
  - ECON 300- and 400-level
  - ESTU 300- and 400-level
- Take one Communication Focus (CF) course and a minimum of three writing proficiency points in approved upper-division writing proficiency courses (WP-3 points) at WWU with a minimum grade of C-. The CF course must be taken within the College of Business and Economics, while the WP requirement can be met with courses from any of the combined major departments. These requirements can be completed as part of the above required and elective credits. Consult the Timetable of Classes for the specific course sections that fulfill the CF and WP requirements.

# **Economics/Mathematics, BA**

**94-95 credits**

## **Introduction**

This major is for students who wish considerable depth in both disciplines, and it is particularly recommended as preparation for graduate study in economics.

## **Admission and Declaration Process**

Admission and Major Declaration (see CBE college page)

## **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

## **Requirements**

- ECON 206 - Introduction to Microeconomics
- ECON 207 - Introduction to Macroeconomics
- ECON 303 - The History of Economic Thought
- ECON 306 - Intermediate Microeconomics
- ECON 307 - Intermediate Macroeconomics
- ECON 475 - Econometrics
- MATH 204 - Elementary Linear Algebra
- MATH 224 - Multivariable Calculus and Geometry I
- MATH 225 - Multivariable Calculus and Geometry II
- MATH 226 - Limits and Infinite Series
- MATH 304 - Linear Algebra
- MATH 331 - Ordinary Differential Equations
- M/CS 435 - Nonlinear Optimization
- One course from:
  - CSCI 139 - Programming Fundamentals in Python
  - CSCI 140 - Programming Fundamentals in C++
  - CSCI 141 - Computer Programming I
  - MATH 207 - Mathematical Computing
- One Course from:
  - ECON 406 - Topics in Microeconomics
  - ECON 407 - Topics in Macroeconomics
- Choose one of the following options:
  - MATH 124 - Calculus and Analytic Geometry I
  - MATH 125 - Calculus and Analytic Geometry II  
or
  - MATH 134 - Calculus I Honors
  - MATH 135 - Calculus II Honors  
or
  - MATH 138 - Accelerated Calculus

- Choose one of the following options:
  - MATH 341 - Probability and Statistical Inference
  - MATH 342 - Statistical Methods OR MATH 441
  - MATH 442 - Mathematical Statistics
- 16 additional credits in upper-division courses in economics, under prior departmental advisement; 8 of these 16 credits must be at the 400 level
- Take one Communication Focus (CF) course and a minimum of three writing proficiency points in approved upper-division writing proficiency courses (WP-3 points) at WWU with a minimum grade of C-. The CF course must be taken within the College of Business and Economics, while the WP requirement can be met with courses from any of the combined major departments. These requirements can be completed as part of the above required and elective credits. Consult the Timetable of Classes for the specific course sections that fulfill the CF and WP requirements.

NOTE: The pair MATH 203 and 303 may be substituted for MATH 204 and 331

## Economics/Political Science, BA

**94-96 credits**

### Introduction

This major is available for students who have a strong interest in both of these disciplines and whose career interests lie, for example, in government or the legal profession.

### Admission and Declaration Process

Admission and Major Declaration ([see CBE college page](#))

### Grade Requirements

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

### Requirements

- DSCI 205 - Business Statistics or equivalent
- ECON 206 - Introduction to Microeconomics
- ECON 207 - Introduction to Macroeconomics
- ECON 303 - The History of Economic Thought
- ECON 306 - Intermediate Microeconomics
- ECON 307 - Intermediate Macroeconomics
- ECON 310 - Public Finance
- PLSC 250 - The American Political System
- PLSC 261 - Introduction to Political Theory
- PLSC 372 - International Political Economy
- PLSC 462 - The Rise of Modern Political Economy
- One course from:
- MATH 124 - Calculus and Analytic Geometry I
- MATH 157 - Calculus With Applications to Business and Economics or equivalent

- One course from:
  - PLSC 271 - Introduction to International Relations
  - PLSC 291 - Introduction to Comparative Politics
- One Course from:
  - ECON 491 - Issues in Political Economy (or approved alternative)
  - PLSC 491 - Issues in Political Economy
- 12 additional credits in upper-division economics courses, under departmental advisement
- 9 additional credits from the American Politics and Public Policy field
- 4 additional credits from the Political Theory field
- 8-9 additional credits in upper-division political science electives, to complete the program
- Take one Communication Focus (CF) course and a minimum of three writing proficiency points in approved upper-division writing proficiency courses (WP-3 points) at WWU with a minimum grade of C-. The CF course must be taken within the College of Business and Economics, while the WP requirement can be met with courses from any of the combined major departments. These requirements can be completed as part of the above required and elective credits. Consult the Timetable of Classes for the specific course sections that fulfill the CF and WP requirements.

## Economics/Social Studies, BA

### 90-94 credits

#### Introduction

This major is open to any student, but is specifically designed for students desiring to pursue a career in teaching.

To receive a recommendation for state of Washington certification, students must complete the "teacher certification" program, including the content methods course SEC 426, which is offered by the Department of Secondary Education 1) as a part of the undergraduate BA degree, or 2) as a post baccalaureate program, or 3) as a part of the Master's in Teaching program. See the Secondary Education section of this catalog for program admission, completion, and teacher certification requirements. Completion of this combined major leads to an endorsement in social studies.

#### Admission and Declaration Process

Admission and Major Declaration (see CBE college page)

#### Grade Requirements

A 2.0 (C) minimum course grade is required in each course taken in the major.

Courses required for a state teaching endorsement must be completed with a grade of C (2.0) or better.

#### Requirements

- DSCI 205 - Business Statistics or equivalent
- ECON 206 - Introduction to Microeconomics
- ECON 207 - Introduction to Macroeconomics
- ECON 303 - The History of Economic Thought
- ECON 306 - Intermediate Microeconomics

- ECON 307 - Intermediate Macroeconomics
  - EGEO 201 - Human Geography
  - HIST 103 - Introduction to American Civilization: American History to 1865
  - HIST 104 - Introduction to American Civilization: American History Since 1865
  - HIST 391 - History of the Pacific Northwest
  - PLSC 250 - The American Political System
  - One course from:
- MATH 124 - Calculus and Analytic Geometry I
- MATH 157 - Calculus With Applications to Business and Economics or equivalent
  - One course from:
- MIS 220 - Introduction to Business Computer Systems
- CSCI 101 - Computers and Applications
  - One course from:
- ANTH 201 - Introduction to Cultural Anthropology
- SOC 221 - Introduction to Population Issues
- SOC 251 - Sociology of Deviant Behavior
- SOC 260 - The Family in Society
- SOC 268 - Gender and Society
  - One of the following:
- EGEO 250 - Geographic Information Systems Survey or two additional geography credits
  - Three additional history courses (minimum 12 credits) distributed as follows:
    - One course in Ancient,
    - One course from two of the following areas:
      - Europe
      - East and South Asia
      - Africa and Middle East
      - Western Hemisphere (outside U.S.)
  - 19 - 20 credits Upper-division electives in economics under departmental advisement to complete the required 90 credits of the major, at least 8 credits must be at the 400 level.
  - Take one Communication Focus (CF) course and a minimum of three writing proficiency points in approved upper-division writing proficiency courses (WP-3 points) at WWU with a minimum grade of C-. The CF course must be taken within the College of Business and Economics, while the WP requirement can be met with courses from any of the combined major departments. These requirements can be completed as part of the above required and elective credits. Consult the Timetable of Classes for the specific course sections that fulfill the CF and WP requirements.

## Financial Economics, BA

**94-97 credits**

### Introduction

This major is designed for students interested in both economics and finance, and is aimed particularly at those who wish to pursue careers in corporate finance, financial analysis, insurance and real estate, and/or government agencies where special emphasis is placed on financial economic knowledge.

## **Admission and Declaration Process**

Admission and Major Declaration

### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

### **Requirements**

- ACCT 240 - Financial Accounting
- ACCT 245 - Managerial Accounting
- ACCT 341 - Intermediate Accounting Theory and Practice I
- ACCT 342 - Intermediate Accounting Theory and Practice II
- DSCI 205 - Business Statistics or equivalent
- ECON 206 - Introduction to Microeconomics
- ECON 207 - Introduction to Macroeconomics
- ECON 303 - The History of Economic Thought
- ECON 306 - Intermediate Microeconomics
- ECON 307 - Intermediate Macroeconomics
- ECON 375 - Introduction to Econometrics
- FIN 341 - Principles of Finance
- FIN 440 - Investments
- FIN 441 - Intermediate Financial Management  
(financial economics majors only may substitute ECON 375 for DSCI 305 as the prerequisite for FIN 441)
- FIN 444 - Financial Institutions and Markets
- One course from:
  - ACCT 343 - Intermediate Accounting Theory and Practice III
  - ECON 411 - Monetary Economics
- One course from:
  - MATH 124 - Calculus and Analytic Geometry I
  - MATH 157 - Calculus With Applications to Business and Economics or equivalent
- One course from:
  - CSCI 101 - Computers and Applications
  - MIS 220 - Introduction to Business Computer Systems
- 12 credits of upper-division economics electives under departmental advisement; a minimum of 8 economics credits must be at the 400 level
- 12 credits of upper-division finance electives under departmental advisement; a minimum of 8 of these credits must be at the 400 level
- Take one Communication Focus (CF) course and a minimum of three writing proficiency points in approved upper-division writing proficiency courses (WP-3 points) at WWU with a minimum grade of C-. The CF and WP courses must be taken within CBE and can be completed as part of the above required and elective courses, prior to graduation. Consult the Timetable of Classes for the specific course sections that fulfill the CF and WP requirements.

NOTE: ECON 311 may not be counted toward this major.

# **Politics/Philosophy/Economics, BA**

**83 credits**

## **Introduction**

A multidisciplinary major designed to provide a solid grounding in disciplines that are critical to decision making and leadership in economic, political and social service institutions.

## **Admission and Declaration Process**

Admission and Major Declaration ([see CBE college page](#))

## **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

## **Requirements**

- ECON 206 - Introduction to Microeconomics
- ECON 207 - Introduction to Macroeconomics
- ECON 303 - The History of Economic Thought
- ECON 310 - Public Finance
- PHIL 102 - Introduction to Logic
- PHIL 112 - Introduction to Philosophy: Moral Issues
- PHIL 114 - Introduction to Philosophy: Knowledge and Reality
- PHIL 310 - Theory of Knowledge
- PHIL 320 - Ethical Theory I
- PHIL 350 - Political Philosophy
- PHIL 360 - Society, Law and Morality
- PHIL 364 - History of Philosophy: Ancient Philosophy
- PHIL 420 - Ethical Theory II
- PLSC 250 - The American Political System
- PLSC 261 - Introduction to Political Theory
- One course from:
  - PLSC 271 - Introduction to International Relations
  - PLSC 291 - Introduction to Comparative Politics
    - 12 additional upper-division economics credits
    - 9 additional credits from the American Politics and Public Policy field
    - 4 additional credits from the Political Theory field
  - Take one Communication Focus (CF) course and a minimum of three writing proficiency points in approved upper-division writing proficiency courses (WP-3 points) at WWU with a minimum grade of C-. The CF course must be taken within the College of Business and Economics, while the WP requirement can be met with courses from any of the combined major departments. These requirements can be completed as part of the above required and elective credits. Consult the Timetable of Classes for the specific course sections that fulfill the CF and WP requirements.

# **Finance & Marketing**

## **Introduction**

The Department of Finance and Marketing provides the opportunity for study of business administration relating to financial and marketing management. These fields cover a variety of responsibilities in both public and private organizations. An emphasis on breadth, general knowledge and analytical skills pervades all levels of the undergraduate curriculum. Graduates from the finance and marketing department will have completed a broad business program plus a wide range of nonbusiness subjects, reflecting the department's belief that education should prepare students for satisfying achievements in life as well as business.

## **Program Objectives**

Departmental programs have been designed to prepare students for leadership roles in business and the community.

The educational objectives of the department are to:

- Encourage intellectual inquiry
- Provide students with the perceptual and analytical skills necessary in making decisions and evaluating policy in business
- Develop student understanding of the social, economic and regulatory environment of business
- Enhance educational opportunities through research activities of faculty and students

The program is designed for students with a variety of career goals including opportunities with financial institutions, manufacturing and retail firms, service industries and the public sector.

## **Faculty**

**SANDRA MOTTNER** (2001) Chair and Associate Professor. BA, Mary Baldwin College; MBA, The College of William and Mary; PhD, Old Dominion University.

**EARL D. BENSON** (1980) Professor. BS, University of Idaho; MA, Pennsylvania State University; PhD, University of Oregon.

**DAVID R. FEWINGS** (1985) Associate Professor. BSc, University of Manitoba; MBA, PhD, University of Toronto.

**P AMELA L. HALL** (1990) Associate Professor. BS, MPA, DBA, Louisiana Tech University.

**SOPHIE X. KONG** (2006) Assistant Professor. BA, Nanjing University of China; MS, PhD, Florida State University.

**EDWIN A. LOVE** (2008) Assistant Professor, BA, Evergreen State College; MBA, University of Arizona; Ph.D, University of Washington

**THOMAS J. OLNEY** (1986) Associate Professor. AB, Cornell University; MBA, PhD, Columbia University.

**DAVID S. RYSTROM** (1983) Associate Professor. BS, UCLA; MS, California State University, Northridge; PhD, University of Oregon.

**FARROKH SAFAVI** (1969) Professor. BA, BS, MBA, University of Teheran; MBA, DBA, University of Southern California.

**WENDY J. WILHELM** (1986) Professor. BA, MS, Tufts University; MBA, Cornell University; PhD, University of Washington.

**NICHOLAS X. WONDER** (2002) Assistant Professor. BA, University of Washington; PhD, University of California-Berkeley.

## **Departmental Mission**

The department contributes core courses to the undergraduate majors in business and the MBA program. In addition, we maintain a diverse set of specialty courses, both domestic and global in orientation, necessary to service the department's undergraduate concentrations and provide a variety of electives for MBA students. Course work is offered by a predominantly doctorally qualified faculty who pride themselves in their availability and personal attention to students in teaching and advising. Our educational philosophy encourages intellectual inquiry and involves students in their own education through internships, projects, case studies and presentations. The department views scholarly activity as an integral part of its instructional mission. This scholarship, both theoretical and applied, helps to maintain

the currency of faculty and provides opportunities for assistance from students. Also, we provide service to our professional organizations, the University, and the community.

### **Declaration Process**

See the *College of Business and Economics* introductory section of this catalog for complete procedures regarding major declaration. Applicants who have completed the college foundation courses and have at least a 2.5 cumulative GPA in all college-level course work or at least a 2.75 GPA in the equivalent of the foundation courses will be assured of admission.

### **Other Departmental Information**

#### **The Curriculum**

Development of the department's curriculum has been guided by the standards of the AACSB International—The Association to Advance Collegiate Schools of Business. Students normally devote most of the freshman and sophomore years of study to completion of the General University Requirements (GURs) and the business administration major foundation courses. Several foundation courses satisfy GURs, and careful planning can save time for additional elective course work. Electives that emphasize oral and written communication skills are particularly recommended.

The junior and senior years are devoted primarily to upper-division core requirements and elective course work. The department offers concentrations in finance and marketing. Students who wish to complete a concentration must pay close attention to class scheduling because of prerequisites and limited offerings of some courses. Additional specific information can be found at the department website, [www.cbe.wwu.edu/deptHome.asp?dept=FMKT](http://www.cbe.wwu.edu/deptHome.asp?dept=FMKT).

#### ***Business Applications Software***

The use of personal computer systems to assist in data management, analysis and reporting of results is widespread in the curriculum of the finance and marketing department. Students are expected to have some proficiency in word processing and spreadsheet software at the time they enter upper-division finance and marketing department classes. The proficiency can be gained through several means, including formal class work at a university or community college, work experience or commercially offered classes. Students who have not otherwise gained these skills are expected to test out of or register for MIS 220 prior to their registration in DSCI 305, MIS 320, and FIN 341D. Additional specific information can be found at [www.cbe.wwu.edu/deptHome.asp?dept=FMKT](http://www.cbe.wwu.edu/deptHome.asp?dept=FMKT).

#### **Communications Requirements**

All business majors are required to take one communication focus (CF) course and a minimum of three writing proficiency points in approved upper-division writing proficiency courses at WWU with a minimum grade of C-, all taken within the College of Business and Economics (CBE). Consult the online Timetable of Classes for the specific course sections that fulfill the CF and WP requirements. The requirements may normally be met by taking designated sections of concentration courses, but may be met by taking any other designated CBE course as well.

#### **Student Advising**

For answers to routine questions concerning preparation and progress through the major, students should consult the finance and marketing department **Planning Guide** available in the finance and marketing department office and the department website. Nonroutine questions should be directed to the department chair or the department's administrative services manager. Questions concerning individual areas of study should be directed to faculty who teach in that area.

After the declaration of a major, a student will be assigned a faculty advisor with whom the student must consult concerning mandatory and elective courses in the chosen major and concentration. The faculty advisor may also be a source of information concerning career objectives and opportunities.

## **Enrollment Priorities**

Because of high student demand for many business administration program courses, the department must give enrollment priority to students for whom those courses are requirements rather than electives. Priority is given to majors in CBE and other declared majors for whom the classes are required.

## **Undergraduate Degrees and Programs**

Business Administration, BA (Finance or Marketing)

Business Administration — Finance, BA

Business Administration — Marketing, BA

## **Business Administration — Finance, BA**

**91-92 credits**

### **Admission and Declaration Process**

Admission and Major Declaration ([see CBE college page](#))

### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

### **Requirements**

- ACCT 240 - Financial Accounting
- ACCT 245 - Managerial Accounting
- DSCI 205 - Business Statistics
- DSCI 305 - Applied Business Statistics
- ECON 206 - Introduction to Microeconomics
- ECON 207 - Introduction to Macroeconomics
- ECON 309 - Managerial Economics
- FIN 341 - Principles of Finance
- FIN 440 - Investments
- FIN 441 - Intermediate Financial Management
- FIN 444 - Financial Institutions and Markets
- MATH 157 - Calculus With Applications to Business and Economics
- MGMT 271 - Law and the Business Environment
- MGMT 311 - Introduction to Management and Organizational Behavior
- MGMT 482 - Business and its Environment
- MIS 320 - Principles of Management Information Systems
- MKTG 380 - Principles of Marketing
- OPS 360 - Operations Management
- One course from:
  - FIN 448 - Investment Analysis and Management
  - FIN 449 - Cases in Financial Management
- One course from:

- MGMT 492 - Entrepreneurial Problems
- MGMT 495 - Strategic Management
  - Take one Communication Focus (CF) course and a minimum of three writing proficiency points in approved upper-division writing proficiency courses (WP) at WWU with a minimum grade of C-. The CF and WP courses must be taken within CBE and can be completed as part of the above required and elective courses, prior to graduation. Consult the Timetable of Classes for the specific course sections that fulfill the CF and WP requirements.
  - Accounting and Business majors must complete a minimum of 90 credits in areas other than accounting, business administration and economics beyond the principles

Two courses from the list below:

One of these courses must be a 400-level course. (FIN 448 or FIN 449 may be used as one of these courses but cannot meet the requirement for FIN 448 or FIN 449 stated above)

- FIN 442 - Multinational Corporate Finance
  - FIN 443 - Topics in Finance
  - FIN 446 - Options and Futures Markets
  - FIN 447 - Commercial Bank Management
  - FIN 466 - Option Trading Strategies
- One course from:
- FIN 345 - Real Estate
  - FIN 346 - Risk and Insurance

One course from the list below:

- ACCT 331 - Cost Management
  - ACCT 341 - Intermediate Accounting Theory and Practice I
  - ACCT 375 - Income Taxation I
  - ECON 306 - Intermediate Microeconomics
  - ECON 307 - Intermediate Macroeconomics
  - ECON 310 - Public Finance
  - ECON 411 - Monetary Economics
  - FIN 345 - Real Estate
  - FIN 346 - Risk and Insurance
- One course from:
- FIN 460 - Finance Apprenticeship
  - FIN 490 - Internship in Finance
- Or any FIN 4xx course listed above (FIN 442, 443, 446, 447, 456, 466) except any duplication of finance courses.

## **Business Administration — Marketing, BA**

**91-92 credits**

### **Admission and Declaration Process**

Admission and Major Declaration ([see CBE college page](#))

## **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

## **Requirements**

- ACCT 240 - Financial Accounting
- ACCT 245 - Managerial Accounting
- DSCI 205 - Business Statistics
- DSCI 305 - Applied Business Statistics
- ECON 206 - Introduction to Microeconomics
- ECON 207 - Introduction to Macroeconomics
- ECON 309 - Managerial Economics
- FIN 341 - Principles of Finance
- MATH 157 - Calculus With Applications to Business and Economics
- MGMT 271 - Law and the Business Environment
- MGMT 311 - Introduction to Management and Organizational Behavior
- MGMT 482 - Business and its Environment
- MIS 320 - Principles of Management Information Systems
- MKTG 380 - Principles of Marketing
- MKTG 381 - Fundamentals of Marketing Research
- MKTG 382 - Buying Behavior and Analysis
- MKTG 489 - Marketing Management and Strategy
- OPS 360 - Operations Management
- One course from:
  - MGMT 492 - Entrepreneurial Problems
  - MGMT 495 - Strategic Management
- Four courses from the list below, or other marketing-related course under advisement. Specific information on suggested courses to be taken under advisement is available at the department office and on the department web site:
  - MKTG 471 - Sports Marketing
  - MKTG 472 - Internet Marketing
  - MKTG 473 - Innovation and Branding
  - MKTG 474 - Marketing Strategies for Sustainability
  - MKTG 480 - Marketing Internship
  - MKTG 481 - Advanced Marketing Research and Analysis
  - MKTG 482 - Personal Selling and Sales Management
  - MKTG 483 - Integrated Marketing Communications
  - MKTG 484 - Retailing
  - MKTG 486 - International Marketing Management
  - MKTG 487 - Nonprofit Marketing
  - MKTG 488 - Topics in Marketing
- Take one Communication Focus (CF) course and a minimum of three writing proficiency points in approved upper-division writing proficiency courses (WP) at WWU with a minimum grade of C-. The CF and WP courses must be taken within CBE and can be completed as part of the above required and elective courses, prior to graduation. Consult the Timetable of Classes for the specific course sections that fulfill the CF and WP requirements.

- ❑ Accounting and Business majors must complete a minimum of 90 credits in areas other than accounting, business administration and economics beyond the principles

## **Business Administration, BA (Finance or Marketing)**

**92 credits**

### **Admission and Declaration Process**

Admission and Major Declaration ([see CBE college page](#))

### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

### **Requirements**

(The first seven courses are required for major status).

- ❑ ACCT 240 - Financial Accounting
- ❑ ACCT 245 - Managerial Accounting
- ❑ DSCI 205 - Business Statistics
- ❑ ECON 206 - Introduction to Microeconomics
- ❑ ECON 207 - Introduction to Macroeconomics
- ❑ MATH 157 - Calculus With Applications to Business and Economics
- ❑ MGMT 271 - Law and the Business Environment
- ❑ DSCI 305 - Applied Business Statistics
- ❑ ECON 309 - Managerial Economics
- ❑ FIN 341 - Principles of Finance
- ❑ MGMT 311 - Introduction to Management and Organizational Behavior
- ❑ MGMT 482 - Business and its Environment
- ❑ MIS 320 - Principles of Management Information Systems
- ❑ MKTG 380 - Principles of Marketing
- ❑ OPS 360 - Operations Management
- ❑ One course from:
  - ❑ MGMT 492 - Entrepreneurial Problems
  - ❑ MGMT 495 - Strategic Management
- ❑ Complete 28 credits under advisement. Four courses must be in the finance and marketing department in order to earn a BA with no concentration in the Department of Finance and Marketing
- ❑ Take one Communication Focus (CF) course and a minimum of three writing proficiency points in approved upper-division writing proficiency courses (WP) at WWU with a minimum grade of C-. The CF and WP courses must be taken within CBE and can be completed as part of the above required and elective courses, prior to graduation. Consult the Timetable of Classes for the specific course sections that fulfill the CF and WP requirements.

# Management

## Introduction

Management describes what is perhaps the most challenging and difficult of human endeavors. It is the process by which we attempt to attain goals beyond the reach of a single individual. Collective action requires that we work effectively and efficiently with and through others. Managing is not a single skill, but rather a dynamic body of knowledge with the goal of the fusion of multiple and diverse skills possessed by many into a cohesive force, the effectiveness of which exceeds the sum of its parts. Management is eclectic, drawing upon the entire fund of human knowledge and experience that is necessary to attain the goals established. Management is also almost universal in application. Any time two or more people join together in pursuit of a common goal and one leads by virtue of skill, experience, personality or authority, management has been initiated.

## Faculty

**BRUCE D. WONDER** (1981) Chair and Associate Professor Emeritus of Management. BS, University of California, Berkeley; MS, San Francisco State University; PhD, University of Washington

**BRIAN K. BURTON** (1995) Dean and Professor. BA, MBA, PhD, Indiana University.

**CRAIG P. DUNN** (2005) Associate Professor. BS, California State University-Long Beach; MBA, California State University-Bakersfield; PhD, Indiana University.

**JOSEPH E. GARCIA** (1985) Bowman Distinguished Professor in Leadership. BA, State University of New York College at Cortland; MA, Western Washington State College; PhD, University of Utah.

**JASON M. KANOV** (2007) Assistant Professor. BS, University of Florida-Gainesville; MA, PhD, University of Michigan-Ann Arbor.

**JONGWOOK KIM** (2003) Associate Professor. BBA, MBA, Yonsei University; PhD, University of Illinois.

**MATTHEW LIAO-TROTH** (2002) Professor. BA, University of California at Santa Cruz; MBA, San Diego State University; MS, PhD, University of Arizona.

**MARKO MADUNIC** (2009) Assistant Professor. BA, MBA, University of Central Florida; Ph.D., University of Illinois at Urbana Champaign.

**THOMAS W. ROEHL** (1999) Associate Professor. BA, Valparaiso University; MA, University of Oregon; PhD, University of Washington.

**MARY D. SASS** (2005) Assistant Professor. BS, University of Albany; PhD, George Washington University.

**KRISTI M. TYRAN** (2001) Associate Professor. BS, MBA, University of Washington; PhD, University of California, Irvine.

**DANIEL M. WARNER** (1978) Professor. BA, JD, University of Washington; MA, Western Washington University.

## Departmental Mission

The mission of the Department of Management at Western Washington University is to *advance the understanding of managerial issues in a complex environment*. We do this to *challenge students and faculty to achieve their professional aspirations and civic responsibilities*. To accomplish this we *develop an environment where students and faculty learn, integrate, and apply business principles and liberal arts*.

Our values, in no particular order, are:

**Higher level learning.** We value learning that integrates a variety of disciplines, perspectives, and ideas. Such learning occurs on more than a rudimentary basis. We promote intellectual rigor, lifelong learning, and critical thinking. We do this both in our own research and in our teaching. We engage in service for our professional areas to promote higher level learning throughout our disciplinary communities.

**Civic and community engagement.** We are committed to giving our students an understanding of what it means to be a citizen of the world, community and organization. We want students to understand the importance of being engaged in the world for the sake of the organization they are a part of, but also for the benefit of the world in general, as well as for themselves. We model our commitment to civic and community engagement by serving our college and university in

various roles. We also engage in service with the local community and the disciplinary communities we participate in as part of our profession.

**Collegiality.** By this we mean that we have respectful relationships with each other, we are open to feedback, and we communicate fully and truthfully with one another. We are interdisciplinary in our approach to research and teaching, and support each other in our own passionate pursuits. We are committed to service to our department, college and university so as to promote collegiality throughout our WWU system.

**Professionalism.** Professionalism is defined as presenting ourselves in a business-like manner in attire, speech, communication, and interpersonal relationships. We model professionalism and teach professionalism. We are professional with each other, our students, and community members who participate in our environment of teaching and learning. We provide our students with opportunities to practice professionalism in our classes and out in the community. We give feedback to our students in professional and ethical practice. We are professional in our service to the department, college, university and community.

### **Declaration Process**

Students in the Department of Management pursue a Bachelor of Arts degree in business administration. Those students should consult the *College of Business and Economics* (CBE) introductory section of this catalog for declaration of major procedure.

### **Other Departmental Information**

#### **The Curriculum**

The development of the curricula in the Department of Management has been guided by the standards of the AACSB International—the Association to Advance Collegiate Schools of Business and those of the Academy of Management. These standards stress a broad education preparing students for managerial roles in business and leadership roles in society.

Curricular paths in the department are structured:

- To develop competence in analysis, decision making and evaluation in both public and private organizations
- To develop and enrich interpersonal skills
- To develop the competence to manage within the social, economic and international environment of organizations
- To provide access to the technical skills necessary in each of the major functional areas of organizations
- To enhance educational opportunity through the theoretical and applied research and business consulting activities of its faculty and students
- To encourage intellectual inquiry into the lessons and skills of the past and present so as to be able to affect the future
- To develop and promote ethical behavior and social responsibility in future managers

Students normally devote most of the freshman and sophomore years of study to completion of the General University Requirements (GURs) and foundation courses in the major. Several foundation courses also satisfy GUR. Careful planning may save time for additional elective course work. Electives which emphasize oral and written communication skills are particularly recommended. The junior and senior years are primarily devoted to core degree requirements and elective course work.

### **Sigma Iota Epsilon ( $\Sigma IE$ )**

The Department of Management sponsors a chapter of the National Management Honorary,  $\Sigma IE$ . Membership is by invitation to declared majors in the department and is based on scholastic achievement and will be noted on the

student's transcript. An induction is held annually in the winter quarter and several special events are scheduled throughout the year.

### **Student Advising**

For answers to routine questions, and prior to declaration, students should consult this catalog and the department's *Planning Guide*. For non-routine questions, inquiry should be made at the departmental office for referral to an appropriate faculty member. A faculty advisor will be assigned to each student upon acceptance into the major.

### **Enrollment Priorities**

Because of high student demand for management courses, the department must give enrollment priority to students for whom those courses are requirements rather than electives. Priority is given to majors in CBE and other declared majors for whom the classes are required.

### **Undergraduate Degrees and Programs**

Business Administration, BA (Management)  
Business Administration — Human Resource Management, BA  
Business Administration — International Business, BA  
Business Administration — Management, BA

## **Business Administration — Human Resource Management, BA**

**92 credits**

### **Admission and Declaration Process**

Admission and Major Declaration ([see CBE college page](#))

### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

### **Requirements**

- ACCT 240 - Financial Accounting
- ACCT 245 - Managerial Accounting
- DSCI 205 - Business Statistics
- DSCI 305 - Applied Business Statistics
- ECON 206 - Introduction to Microeconomics
- ECON 207 - Introduction to Macroeconomics
- ECON 309 - Managerial Economics
- FIN 341 - Principles of Finance
- HRM 322 - Human Resource Management
- MATH 157 - Calculus With Applications to Business and Economics
- MGMT 271 - Law and the Business Environment

- MGMT 311 - Introduction to Management and Organizational Behavior
- MGMT 313 - Teamwork Basics
- MGMT 482 - Business and its Environment
- MIS 320 - Principles of Management Information Systems
- MKTG 380 - Principles of Marketing
- OPS 360 - Operations Management
- One course from:
  - MGMT 492 - Entrepreneurial Problems
  - MGMT 495 - Strategic Management
  - One course from:
    - ECON 325 - Labor Market Economics
    - MGMT 401 - Conflict Management and Negotiations
    - MGMT 481 - Managing Cultural Diversity
    - MIS 321 - Systems Analysis and Design
  - Three courses from:
    - HRM 423 - Staffing
    - HRM 424 - Training and Development
    - HRM 425 - Negotiations and Labor Relations
    - HRM 426 - Current Issues in Human Resource Management
    - HRM 427 - Compensation Administration
  - One course under advisement
  - Take one Communication Focus (CF) course and a minimum of three writing proficiency points in approved upper-division writing proficiency courses (WP) at WWU with a minimum grade of C-. The CF and WP courses must be taken within CBE and can be completed as part of the above required and elective courses, prior to graduation. Consult the Timetable of Classes for the specific course sections that fulfill the CF and WP requirements.
  - Accounting and Business majors must complete a minimum of 90 credits in areas other than accounting, business administration and economics beyond the principles.

## **Business Administration — International Business, BA**

**92 credits**

### **Admission and Declaration Process**

Admission and Major Declaration (see CBE college page)

### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

### **Requirements**

- ACCT 240 - Financial Accounting
- ACCT 245 - Managerial Accounting
- DSCI 205 - Business Statistics
- DSCI 305 - Applied Business Statistics
- ECON 206 - Introduction to Microeconomics

- ECON 207 - Introduction to Macroeconomics
  - ECON 309 - Managerial Economics
  - FIN 341 - Principles of Finance
  - IBUS 370 - Introduction to International Business
  - IBUS 470 - International Business Operations
  - MATH 157 - Calculus With Applications to Business and Economics
  - MGMT 271 - Law and the Business Environment
  - MGMT 311 - Introduction to Management and Organizational Behavior
  - MGMT 482 - Business and its Environment
  - MIS 320 - Principles of Management Information Systems
  - MKTG 380 - Principles of Marketing
  - OPS 360 - Operations Management
  - One course from:
    - MGMT 492 - Entrepreneurial Problems
    - MGMT 495 - Strategic Management
  - One course from:
    - ACCT 451 - International Accounting
    - FIN 442 - Multinational Corporate Finance
    - IBUS 473 - International Trade Operations
    - IBUS 474 - Topics in International Business
    - MGMT 337 - Management Study Abroad
    - MGMT 481 - Managing Cultural Diversity
    - MKTG 486 - International Marketing Management
    - OPS 466 - Supply Chain Management
  - Two courses from:
    - ECON 343 - Population, Environment, and World Agriculture
    - ECON 365 - The Canadian Economy
    - ECON 385 - Comparative Economic Systems
    - ECON 462 - International Trade
    - ECON 463 - International Finance
    - ECON 388 - Economics of the European Union
    - ECON 389 - Economies of the Pacific Rim
    - EGEO 312 - Geography of the World Economy
    - INTL 305 - Study Abroad

Or other 300-level Social Science course approved by advisor
- Two courses under advisement (at least one course from CBE)
- Complete at least one of the following:
  - An approved foreign education experience
  - A second-year college-level language study
  - A qualified global internship
- Take one Communication Focus (CF) course and a minimum of three writing proficiency points in approved upper-division writing proficiency courses (WP) at WWU with a minimum grade of C-. The CF and WP courses must be taken within CBE and can be completed as part of the above required and elective courses, prior to graduation. Consult the Timetable of Classes for the specific course sections that fulfill the CF and WP requirements. An International Business student completing a double major may satisfy the upper-division writing proficiency requirement in either major.
- Accounting and Business majors must complete a minimum of 90 credits in areas other than accounting, business administration and economics beyond the principles

# **Business Administration — Management, BA**

**92 credits**

## **Admission and Declaration Process**

Admission and Major Declaration (see CBE college page)

## **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

## **Requirements**

- ACCT 240 - Financial Accounting
- ACCT 245 - Managerial Accounting
- DSCI 205 - Business Statistics
- DSCI 305 - Applied Business Statistics
- ECON 206 - Introduction to Microeconomics
- ECON 207 - Introduction to Macroeconomics
- ECON 309 - Managerial Economics
- FIN 341 - Principles of Finance
- HRM 322 - Human Resource Management
- MATH 157 - Calculus With Applications to Business and Economics
- MGMT 271 - Law and the Business Environment
- MGMT 311 - Introduction to Management and Organizational Behavior
- MGMT 313 - Teamwork Basics
- MGMT 414 - Leadership Practicum
- MGMT 482 - Business and its Environment
- MIS 320 - Principles of Management Information Systems
- MKTG 380 - Principles of Marketing
- OPS 360 - Operations Management
- OPS 461 - Project Management
- One course from:
  - MGMT 492 - Entrepreneurial Problems
  - MGMT 495 - Strategic Management
- One course from:
  - MGMT 401 - Conflict Management and Negotiations
  - MGMT 413 - Organizational Change Practicum
- Two courses from:
  - IBUS 370 - Introduction to International Business
  - HRM 424 - Training and Development
  - HRM 425 - Negotiations and Labor Relations  
MGMT 401 or 413 (if not taken above)
  - MGMT 481 - Managing Cultural Diversity
  - MGMT 483 - Ethics in Business Decisions
  - MGMT 490 - Internship in Business Administration
  - MGMT 491 - Small Business Entrepreneurship

- MIS 321 - Systems Analysis and Design
  - Take one Communication Focus (CF) course and a minimum of three writing proficiency points in approved upper-division writing proficiency courses (WP) at WWU with a minimum grade of C-. The CF and WP courses must be taken within CBE and can be completed as part of the above required and elective courses, prior to graduation. Consult the Timetable of Classes for the specific course sections that fulfill the CF and WP requirements.
  - Accounting and Business majors must complete a minimum of 90 credits in areas other than accounting, business administration and economics beyond the principles

## **Business Administration, BA (Management)**

**92 credits**

### **Admission and Declaration Process**

Admission and Major Declaration ([see CBE college page](#))

### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

### **Requirements**

- ACCT 240 - Financial Accounting
- ACCT 245 - Managerial Accounting
- ECON 206 - Introduction to Microeconomics
- ECON 207 - Introduction to Macroeconomics
- DSCI 205 - Business Statistics
- DSCI 305 - Applied Business Statistics
- ECON 309 - Managerial Economics
- FIN 341 - Principles of Finance
- MATH 157 - Calculus With Applications to Business and Economics
- MGMT 271 - Law and the Business Environment
- MGMT 311 - Introduction to Management and Organizational Behavior
- MGMT 482 - Business and its Environment
- MIS 320 - Principles of Management Information Systems
- MKTG 380 - Principles of Marketing
- OPS 360 - Operations Management
- One course from:
  - MGMT 492 - Entrepreneurial Problems
  - MGMT 495 - Strategic Management
- 28 credits of approved upper-division elective courses

Students in the department may elect to work with their faculty advisor in designing a set of upper-division courses appropriate to their academic interests. The resulting course of study shall have prior approval of the advisor and include the following: HRM 322, MGMT 313 and five additional upper-division CBE courses, of which at least three must be offered through the Department of Management. Students interested in entrepreneurial management should select the general option and inform the department of that interest. They

will be advised of the preferred courses for students intending to embark upon entrepreneurial careers or careers in small business.

❑ Take one Communication Focus (CF) course and a minimum of three writing proficiency points in approved upper-division writing proficiency courses (WP) at WWU with a minimum grade of C-. The CF and WP courses must be taken within CBE and can be completed as part of the above required and elective courses, prior to graduation. Consult the Timetable of Classes for the specific course sections that fulfill the CF and WP requirements.

❑ Accounting and Business majors must complete a minimum of 90 credits in areas other than accounting, business administration and economics beyond the principles

# **Master of Business Administration Program**

## **MBA Program Degrees**

Business Administration, Regular Full-Time, MBA

Business Administration, Accelerated, MBA

Business Administration, Evening Part-Time, MBA

Business Administration, Managers and Professionals, MBA

For additional information on the MBA Program, please see the Graduate School section of this catalog.

## **Business Administration, Accelerated, MBA**

### **Graduate Faculty**

**Deepinder Bajwa** (1999) PhD, management information systems.

**Earl D. Benson** (1980) PhD, finance.

**Stephen Blank** (2008) PhD, Canada – US relations

**Brian K. Burton** (1995) PhD, business environment.

**Craig Dunn** (2005) PhD, business environment.

**Brandon Dupont** (2006) PhD, economic history, labor economics.

**David R. Fewings** (1985) PhD, finance.

**Joseph E. Garcia** (1985) PhD, organizational behavior.

**David L. Gilbertson** (1988) PhD, auditing/financial accounting.

**Steven Globerman** (1994) PhD, international business.

**Daniel A. Hagen** (1988) PhD, environmental/international/labor/microeconomics.

**Pamela L. Hall** (1990) PhD, finance.

**Julia L. Hansen** (1988) PhD, urban/labor economics.

**K. Peter Harder** (1970) PhD, economic history.

**Peter Haug** (1986) PhD, operations management.

**Steven E. Henson** (1985) PhD, microeconomics, applied econometrics.

**L. Hart Hodges** (2005) PhD, natural resources, applied business.

**Stella Hua** (2002) PhD, operations management and quantitative methods.

**Marguerite R. Hutton** (1989) PhD, taxation.

**Jason M. Kanov** (2007) PhD, organizational behavior

**Ilhyung Kim** (2004) PhD, operations and technology management.

**Jongwook Kim** (2003) PhD, business policy and strategic management.

**Shawn Knabb** (2005) PhD, macroeconomics, public finance, growth.

**John Krieg** (2000) PhD, econometrics, money and banking, macroeconomics.

**Floyd L. Lewis** (1983) PhD, management information systems.

**Matthew Liao-Troth** (2002) PhD, organizational theory and behavior.

**Julie A. Lockhart** (1982) MS/CPA/CMA, managerial accounting.

**Edwin A. Love** (2008) PhD, marketing

**Marko Madunic** (2009) PhD, business policy and strategic management & international business

**Sandra Mottner** (2001) PhD, marketing.

**Dennis R. Murphy** (1979) PhD, managerial decisions/international finance.

**David M. Nelson** (1977) PhD, macroeconomics/money markets.

**Thomas J. Olney** (1986) PhD, marketing.

**Mary Ann Reynolds** (1996) PhD, financial accounting.

**Thomas Roehl** (1999) PhD, international business.

**Matthew Roelofs** (1997) PhD, managerial economics.

**Steven C. Ross** (1989) PhD, management information systems.

**David S. Rystrom** (1983) PhD, finance.  
**George D. Sanders** (1995) PhD, financial/governmental accounting.  
**J. Christopher Sandvig** (2001) PhD, management information systems.  
**Mary Sass** (2005) PhD, organizational behavior and development.  
**Stephen V. Senge** (1985) CMA, DBA, managerial accounting  
**Khim L. Sim** (2008) PhD, managerial accounting  
**William R. Singleton** (1976) PhD, taxation.  
**Mark Springer** (1987) PhD, operations management.  
**Paul Storer** (1996) PhD, economics.  
**Ozan Sula** (2006) PhD, international finance, macroeconomics, money and banking.  
**Audrey Taylor** (2001) PhD, managerial accounting.  
**Craig Tyran** (2001) PhD, management and information systems.  
**Kristi M. Tyran** (2001) PhD, organizational behavior.  
**Daniel M. Warner** (1978) JD, business law.  
**Wendy J. Bryce Wilhelm** (1986) PhD, marketing.  
**Nicholas Wonder** (2002) PhD, corporate finance.  
**Zhe George Zhang** (2000) PhD, statistics.  
**David Zhe** (2008) PhD, accounting information systems.

### **Program Description**

The Master of Business Administration (MBA) program is a rigorous, integrated graduate business program designed to prepare students for responsible leadership positions in private, public and nonprofit organizations. The Western MBA curriculum provides a balance of theory and application essential for managerial excellence. The program is intended for the active manager and technical supervisor as well as those looking for new opportunities at the mid-management level. Regardless of undergraduate degree, candidates will find a challenging program designed to meet their specific background and needs.

The College of Business and Economics is accredited by AACSB International-The Association to Advance Collegiate Schools of Business at both the graduate and undergraduate levels.

### **Program Goals**

The typical student graduating from Western Washington University's MBA program shall:

- Understand various domestic and global contexts of business, including economic, technological, ecological, legal and regulatory, and social and political (including issues related to social and cultural diversity)
- Understand concepts, models, and techniques associated with strategic and tactical areas of business
- Possess the ability to solve problems in unfamiliar circumstances and unpredictable environments
- Have effective communication skills
- Understand ethical issues and different modes of ethical reasoning
- Possess important managerial skills

### **Program Mission**

The MBA program in CBE provides a high-quality general graduate business program designed to develop organizational leaders who have strong managerial skills, a solid foundation in the core business functions, and a global perspective on issues that affect organizations and markets. The program is distinguished by small classes, collegial relationships among faculty and students, and a diverse student body.

## **Admission Prerequisites**

**Knowledge prerequisites:** Normally an applicant to the program must have completed a college-level calculus course or otherwise demonstrate knowledge and proficiency in quantitative methods prior to entering the program. It also is expected that entering students will have proficiency in the use of microcomputers and common business software such as spreadsheets. Well-developed communications skills also are important.

## **Program Application / Admission Requirements**

The Western Washington University MBA program invites applications from students with any undergraduate major. Current MBA admissions criteria include a minimum 3.00 upper-division undergraduate GPA, an acceptable GMAT score (recently successful applicants have achieved a 560 average score), a résumé, and a statement of purpose. International students must also submit a TOEFL score of at least 227 for the computer-based test, 567 for the paper-based test, or 86 for the Internet-based test.

To apply for admission, send a completed official application form to the Graduate School along with an application fee, official transcripts, GMAT scores, personal statement of background and intentions, and a résumé showing work experience. (Further information, including deadlines, is provided in the Graduate School section of this catalog.)

**Admit Quarters:** Summer (accelerated track).

**Deadline:** Application deadline is May 1. International students are encouraged to submit applications by February 1 to ensure adequate time for admission decision and application for student visa.

**Specific Test Requirements:** Graduate Management Admission Test (GMAT). Test of English as a Foreign Language (TOEFL) must be submitted by applicants who are not native speakers of English.

## **Supporting Materials:**

- Application with \$50 fee (subject to change)
- Two sets of official transcripts from all previous college-level work (no more than two years old)
- Personal statement of background and intention
- Résumé showing work experience

## **The Curriculum**

The Accelerated Full-Time MBA Program serves outstanding students who have recently completed an undergraduate degree in a business-related field or who have extensive managerial experience.

## **Program Requirements (52 credits)**

- MBA 516 - Managerial Decisions
  - MBA 524 - Management and Leadership Skills
  - MBA 532 - Marketing Strategy
  - MBA 541 - Managerial Finance
  - MBA 574 - Enterprise Resource Planning
  - MBA 591 - Business Policy
- Electives (16 credits)

A required comprehensive exam is given as part of MBA 591.

Information contained in the MBA program section of the catalog is subject to change; please contact the MBA program for the most current information.

## Other Requirements

### Academic Probation

The Graduate School requires that all graduate students maintain a 3.00 GPA (on a 4.0 scale) to be a candidate for a degree and to remain in good academic standing. Students in the MBA program falling below this standard will automatically be placed on academic probation and will be allowed a maximum of 16 credits of course work to raise their cumulative GPA to 3.00 or better. If, after completing 16 additional credits, a student has failed to achieve good standing, that student may only be allowed to continue MBA studies with special permission.

In no case will a student be recommended for a master's degree without having achieved a 3.00 GPA or better.

### Student Advising

For answers to routine questions concerning preparation and progress through the program, students should consult this catalog and the program Website. Nonroutine questions should be directed to the program director, assistant director or program manager.

## Business Administration, Evening Part-Time, MBA

### Graduate Faculty

**Deepinder Bajwa** (1999) PhD, management information systems.

**Earl D. Benson** (1980) PhD, finance.

**Stephen Blank** (2008) PhD, Canada – US relations

**Brian K. Burton** (1995) PhD, business environment.

**Craig Dunn** (2005) PhD, business environment.

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**Julia L. Hansen** (1988) PhD, urban/labor economics.

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**Shawn Knabb** (2005) PhD, macroeconomics, public finance, growth.

**John Krieg** (2000) PhD, econometrics, money and banking, macroeconomics.

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**Mark Springer** (1987) PhD, operations management.  
**Paul Storer** (1996) PhD, economics.  
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**Craig Tyran** (2001) PhD, management and information systems.  
**Kristi M. Tyran** (2001) PhD, organizational behavior.  
**Daniel M. Warner** (1978) JD, business law.  
**Wendy J. Bryce Wilhelm** (1986) PhD, marketing.  
**Nicholas Wonder** (2002) PhD, corporate finance.  
**Zhe George Zhang** (2000) PhD, statistics.  
**David Zhe** (2008) PhD, accounting information systems.

### **Program Description**

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The College of Business and Economics is accredited by AACSB International-The Association to Advance Collegiate Schools of Business at both the graduate and undergraduate levels.

### **Program Goals**

The typical student graduating from Western Washington University's MBA program shall:

- Understand various domestic and global contexts of business, including economic, technological, ecological, legal and regulatory, and social and political (including issues related to social and cultural diversity)
- Understand concepts, models, and techniques associated with strategic and tactical areas of business
- Possess the ability to solve problems in unfamiliar circumstances and unpredictable environments
- Have effective communication skills
- Understand ethical issues and different modes of ethical reasoning
- Possess important managerial skills

## **Program Mission**

The MBA program in CBE provides a high-quality general graduate business program designed to develop organizational leaders who have strong managerial skills, a solid foundation in the core business functions, and a global perspective on issues that affect organizations and markets. The program is distinguished by small classes, collegial relationships among faculty and students, and a diverse student body.

## **Admission Prerequisites**

**Knowledge prerequisites:** Normally an applicant to the program must have completed a college-level calculus course or otherwise demonstrate knowledge and proficiency in quantitative methods prior to entering the program. It also is expected that entering students will have proficiency in the use of microcomputers and common business software such as spreadsheets. Well-developed communications skills also are important.

## **Program Application / Admission Requirements**

The Western Washington University MBA program invites applications from students with any undergraduate major. Current MBA admissions criteria include a minimum 3.00 upper-division undergraduate GPA, an acceptable GMAT score (recently successful applicants have achieved a 560 average score), a résumé, and a statement of purpose. International students must also submit a TOEFL score of at least 227 for the computer-based test, 567 for the paper-based test, or 86 for the Internet-based test.

To apply for admission, submit a completed official application form to the Graduate School along with an application fee, official transcripts, GMAT scores, personal statement of background and intentions, and a résumé showing work experience. (Further information, including deadlines, is provided in the Graduate School section of this catalog.)

**Admit Quarters:** Summer, even-numbered years (part-time track).

**Deadline:** Application deadline is May 1. International students are encouraged to submit applications by February 1 to ensure adequate time for admission decision and application for student visa.

**Specific Test Requirements:** Graduate Management Admission Test (GMAT). Test of English as a Foreign Language (TOEFL) must be submitted by applicants who are not native speakers of English.

## **Supporting Materials:**

- Application with \$50 fee (subject to change)
- Two sets of official transcripts from all previous college-level work (no more than two years old)
- Personal statement of background and intention
- Résumé showing work experience

## **The Curriculum**

The Evening Part-Time MBA Program serves students who have significant managerial or professional experience

## **Program Requirements (52-68 credits)**

- MBA 502 - Microeconomics \*
- MBA 503 - Macroeconomics \*
- MBA 504 - Statistical Methods \*
- MBA 505 - Business Finance \*
- MBA 506 - Corporate Information Systems Management \*

- MBA 507 - Managing Organizations and People \*
  - MBA 508 - Operations Management \*
  - MBA 509 - Marketing Management \*
  - MBA 510 - Financial Accounting and Reporting Concepts \*
  - MBA 511 - Managerial Accounting \*
  - MBA 524 - Management and Leadership Skills
  - MBA 532 - Marketing Strategy
  - MBA 541 - Managerial Finance
  - MBA 551 - Managerial Economics
  - MBA 591 - Business Policy
  - MBA 594 - Introduction to Professional Management
  - MBA 595 - Competing in a Global Environment
- \*Up to four core courses may be waived under advisement.

A required comprehensive exam is given as part of MBA 591.

Information contained in the MBA program section of the catalog is subject to change; please contact the MBA program for the most current information.

#### **Other Requirements**

Students must demonstrate competence through substantive experience in an organizational setting. This must be done through formal evaluation by a supervisor, and can be accompanied either before or during the student's time in the program. More details on this requirement can be obtained from the MBA program office.

#### **Academic Probation**

The Graduate School requires that all graduate students maintain a 3.00 GPA (on a 4.0 scale) to be a candidate for a degree and to remain in good academic standing. Students in the MBA program falling below this standard will automatically be placed on academic probation and will be allowed a maximum of 16 credits of course work to raise their cumulative GPA to 3.00 or better. If, after completing 16 additional credits, a student has failed to achieve good standing, that student may only be allowed to continue MBA studies with special permission.

In no case will a student be recommended for a master's degree without having achieved a 3.00 GPA or better.

#### **Student Advising**

For answers to routine questions concerning preparation and progress through the program, students should consult this catalog and the program Website. Nonroutine questions should be directed to the program director, assistant director or program manager.

## **Business Administration, Managers and Professionals, MBA**

#### **Graduate Faculty**

**Deepinder Bajwa** (1999) PhD, management information systems.  
**Earl D. Benson** (1980) PhD, finance.  
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**J. Christopher Sandvig** (2001) PhD, management information systems.  
**Mary Sass** (2005) PhD, organizational behavior and development.  
**Stephen V. Senge** (1985) CMA, DBA, managerial accounting  
**Khim L. Sim** (2008) PhD, managerial accounting  
**William R. Singleton** (1976) PhD, taxation.  
**Mark Springer** (1987) PhD, operations management.  
**Paul Storer** (1996) PhD, economics.  
**Ozan Sula** (2006) PhD, international finance, macroeconomics, money and banking.  
**Audrey Taylor** (2001) PhD, managerial accounting.  
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**Daniel M. Warner** (1978) JD, business law.  
**Wendy J. Bryce Wilhelm** (1986) PhD, marketing.  
**Nicholas Wonder** (2002) PhD, corporate finance.  
**Zhe George Zhang** (2000) PhD, statistics.  
**David Zhe** (2008) PhD, accounting information systems.

## **Program Description**

The Master of Business Administration (MBA) program is a rigorous, integrated graduate business program designed to prepare students for responsible leadership positions in private, public and nonprofit organizations. The Western MBA curriculum provides a balance of theory and application essential for managerial excellence. The program is intended for the active manager and technical supervisor as well as those looking for new opportunities at the mid-management level. Regardless of undergraduate degree, candidates will find a challenging program designed to meet their specific background and needs.

The College of Business and Economics is accredited by AACSB International-The Association to Advance Collegiate Schools of Business at both the graduate and undergraduate levels.

## **Program Goals**

The typical student graduating from Western Washington University's MBA program shall:

- Understand various domestic and global contexts of business, including economic, technological, ecological, legal and regulatory, and social and political (including issues related to social and cultural diversity)
- Understand concepts, models, and techniques associated with strategic and tactical areas of business
- Possess the ability to solve problems in unfamiliar circumstances and unpredictable environments
- Have effective communication skills
- Understand ethical issues and different modes of ethical reasoning
- Possess important managerial skills

## **Program Mission**

The MBA program in CBE provides a high-quality general graduate business program designed to develop organizational leaders who have strong managerial skills, a solid foundation in the core business functions, and a global perspective on issues that affect organizations and markets. The program is distinguished by small classes, collegial relationships among faculty and students, and a diverse student body.

## **Admission Prerequisites**

Knowledge prerequisites: Normally an applicant to the program must have completed a college-level calculus course or otherwise demonstrate knowledge and proficiency in quantitative methods prior to entering the program. It also is expected that entering students will have proficiency in the use of microcomputers and common business software such as spreadsheets. Well-developed communications skills also are important.

## **Program Application / Admission Requirements**

The Western Washington University MBA program invites applications from students with any undergraduate major. Current MBA admissions criteria include a minimum 3.00 upper-division undergraduate GPA, an acceptable GMAT score (recently successful applicants have achieved a 560 average score), a résumé, and a statement of purpose. International students must also submit a TOEFL score of at least 227 for the computer-based test, 567 for the paper-based test, or 86 for the Internet-based test.

To apply for admission, submit a completed official application form to the Graduate School along with an application fee, official transcripts, GMAT scores, personal statement of background and intentions, and a résumé showing work experience. (Further information, including deadlines, is provided in the Graduate School section of this catalog.)

**Admit Quarters:** Winter, odd-numbered years.

**Deadline:** Application deadline is May 1. International students are encouraged to submit applications by February 1 to ensure adequate time for admission decision and application for student visa.

**Specific Test Requirements:** Graduate Management Admission Test (GMAT). Test of English as a Foreign Language (TOEFL) must be submitted by applicants who are not native speakers of English.

**Supporting Materials:**

- Application with \$50 fee (subject to change)
- Two sets of official transcripts from all previous college-level work (no more than two years old)
- Personal statement of background and intention
- Résumé showing work experience

**Program Requirements (52-68 credits)**

- MBA 502 - Microeconomics \*
- MBA 503 - Macroeconomics \*
- MBA 504 - Statistical Methods \*
- MBA 505 - Business Finance \*
- MBA 506 - Corporate Information Systems Management \*
- MBA 507 - Managing Organizations and People \*
- MBA 508 - Operations Management \*
- MBA 509 - Marketing Management \*
- MBA 510 - Financial Accounting and Reporting Concepts \*
- MBA 511 - Managerial Accounting \*
- MBA 524 - Management and Leadership Skills
- MBA 532 - Marketing Strategy
- MBA 541 - Managerial Finance
- MBA 551 - Managerial Economics
- MBA 591 - Business Policy
- MBA 594 - Introduction to Professional Management
- MBA 595 - Competing in a Global Environment

\*Up to four core courses may be waived under advisement.

A required comprehensive exam is given as part of MBA 591.

Information contained in the MBA program section of the catalog is subject to change; please contact the MBA program for the most current information.

**Other Requirements**

Students must demonstrate competence through substantive experience in an organizational setting. This must be done through formal evaluation by a supervisor, and can be accomplished either before or during the student's time in the program. More details on this requirement can be obtained from the MBA program office.

**Academic Probation**

The Graduate School requires that all graduate students maintain a 3.00 GPA (on a 4.0 scale) to be a candidate for a degree and to remain in good academic standing. Students in the MBA program falling below this standard will

automatically be placed on academic probation and will be allowed a maximum of 16 credits of course work to raise their cumulative GPA to 3.00 or better. If, after completing 16 additional credits, a student has failed to achieve good standing, that student may only be allowed to continue MBA studies with special permission.

In no case will a student be recommended for a master's degree without having achieved a 3.00 GPA or better.

### **Student Advising**

For answers to routine questions concerning preparation and progress through the program, students should consult this catalog and the program Website. Nonroutine questions should be directed to the program director, assistant director or program manager.

## **Business Administration, Regular Full-Time, MBA**

### **Graduate Faculty**

**Deepinder Bajwa** (1999) PhD, management information systems.  
**Earl D. Benson** (1980) PhD, finance.  
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To apply for admission, send a completed official application form to the Graduate School along with an application fee, official transcripts, GMAT scores, personal statement of background and intentions, and a résumé showing work experience. (Further information, including deadlines, is provided in the Graduate School section of this catalog.)

**Admit Quarters:** Fall (regular track).

**Deadline:** Application deadline is May 1. International students are encouraged to submit applications by February 1 to ensure adequate time for admission decision and application for student visa.

**Specific Test Requirements:** Graduate Management Admission Test (GMAT). Test of English as a Foreign Language (TOEFL) must be submitted by applicants who are not native speakers of English.

## **Supporting Materials:**

- Application with \$50 fee (subject to change)
- Two sets of official transcripts from all previous college-level work (no more than two years old)
- Personal statement of background and intention
- Résumé showing work experience

## **The Curriculum**

Three unique programs of study are offered to meet the needs of various student groups.

*The Traditional Full-Time MBA Program* serves students without recent substantial course work in business and economics

## **Program Requirements (84 credits)**

- MBA 514 - Managerial Foundations
- MBA 515 - Internal and External Forces Impacting the Manager
- MBA 516 - Managerial Decisions
  - MBA 524 - Management and Leadership Skills
  - MBA 532 - Marketing Strategy
- MBA 541 - Managerial Finance
- MBA 574 - Enterprise Resource Planning
- MBA 591 - Business Policy
  - Electives (16 credits)

A required comprehensive exam is given as part of MBA 591.

Information contained in the MBA program section of the catalog is subject to change; please contact the MBA program for the most current information.

#### **Other Requirements**

##### **Academic Probation**

The Graduate School requires that all graduate students maintain a 3.00 GPA (on a 4.0 scale) to be a candidate for a degree and to remain in good academic standing. Students in the MBA program falling below this standard will automatically be placed on academic probation and will be allowed a maximum of 16 credits of course work to raise their cumulative GPA to 3.00 or better. If, after completing 16 additional credits, a student has failed to achieve good standing, that student may only be allowed to continue MBA studies with special permission.

In no case will a student be recommended for a master's degree without having achieved a 3.00 GPA or better.

##### **Student Advising**

For answers to routine questions concerning preparation and progress through the program, students should consult this catalog and the program Website. Nonroutine questions should be directed to the program director, assistant director or program manager.

# Fairhaven College of Interdisciplinary Studies

## Introduction

*Dr. Roger W. Gilman, Dean*

### A College Within the University

Founded in 1967, Fairhaven College of Interdisciplinary Studies is an undergraduate division of Western Washington University. Its purpose is to offer students the opportunity to take an uncommon degree of responsibility for the structure and content of their own education. Fairhaven is a small learning community where students design their own degree programs by drawing on the resources of a larger University. The college offers training in writing and research, critical thought and creative expression, independent judgment and scholarship, self evaluation and narrative assessment.

As a learning community, Fairhaven is defined by five attributes: (1) interdisciplinary study, (2) student designed studies and evaluations of learning, (3) examination of issues arising from a diverse society, (4) development of leadership and a sense of social responsibility, and (5) curricular, instructional and evaluative innovations.

At Fairhaven, students are challenged to bring what they learn to bear on human concerns and crucial real-world problems, to experiment, to discover and to act. This style of education supports the development of certain values, virtues and skills: self-discipline, resourcefulness, initiative, self-development, adaptability, reasonable risk-taking, leadership, sensitivity to injustice, and respect for persons. Fairhaven courses prepare students to listen carefully and engage respectfully in discussion, to value and respect different world views and to appreciate multiple voices reflecting the diversity of experiences in our society.

Fairhaven College is committed to interdisciplinary study and serving a diverse student body in terms of age, ethnic background, academic interest, and life experience. The College is committed to a gender-conscious and multicultural approach to topics, resources and classroom practices. Courses and other learning experiences provide an opportunity to examine the impacts and contemporary and historical roots of race, class and gender relations.

Students are encouraged to find their connection with the world, to understand relationships of thought and action, theory and experience, to cultivate opportunities to apply what they learn and to develop a strong sense of themselves as individuals in a community, including the benefits and responsibilities that come from membership in it. Courses and experiences encourage students to practice and assume leadership roles and to challenge leaders responsibly and intelligently.

Fairhaven College's role in the University is not only to provide a learning environment for students interested in self-designed study and interdisciplinary learning, but also to help the University ask questions about teaching and learning. Members of the Fairhaven community seek to learn from colleagues in other colleges both within and outside of Western.

### A Structure for Learning

The structure of learning at Fairhaven College consists of close working relationships between teachers and students; we are known for our practice of student-centered learning. Classes are small and the emphasis is on open discussion and the exchange of ideas. Our classes are interactive; we believe everyone is an essential participant in the creation of knowledge and value – the discovery and decision process.

In any given quarter, students may select classes offered across the University and/or design independent study projects in consultation with their faculty advisor. Students are encouraged to formulate and carry out independent research projects. Faculty members sponsor and monitor these projects and help students develop the resources necessary to complete them. Field work, practica, internships, and study abroad can also form an important part of a Fairhaven education. Students are encouraged to work outside their comfort zone and to find ways to connect their learning with

challenges and opportunities in the real world, ways to understand relationships of thought and action, theory and expertise, ways to cultivate opportunities for applying what they learn through campus and community volunteer activities, and through internships.

Collaborative learning is often used together with independent research. Narrative assessments, including a student self-evaluation and written responses from faculty replace letter grades, for charting a student's growth and learning experience.

## Academic Programs

### *Degree Requirements*

Requirements for bachelor's degrees awarded by Fairhaven College are as follows:

- The Fairhaven Core Program
- A Fairhaven Interdisciplinary Concentration (the individually designed major), the Upside Down Program or other WWU departmental major
- Minimum of 180 credits, including 60 credits at the upper-division level and 45 credits in residence
- Completion of at least 25 credits at Fairhaven and 50 credits outside of Fairhaven
- Completion of WWU upper-division writing proficiency requirements
- Scholarship and credit standards as prescribed in the *Student Guide to Fairhaven College*

**NOTE:** Requirements common to all undergraduate divisions of WWU are listed elsewhere in this catalog.

Students completing the Fairhaven Interdisciplinary Concentration earn the Bachelor of Arts or Bachelor of Arts in Education. Fairhaven College, in conjunction with majors in other Western Washington University departments, offers the following undergraduate degrees: Bachelor of Arts; Bachelor of Arts in Education; Bachelor of Fine Arts; Bachelor of Music; Bachelor of Science.

### *Special Opportunities*

**Independent field studies** abroad or community internships might consume a full quarter's registration. The Adventure Learning Program (ALG) provides opportunities for selected Fairhaven students to spend 10 months immersed in a cultural environment different than their own while engaging in a scholarly project of their own design. In recent years, ALG grant recipients have lived and conducted research in Madagascar, Ethiopia, Kenya, Uganda, South Africa, India, Korea, Thailand, Brazil, and Lebanon.

**Professional Education.** For students wishing to acquire teaching credentials, Western's Woodring College of Education offers a choice of majors — including certain Fairhaven Concentrations — appropriate to public school teaching. Faculty advise students in the construction of their programs and work closely with the College of Education in helping students to complete requirements.

**CIEL Student Exchanges.** Fairhaven College is a member of The Consortium for Innovative Environments in Learning (CIEL), a growing network of distinguished, progressive higher education institutions. Through this network, students at Fairhaven College have the opportunity to spend a quarter or semester on one of the Consortium campuses. Visit [www.Cielearn.org](http://www.Cielearn.org).

Information on these and other special opportunities can be accessed on the Fairhaven College Website or is available at the main Fairhaven office.

## College Admission and Advisement

Fairhaven College of Interdisciplinary Studies has selective admission and enrolls first-year students, transfer students, and students from other WWU programs fall, winter, spring and summer quarters. New applicants to Fairhaven and to the University complete the WWU Undergraduate Application (available online or in print form). Indicate interest in

Fairhaven College in your application. Send the standard application, transcripts, and required test scores to: Office of Admissions, Western Washington University, Bellingham, WA 98225-9009.

In addition to the WWU application, Fairhaven requests a personal statement, two letters of recommendation and an interview (in person or by telephone). For more information or to make an appointment, please call 360-650-6680.

Students currently enrolled in other University programs may apply to transfer to Fairhaven's program by the quarterly application deadlines. Current WWU students applying to Fairhaven do not need to submit transcript test scores or the WWU Undergraduate Application.

Visitors are welcome and with advance notice, appointments can be arranged with Fairhaven advising and admissions staff, students or other WWU staff.

### ***Advising***

Students benefit from high quality advising; extensive and intensive advising is a hallmark of the Fairhaven College learning experience for all its students. All full-time faculty members are academic advisors supported by professional staff, and student peer mentoring. Great thought has been given to the design of advising at Fairhaven – multiple advisors and kinds of advising at multiple points along the path from admission to graduation. We provide an organized sequence of required advising engagements with every student. Advising is continuous and embedded in the curriculum.

The role of the faculty advisor is to mentor, advise, question, recommend resources, and ultimately, oversee and approve the student's satisfaction of degree requirements for graduation. The faculty advisor is a useful resource for facilitating connections for students with other departments and classes on campus; the advisor can also be an influential and important advocate for students seeking internships, study abroad recommendations, exceptions to policies, and graduate school information and references. Faculty advisors review each student's writing portfolio, facilitate student transition conferences, and are essential mentors in supporting the development of the student interdisciplinary concentrations.

A professional Advising Coordinator oversees the complex system of advising at Fairhaven. This person advises new students regarding credit evaluation, degree planning, graduation processes, narrative assessment, and programs and services outside the college. The Advising Coordinator regularly reviews the academic progress of each Fairhaven student and works with faculty advisors, support personnel, and students to promote retention and satisfactory academic progress.

### **Faculty**

**ROGER W. GILMAN** (2006) Dean and Professor, BA, Fairhaven College, Western Washington University; MA, PhD, University of Chicago.

**BABAFEMI AKINRINADE** (2008) Assistant Professor. LL.B University of Ife; BL Nigerian Law School, LL.M Obafemi Awolowo University, LL.M. University of Notre Dame, J.S.D. University of Notre Dame.

**KATHRYN L. ANDERSON** (1972) Professor. BA, MA, University of Iowa; PhD, University of Washington.

**GARY BORNZIN** (1981) Senior Lecturer. BS, California Institute of Technology; MS, PhD, University of Colorado.

**JOHN L. BOWER** (1998) Associate Professor. BS, PhD, Cornell University.

**LESLIE CONTON** (1980) Professor. BA, Oberlin College; MA, PhD, University of Oregon.

**MARIE D. EATON** (1975) Professor. BA, Pomona College; MEd, PhD, University of Washington.

**LAWRENCE J. ESTRADA** (1989) Associate Professor and Director, American Cultural Studies. BA, University of California, Santa Barbara; MEd, Whittier College; PhD, University of California, Los Angeles.

**JOHN V. FEODOROV** (2005) Assistant Professor. BFA, California State University-Long Beach; MFA, Vermont College.

**JULIE A. HELLING** (2000) Associate Professor. BA, University of Iowa; JD, University of Michigan Law School.

**DANA C. JACK** (1982) Professor. BA, Mount Holyoke; MSW, University of Washington; EdD, Harvard University.

**DANIEL M. LARNER** (1968) Professor. AB, Harvard College; MS, PhD, University of Wisconsin, Madison.

**RAQUEL MONTOYA-LEWIS** (2003) Associate Professor. BA, University of New Mexico; MSW, JD, University of

Washington.

**NIALL Ó MURCHÚ** (2001) Assistant Professor. BA, MA, University College, Dublin; MA, PhD, University of Washington.

**DAN FIRST SCOUT ROWE** (1998) Instructor. BA, Montana State University at Billings; MA, Purdue University.

**TANIS S'EILTIN** (1992) Associate Professor. BA, University of Alaska, Fairbanks; MFA, University of Arizona.

**STAN TAG** (1997) Associate Professor. BA, Whitworth College; MA, PhD, University of Iowa.

**MIDORI TAKAGI** (1994) Associate Professor. BA, Oberlin College; MA, American University; MPhil, PhD, Columbia University.

**JOHN TUXILL** (2007) Assistant Professor, BA Williams College, MS University of Wisconsin-Madison, PhD, Yale University.

**Faculty specialties.** Areas of faculty study and interest include African American and Asian American history, American literature, anthropology, art and art history, constitutional and environmental law, creative writing, cross-cultural psychology, ecology, economics, history and philosophy of science, human development, mathematics, multicultural issues and literature, music, Native American issues, natural sciences, nature writing, ornithology, physics, poetry, psychology of women, queer studies, scriptwriting, social theory, theater and drama, theory and practice of teaching, video production, women studies, ethics, philosophy of nature, political philosophy, and other areas.

Other members of the Western Washington University faculty from various departments and programs contribute to Fairhaven's curriculum as teachers of classes, members of advisory committees for concentrations and as lecturers. Visiting faculty and guest lecturers from other universities, and from a variety of other occupations, also add to the resources available to Fairhaven students.

## Other College Information

### *Tuition, Financial Aid and Scholarships*

Fairhaven students pay the same tuition and fees as students of other colleges in the University. See other sections of this catalog for specific details. Information regarding federal, state and private financial assistance and application procedures should be addressed to: Financial Aid, Western Washington University, Bellingham, WA 98225-9006.

Fairhaven offers scholarships to selected students. Check the college's website or the WWU scholarship center website for information.

### *The Registration Process*

University Registration. Registration for Fairhaven College offerings occurs during scheduled University registration periods. Class schedules (timetables) are available online. Registration for Fairhaven College variable credit classes and independent studies is via the **Web4U Independent Study Proposal process**.

Fairhaven College Students. Credit earned by Fairhaven students taking Fairhaven classes may apply to the core requirements, to the concentration or to the general 180-credit requirement for graduation. Credit earned in other WWU classes by Fairhaven students may apply to the major or concentration, or to the 180-credit requirement for graduation.

Other WWU Students. Fairhaven College credit earned by students affiliated with Western's other colleges is applied to the general 180-credit requirement for graduation. Occasionally department advisors in other colleges may approve Fairhaven courses as electives for majors. Fairhaven's courses and studies are open to all WWU students (unless indicated in prerequisites or otherwise).

The Fairhaven College Quarterly Class Descriptions. Available prior to registration in the fall, winter and spring, this publication is available online. It announces schedule changes and additions and describes in detail Fairhaven's offerings each term. Students are advised to consult the schedule before finalizing their programs.

### *Grading Evaluation*

At Fairhaven, the A-to-F grading system is not used. Classes and studies are taken on a "Satisfactory/Unsatisfactory" basis. Academic credit is granted after requirements have been satisfactorily completed and the student has submitted a written self-evaluation of his or her work to faculty instructors. Faculty respond with a written evaluation of the student's progress. The student-faculty evaluation becomes a part of the student's academic file, and forms part of the student's credentials for applying for employment and for graduate programs.

The official transcript, held in the University's Registrar's Office, lists all Fairhaven and other WWU classes (normally graded) and studies completed (A cumulative GPA is not displayed on the official transcript for Fairhaven Students). Fairhaven College follows the Student Records Policy of Western Washington University found elsewhere in this catalog. Fairhaven issues a separate official set of narrative evaluations to supplement the official transcript by request.

### *Assessment*

A culture and pedagogy of self-assessment and reflection have been significant features of teaching and learning at Fairhaven College since its founding as an experimental college. Assessment is part of learning.

Students assess their own learning in each course and are also asked to assess the course and the faculty. Students assess their writing skills in the development of a writing plan, and later in their education revisit that plan when they create their college writing portfolio. A cumulative self-assessment, the Summary and Evaluation, is required of all students prior to graduation.

Faculty provide individual narrative assessment of students in each course they teach, and provide on-going assessment of student growth in the advising process. Faculty regularly revisit and respond to outcomes of their teaching through reviewing student self-evaluations, faculty and course evaluations. Faculty peer review of teaching practices happen regularly through team teaching, shared concentration committee mentorship of students, shared advising (often in student Transition conferences) and collaborative curriculum review and college governance.

The Fairhaven Curriculum Committee, which includes faculty, staff, and students, periodically assesses the entire core program and processes.

**The Law, Diversity & Justice Concentration** is an interdisciplinary course of study for students who are interested in law, diversity and access to the legal system for under-served communities. The Law, Diversity and Justice Concentration is open to all Fairhaven students with a passion for social justice. The concentration welcomes students who desire to effect change and who have the potential to act as leaders and role models in their communities using legal knowledge and processes. Through the Fairhaven College Concentration Seminar and faculty advisement, students combine the required Law, Diversity and Justice curriculum with courses throughout the University to develop the skills and knowledge necessary for success in law school and other careers in social justice work.

**LDJ Required Curriculum** Students pursuing the Law, Diversity, and Justice Concentration must take the courses in addition to satisfying the Fairhaven College Core curriculum. The required classes in Law, Diversity, and Justice are:

- FAIR 211b The American Legal System (5)
- At least one of the following courses:
  - FAIR 393b Rights, Liberties and Justice in America (4)
  - FAIR 334c International Human Rights (4)
- FAIR 412e Advanced Topics in Law (2-5)
- FAIR 422k Advanced Legal Writing and Analysis (4)

## **Undergraduate Degrees and Programs**

Fairhaven Interdisciplinary Concentration, BA  
Fairhaven Interdisciplinary Concentration, BAE  
The Upside-Down Program, BA

### **Fairhaven Interdisciplinary Concentration, BA**

#### **180 Credits**

**Fairhaven Interdisciplinary Concentration – The Individually Designed Major.** The Fairhaven Interdisciplinary Concentration provides an opportunity for developing an individually designed major for the Bachelor of Arts or Bachelor of Arts in Education degrees. It allows maximal flexibility in formulating a program to meet personal and career goals, bringing together each student's vital interests from more than one discipline into a cohesive whole.

The self-designed concentration process allows students to work with a faculty committee to articulate a sound rationale for their area of study and to develop a plan including courses, independent study projects, senior projects and, where applicable, internships and apprenticeships. Students are assisted in completing the concentration by faculty and other advisors and by the Concentration Seminar course. At the conclusion of the program, a senior project and a concentration summary and evaluation help each graduate to evaluate her or his own work and to look toward the future.

Concentrations have been developed in a wide range of areas not available through traditional majors. Further information pertaining to the concentration, its possibilities and prospects, may be found in the *Student Guide to Fairhaven College*.

#### **Fairhaven Admission and Declaration Process**

Fairhaven College of Interdisciplinary Studies has selective admission and enrolls first-year students, transfer students, and students from other WWU programs fall, winter, spring and summer quarters. New applicants to Fairhaven and to the University complete the WWU Undergraduate Application (available online or in print form). Indicate interest in Fairhaven College in your application. Send the standard application, transcripts, and required test scores to: Office of Admissions, Western Washington University, Bellingham, WA 98225-9009.

In addition to the WWU application, Fairhaven requests a personal statement, two letters of recommendation and an interview (in person or by telephone). For more information or to make an appointment, please call 360-650-6680.

Students currently enrolled in other University programs may apply to transfer to Fairhaven's program by the quarterly application deadlines. Current WWU students applying to Fairhaven do not need to submit transcript test scores or the WWU Undergraduate Application.

Visitors are welcome and with advance notice, appointments can be arranged with Fairhaven advising and admissions staff, students or other WWU staff.

#### **Fairhaven Grade Requirements**

At Fairhaven, the A-to-F grading system is not used. Classes and studies are taken on a "Satisfactory/Unsatisfactory" basis. Academic credit is granted after requirements have been satisfactorily completed and the student has submitted a written self-evaluation of his or her work to faculty instructors. Faculty respond with a written evaluation of the student's progress. The student-faculty evaluation becomes a part of the student's academic file, and forms part of the student's credentials for applying for employment and for graduate programs.

The official transcript, held in the University's Registrar's Office, lists all Fairhaven and other WWU classes (normally graded) and studies completed (A cumulative GPA is not displayed on the official transcript for Fairhaven Students).

Fairhaven College follows the Student Records Policy of Western Washington University found elsewhere in this catalog. Fairhaven issues a separate official set of narrative evaluations to supplement the official transcript by request.

### **Fairhaven Core Program**

A core program, unique to Fairhaven College, includes a series of courses designed to widen students' exposure to areas of study, to connections among disciplines and to interdisciplinary theory and practice. Its purpose is to help students become perceptive, probing learners who can ask questions and pursue answers with care and confidence. Skills in reading, writing, presentation and analysis are emphasized. Each course deals with methods of knowing and understanding, themes, modes of creativity and practical applications to be found in each area of study.

Elements of this core contribute to its unique character:

- Courses are conducted in a collaborative seminar format
- Class sizes seldom exceed 20 students
- A strong mentoring/advising relationship is established
- Interdisciplinary studies mirror the shape of complex problems
- Instruction is shared by all Fairhaven faculty members — artists, scientists, philosophers, historians, poets — who adapt the diverse themes of their disciplines to core studies
- Evaluation takes the form of narrative assessment

Fairhaven students complete Fairhaven's core program in lieu of the WWU General University Requirements. A student who leaves Fairhaven for another WWU program must complete the GUR. Fairhaven College also offers the opportunity for self-motivated students who have demonstrated exceptional learning skills to design an individualized alternative to parts of the core program, making systematic use of existing course challenge procedures.

There are core courses in each of three curricular stages. Students need not complete one curricular stage before advancing to the next.

#### **Requirements: Exploratory Studies**

- □ FAIR 101A - An Introduction to Interdisciplinary Study at Fairhaven College
- □ FAIR 201A - Critical and Reflective Inquiry
- □ FAIR 202A - Core: Humanities and the Expressive Arts I
- □ FAIR 203A - Social Relationships and Responsibility: Theories and Critiques
- □ FAIR 206A - Core: Science and Our Place on the Planet I
- □ FAIR 305A - Core: Writing and Transition Conference
- One 300-level course in each of the following areas, with the specific course in each area, selected from a listing of approved courses found in the quarterly **Fairhaven Course Description Booklet**: Humanities and the Expressive Arts, Society and the Individual, and, Science and Our Place on the Planet

#### **The Individually Designed Major - Concentrated Studies**

- □ FAIR 303A - Core: Interdisciplinary Concentration Seminar
- □ FAIR 401A - Core: Senior Project
- Coursework as approved by the Individual Designed Major Committee

#### **Additional Requirements - Advanced Studies**

- □ FAIR 403A - Core: Advanced Seminar

## **Law, Diversity and Justice Option**

**The Law, Diversity & Justice Concentration** is an interdisciplinary course of study for students who are interested in law, diversity and access to the legal system for under-served communities. The Law, Diversity and Justice Concentration is open to all Fairhaven students with a passion for social justice. The concentration welcomes students who desire to effect change and who have the potential to act as leaders and role models in their communities using legal knowledge and processes. Through the Fairhaven College Concentration Seminar and faculty advisement, students combine the required Law, Diversity and Justice curriculum with courses throughout the University to develop the skills and knowledge necessary for success in law school and other careers in social justice work.

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## **Fairhaven Interdisciplinary Concentration, BAE**

**Fairhaven Interdisciplinary Concentration – The Individually Designed Major.** The Fairhaven Interdisciplinary Concentration provides an opportunity for developing an individually designed major for the Bachelor of Arts or Bachelor of Arts in Education degrees. It allows maximal flexibility in formulating a program to meet personal and career goals, bringing together each student's vital interests from more than one discipline into a cohesive whole.

The self-designed concentration process allows students to work with a faculty committee to articulate a sound rationale for their area of study and to develop a plan including courses, independent study projects, senior projects and, where applicable, internships and apprenticeships. Students are assisted in completing the concentration by faculty and other advisors and by the Concentration Seminar course. At the conclusion of the program, a senior project and a concentration summary and evaluation help each graduate to evaluate her or his own work and to look toward the future.

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In addition to the WWU application, Fairhaven requests a personal statement, two letters of recommendation and an interview (in person or by telephone). For more information or to make an appointment, please call 360-650-6680.

Students currently enrolled in other University programs may apply to transfer to Fairhaven's program by the quarterly application deadlines. Current WWU students applying to Fairhaven do not need to submit transcript test scores or the WWU Undergraduate Application.

Visitors are welcome and with advance notice, appointments can be arranged with Fairhaven advising and admissions staff, students or other WWU staff.

### **Fairhaven Grade Requirements**

At Fairhaven, the A-to-F grading system is not used. Classes and studies are taken on a "Satisfactory/Unsatisfactory" basis. Academic credit is granted after requirements have been satisfactorily completed and the student has submitted a written self-evaluation of his or her work to faculty instructors. Faculty respond with a written evaluation of the student's progress. The student-faculty evaluation becomes a part of the student's academic file, and forms part of the student's credentials for applying for employment and for graduate programs.

The official transcript, held in the University's Registrar's Office, lists all Fairhaven and other WWU classes (normally graded) and studies completed (A cumulative GPA is not displayed on the official transcript for Fairhaven Students). Fairhaven College follows the Student Records Policy of Western Washington University found elsewhere in this catalog. Fairhaven issues a separate official set of narrative evaluations to supplement the official transcript by request.

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A core program, unique to Fairhaven College, includes a series of courses designed to widen students' exposure to areas of study, to connections among disciplines and to interdisciplinary theory and practice. Its purpose is to help students become perceptive, probing learners who can ask questions and pursue answers with care and confidence. Skills in reading, writing, presentation and analysis are emphasized. Each course deals with methods of knowing and understanding, themes, modes of creativity and practical applications to be found in each area of study.

Elements of this core contribute to its unique character:

- Courses are conducted in a collaborative seminar format
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- Evaluation takes the form of narrative assessment

Fairhaven students complete Fairhaven's core program in lieu of the WWU General University Requirements. A student who leaves Fairhaven for another WWU program must complete the GUR. Fairhaven College also offers the opportunity for self-motivated students who have demonstrated exceptional learning skills to design an individualized alternative to parts of the core program, making systematic use of existing course challenge procedures.

There are core courses in each of three curricular stages. Students need not complete one curricular stage before advancing to the next.

### **Requirements: Fairhaven Core**

#### *Exploratory Studies*

- FAIR 101A - An Introduction to Interdisciplinary Study at Fairhaven College
- FAIR 201A - Critical and Reflective Inquiry
- FAIR 202A - Core: Humanities and the Expressive Arts I

- FAIR 203A - Social Relationships and Responsibility: Theories and Critiques
- FAIR 206A - Core: Science and Our Place on the Planet I
- FAIR 305A - Core: Writing and Transition Conference
- FAIR 403A - Core: Advanced Seminar
  - One 300-level course in each of the following areas, with the specific course in each area, selected from a listing of approved courses found in the quarterly **Fairhaven Course Description Booklet**:
- Humanities and the Expressive Arts
- Society and the Individual
- Science and our Place on the Planet

### **Professional Education Requirements**

For students wishing to acquire teaching credentials, Western's Woodring College of Education offers a choice of majors — including certain Fairhaven Concentrations — appropriate to public school teaching. Faculty advise students in the construction of their programs and work closely with the College of Education in helping students to complete requirements.

### **Fairhaven Interdisciplinary Concentration: The Individually Designed Major**

- FAIR 303A - Core: Interdisciplinary Concentration Seminar
- FAIR 401A - Core: Senior Project
  - Coursework as approved by Individual Designed Major committee

### **The Upside-Down Program, BA**

**The Upside-Down Degree.** The usual route to a BA degree calls for general education in the first two years and specialization in the last two years. Fairhaven's Upside-Down BA gives selected students an option to reverse this process. Graduates of Washington state community colleges who hold the ATA, the AAS or other approved two-year technical degrees may apply to transfer their specializations to Fairhaven as the completed major. Stages 1 and 3 of the curriculum and a minimum of 90 credits are then required for graduation. Students are expected to complete as much as possible of their elective credit at the upper-division level (courses numbered 300 or above). Each application for this program is reviewed on an individual basis. Students are urged to contact Fairhaven College early in the admissions process.

### **Admission and Declaration Process**

Fairhaven College of Interdisciplinary Studies has selective admission and enrolls first-year students, transfer students, and students from other WWU programs fall, winter, spring and summer quarters. New applicants to Fairhaven and to the University complete the WWU Undergraduate Application (available online or in print form). Indicate interest in Fairhaven College in your application. Send the standard application, transcripts, and required test scores to: Office of Admissions, Western Washington University, Bellingham, WA 98225-9009.

In addition to the WWU application, Fairhaven requests a personal statement, two letters of recommendation and an interview (in person or by telephone). For more information or to make an appointment, please call 360-650-6680.

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Visitors are welcome and with advance notice, appointments can be arranged with Fairhaven advising and admissions staff, students or other WWU staff.

## **Fairhaven Grade Requirements**

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### **Requirements: Fairhaven Core**

#### *Exploratory Studies*

- FAIR 101A - An Introduction to Interdisciplinary Study at Fairhaven College
- FAIR 201A - Critical and Reflective Inquiry
- FAIR 202A - Core: Humanities and the Expressive Arts I
- FAIR 203A - Social Relationships and Responsibility: Theories and Critiques
- FAIR 206A - Core: Science and Our Place on the Planet I
- FAIR 305A - Core: Writing and Transition Conference
- FAIR 403A - Core: Advanced Seminar
  - ❑ One 300-level course in each of the following areas, with the specific course in each area, selected from a listing of approved courses found in the quarterly **Fairhaven Course Description Booklet**:
- Humanities and the Expressive Arts
- Society and the Individual
- Science and our Place on the Planet

# **College of Fine and Performing Arts**

## **Introduction**

*Dean, Daniel Guyette*

The College of Fine and Performing Arts, consisting of the departments of art, music, and theatre and dance, provides an educational environment for enhancing the creation, development, performance and teaching of the fine and performing arts. Through its facilities and programs, the College has a strong presence on campus. The University's Concert Hall, the Mainstage Theatre, and more intimate performance venues are housed in the College, as well as classrooms, art studios, and the Western Gallery. The College also is responsible for public art throughout the campus in the form of the internationally recognized Outdoor Sculpture Collection.

The goal of CFPA is to nurture a comprehensive understanding of the languages of movement art, visual art, theatre art, and music in order to create thinking artists and artistic thinkers who will shape culture in the 21st century.

To fulfill this mission, the College of Fine and Performing Arts maintains a viable connection with the liberal arts tradition of the University; equips students with the creative and intellectual tools necessary for success in the arts; enables students to value, understand, and challenge traditional concepts; maintains an environment that supports diversity, reflection, and dedication to creative pursuits; promotes critical thinking, innovative ideas and active arts leadership; provides world class and multicultural experiences in the arts for both students and members of the community; and prepares students for a dynamic, lifelong relationship with the arts.

## ***Academic Programs Leading to Undergraduate and Graduate Degrees***

Art	BA, BAE, BFA
Music	BA, BAE, B/Mus, M/Mus
Theatre and Dance	BA, BFA

## ***Majors/Minors***

In addition to the General University Requirements and other common degree requirements, a candidate for a bachelor's degree must complete a major from one of the departments within CFPA. Minors are also offered in art, dance, music, and theatre arts.

## ***Student/Faculty-Designed Major***

The student/faculty-designed major is a major for a bachelor's degree granted by CFPA. Each major is approved by the Curriculum Committee of CFPA. Approval should come after 45 — and before 90 — credits are completed.

Policies, procedures and contract forms will be issued to applicants by the dean's office.

## **College Admission and Advisement**

### *Admission*

A student is admitted to CFPA when he or she has been admitted to Western Washington University and has officially declared and been accepted as a major in any discipline area of the College. Advisement is carried on through the individual departments or the dance program.

### *Requirements for Bachelor's Degree*

Besides the general requirements for graduation from the University, explained elsewhere in this catalog, CFPA has the following specific requirements:

The Bachelor of Music degree may require more than the usual 180 credit hours.

The Bachelor of Fine Arts degree is the professional undergraduate degree requiring study beyond the normal four years.

### **Department Chairs**

Madge Gleeson	Art
David Feingold	Music
Deborah Currier	Theatre and Dance

### **Other College Information**

#### *Departments, Courses and Programs*

Courses listed in this *General Catalog* constitute a record of the total academic program of the University. For an exact scheduling of courses at Western, students should consult the annual online *Timetable of Classes*, the *Summer Bulletin* on the Web and the *University Extended Programs'bulletins*.

# **Art**

## **Introduction**

The Department of Art offers programs in four interrelated areas of study: art studio, design, art education and art history. The programs are designed to enhance artistic and intellectual inquiry across and within disciplines. The programs, classes and workshops combine practice in visual skills with rigorous critical analyses, providing an environment that fosters lively dialog and energetic engagement. Artists, designers, art historians and art educators, with innovative and well-established approaches to teaching, offer a variety of courses that include art education, art history, art theory and criticism, ceramics, design production, drawing, fibers/fabrics, graphic design, new media, painting, photography, printmaking, and sculpture. The faculty is dedicated to the preparation and sponsorship of students in their post-graduate careers as professional artists, designers, curators, art historians and educators.

The Department of Art offers Bachelor of Arts degrees in art studio, design and art history. A Bachelor of Fine Arts degree in art is available in art studio and design. A Bachelor of Arts in Education degree is available through Woodring College.

## **Faculty**

**MADGE GLEESON** (1983) Chair and Professor. BA, MAT, Brown University; MFA, Washington State University

**GARTH AMUNDSON** (2000) Associate Professor. BA, Central Washington University; MFA, Syracuse University.

**SHARRON ANTHOLT** (1996) Professor. BFA, California State University; MFA, San Francisco Art Institute.

**CYNTHIA CAMLIN** (2008) Assistant Professor, BA, Duke University; MA, The University of Virginia; Post BA, Yale University; MFA, The University of Texas at Austin.

**CRISTINA de ALMEIDA** (1997) Professor. BFA, Escola Superior de Desenho Industrial, Rio de Janeiro, Brazil; MFA, University of Massachusetts.

**ELSI VASSDAL ELLIS** (1977) Professor. BS, MEd, Western Washington State College; PhD, University of Washington.

**GAYE LEIGH GREEN** (1996) Professor. BA, California State University; MA, Stanford University; PhD, Pennsylvania State University.

**ERIN HAZARD** (2008) Assistant Professor, BA, MA, University of Wisconsin-Milwaukee; PhD., University of Chicago.

**CAROL JANSON**, (1989). Professor. BA, MA, PhD, University of Minnesota

**CARA JAYE** (1997) Associate Professor. BFA, Parsons School of Design; MFA, University of Colorado.

**ROSALIE ROSSO KING** (1983) Professor. BS, University of Washington; MEd, Massachusetts State College-Framingham; PhD, University of Washington.

**PATRICK F. McCORMICK** (1969) Professor. BFA, BA, University of Washington; MFA, Cranbrook Academy of Art.

**SEBASTIAN MENDES** (2001) Associate Professor. BA, University of California-Santa Cruz; MFA, Stanford University.

**BARBARA MILLER** (2000) Associate Professor. BA, Simon Fraser University; MA, PhD, University of Rochester.

**KACEY MORROW** (2008) Assistant Professor, BA, University of Iowa, School of Art and Art History; MFA, University of Illinois, School of Art and Design.

**SEIKO ATSUTA PURDUE** (2002) Associate Professor. BFA, Kyoto Seika University; MA, Montclair University; MFA, the School of the Art Institute of Chicago.

**JULIA SAPIN** (2003) Associate Professor. BA, University of Texas; MA, PhD, University of Washington.

**KENTON D. SMITH** (1993) Associate Professor. BFA, MA, Fort Hays State University; MFA, Kent State University.

## **Gallery Director**

**SARAH CLARK-LANGAGER** (1988). BA, Randolph-Macon Woman's College; MA, University of Washington; PhD, Graduate Center, City University of New York.

## **Adjunct Faculty**

**SARAH CLARK-LANGAGER** (1988). BA, Randolph-Macon Woman's College; MA, University of Washington; PhD, Graduate Center, City University of New York.

## **Declaration Process**

Most classes in the Design and Studio areas are restricted to majors only. To access classes in these areas, a formal application to the Department of Art is required. For students in art studio, design, or art education, application for the major is made with a portfolio of work. The portfolio will be reviewed by Department of Art faculty and evaluated on the basis of a demonstrated understanding of the elements of visual art, technical proficiency and originality. Application deadline for the Department of Art, is February 15 for current Western students and March 1 for freshman and transfer students planning to start in the fall. There will be an additional portfolio review on October 15 for current Western students only. Portfolios must be received by the deadline, not postmarked by the deadlines.

Design and Studio majors must complete a plan of study with a department advisor before enrolling in any 200-level course.

## **Other Departmental Information**

### **Application Requirements: Art Studio, Design, and Art Education**

All applicants of Art Studio, Design and Art Education majors must submit a portfolio of 12 works. It is recommended that the portfolio include only recent pieces. Artwork can be in any media and must demonstrate the following criteria:

- Understanding of formal principles
- Technical skills
- Ability to use visual language to communicate ideas
- Originality and risk taking

An accompanying list should briefly describe the rationale behind each piece. Macintosh-compatible CD-ROMs; slides and online portfolios are acceptable. Digital portfolios must be presented in an easily accessible format. It is the applicant's responsibility to ensure proper functioning of the presentation.

### **Application Requirements: Art History**

To apply to the art history major, students must have taken A/HI 275 and two 200-level art history surveys or pre-approved equivalent courses. Students must have a B average or higher in these classes to be considered for the art history program. Application deadlines for the art history major are October 15 and February 15 and completed forms must be received in the Department of Art by those dates.

## **Scholarships**

The Department of Art offers a limited number of scholarships to recognize individual talents, promise, and meritorious achievement. The Scholtz Family Memorial Scholarship has been designated for high school graduates entering the program. J. Ruth Kelsey Scholarship, McIntyre Gorrell Scholarship, Thomas O. Vassdal Scholarship and Berit Siren Vassdal scholarships are among other scholarships offered in the Department of Art. Please consult the scholarship brochure available through Student Financial Resources for information on other scholarships.

## **100-level courses**

One hundred-level courses provide an introduction to contemporary issues and practices in art.

- ART 109: Required for all Art Education, Art Studio
- ART 110: Required for Art Education, Art Studio and Design
- ART 120: Required for Art Education, Art Studio and Design
- ART 130: or ART 140: Required for Art Studio
- ART 130: Required for Art Education

- Art History: 6 credits of 100-level courses

### **Western Gallery and Outdoor Sculpture Collection**

The internationally known Outdoor Sculpture Collection includes works by international, national and regional artists, such as Magdalena Abakanowicz, Alice Aycock, Anthony Caro, Mark di Suvero, Nancy Holt, Donald Judd, Robert Morris, Bruce Nauman, Isamu Noguchi, Tom Otterness, Beverly Pepper, and Richard Serra.

The Western Gallery provides diverse experiences in the visual arts for its constituencies, encompassing the University community and region while providing a point of reference to the national and international art scene. Through historical, contemporary and experimental art exhibitions, through the outdoor collection of contemporary sculpture, through the publications and through interpretative interdisciplinary programs, the Western Gallery is committed to creating an environment for learning. The gallery acts as a center for discussion and exchange of ideas on critical issues in contemporary art. The Western Gallery recognizes its role in expanding its audience's awareness of the visual arts as central to the dynamic and pluralistic nature of our society. Individuals interested in supervised work in the gallery are encouraged to volunteer their services.

### **Graduate Study**

The Department of Art is not currently accepting applications to the graduate program. Please contact the Graduate School or the graduate program advisor for information.

### **Undergraduate Degrees and Programs**

Art, BA  
Art, BFA  
Art — Elementary, BAE  
Art — P-12, BAE  
Art History, BA  
Art History Minor  
Design, BA  
Design, BFA

### **Art History Minor**

#### **24 credits**

#### **Admission and Declaration Process**

Admissions ([see Art Dept page](#))

#### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

#### **Requirements**

- One course from:
  - A/HI 220 - Visual Culture in Ancient Greece and Rome
  - A/HI 221 - Visual Culture in Medieval Europe
- One course from:

- A/HI 230 - Visual Culture in Western Europe 1400-1550
- A/HI 231 - Visual Culture in Western Europe 1550-1700
  - One course from:
- A/HI 240 - Visual Culture in Western Europe in the 19th Century
- A/HI 241 - Visual Culture in Western Europe and America in the 20th Century
  - One course from:
- A/HI 270 - Visual Culture in South and Southeast Asia
- A/HI 271 - Visual Culture in East Asia
  - Three additional art history courses (12 credits) at the 300 or 400 level. A/HI 305 may not be used for Art History minor

## Art History, BA

**72 credits**

### Introduction

The art history major gives students the opportunity to address social, cultural and transnational issues through an engagement with visual culture objects, images and ideas and to imagine critical intersections in the arts, humanities, and sciences by means of innovative course instruction. Art history classes are catalysts through which students make cross-connections between their major areas of study and the diverse perspectives found in visual forms of communication. To apply to the art history major students must have taken A/HI 275 and two 200-level art history surveys or pre-approved equivalent courses (students can be enrolled in the second survey when applying). As students enter the program they will be assigned an advisor to develop an individualized course of study. This plan becomes an outline of the degree requirements but should be revised yearly in consultation with an advisor.

### Admission and Declaration Process

Admissions ([see Art Dept page](#))

### Grade Requirements

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

### Requirements

- A/HI 275 - Introduction to Writing and Critical Thinking
- A/HI 375 - Methods in Art History
- A/HI 475 - Senior Projects/Practicum
  - (the above courses must be taken in sequence)
  - 100-level courses (6 credits)
  - One course from:
    - A/HI 220 - Visual Culture in Ancient Greece and Rome
    - A/HI 221 - Visual Culture in Medieval Europe
  - One course from:
    - A/HI 230 - Visual Culture in Western Europe 1400-1550
    - A/HI 231 - Visual Culture in Western Europe 1550-1700
  - One course from:
    - A/HI 240 - Visual Culture in Western Europe in the 19th Century

- A/HI 241 - Visual Culture in Western Europe and America in the 20th Century
  - One course from:
    - A/HI 270 - Visual Culture in South and Southeast Asia
    - A/HI 271 - Visual Culture in East Asia
  - Two additional courses from:
    - A/HI 220 - Visual Culture in Ancient Greece and Rome
    - A/HI 221 - Visual Culture in Medieval Europe
    - A/HI 230 - Visual Culture in Western Europe from 1400-1500
    - A/HI 231 - Visual Culture in Western Europe 1550-1700
    - A/HI 240 - Visual Culture in Western Europe in the 19th Century
    - A/HI 241 - Visual Culture in Western Europe and America in the 20th Century
    - A/HI 270 - Visual Culture in South and Southeast Asia
    - A/HI 271 - Visual Culture in East Asia
  - 300- or 400-level courses (36 credits, with a minimum of 12 credits at the 400 level)
    - 8 credits from:
      - A/HI 310 - Indigenous Arts of the Pacific Northwest
      - A/HI 313 - Art and Technology
      - A/HI 368 - Pacific Arts and Visual Culture
      - A/HI 411 - Contemporary Japanese Visual Culture
      - A/HI 416 - Borders and Terrains
      - A/HI 429 - Patronage and Power: The Baroque Era
      - A/HI 431 - Popular Culture, Tourism and Leisure
      - A/HI 438 - Art and Feminism
    - 8 credits from:
      - A/HI 301 - Modern Art and Modernism
      - A/HI 315 - Civic Identity in 15th- and 16th-Century Europe
      - A/HI 330 - Art and Texts of the Sacred
      - A/HI 358 - Postwar, Mass Media and Popular Culture
      - A/HI 360 - Nationalism and Cultural Identity, 19th and 20th Centuries
      - A/HI 370 - Islamic Visual Cultures
      - A/HI 371 - Transforming Traditions: Art and Visual Culture In Japan
      - A/HI 420 - Building 17th and 18th Century Europe
    - 8 credits from:
      - A/HI 308 - Visual Arts in the Community
      - A/HI 316 - Land and Landscape
      - A/HI 401 - Contemporary Issues and Post-Modern Critiques
      - A/HI 415 - Space and the Urban Environment
      - A/HI 440 - New Media and Digital Art
      - A/HI 450 - Colonization and Cross-Cultural Encounters
      - A/HI 490 - Seminar: Exhibition Theory and Practice
  - 12 credits: Upper-division art history electives — Students must select three additional classes from the above groups of 300- and 400-level courses
    - Students are strongly encouraged to take courses outside of the art history area, such as computer technologies, modern and classical languages, anthropology, film, communication or other classes to complement their studies and provide better preparation for the diversity of careers that employ skills with visual language.

## **Departmental Honors**

In addition to the general requirements for all honors students, an art major who wishes to graduate with honors must complete an honors senior project in art.

## **Art — Elementary, BAE**

**49 credits**

### **Introduction**

This major satisfies the academic major requirement for teacher certification with an endorsement in elementary education and must be accompanied by the professional program in elementary education. See the Elementary Education section of this catalog for program admission, completion, and teacher certification requirements.

### **Admission and Declaration Process**

Admissions ([see Art Dept page](#))

### **Grade Requirements**

A grade of C (2.0) or better is required for courses in the elementary education professional program and all courses required for the endorsement.

### **Requirements**

- ART 109 - Visual Dialogue
- ART 110 - Form and Content I: Drawing
- ART 120 - 2-Dimensional Design/Color
- ART 130 - Form and Content III: 3-D
- ART 220 - Painting
- ART 240 - Ceramics
- ART 381 - Theories and Teaching Strategies in Art Education
- Select 21 credits from:
  - A/HI 220 - Visual Culture in Ancient Greece and Rome
  - A/HI 221 - Visual Culture in Medieval Europe
  - A/HI 230 - Visual Culture in Western Europe 1400-1550
  - A/HI 231 - Visual Culture in Western Europe 1550-1700
  - A/HI 240 - Visual Culture in Western Europe in the 19th Century
  - A/HI 241 - Visual Culture in Western Europe and America in the 20th Century
  - A/HI 270 - Visual Culture in South and Southeast Asia
  - A/HI 271 - Visual Culture in East Asia
- Plus one 100-level Art Studio elective

### **Additional Requirements**

**Elementary Education Professional Program Requirements (106 credits)**

### **Professional Studies Core (25 credits)**

- EDUC 301 - Educational Psychology I: Development and Individual Differences
- EDUC 302 - Educational Psychology II: Motivation, Learning and Assessment
- EDUC 310 - The Teacher and the Social Order
- ELED 370 - Introduction to Teaching
- IT 344 - Basic Instructional Technology Skills
- IT 442 - Classroom Use of Instructional Technology (Elementary)
- SPED 364 - Teaching All Students

### **Elementary Program — Methods, Curriculum Content, and Field Experiences (81 credits)**

- ART 380 - Art Educating the Child
- ELED 425 - Social Studies for the Elementary School
- ELED 470 - Developing Teaching
- ELED 471 - Documenting Teaching
- ELED 480 - Literacy: Beginning Communicators
- ELED 481 - Literacy: Fluent Communicators
- ELED 491 - September Experience
- ELED 492 - Practicum: Experience in Literacy Methods
- ELED 494 - Internship - Elementary
- HLED 455 - Health Education Grades K-8
- MATH 381 - Teaching K-8 Mathematics I
- MATH 382 - Teaching K-8 Mathematics II
- MATH 383 - Teaching K-8 Mathematics III
- MATH 491 - Internship Seminar - Teaching K-8 Mathematics
- MUS 361 - Music for Elementary Teachers
- PE 345 - Physical Education for Elementary School
- SCED 480 - Science Methods and Curriculum for the Elementary School
- SCED 490 - Laboratory/Field Experience in Elementary Science
- SPED 430 - Problem Solving for Diverse Needs

### **Departmental Honors**

In addition to the general requirements for all honors students, an art major who wishes to graduate with honors must complete an honors senior project in art.

### **Art — P-12, BAE**

**71 credits**

#### **Introduction**

This major must be accompanied by the professional preparation program in secondary education and leads to an endorsement in visual arts. See the Secondary Education section of this catalog for program admission, completion, and teacher certification requirements.

## **Admission and Declaration Process**

**Admissions (see Art Dept page)**

### **Grade Requirements**

A grade of C (2.0) or better is required for courses in the elementary education professional program and all courses required for the endorsement.

### **Requirements**

- ART 109 - Visual Dialogue
- ART 110 - Form and Content I: Drawing
- ART 120 - 2-Dimensional Design/Color
- ART 130 - Form and Content III: 3-D
- ART 381 - Theories and Teaching Strategies in Art Education
- A/HI 220 - Visual Culture in Ancient Greece and Rome
- A/HI 221 - Visual Culture in Medieval Europe
- A/HI 230 - Visual Culture in Western Europe 1400-1550
- A/HI 231 - Visual Culture in Western Europe 1550-1700
- A/HI 240 - Visual Culture in Western Europe in the 19th Century
- Six courses from:
  - ART 210 - Introduction to Printmaking
  - ART 220 - Painting
  - ART 230 - Beginning Sculpture
  - ART 240 - Ceramics
  - ART 260 - Fibers/Fabrics I
  - ART 290 - Photography
  - DSGN 251 - Computers in Visual Problem-Solving
  - DSGN 270 - Graphic Design I
- Two courses from:
  - A/HI 270 - Visual Culture in South and Southeast Asia
  - A/HI 271 - Visual Culture in East Asia
  - A/HI 310 - Indigenous Arts of the Pacific Northwest
  - A/HI 368 - Pacific Arts and Visual Culture
  - A/HI 370 - Islamic Visual Cultures
  - A/HI 371 - Transforming Traditions: Art and Visual Culture In Japan
  - A/HI 411 - Contemporary Japanese Visual Culture
- Studio specialization (10 credits)

### **Additional Requirements**

#### **Secondary Education Professional Program Requirements (68 credits)**

- EDUC 301 - Educational Psychology I: Development and Individual Differences
- EDUC 302 - Educational Psychology II: Motivation, Learning and Assessment
- EDUC 310 - The Teacher and the Social Order
- IT 444 - Classroom Use of Instructional Technology (Secondary)

- SEC 410 - Dynamics of Teaching
- SEC 411 - Philosophical Foundations of Education
- SEC 425 - Developmental Reading, Writing and Learning in Secondary Schools
- SEC 430 - Secondary School Methods I - Instructional Strategies, Daily Planning, and Standards
- SEC 431 - Secondary School Methods II-Assessment and Long Term Planning
- SEC 432 - Secondary School Methods III - Management, Motivation and Discipline
- SEC 433 - Peer Teaching Laboratory
- SEC 435 - Middle Level Practicum
- SEC 436 - Secondary School Practicum
- SEC 495 - Internship - Secondary
- SPED 363 - Secondary Students With Special Needs

### **Departmental Honors**

In addition to the general requirements for all honors students, an art major who wishes to graduate with honors must complete an honors senior project in art.

## **Art, BA**

**71 credits**

### **Introduction**

Art Studio includes ceramics, drawing, fiber/fabrics, mixed media, painting, photography, printmaking and sculpture. The objectives of the major are to investigate the function of art and the relationships between art, culture, artist and audience. Art studio classes are designed to familiarize students with the principles that shape and inform visual literacy and expression through a variety of practices in art making. Students meet with an advisor after completing 200-level courses to write a formal plan of study and select an area of Art Studio for concentration.

### **Admission and Declaration Process**

Admissions ([see Art Dept page](#))

### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

### **Requirements**

- ART 109 - Visual Dialogue
- ART 110 - Form and Content I: Drawing
- ART 120 - 2-Dimensional Design/Color
- One course from:
  - ART 130 - Form and Content III: 3-D
  - ART 140 - Form & Content IV: Special Topics

**Students must meet with an advisor before taking 200-level courses**

9 credits from the following:

- One course from:
  - A/HI 220 - Visual Culture in Ancient Greece and Rome
  - A/HI 221 - Visual Culture in Medieval Europe
- One course from:
  - A/HI 230 - Visual Culture in Western Europe 1400-1550
  - A/HI 231 - Visual Culture in Western Europe 1550-1700
- One course from:
  - A/HI 240 - Visual Culture in Western Europe in the 19th Century
  - A/HI 241 - Visual Culture in Western Europe and America in the 20th Century
- One course from:
  - A/HI 270 - Visual Culture in South and Southeast Asia
  - A/HI 271 - Visual Culture in East Asia
- 12 credits of 200-level studio courses
- After completing the 200-level classes students must meet with an advisor to write a formal plan of study and declare a concentration in one area of Art Studio
- 15 credits of 300- or 400-level art studio courses in area of selected concentration
- 10 credits of 300- or 400-level art studio or design electives
- Five credits from:
  - ART 494 - Advanced Studio Seminar
  - ART 495 - Professional Practices for Studio Artist
- 8 credits of 300- or 400-level art history

### **Departmental Honors**

In addition to the general requirements for all honors students, an art major who wishes to graduate with honors must complete an honors senior project in art.

## **Art, BFA**

### **115 credits**

#### **Introduction**

The Bachelor of Fine Arts degree is the professional undergraduate art degree. It is an expanded undergraduate degree that requires each student to undertake a program of more than 180 undergraduate credits. Students are advised that a Bachelor of Arts major of normal length is available. The Bachelor of Fine Arts degree requires each student to complete the following program in art studio:

#### **Admission and Declaration Process**

##### **Admissions**

Application should be made to the Department of Art faculty for admission to the Bachelor of Fine Arts program during spring quarter of the preceding year. Students must be in the final quarter of the Bachelor of Arts study, or have completed the Bachelor of Arts to apply for the Bachelor of Fine Arts program.

Application consists of 20 labeled slides of work, artist statement, a letter of application indicating your goals and theme of study and a preference for faculty committee members; a grade point average of 3.00 or higher, and a transcript. The BFA is a selective and competitive program. If a student is not accepted into the BFA program, the student may reapply the following year.

All students must begin their BFA studies in the fall quarter. Applications will be reviewed at the end of the spring quarter and/or during the week prior to the beginning of fall quarter. (Specific dates will be announced each year.) Following acceptance to the BFA program, a committee of at least three faculty members will be formed to work with the student throughout the year.

A typical three-person committee will be comprised of the following: a primary advisor from the art department, and a "secondary advisor" from within or outside the art department, both of whom shall be assigned. The third committee member shall be selected by the student from within or outside the art department. The department must approve the third committee member.

### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

### **Requirements**

- Completion of the Art, Bachelor of Arts course study
- 10 credits from:
  - ART 494 - Advanced Studio Seminar
  - ART 495 - Professional Practices for Studio Artist
  - 20 credits of studio practice in areas of focus
  - 8 credits of 300- or 400-level art history
  - 7 credits of electives specific to course study
  - Midterm review, to be scheduled before registration for spring quarter
  - Final exhibition and evaluation

### **Additional Requirements:**

During the BFA program students spend three quarters creating a self-determined body of artwork. Attention is given to the medium(s), method(s), and the content of the creative activity. The evaluation of the first part of your work will take place with the midterm review, with the participation of the student's full committee. The midterm review must be scheduled to take place sometime in January, during a designated week. At the culmination of the project each student is required to exhibit their completed work in a one or two-person exhibition. In addition, the student is required to submit a research-driven artist's statement that supports the individual's own intellectual and creative achievement. An oral defense with full committee will be scheduled during the week of the student's exhibition. This is an opportunity for the student to discuss and defend their work.

Failure to meet these requirements on schedule will result in an unsatisfactory progress mark for the BFA degree which, in turn, would result in having to repeat the course of study.

### **Departmental Honors**

In addition to the general requirements for all honors students, an art major who wishes to graduate with honors must complete an honors senior project in art.

# Design, BA

79 credits

## Introduction

The Design area of the Department of Art identifies design as the visual communication of ideas. The program utilizes a curriculum that emphasizes the process of problem solving and encourages students to make connections between culture and design, and their role as visual communicators. Students learn to combine personal expression and critical thinking as they create solutions that connect industry to an audience and themselves to the world. A junior portfolio review is held each spring; the portfolio is based on a selection of work from 300-level design classes.

## Admission and Declaration Process

Admissions ([see Art Dept page](#))

## Grade Requirements

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

## Requirements

- ART 110 - Form and Content I: Drawing
- ART 120 - 2-Dimensional Design/Color

**Students must meet with an advisor before taking 200-level courses**

- DSGN 211 - Foundations of Visual Communication
- DSGN 251 - Computers in Visual Problem-Solving
- DSGN 252 - Drawing and Visualization
- DSGN 270 - Graphic Design I
- One course from:

- A/HI 240 - Visual Culture in Western Europe in the 19th Century
- A/HI 241 - Visual Culture in Western Europe and America in the 20th Century

**After completing the 200-level design classes, students must meet with an advisor to write a formal plan of study and declare the Design Major.**

- DSGN 356 - Web Design and Production
- DSGN 371 - Design II
- DSGN 372 - Design Production Processes
- DSGN 373 - Design Production Application
- DSGN 379 - Typography
- DSGN 312 - Graphic Design in the 20th Century
- 4 credits in a 300-level art history

**After successful completion of the portfolio review, students are cleared to enroll in the 400-level design classes with emphasis in design production, graphic design or new media. Admission to the senior level is selective and by no means guaranteed.**

One of the following Emphasis (27 credits):

— **Design Production Emphasis**

- DSGN 377 - Book Arts Production
- DSGN 472 - Materials and Finishing
- DSGN 473 - Advanced Design Production

- DSGN 477 - Senior Projects in Design Production
- DSGN 479 - Professional Practices in Graphic Design, New Media and Design Production  
4 credits in upper-division art history
  - **Graphic Design Emphasis**
- DSGN 454 - Digital Media Design
- DSGN 470 - Advanced Graphic Design
- DSGN 471 - Three-Dimensional Graphic Design
- DSGN 476 - Senior Projects in Graphic Design  
DSGN 479 - Professional Practices in Graphic Design, New Media and Design Production  
4 credits in upper-division art history
  - **New Media Emphasis**
- DSGN 451 - Digital Video  
DSGN 454 - Digital Media Design
- DSGN 457 - Motion Graphic Design
- DSGN 459 - Senior Projects in New Media  
DSGN 479 - Professional Practices in Graphic Design, New Media and Design Production  
4 credits in upper-division art history

### **Departmental Honors**

In addition to the general requirements for all honors students, an art major who wishes to graduate with honors must complete an honors senior project in art.

## **Design, BFA**

### **115 Credits**

#### **Introduction**

The Bachelor of Fine Arts in Design is an expanded degree that requires one extra year of studies in Design. Students must be in either the final quarter of, or have completed the Bachelor of Art in Design to be eligible to apply to the BFA. A portfolio of work must be submitted to the Design Program, indicating their intent. Application to the BFA in Design should be made during the spring quarter of the preceding year and will be reviewed by the Design faculty. All students must begin their BFA studies in the fall quarter. The Bachelor of Fine Arts in Design degree requires each student to complete the following program:

#### **Admission and Declaration Process**

Admissions (see Art Dept page)

#### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

## **Requirements**

- Completion of the Design, Bachelor of Arts Course of study
- 3 additional credits of:
  - DSGN 479 - Professional Practices in Graphic Design, New Media and Design Production
  - 5 credits of internship
  - 20 credits of design practice in the chosen emphasis
  - 8 credits of electives specific to course study
  - Portfolio exhibition

## **Departmental Honors**

In addition to the general requirements for all honors students, an art major who wishes to graduate with honors must complete an honors senior project in art.

## **Art, MEd**

This program is not currently accepting new students. For further information, contact the Graduate School, Western Washington University, 516 High St., Bellingham, WA 98225-9037, 360-650-3170, [gradschool@wwu.edu](mailto:gradschool@wwu.edu).

# Music

## Introduction

A music degree from Western is highly regarded in the profession. The music department graduates successful teachers, performers, composers and leaders in all fields of music. The strength of Western's Department of Music is its forty-member music faculty, each of whom is deeply committed to serving music majors in achieving their aspirations.

The Department of Music also encourages and promotes participation from those students whose academic interests lie outside the arts, yet who have the talent and the dedication to succeed in our department. With more than five hundred students participating in our music program, there are opportunities for performance and academic study at many levels of involvement.

Explorations in early, traditional, contemporary, jazz and electronic music exist in the various course activities and degree plans with the emphasis always on dealing directly with the musical art through performance, composition and analysis.

The Department of Music offers one general and five professional undergraduate programs leading to baccalaureate degrees in music. The general program (BA) provides a liberal arts education with music as the major subject. The four professional undergraduate programs (BMus) emphasize the development of proficiency in the major area: music education, performance, history and literature and composition. The BMus in Music Education has three areas of emphasis: K-12 general music, K-12 instrumental music, and K-12 choral music. The Bachelor of Arts in Education is offered with an elementary music major. State certification to teach is received concurrently with the granting of the degree.

A variety of large and small ensembles and music courses are open to all qualified students of the University, regardless of major. The ensembles include: University Choir, Concert Choir, Symphonic Band, Wind Symphony, University Symphony Orchestra, Jazz Ensembles, Chamber Music (in all instruments and voice), Collegium Musicum, Opera Theatre and Vocal Jazz Ensemble. All music ensembles present public programs throughout the year, and several ensembles participate in annual tours. Music courses open to all students in the University include: The Art of Listening to Music, Fundamentals of Music, Music in the Western World, Non-Western Music, and the History of Jazz, among others.

### *Advisement (please read carefully)*

The Department of Music provides individual advisement and program planning for all students majoring in music. This takes place during the registration period. The department provides advisement by appointment. Many students prefer to spend a day on campus prior to transfer, at which time they may receive advisement and visit the various departmental performance groups and classes and meet with instructors. Interested students should follow the guidelines set forth in the *Music* section of this catalog prior to contacting the department. Write or phone the Department of Music, Western Washington University, Bellingham, Washington 98225-9107, phone 360-650-3130 or visit the Website, [www.wwu.edu/music/](http://www.wwu.edu/music/).

The department is a full member of the National Association of Schools of Music.

## Faculty

**LESLEY SOMMER** (1997) Chair and Associate Professor. BM, MM, DM, Indiana University.

**CHRISTOPHER BIANCO** (2006) Assistant Professor. BME, Northwestern University; MM, University of Montana; DMA, the University of Texas-Austin.

**ROGER D. BRIGGS** (1989) Professor. BM, Memphis State; MM, PhD, Eastman School of Music.

**GRANT DONNELLAN** (2000) Associate Professor. BM, Oberlin Conservatory; MM, Yale University.

**DAVID FEINGOLD** (1980) Associate Professor. BA, Sarah Lawrence College; MA, Western Washington University.

**TIMOTHY FITZPATRICK** (2006) BM, Western Washington University; MM, University of Texas-Austin; MM, Western Washington University.

**JOHN FRIESEN** (1998) Associate Professor. BMus, University of British Columbia; MMus, Juilliard; DMA, University of

Southern California.

**JEFFREY GILLIAM** (1992) Professor. BMus, Eastman School of Music; MMus, University of Michigan.

**LESLIE GUELKER-CONE** (1995) Professor. BA, California State University, Stanislaus; MA, San Jose State University; DMA, University of Colorado, Boulder.

**BRUCE HAMILTON** (2002) Assistant Professor. BM, MM, DM, Indiana University.

**MILICA JELACA JOVANOVIC** (2004) Assistant Professor. BMUS, University of Belgrade; DMA, University of Michigan; MM, Moscow Tchaikovsky Conservatory; PhD, University of Michigan.

**DAVID MEYER** (2003) Assistant Professor. BM, University of Iowa; MM, DM, Indiana University.

**CARLA J. RUTSCHMAN** (1975) Professor. BA, University of Northern Colorado; MM, Arizona State University; PhD, University of Washington.

**EDWARD R. RUTSCHMAN** (1975) Professor. BM, University of Northern Colorado; MM, Arizona State University; PhD, University of Washington.

**WALTER SCHWEDE** (1997) Associate Professor. BM, University of Michigan, MM, Catholic University.

**BERTIL H. VAN BOER** (1996) Professor. AB, University of California, Berkeley; MA, University of Oregon; PhD, Uppsala University.

**EUGENE S. ZORO** (1969) Professor. BM, MM, Eastman School of Music of the University of Rochester.

#### *Affiliate Music Faculty*

**NICOLE BARNES**, Saxophone

**AMBER BONE**, Voice

**EDWARD COOK**, Voice

**GREGORY COX**, Trombone

**VINCE GREEN**, Trumpet

**ERIC KEAN**, Viola

**LISA McCARTHY**, Flute

**BEN MUSA**, Double Bass

**FRANCINE PETERSON**, Bassoon

**RICHARD REED**, Horn

**JAY ROOZENDAAL**, Voice

**ARTHUR SHAW**, Conductor, Symphony Orchestra

**DAVID STEEGE**, Keyboard Technician

**ROB TUCKER**, Percussion

**JENNIFER WEEKS**, Oboe

**KATIE WELD**, Voice

**JUDITH WIDRIG**, Piano

**JILL WHITMAN**, Harp

**ASTA VAICEKONIS**, Accompanist

**DANIUS VAICEKONIS**, Accompanist

#### **Declaration Process**

Due to the sequential nature of the music curriculum, midyear applications are not recommended. Students seeking admission to the program other than fall quarter will be required to meet prerequisites in all course sequences (MUS 121/122 through 225/226; 341 through 343; and 351 through 354) as a condition of admission. All students must also complete the audition to be eligible for music major advising. Contact the music department undergraduate advising office at 360-650-4091 for details.

## **Other Departmental Information**

### *Music Performance*

All students in Bachelor of Music degree programs must be members of a major performing ensemble each quarter of residence except in those quarters in which music education majors are enrolled in student teaching and those quarters in which piano majors are enrolled in accompanying. The requirement must be met through the student's major instrument or voice as follows: Symphonic Band or Wind Symphony for wind/percussion players, University Choir or Concert Choir for vocalists, and Symphony Orchestra for string players. Pianists and guitarists may elect to participate in any of the major performing ensembles for which they are qualified. Pianists will take a combination of Major Performance Ensemble and Piano Accompanying as follows:

**Performance:** Three quarters of major ensemble, remaining quarters in piano accompanying. **Composition and History/Literature:** six quarters of major ensemble, three quarters of piano accompanying, remaining quarters either major ensemble or piano accompanying. **Music Education:** six quarters of major ensemble, remaining quarters piano accompanying. **Bachelor of Arts in Music** majors will take three quarters of major performance ensemble and three quarters of accompanying.

Guitarists majoring in music performance may, under advisement, substitute up to 12 additional credits in chamber music for this requirement. Performance ensembles may be repeated for credit.

### *Official Attire*

The official attire for all public performances of the University Orchestra, Wind Symphony, Symphonic Band and Concert Choir is as follows: women — long black dress; men — black tuxedo. The Department of Music requires the student to have this attire available at the beginning of the academic year.

### *Applied Performance Proficiency*

All entering music students will be expected to demonstrate their performance proficiency before a faculty committee to determine their admissibility as music majors. This qualifying audition will be held on announced dates prior to the start of fall, winter and spring quarter classes and on any day school is in session by **prior appointment. Audition deadlines** are as follows:

Fall quarter — June 1  
Winter quarter — December 1  
Spring quarter — March 1

Freshman and transfer students with marginal qualifications may be placed on **probation** at the beginning of their first quarter of study and will be re-examined at the end of the quarter. A student who fails to have probationary status removed at the end of two consecutive quarters may be removed from pre-major status, continued applied instruction and admissibility to restricted classes. Music minors wishing to include applied instruction as part of the elective credits for the minor must perform an audition in accordance with the listed levels of proficiency. All students receiving applied instruction, with the exception of guitar and piano, must audition for placement in the appropriate major performing ensemble. All applied private music study is included in the student's regular fees. Applied music may be repeated for credit. Students must complete the audition process in order to be eligible for music major advising.

Minimum applied performance proficiency levels required for entrance to private applied music study are as follows. This list of repertoire is intended to characterize acceptable standards for full admittance and entrance to pre-major status, with the permission of the appropriate area coordinator. Please contact the music department adviser at 360-650-4091 for details. However, at the entrance audition, the entering music student may play or sing musical selections other than those listed below.

**Piano** — Baroque, classical, Romantic and contemporary literature of the difficulty of or greater than Bach, "Short Preludes" and "Inventions;" Clementi, Haydn, Mozart and Beethoven "Sonatinas;" Bartok, "Mikrokosmos," Books 3 and 4. Three pieces of different style periods, all from memory. Sight reading required.

**Violin** — Scales, either three or four octaves at a moderato tempo, six to eight notes per bow. Arpeggios, three or four octaves, both études/caprices of Kreutzer, Rode, Fiorillo, Dont (Opus 35), Gaviniés, Paganini, Wieniawski (Opus 10) or Ernst. One movement of any solo sonata or partita of J.S. Bach, and either a movement of any of the major concertos, Beethoven, Brahms, Mendelssohn, Saint-Saëns, Tchaikovsky, et al, or a virtuoso work such as Havanaise — Introduction and Rondo —Capriccioso of Saint-Saëns, Polonaise-Brillante of Wieniawski, Zapateado of Sarasate or Tzigane by Ravel, et al.

**Viola** — Handel, Purcell or other sonatas; Telemann Concerto in G major or Vivaldi Concerto in E minor. Scales two octaves (major and melodic minor).

**Violoncello** — Major and Minor Scales 3 octaves, Popper (from High School of Cello Playing), Duport or Piatti étude, mvt of a concerto (such as Lalo, Dvorák or Shostakovich) or mvt of a sonata (such as Brahms or Prokofiev) and 2 contrasting mvt of Bach Solo Suites.

**Double Bass** — One étude from Edouard Nanny's "Complete Method Book for Contrabass" Book 1 **or** solo of candidate's choice. Two contrasting orchestral excerpts (one Mozart) of candidate's choice. Major and minor scales through half, first and second positions.

**Harp** — Two pieces of different style, memorized, such as Handel's Concerto in B-flat, Haydn's *Theme and Variations*, Pescetti's *C Major Sonata*, Pierre's *Impromptu Caprice*, Debussy's *First Arabesque*, selections from *Suite of Eight Dances* by Salzedo. Major and melodic minor scales. Sight reading.

**Flute** — Any Handel sonata (except the E minor Sonata) [select at least one sonata]. Any étude from Anderson Étude Method, opus 41 [select any two of the 18 studies]. Major and minor scales and arpeggios through four sharps and four flats (two octaves when possible).

**Oboe** — Handel *Sonata No. 1*; Any progressive melodic study from Barrett or an étude from Ferling *48 Studies*. Major and minor scales and arpeggios through four sharps and flats (two octaves).

**Clarinet** — Any two études from *Thirty-two Études for Clarinet* by C. Rose, or from *Preliminary Studies for the Accomplished Clarinetist*, Vol. I, by R. Jettel. One solo work comparable in difficulty to the Weber "Concertino" or Hindemith "Sonata." Major and minor scales and arpeggios through four sharps and four flats (two octaves when possible).

**Bassoon** — Three or four selected studies from the Weissenborn Complete Method. Any two studies from the Weissenborn Advanced studies. Mozart "Concerto in B" (second and third movements), or Galliard *Sonatas I and VI* or Phillips *Concertpiece* or Telemann *Sonata in F Minor*, or J. C. Bach "Concerto in B Major" and minor scales and arpeggios through four sharps and four flats (two octaves when possible).

**Saxophone** — Two studies from Ferling "48 Famous Studies," Rubank "Selected Studies," Klose "25 Exercises or Niehaus Jazz Studies." One solo work comparable to Glazounov "Concerto," Ibert "Concertino de Camara," Villa-Lobos "Fantasia," Bozza: "Aria" or Ibert "Aria." Major and minor scales and arpeggios through four sharps and four flats (two octaves or full range).

**French Horn** — Two or three études selected from "Method for French Horn" by Pottag, edited by Hovey. Mozart, *Concerto No. 3* or Saint-Saëns *Romance*. Major and minor scales and arpeggios through four sharps and four flats (two octaves when possible).

**Trumpet** — One or two études from "34 Studies" by Brandt, edited by Nagel. Haydn "Concerto" (first and second movements), or Vidal "Concertino" or Thome "Fantasy in E" or Corelli "Sonata VIII," edited by Fitzgerald. Major and minor scales and arpeggios through four sharps and four flats (two octaves when possible).

**Trombone (Tenor and Bass Trombone) and Euphonium** — Two or three studies from “Melodious Études” by Rochut, Book I (bass trombone should play one octave lower where feasible). Studies one through ten of the Blashevich Clef Studies. Five selected studies from the Arban Method, Book 1. Major and minor scales and arpeggios through four sharps and four flats (two octaves when possible).

**Tuba** — Any two of the first four solos in “Solos for the Tuba Player” by Wekselblatt. First ten studies from the “Studies for BB  $\flat$  Tuba” by Tyrell. Major and minor scales through four sharps and four flats (two octaves when possible).

**Percussion** — On entering, percussion students should demonstrate proficiency in snare drum, timpani and keyboard percussion and have some experience and ability on drum set and accessory instruments (bass drum, cymbals, tambourine, et cetera.) *Snare Drum*: The 40 Percussive Arts Society snare drum rudiments, a concert and a rudimental style étude or solo. *Timpani*: Demonstrate the ability to tune various intervals and perform an étude or solo using four drums. *Keyboard Percussion (Marimba, Vibraphone, Xylophone)*: Major and minor scales and arpeggios through four sharps and four flats (two octaves), an étude or solo utilizing two and/or four mallet techniques. *Drum Set (optional)*: Demonstrate knowledge of various contemporary styles (jazz, rock, Latin) and the ability to maintain a steady pulse. In addition, sight-reading is required in each of the above categories.

**Voice** — Two songs of contrasting style from the classical or folk song repertoire. At least one song in a language other than English is recommended, i.e., Italian, German or French art song or aria. Accompanist provided.

**Classical Guitar** — *Scales*: two octaves, any key (i and m), major and minor; *reading*: easy pieces through fifth position; prepare two contrasting pieces from “Solo Guitar Playing” book 1 (second position or higher) by Noad or “100 Graded Studies” (Noad), studies numbered 5-100 or Royal Conservatory Book 3, 4 or higher.

**Composition Portfolio** — Students interested in pursuing a BMus in composition must schedule an interview with Dr. Roger Briggs, director of composition. Students should schedule their composition interview for the same day they schedule their entrance audition in their major instrument/voice.

#### *Academic Progress Policy*

A minimum GPA of 2.5 in music courses is required for graduation with a degree in music. Students must complete the basic music theory sequence (MUS 222, 224, 226) with an average of B- or better to continue on to upper-division theory and history courses. Specific requirements for admission into the various BMus degree programs can be obtained from the appropriate area coordinator or the undergraduate advisor.

#### *Theory Placement Examination - Transfers*

All students transferring to Western with less than two years of college theory will be assigned to the theory course that succeeds the last course taken. (Students may repeat theory courses previously taken elsewhere.) All students transferring to Western who have completed two years of college theory will write, prior to enrollment, a Theory Placement Examination. This examination may be written at Western, or it may be written and examined at any college or community college (administered by professors at that college) prior to transferring to Western, upon individual request. This examination is an evaluative instrument; the results of this examination are advisory only. All credit received in theory previously at other institutions will be transferred at the level for which it was earned and may apply toward fulfillment of the requirements for the major in music or in music education.

#### *History Placement Examination - Transfers*

Students with upper-division music history credit (300 level or above) must take a history placement examination to determine what history courses remain to be taken.

### *Keyboard Competency*

All students in Bachelor of Music programs will successfully complete a Keyboard Competency Examination. Those students commencing their music theory studies at Western will complete this requirement as part of the two-year music theory/ear-training sequence. Students transferring to Western with one or more quarters of music theory will complete the requirement either by: 1) completing the remaining quarters of the theory sequence; or 2) taking the Keyboard Competency Examination.

The appropriate course of action will be determined by the results of the Theory/Ear-Training Placement Examination.

Students in the BMus degree programs will be required to take the Keyboard Competency Examination by the end of the sophomore year or, in the case of transfer students, after three quarters of full-time study.

### *Scholarships*

In addition to general University scholarships, several awards are available from off-campus music organizations through The Western Foundation. Scholarship awards to incoming music majors will be based upon quality of entrance audition. For further information, please call the music adviser, PAC 263, at 360-650-4091 or refer to [www.wwu.edu/music/](http://www.wwu.edu/music/).

### *Concert Attendance*

All music majors will register for MUS 99, Concert Attendance (0 credits, S/U grading) each quarter in residence. Programs or ticket stubs from a minimum of eight approved concerts/recitals must be submitted each quarter to receive a satisfactory grade. For further information please call the music adviser at 360-650-4091.

### *Program Advisement*

All undergraduate music majors are assigned to the departmental undergraduate program advisor for scheduling and program approval.

### *Bachelor of Music*

To complete the Bachelor of Music degree requirements, it may be necessary for the student to take more than the usual 180 credit hours. Students should anticipate that these programs may require more than four years.

### **Undergraduate Degrees and Programs**

Music, BA  
Music - Elementary, BAE  
Music Composition, BMus  
Music Education P-12, BMus  
Music History and Literature, BMus  
Music Performance, BMus  
Music Minor

### **Graduate Degrees and Programs**

Music, Thesis, MMus

# **Music - Elementary, BAE**

**44 credits**

## **Introduction**

This major satisfies the academic major requirement for teacher certification with an endorsement in elementary education and must be accompanied by the professional preparation program in elementary education. See the Elementary Education section of this catalog for program admission, completion, and teacher certification requirements.

This results in an elementary endorsement, but does not result in a music endorsement.

## **Admission and Declaration Process**

Admission to Program ([see Music dept page](#))

## **Grade Requirements**

A grade of C (2.0) or better is required for courses in the elementary education professional program and all courses required for the endorsement.

## **Requirements**

- MUS 105 - Music in the Western World
- MUS 121 - Aural and Keyboard Skills I
- MUS 122 - Theoretical and Analytical Skills I
- MUS 123 - Aural and Keyboard Skills I
- MUS 124 - Theoretical and Analytical Skills I
- MUS 125 - Aural and Keyboard Skills I
- MUS 126 - Theoretical and Analytical Skills I
- MUS 164 - Class Voice and Pedagogy
- MUS 205 - Survey of Non-Western Musical Cultures
- MUS 221 - Aural and Keyboard Skills II
- MUS 222 - Theoretical and Analytical Skills II
- MUS 223 - Aural and Keyboard Skills II
- MUS 224 - Theoretical and Analytical Skills II
- MUS 225 - Aural and Keyboard Skills II
- MUS 226 - Theoretical and Analytical Skills II
- MUS 268 - Survey of Music Education
- MUS 362 - Elementary Music Education
- MUS 461 - Elementary Music Education Methods II
- Select two courses from:
  - MUS 341 - History of Music to 1600
  - MUS 342 - History of Music 1600-1830
  - MUS 343 - History of Music 1830-Present
- Applied music on major performing instrument or voice; minimum 6 quarters (jazz guitar and electric bass not applicable)
- Pianists will take three quarters of MUS 276 and/or 476 (piano accompanying) and remaining quarters in major performing ensemble.

## **Additional Requirements**

### **Elementary Education Professional Program Requirements (106 credits)**

#### **Professional Studies Core (25 credits)**

- EDUC 301 - Educational Psychology I: Development and Individual Differences
- EDUC 302 - Educational Psychology II: Motivation, Learning and Assessment
- EDUC 310 - The Teacher and the Social Order
- ELED 370 - Introduction to Teaching
- IT 344 - Basic Instructional Technology Skills
- IT 442 - Classroom Use of Instructional Technology (Elementary)
- SPED 364 - Teaching All Students

#### **Elementary Program — Methods, Curriculum Content, and Field Experiences (81 credits)**

- ART 380 - Art Educating the Child
- ELED 425 - Social Studies for the Elementary School
- ELED 470 - Developing Teaching
- ELED 471 - Documenting Teaching
- ELED 480 - Literacy: Beginning Communicators
- ELED 481 - Literacy: Fluent Communicators
- ELED 491 - September Experience
- ELED 492 - Practicum: Experience in Literacy Methods
- ELED 494 - Internship - Elementary
- HLED 455 - Health Education Grades K-8
- MATH 381 - Teaching K-8 Mathematics I
- MATH 382 - Teaching K-8 Mathematics II
- MATH 383 - Teaching K-8 Mathematics III
- MATH 491 - Internship Seminar - Teaching K-8 Mathematics
- MUS 361 - Music for Elementary Teachers
- PE 345 - Physical Education for Elementary School
- SCED 480 - Science Methods and Curriculum for the Elementary School
- SCED 490 - Laboratory/Field Experience in Elementary Science
- SPED 430 - Problem Solving for Diverse Needs

## **Music Composition, BMus**

**116-123 credits**

### **Introduction**

The Bachelor of Music (BMus) degree is the professional undergraduate degree program in music. It is an expanded program which requires a student to undertake a course of study of a minimum of 192 undergraduate credits.

## **Admission and Declaration Process**

Admission to Program ([see Music dept page](#))

Entrance by compositional accomplishment and interview — student must qualify for upper-division composition courses by junior year

## **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

## **Requirements**

- MUS 099 - Concert Attendance Required for every quarter in residence. Minimum 8 concert programs or ticket stubs required
- MUS 121 - Aural and Keyboard Skills I
- MUS 122 - Theoretical and Analytical Skills I
- MUS 123 - Aural and Keyboard Skills I
- MUS 124 - Theoretical and Analytical Skills I
- MUS 125 - Aural and Keyboard Skills I
- MUS 126 - Theoretical and Analytical Skills I
- MUS 221 - Aural and Keyboard Skills II
- MUS 222 - Theoretical and Analytical Skills II
- MUS 223 - Aural and Keyboard Skills II
- MUS 224 - Theoretical and Analytical Skills II
- MUS 225 - Aural and Keyboard Skills II
- MUS 226 - Theoretical and Analytical Skills II
- MUS 341 - History of Music to 1600
- MUS 342 - History of Music 1600-1830
- MUS 343 - History of Music 1830-Present
- MUS 352 - Instrumental Conducting
- MUS 353 - Choral Conducting
- Two courses from:
  - MUS 322 - Form and Analysis: Music to 1900
  - MUS 324A - Modal Counterpoint
  - MUS 324B - Tonal Counterpoint
  - MUS 326 - Orchestration/Arranging
  - MUS 328B - Midi Notation and Sequencing for Composition
  - MUS 422 - Analytical Techniques: 20th-Century Music
- One course from:
  - MUS 441 - Notation
  - MUS 442 - Seminar in Music History
  - MUS 443A - History of Musical Genres: Choral Music
  - MUS 443B - History of Musical Genres: Solo Song
  - MUS 443C - History of Musical Genres: Opera
  - MUS 443D - History of Musical Genres: Keyboard Music
  - MUS 443E - History of Musical Genres: Chamber Music
  - MUS 443F - History of Musical Genres: Symphonic Music

- MUS 443G - History of Musical Genres: Concerto
  - MUS 443H - History of Musical Genres: Symphonic Music in the 20th Century
  - MUS 443I - History of Musical Genres: Opera I
  - MUS 443J - History of Musical Genres: Opera II
  - MUS 444 - Shakespeare and Music  
voice majors must take 443b or 443c
    - Three courses from:
  - MUS 275 - Chamber Jazz Ensembles
  - MUS 278 - Opera Workshop
  - MUS 280 - Collegium Musicum
  - MUS 281A - Applied Chamber Music: Flute
  - MUS 281B - Applied Chamber Music: Double Reed
  - MUS 281C - Applied Chamber Music: Single Reed
  - MUS 281F - Applied Chamber Music: High Brass
  - MUS 281H - Applied Chamber Music: Low Brass
  - MUS 281K - Applied Chamber Music: Percussion
  - MUS 281L - Applied Chamber Music: Strings
  - MUS 281M - Applied Chamber Music: Piano
  - MUS 281N - Applied Chamber Music: Guitar
  - MUS 283 - Chamber Vocal Ensembles
  - MUS 284 - Vocal Jazz Ensemble
  - MUS 475 - Chamber Jazz Ensemble
  - MUS 478 - Advanced Opera Production
  - MUS 480 - Advanced Collegium Musicum
  - MUS 481 - Advanced Applied Chamber Music
  - MUS 483 - Advanced Chamber Vocal Ensembles
  - MUS 484 - Advanced Vocal Jazz Ensemble
  - MUS 485 - New Music Ensemble
- One course from:
- MUS 354A - Choral Conducting
  - MUS 354B - Instrumental Conducting
- One course from:
- MUS 499 - Senior Recital
  - MUS 490 - Senior Thesis
- 21 credits minimum including at least three credits of 431
- MUS 231 - Elementary Composition
  - MUS 331 - Composition
  - MUS 431 - Composition
- Applied music on major instrument or voice each quarter in residence (minimum 12 credits); including at least three credits in courses numbered:
- MUS 312 - Applied Instruction: Piano
  - MUS 313 - Applied Instruction: Strings
  - MUS 314 - Winds and Percussion
  - MUS 315 - Applied Instruction: Voice
  - MUS 316 - Applied Instruction: Classical Guitar  
or
  - MUS 412 - Applied Instruction: Piano
  - MUS 413 - Applied Instruction: Strings

- MUS 414 - Applied Instruction: Winds and Percussion
  - MUS 415 - Applied Instruction: Voice
  - MUS 416 - Applied Instruction: Classical Guitar
  - Electives: 5 credits selected under advisement
- \*\*\*Piano students will take a combination of major performing ensemble and MUS 276/476 (piano accompanying) as follows: Performance — three quarters major performing ensemble, remaining quarters piano accompanying; Composition and Music History & Literature — six quarters major performance ensemble, three quarters accompanying, remaining quarters in either piano accompanying or major performance ensemble. Guitar students as follows: six quarters Major Performance Ensemble (MUS 271- or 471); three quarters of Collegium (MUS 280 or 480); and three quarters of Guitar Ensemble (MUS 281N or 481).

## **Music Education P-12, BMus**

**161-165 credits minimum\***

### **Introduction**

**\*Includes Woodring College Secondary Education Requirements:** 54 credits minimum including internship (SEC 410, 411, 425, 432, 495; EDUC 301, 302, 310; and SPED 363). The Bachelor of Music Education major must be accompanied by the professional preparation program in secondary education. See the Secondary Education section of this catalog for program admission, completion, and teacher certification requirements.

*Music education majors should consult Teacher Education Admissions, Miller Hall 250, for information concerning the College of Education professional courses and admission to the Secondary Education program.*

### **Admission and Declaration Process**

Admission to Program ([See Music dept page](#))

### **Grade Requirements**

A grade of C (2.0) or better is required for courses in the elementary education professional program and all courses required for the endorsement.

### **Requirements**

- MUS 099 - Concert Attendance  
Required for every quarter in residence. Minimum 8 concert programs or ticket stubs required.
- MUS 164 - Class Voice and Pedagogy
- MUS 121 - Aural and Keyboard Skills I
- MUS 122 - Theoretical and Analytical Skills I
- MUS 123 - Aural and Keyboard Skills I
- MUS 124 - Theoretical and Analytical Skills I
- MUS 125 - Aural and Keyboard Skills I
- MUS 126 - Theoretical and Analytical Skills I
- MUS 221 - Aural and Keyboard Skills II
- MUS 222 - Theoretical and Analytical Skills II
- MUS 223 - Aural and Keyboard Skills II
- MUS 224 - Theoretical and Analytical Skills II
- MUS 225 - Aural and Keyboard Skills II

- MUS 226 - Theoretical and Analytical Skills II
- MUS 268 - Survey of Music Education
- MUS 328A - Midi Notation and Sequencing for Music Education
- MUS 341 - History of Music to 1600
- MUS 342 - History of Music 1600-1830
- MUS 343 - History of Music 1830-Present
- MUS 352 - Instrumental Conducting
- MUS 353 - Choral Conducting
- MUS 362 - Elementary Music Education
- MUS 469 - Music Teaching Practicum II
- One course from:
  - MUS 354A - Choral Conducting
  - MUS 354B - Instrumental Conducting
- One course from:
  - MUS 264A - Instrumental Lab for Secondary Instruments: Flute/Single Reeds
  - MUS 264B - Instrumental Lab for Secondary Instruments: Double Reeds
  - MUS 264C - Instrumental Lab for Secondary Instruments: Clarinet
  - MUS 264D - Instrumental Lab for Secondary Instruments: Bassoon
  - MUS 264E - Instrumental Lab for Secondary Instruments: Saxophone
  - MUS 264F - Instrumental Lab for Secondary Instruments: Horn
  - MUS 264G - Instrumental Lab for Secondary Instruments: High Brass
  - MUS 264H - Instrumental Lab for Secondary Instruments: Low Brass
  - MUS 264I - Instrumental Lab for Secondary Instruments: Euphonium
  - MUS 264J - Instrumental Lab for Secondary Instruments: Tuba
  - MUS 264K - Instrumental Lab for Secondary Instruments: Percussion
- One course from:
  - MUS 265A - String Techniques and Pedagogy Lab: Violin/Viola
  - MUS 265B - String Techniques and Pedagogy Lab: Cello/Bass
- One course from: (Each quarter in residence minimum 24 credits)\*\*
  - MUS 271 - University Choir
  - MUS 272 - Symphonic Band
  - MUS 471 - Concert Choir
  - MUS 472 - Wind Symphony
  - MUS 473 - University Symphony Orchestra

*\*\*Piano students will take six quarters of major performing ensemble and six quarters of MUS 276 and/or 476 (piano accompanying). Guitar students as follows: six quarters major performance ensemble (MUS 271 or 471), three quarters of Collegium (MUS 280 or 480) and three quarters Guitar Ensemble (MUS 281N or 481).*

- 12 credits minimum, including at least 3 credits in courses numbered 312 -316 or 412 -416; at least one credit each quarter in residence, except when student teaching.
- One of the following Emphasis Areas:
  - P-12 General Music Emphasis (9 credits) This emphasis leads to an endorsement in general music.  
        MUS 271 - University Choir
- MUS 461 - Elementary Music Education Methods II  
Electives: 4 credits selected under advisement. In lieu of elective credits, piano students will take 4 credits of MUS 466.
- P-12 Choral Music Emphasis (10 credits) This emphasis leads to an endorsement in choral music.
- MUS 166A - Introduction to Voice Studies A
- MUS 463 - Secondary Choral Music Education

Electives: 4 credits selected under advisement. In lieu of elective credits, piano students will take 4 credits of MUS 466.

- P-12 Instrumental Music Emphasis (11-12 credits) This emphasis leads to an endorsement in instrumental music.

- MUS 271 - University Choir
- MUS 462 - Band Music Education
- MUS 464 - Orchestral Music Education

Electives: 3-4 credits selected under advisement. In lieu of elective credits, piano students will take four credits of MUS 466; in lieu of elective credits guitar students will take 2 credits of Introduction to Guitar Repertory – MUS 467; and 1 credit of Fretboard Harmony – MUS 367.

## **Music History and Literature, BMus**

**116-123 credits**

### **Introduction**

The Bachelor of Music (BMus) degree is the professional undergraduate degree program in music. It is an expanded program which requires a student to undertake a course of study of a minimum of 192 undergraduate credits.

### **Admission and Declaration Process**

Admission to Program ([see Music dept page](#))

Entrance by interview and distinguished accomplishment in musicianship

### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

### **Requirements**

- MUS 099 - Concert Attendance
- MUS 121 - Aural and Keyboard Skills I
- MUS 122 - Theoretical and Analytical Skills I
- MUS 123 - Aural and Keyboard Skills I
- MUS 124 - Theoretical and Analytical Skills I
- MUS 125 - Aural and Keyboard Skills I
- MUS 126 - Theoretical and Analytical Skills I
- MUS 221 - Aural and Keyboard Skills II
- MUS 222 - Theoretical and Analytical Skills II
- MUS 223 - Aural and Keyboard Skills II
- MUS 224 - Theoretical and Analytical Skills II
- MUS 225 - Aural and Keyboard Skills II
- MUS 226 - Theoretical and Analytical Skills II
- MUS 341 - History of Music to 1600
- MUS 342 - History of Music 1600-1830
- MUS 343 - History of Music 1830-Present
- MUS 351 - Basic Conducting

- MUS 441 - Notation
  - MUS 490 - Senior Thesis
  - One course from:
    - MUS 441 - Notation
- MUS 442 - Seminar in Music History
- MUS 443A - History of Musical Genres: Choral Music
- MUS 443B - History of Musical Genres: Solo Song
- MUS 443C - History of Musical Genres: Opera
- MUS 443D - History of Musical Genres: Keyboard Music
- MUS 443E - History of Musical Genres: Chamber Music
- MUS 443F - History of Musical Genres: Symphonic Music
- MUS 443G - History of Musical Genres: Concerto
- MUS 443H - History of Musical Genres: Symphonic Music in the 20th Century
- MUS 443I - History of Musical Genres: Opera I
- MUS 443J - History of Musical Genres: Opera II
- MUS 444 - Shakespeare and Music
- Two courses from:
  - MUS 322 - Form and Analysis: Music to 1900
  - MUS 324A - Modal Counterpoint
  - MUS 324B - Tonal Counterpoint
  - MUS 326 - Orchestration/Arranging
  - MUS 328B - Midi Notation and Sequencing for Composition
  - MUS 422 - Analytical Techniques: 20th-Century Music
- Two courses from:
  - MUS 275 - Chamber Jazz Ensembles
  - MUS 278 - Opera Workshop
  - MUS 281A - Applied Chamber Music: Flute
  - MUS 281B - Applied Chamber Music: Double Reed
  - MUS 281C - Applied Chamber Music: Single Reed
  - MUS 281F - Applied Chamber Music: High Brass
  - MUS 281H - Applied Chamber Music: Low Brass
  - MUS 281K - Applied Chamber Music: Percussion
  - MUS 281L - Applied Chamber Music: Strings
  - MUS 281M - Applied Chamber Music: Piano
  - MUS 281N - Applied Chamber Music: Guitar
  - MUS 283 - Chamber Vocal Ensembles
  - MUS 475 - Chamber Jazz Ensemble
  - MUS 478 - Advanced Opera Production
  - MUS 483 - Advanced Chamber Vocal Ensembles
  - MUS 484 - Advanced Vocal Jazz Ensemble
  - MUS 485 - New Music Ensemble
- 12 credits from:
  - MUS 442 - Seminar in Music History
  - MUS 443A - History of Musical Genres: Choral Music
  - MUS 443B - History of Musical Genres: Solo Song
  - MUS 443C - History of Musical Genres: Opera
  - MUS 443D - History of Musical Genres: Keyboard Music
  - MUS 443E - History of Musical Genres: Chamber Music
  - MUS 443F - History of Musical Genres: Symphonic Music

MUS 443G - History of Musical Genres: Concerto

MUS 443H - History of Musical Genres: Symphonic Music in the 20th Century

MUS 443I - History of Musical Genres: Opera I

MUS 443J - History of Musical Genres: Opera II

Applied music on major instrument or voice each quarter in residence (minimum 12 credits); including at least three credits in courses numbered

- MUS 312 - Applied Instruction: Piano
- MUS 313 - Applied Instruction: Strings
- MUS 314 - Winds and Percussion
- MUS 315 - Applied Instruction: Voice
- MUS 316 - Applied Instruction: Classical Guitar

or

- MUS 412 - Applied Instruction: Piano
- MUS 413 - Applied Instruction: Strings
- MUS 414 - Applied Instruction: Winds and Percussion
- MUS 415 - Applied Instruction: Voice

Foreign Language: Students must complete an examination in French or German.

- MUS 416 - Applied Instruction: Classical Guitar

Major Performing Ensemble each quarter in residence (minimum 24 credits)\*\*\*

\*\*\*Piano students will take a combination of major performing ensemble and MUS 276/476 (piano accompanying) as follows: Performance — three quarters major performing ensemble, remaining quarters piano accompanying; Composition and Music History & Literature — six quarters major performance ensemble, three quarters accompanying, remaining quarters in either piano accompanying or major performance ensemble. Guitar students as follows: six quarters Major Performance Ensemble (MUS 271- or 471); three quarters of Collegium (MUS 280 or 480); and three quarters of Guitar Ensemble (MUS 281N or 481).

Thesis: (3 credits)

Electives: 14 credits selected under advisement

Foreign Language: Students must complete an examination in French or German.

## Music Minor

**30 credits**

### Admission and Declaration Process

Admission to Program (see Music dept page)

### Grade Requirements

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

### Requirements

- MUS 121 - Aural and Keyboard Skills I
- MUS 122 - Theoretical and Analytical Skills I
- MUS 123 - Aural and Keyboard Skills I
- MUS 124 - Theoretical and Analytical Skills I
- MUS 125 - Aural and Keyboard Skills I
- MUS 126 - Theoretical and Analytical Skills I

One course from:

- MUS 104 - The Art of Listening to Music
- MUS 105 - Music in the Western World
  - One course from:
- MUS 202 - Jazz: Genesis and Evolution
- MUS 205 - Survey of Non-Western Musical Cultures
  - 12 credits selected under advisement

## Music Performance, BMus

116-123 credits

### Introduction

The Bachelor of Music (BMus) degree is the professional undergraduate degree program in music. It is an expanded program which requires a student to undertake a course of study of a minimum of 192 undergraduate credits.

### Admission and Declaration Process

Admission to Program ([see Music dept page](#))

Entrance by performance audition — student must expect to achieve upper-division applied instruction by the sophomore year

### Grade Requirements

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

### Requirements

- MUS 099 - Concert Attendance Required for every quarter in residence. Minimum 8 concert programs or ticket stubs required
- MUS 121 - Aural and Keyboard Skills I
- MUS 122 - Theoretical and Analytical Skills I
- MUS 123 - Aural and Keyboard Skills I
- MUS 124 - Theoretical and Analytical Skills I
- MUS 125 - Aural and Keyboard Skills I
- MUS 126 - Theoretical and Analytical Skills I
- MUS 221 - Aural and Keyboard Skills II
- MUS 222 - Theoretical and Analytical Skills II
- MUS 223 - Aural and Keyboard Skills II
- MUS 224 - Theoretical and Analytical Skills II
- MUS 225 - Aural and Keyboard Skills II
- MUS 226 - Theoretical and Analytical Skills II
- MUS 341 - History of Music to 1600
- MUS 342 - History of Music 1600-1830
- MUS 343 - History of Music 1830-Present
- MUS 351 - Basic Conducting
- MUS 466 - Applied Music Pedagogy

- MUS 499 - Senior Recital
    - One course from:
  - MUS 441 - Notation
  - MUS 442 - Seminar in Music History
  - MUS 443A - History of Musical Genres: Choral Music
  - MUS 443B - History of Musical Genres: Solo Song
  - MUS 443C - History of Musical Genres: Opera
  - MUS 443D - History of Musical Genres: Keyboard Music
  - MUS 443E - History of Musical Genres: Chamber Music
  - MUS 443F - History of Musical Genres: Symphonic Music
  - MUS 443G - History of Musical Genres: Concerto
  - MUS 443H - History of Musical Genres: Symphonic Music in the 20th Century
  - MUS 443I - History of Musical Genres: Opera I
  - MUS 443J - History of Musical Genres: Opera II
  - MUS 444 - Shakespeare and Music
- voice majors must take voice majors must take 443b or 443c
- Two courses from:
- MUS 322 - Form and Analysis: Music to 1900
  - MUS 324A - Modal Counterpoint
  - MUS 324B - Tonal Counterpoint
  - MUS 326 - Orchestration/Arranging
  - MUS 328B - Midi Notation and Sequencing for Composition
  - MUS 422 - Analytical Techniques: 20th-Century Music
- Four courses from:
- MUS 275 - Chamber Jazz Ensembles
  - MUS 278 - Opera Workshop
  - MUS 280 - Collegium Musicum
  - MUS 281A - Applied Chamber Music: Flute
  - MUS 281B - Applied Chamber Music: Double Reed
  - MUS 281C - Applied Chamber Music: Single Reed
  - MUS 281F - Applied Chamber Music: High Brass
  - MUS 281H - Applied Chamber Music: Low Brass
  - MUS 281K - Applied Chamber Music: Percussion
  - MUS 281L - Applied Chamber Music: Strings
  - MUS 281M - Applied Chamber Music: Piano
  - MUS 281N - Applied Chamber Music: Guitar
  - MUS 283 - Chamber Vocal Ensembles
  - MUS 284 - Vocal Jazz Ensemble
  - MUS 475 - Chamber Jazz Ensemble
  - MUS 478 - Advanced Opera Production
  - MUS 480 - Advanced Collegium Musicum
  - MUS 481 - Advanced Applied Chamber Music
  - MUS 483 - Advanced Chamber Vocal Ensembles
  - MUS 484 - Advanced Vocal Jazz Ensemble
  - MUS 485 - New Music Ensemble
- Applied music on major instrument or voice: (minimum 30 credits)
- MUS 212 - Applied Instruction: Piano
  - MUS 213 - Applied Instruction: Strings

- MUS 214 - Applied Instruction: Winds and Percussion
  - MUS 215 - Applied Instruction: Voice
  - MUS 216 - Applied Instruction: Classical Guitar
  - MUS 312 - Applied Instruction: Piano
  - MUS 313 - Applied Instruction: Strings
  - MUS 314 - Winds and Percussion
  - MUS 315 - Applied Instruction: Voice
  - MUS 316 - Applied Instruction: Classical Guitar  
including at least three credits from the following:
  - MUS 412 - Applied Instruction: Piano
  - MUS 413 - Applied Instruction: Strings
  - MUS 414 - Applied Instruction: Winds and Percussion
  - MUS 415 - Applied Instruction: Voice
  - MUS 416 - Applied Instruction: Classical Guitar
- Entrance by performance audition—student must expect to achieve upper-division applied instruction by the sophomore year.
- Applied music on major instrument or voice: MUS 212-216; 312-316; 412-416 (minimum 30 credits); including at least three credits in courses numbered 412-416
- Chamber Music: minimum 4 quarters (4-8 credits) selected from MUS 275, 278, 280, 281, 283, 284, 475, 478, 480, 481, 483, 484, 485
- Conducting: MUS 351 (2 credits)
- Advanced Applied Pedagogy: MUS 466 (minimum 4 credits)
- Junior Recital (required performance; prerequisite for Senior Recital; not a course; schedule with approval of Applied Instructor; see Music Advisor).
- Senior Recital: MUS 499 (3 credits)
- Electives: 8 credits minimum selected under advisement. Piano student must take Applied Music Literature – MUS 467 (6 credits minimum). Voice students will take Voice Studies – MUS 166A & 166B (5 credits), and Vocal Diction – MUS 366A, 366B, and 366C (3 credits). Guitar students must take Fretboard Harmony – MUS 367 (minimum 1 credit), and Introduction to Guitar Repertory – MUS 467A and 467B (4 credits minimum).

*\*\*\* Piano students will take a combination of major performing ensemble and MUS 276/476 (piano accompanying) as follows: Performance – three quarters major performing ensemble, remaining quarters piano accompanying. Guitar students as follows: six quarters Major Performance Ensemble (MUS 271 or 471); three quarters of Collegium (MUS 280 or 480); and three quarters of Guitar ensemble (MUS 281N or 481).*

## Music, BA

### 60 Credits

#### Introduction

The Bachelor of Arts is the liberal arts degree program in music. The curriculum, providing 40 credits of free electives and 70 credits of General University Requirements, allows for individual preferences in intensifying studies in certain aspects of music and broadening the scope of academic pursuits.

#### Admission and Declaration Process

Admission to Program ([see Music Dept page](#))

## **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

## **Requirements**

- MUS 099 - Concert Attendance Required for every quarter in residence. Minimum 8 concert programs or ticket stubs required.
- MUS 121 - Aural and Keyboard Skills I
- MUS 122 - Theoretical and Analytical Skills I
- MUS 123 - Aural and Keyboard Skills I
- MUS 124 - Theoretical and Analytical Skills I
- MUS 125 - Aural and Keyboard Skills I
- MUS 126 - Theoretical and Analytical Skills I
- MUS 221 - Aural and Keyboard Skills II
- MUS 222 - Theoretical and Analytical Skills II
- MUS 223 - Aural and Keyboard Skills II
- MUS 224 - Theoretical and Analytical Skills II
- MUS 225 - Aural and Keyboard Skills II
- MUS 226 - Theoretical and Analytical Skills II
- MUS 341 - History of Music to 1600
- MUS 342 - History of Music 1600-1830
- MUS 343 - History of Music 1830-Present
  - Nine credits from:
  - MUS 105 - Music in the Western World
  - MUS 205 - Survey of Non-Western Musical Cultures
  - MUS 231 - Elementary Composition
  - MUS 322 - Form and Analysis: Music to 1900
  - MUS 324A - Modal Counterpoint
  - MUS 324B - Tonal Counterpoint
  - MUS 326 - Orchestration/Arranging
  - MUS 328A - Midi Notation and Sequencing for Music Education
  - MUS 328B - Midi Notation and Sequencing for Composition
  - MUS 331 - Composition
  - MUS 334 - Jazz Improvisation I
  - MUS 335 - Jazz Improvisation II
  - MUS 336 - Jazz Improvisation III
  - MUS 422 - Analytical Techniques: 20th-Century Music
  - MUS 431 - Composition
  - MUS 434 - Jazz Arranging I
  - MUS 435 - Jazz Arranging II
  - MUS 436 - Jazz Arranging III
  - MUS 442 - Seminar in Music History
  - MUS 443A - History of Musical Genres: Choral Music
  - MUS 443B - History of Musical Genres: Solo Song
  - MUS 443C - History of Musical Genres: Opera
  - MUS 443D - History of Musical Genres: Keyboard Music
  - MUS 443E - History of Musical Genres: Chamber Music

- MUS 443F - History of Musical Genres: Symphonic Music
- MUS 443G - History of Musical Genres: Concerto
- MUS 443H - History of Musical Genres: Symphonic Music in the 20th Century
- MUS 443I - History of Musical Genres: Opera I
- MUS 443J - History of Musical Genres: Opera II
  - Applied music on major instrument or voice: 6 credits minimum. *Additional course credits in applied music instruction beyond the required minimum of 6 may be obtained under the advisement of the appropriate area coordinator.*
  - Major Performance Ensemble: 12 credits minimum\*\*  
*\*\*Pianists will take three quarters of major performing ensemble and three quarters of Mus 276 and/or 476 (piano accompanying).*

## Music, Thesis, MMus

### Graduate Faculty

**Bianco, Christopher**, DMA, wind, ensemble, conducting.

**Briggs, Roger D.**, PhD, composition, orchestra.

**Donnellan, Grant**, MMus, violin.

**Feingold, David**, MMus, guitar, Chair.

**Friesen, John**, DMA, cello, chamber music.

**Gilliam, Jeffrey**, MMus, piano, piano accompanying.

**Guelker-Cone, Leslie**, DMA, choral music, conducting.

**Hamilton, Bruce**, DMus, composition, theory/analysis, electro-acoustic music.

**Israels, Chuck**, BA, jazz studies, ensembles, string bass.

**Jelaca-Jovanovic, Milica**, DMA, piano, piano literature, piano pedagogy.

**Meyer, David**, DMus, voice, voice pedagogy, opera production.

**Rutschman, Carla**, PhD, low brass, musicology, brass pedagogy.

**Rutschman, Edward R.**, PhD, musicology, graduate program advisor, theory/ analysis, counterpoint.

**Schwede, Walter**, MMus, violin, chamber music.

**Sommer, Lesley**, DM, composition, theory/analysis.

**Van Boer, Bertil H.**, PhD, musicology.

**Zoro, Eugene S.**, MMus, clarinet, woodwind pedagogy, chamber music.

Program Advisor: Dr. Edward Rutschman, Performing Arts Center 147, (360) 650-3889.

### Introduction

The Master of Music degree consists of a core of courses which serve as a common foundation and a set of more specialized courses in one of five concentrations: composition, music history and literature, performance, conducting and music education. The degree may be used as a preparation for doctoral studies in music, or it may serve as a terminal degree. Minimum credits for each concentration is 45.

The *composition concentration* includes course work in composition, music history, and music theory as well as a thesis (original composition). Ensembles, studio instruction, and course work in conducting are also available.

The *music history and literature concentration* includes seminars in music history, work in notation, courses in music theory, performance with the Collegium Musicum, and a written thesis.

The *performance concentration* includes vocal or instrumental studio instruction, work with small and large ensembles, a recital to satisfy the thesis requirement, and course work in music history and music theory. Pianists may emphasize solo performance or accompanying. Studies in jazz areas are available.

The *conducting concentration* includes course work in conducting, music history, and music theory, and a conducting practicum to fulfill the thesis requirement. Ensembles and studio instruction are also available.

The *music education concentration* includes courses in music education, music history and music theory courses in the College of Education or the Department of Psychology. Ensembles and studio instruction are also available. The thesis can be a written project, a recital or a conducting practicum.

## **Goals**

To prepare students for professional-level work in music, as performers (singers, instrumentalists or conductors), composers, scholars, educators, or in a combination of these areas.

### *Prerequisites and Examinations*

*Prerequisite for admission to the MMus program is a BMus degree or its equivalent.*

Students in the *Composition* concentration must submit at least three original compositions for evaluation.

Students in the *Performance* concentration must audition before a faculty committee or submit tape recorded performance for evaluation. Vocal performers must demonstrate competence in German, French and Italian diction.

Students in the *History and Literature* concentration must demonstrate strength in that area by interview with appropriate faculty members.

Students in the *Conducting* concentration must demonstrate ability and experience in conducting by interview with appropriate faculty members. In addition, they must prepare a curricular proposal for approval by an appropriate faculty committee.

Students in the *Music Education* concentration must prepare a curricular proposal for approval by an appropriate faculty committee, subject to final approval by the department.

*Placement examinations* in music theory and music history must be taken prior to beginning the program. Courses necessary to remove deficiencies are not credited toward the degree.

*The Graduate Record Examination.* The General Test is required. Scores should be sent to the WWU Graduate School along with other application materials.

### **Basic Requirements for All Concentrations (minimum 45 credits)**

- MUS 541 - History/Analysis: Music to 1600 (4)
- MUS 542 - History/Analysis: Music from 1600-1830 (4)
- MUS 543 - History/Analysis: Music from 1830-Present (4)
- MUS 503 - Introduction to Graduate Study of Music (4)
- MUS 532 - Analytical Techniques: 20th-Century Musical Practices (3)
- MUS 533 - Analytical Techniques: 19th-Century Musical Styles and Practices (3)
- MUS 690 - Thesis (6)

All students admitted to graduate study must register for at least one course in the area of basic requirements during each quarter of enrollment until those requirements are fulfilled.

Candidates for the Master of Music degree must successfully complete a final oral exam.

## **Requirements and Electives for Each Concentration**

### **Composition Concentration**

- MUS 534 - Composition (12)
- Electives (5)

### **History and Literature Concentration**

- Select two from: (6)
- MUS 443A - History of Musical Genres: Choral Music
- MUS 443B - History of Musical Genres: Solo Song
- MUS 443C - History of Musical Genres: Opera
- MUS 443D - History of Musical Genres: Keyboard Music
- MUS 443E - History of Musical Genres: Chamber Music
- MUS 443F - History of Musical Genres: Symphonic Music
- MUS 443G - History of Musical Genres: Concerto
- MUS 443H - History of Musical Genres: Symphonic Music in the 20th Century
- MUS 443I - History of Musical Genres: Opera I
- MUS 443J - History of Musical Genres: Opera II
- MUS 441 - Notation (3)
- MUS 540 - Advanced Collegium Musicum [for three quarters] (6)
- MUS 550 - Seminar in the History of Music (3)

Students in history and literature concentration must pass a reading exam in French or German.

### **Performance Concentration**

- One of the following courses in each of three quarters (6 credits):
  - MUS 540 - Advanced Collegium Musicum
  - MUS 574 - Jazz Ensembles
  - MUS 575 - Chamber Jazz Ensembles
  - MUS 578 - Opera Production
  - MUS 581 - Applied Chamber Music
  - MUS 583 - Chamber Vocal Ensembles
  - or any approved 400-level or 500-level course(s)
- 9 credits from:
  - MUS 511 - Individual Instruction: Advanced Organ
  - MUS 512 - Individual Instruction: Advanced Piano
  - MUS 513 - Individual Instruction: Advanced Strings
  - MUS 514 - Individual Instruction: Advanced Orchestral Winds and Percussion
  - MUS 515 - Individual Instruction: Advanced Voice
  - MUS 518 - Individual Instruction: Applied Jazz
  - MUS 576 - Accompanying
- Electives (2)

## **Conducting Concentration (Choral Conducting, Orchestral Conducting, Band Conducting)**

- Conducting Studies (9-17)**
  - MUS 501 - Instrumental Conducting and Rehearsal Techniques
  - MUS 502 - Choral Conducting and Literature
  - MUS 519 - Individual Instruction - Advanced Applied Conducting  
and approved 400-level and/or 500-level course(s)
- Basic Musicianship (0-9) Courses to be selected from the following (any not selected under Basic Requirements):**
  - MUS 541 - History/Analysis: Music to 1600
  - MUS 542 - History/Analysis: Music from 1600-1830
  - MUS 543 - History/Analysis: Music from 1830-Present  
MUS 544
  - MUS 550 - Seminar in the History of Music
  - MUS 531 - Arranging
  - MUS 534 - Composition  
and approved 400-level and/or 500-level course(s)
- Applied Music (0-9)**
  - MUS 511 - Individual Instruction: Advanced Organ
  - MUS 512 - Individual Instruction: Advanced Piano
  - MUS 513 - Individual Instruction: Advanced Strings
  - MUS 514 - Individual Instruction: Advanced Orchestral Winds and Percussion
  - MUS 515 - Individual Instruction: Advanced Voice
  - MUS 518 - Individual Instruction: Applied Jazz  
and/or approved 411-418 course(s)
- Ensemble (0-9)**  
Approved 400-level and/or 500-level ensemble course(s)

## **Music Education Concentration (Instrumental Music Supervision, Choral Music Supervision, Choral Conducting, Orchestral Conducting, Band Conducting)**

- Professional Understandings/Techniques (6-9)**  
Courses to be selected from the following:
  - MUS 501 - Instrumental Conducting and Rehearsal Techniques
  - MUS 502 - Choral Conducting and Literature
  - MUS 525 - Brass and Percussion Techniques and Materials  
or any approved 400-level or 500-level course(s)
- Basic Musicianship (3-9)**  
Courses to be selected from the following: (any not elected under Basic Requirements)
  - MUS 531 - Arranging
  - MUS 534 - Composition
  - MUS 541 - History/Analysis: Music to 1600
  - MUS 542 - History/Analysis: Music from 1600-1830
  - MUS 543 - History/Analysis: Music from 1830-Present  
MUS 544
  - MUS 550 - Seminar in the History of Music  
or any approved 400-level or 500-level course(s)
- Applied Music (0-9)**
  - MUS 511 - Individual Instruction: Advanced Organ

- MUS 512 - Individual Instruction: Advanced Piano
  - MUS 513 - Individual Instruction: Advanced Strings
  - MUS 514 - Individual Instruction: Advanced Orchestral Winds and Percussion
  - MUS 515 - Individual Instruction: Advanced Voice
  - MUS 518 - Individual Instruction: Applied Jazz  
or approved 411-418
- Ensemble (0-9)  
Approved 400-level or 500-level ensemble course(s)
- Guided electives in professional education in education or psychology (3-9)

# Theatre and Dance

## Introduction

### Department Mission Statement

The faculty and staff of the theatre and dance department are committed to a liberal arts approach to performing arts education while maintaining a balance of both academic and practical approaches to the arts of theatre and dance. We believe strongly in the value of academic rigor, which in turn supports and maintains productions and projects of the highest standards. We promote a global, diverse and collaborative view of performing arts education, and strive to train artistic leaders in their chosen disciplines who will further contribute to the craft.

#### *Program Description: Theatre*

Theatre offers a Bachelor of Arts as well as endorsements and degrees in Theatre Education and Language Arts in conjunction with Woodring College of Education. Each theatre arts major is grounded in generalist fundamentals and chooses one or more areas of specialization (acting, directing, dramatic writing, educational theatre, technical theatre, design and/or management). In addition to preparing majors for careers in academic or professional theatre, the lessons acquired through this course of study are readily transferable to careers in teaching, law, business, social services and other areas where inter- and intrapersonal skills are required.

The following areas of knowledge are central to the undergraduate degree in theatre arts:

- Major works of dramatic literature representative of diverse cultures
- The history of theatrical production - its styles, conventions and social context - from the ancients to the present day
- The means by which theatrical production is realized
- The role of theatre in shaping our past, present and future

In addition, students completing a degree in theatre arts will possess the ability to:

- Analyze and interpret dramatic literature and performance from the standpoint of designer, performer, director, playwright or critic
- Safely and efficiently use the tools and equipment basic to theatrical production
- Function effectively as a member of a collaborative team in the preparation and realization of a public performance

Assessment of these competencies is accomplished through individual course performance as well as a final evaluation of each student via a senior project, which may include the presentation of a written thesis, performance project or portfolio. Projects vary by student specialization and interests.

#### *Program Description: Dance*

Dance offers a Bachelor of Arts and a Bachelor of Fine Arts as well as a Dance Minor and a Teaching Endorsement in conjunction with Woodring College of Education.

Entry into the BA/BFA is by audition. Completion of the program is dependent upon successful progress through the curriculum. The BA is a broadly-based degree, with a liberal arts orientation, and is designed for students with a general rather than career interest in performing or choreographing. BA candidates will focus on pedagogical and historic aspects of dance. The BFA degree is a highly selective program which trains exceptionally committed, disciplined, and talented students. The BFA degree also requires recommendation of faculty members.

The Dance Program expects achievement in the following competencies by graduating majors in both the BA and BFA. Our students will:

- Develop proficiency in modern dance technique
- Develop competency in ballet technique
- Become familiar with the history of dance and enhance writing skills by using this knowledge
- Gain expanded diversity awareness through the cultural dimensions of dance
- Understand alignment and anatomy as they relate to dancers
- Explore their choreographic potential in traditional and/or experimental approaches
- Learn the basic skills and operations of technical theatre related to dance production
- Have multiple performing opportunities in different venues

Assessment of these competencies is accomplished through individual course performance, completion of degree requirements, and in part by successful audition and casting in faculty directed events. BFA candidates will be expected to participate in a culminating Capstone course and presentation as choreographers and as featured dancers.

### **Faculty**

**DEBORAH CURRIER** (2003) Chair and Associate Professor. BA, California State University; MA, PhD, University of Oregon.

**CHER CARNELL** (1996) Associate Chair. Senior Instructor, BA University of Wisconsin; MEd, Western Washington University.

**RICH BROWN** (2006) Assistant Professor. BA, MA, Central Missouri State University; PhD, University of Oregon.

**NOLAN DENNETT** (1989) Professor. BA, Brigham Young University; MA, Western Washington University.

**CHARLOTTE GUYETTE** (2009) Associate Professor. BFA, Utah State; MFA Pennsylvania State University.

**DANIEL G. GUYETTE** (2009) Dean and Professor. BS, Northwestern University; MFA, Pennsylvania State University.

**PENNY HUTCHINSON** (2005) Assistant Professor. BA, Vermont College; MFA, Mills College.

**MARK KUNTZ** (1997) Associate Professor. BA, University of Washington; MFA, University of Oregon.

**JAMES E. LORTZ** (1989) Associate Professor. BFA, MFA, University of Montana.

**PERRY F. MILLS** (1981) Associate Professor. BA. Western Washington State College; MA, Western Washington University.

**MAUREEN E. O'REILLY** (1983) Professor. BA, Whitman College; MA, University of Washington; MFA, University of Cincinnati.

**GREGORY LAWRENCE PULVER** (2000) Associate Professor. BA, MFA, Humboldt State University.

**DAVID SAXTON** (2009) Assistant Professor. BFA, Carnegie-Mellon University

**MARCUS TODD** (2009) Production Manager/Technical Director. BA, Eastern Washington University; MFA, Kent State.

**JOHN 'J' WIESE** (2010) Assistant Professor. BFA, Longwood University; MFA, Boston University School of the Arts.

### **Adjunct Faculty**

**MIKE BAJUK** (2004) Senior Instructor and Dance Musical Director. BM, Western Washington University; MS, University of Indiana-Purdue.

**VANESSA DAINES** (2009) Instructor, BFA Western Washington University.

**PATRICK DIZNEY** (2004) Senior Instructor. BA, Eastern Oregon University; MFA, University of Washington.

**KENDALL HAGENSEN** (2009) Instructor. BA, Western Washington University.

**SUSAN HAINES** (2005) Instructor. BA, Radford University; MFA, University of North Carolina-Greensboro.

**PAM KUNTZ** (1999) Senior Instructor. BFA, University of Montana; MFA, Boston Conservatory.

**RICK MERRILL** (2005) Instructor.

**CYNTHIA SHEPARD** (2008) Instructor. BA, California State University-Fullerton; MA, Immaculate Heart College-Los Angeles

**BRIAN SIBLEY** (2009) Lecturer. BA, University of Montana

### **Application Requirements: Theatre**

A student may declare a major in Theatre Arts after completion of 12 credits or more in theatre coursework, or by permission of the department chair.

## **Application Requirements: Dance**

A student may declare a major in Dance after placement in Modern Dance I and with the permission of the departmental advisor.

### **Undergraduate Degrees and Programs**

Theatre, BA

Theatre Arts - P-12, BAE

Theatre Arts P-12, Additional Teaching Endorsement

Theatre Minor

Dance, BA

Dance, BFA

Dance Minor

Dance with a Teaching Endorsement, BA

Dance with a Teaching Endorsement, BFA

Dance Additional Teaching Endorsement

### **Graduate Degrees and Programs**

Theatre, MA

## **Dance Additional Teaching Endorsement**

**21 credits**

### **Introduction**

Students completing a teacher certification program and endorsable major in a subject other than Dance may qualify for an additional endorsement in Dance by completing requirements listed below. See the Woodring College of Education Secondary Teacher Education Program link below for more information on teacher certification programs and approved majors.

### **Grade Requirements**

Dance courses required for a state teaching endorsement and courses in the secondary education professional program must be completed with a grade of C (2.0) or better.

### **Requirements**

- DNC 101 - Open Ballet
- DNC 102 - Open Modern Dance
- DNC 231 - Introduction to Dance in Western Cultures
- DNC 232 - Movement and Culture
- DNC 253
  - DNC 334 - Music and Movement
  - DNC 339 - Functional Alignment
  - DNC 433 - Creative Movement for Educators With Lab

## **Additional Requirements**

### **Secondary Education Professional Program Requirements (68 credits)**

- EDUC 301 - Educational Psychology I: Development and Individual Differences
- EDUC 302 - Educational Psychology II: Motivation, Learning and Assessment
- EDUC 310 - The Teacher and the Social Order
- IT 444 - Classroom Use of Instructional Technology (Secondary)
- SEC 410 - Dynamics of Teaching
- SEC 411 - Philosophical Foundations of Education
- SEC 425 - Developmental Reading, Writing and Learning in Secondary Schools
- SEC 430 - Secondary School Methods I - Instructional Strategies, Daily Planning, and Standards
- SEC 431 - Secondary School Methods II-Assessment and Long Term Planning
- SEC 432 - Secondary School Methods III - Management, Motivation and Discipline
- SEC 433 - Peer Teaching Laboratory
- SEC 435 - Middle Level Practicum
- SEC 436 - Secondary School Practicum
- SEC 495 - Internship - Secondary
- SPED 363 - Secondary Students With Special Needs

## **Dance Minor**

**33-34 credits**

### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

### **Requirements**

- DNC 121 - Modern Dance I - Level 1
- DNC 122 - Modern Dance I - Level 2
- DNC 123 - Modern Dance I - Level 3
- DNC 211 - Ballet II - Level 1
- DNC 221 - Modern Dance II - Level 1
- DNC 222 - Modern Dance II - Level 2
- DNC 223 - Modern Dance II - Level 3
- DNC 231 - Introduction to Dance in Western Cultures
- DNC 251 - Dance Production I
- DNC 252 - Dance Production II
- DNC 257 - Performance
- DNC 339 - Functional Alignment
- One course from
  - DNC 232 - Movement and Culture
  - DNC 311 - Ballet III - Level 1
  - DNC 312 - Ballet III - Level 2
  - DNC 313 - Ballet III - Level 3

- DNC 321 - Modern Dance III - Level 1
- DNC 340 - Anatomy for Dancers
- DNC 342 - Choreography II
- DNC 434 - Dance Arts in Education
- DNC 442 - Advanced Choreography
- THTR 210 - Foundations in Design Communication
- THTR 212 - Introduction to Stage Technology
- THTR 216 - Introduction to Costuming  
or electives under advisement

## **Dance with a Teaching Endorsement, BA**

### **Introduction**

The BA and BFA Dance majors lead to a baccalaureate degree without teacher certification. To receive a recommendation for state of Washington teacher certification, students must also complete the teacher certification program offered by the Department of Secondary Education as one of the following:

- A part of the undergraduate baccalaureate degree
- A post-baccalaureate program
- A part of the Master in Teaching program

See the Secondary Education link below for program admission, completion, and teacher certification requirements.

### **Grade Requirements**

Students must earn a grade of C (2.0) or better in the secondary education professional program and in all courses required for the endorsement.

### **Requirements**

This endorsement must be taken with the following major:

- Dance, BA

### **Additional Requirements**

#### **Secondary Education Professional Program Requirements (68 credits)**

- EDUC 301 - Educational Psychology I: Development and Individual Differences
- EDUC 302 - Educational Psychology II: Motivation, Learning and Assessment
- EDUC 310 - The Teacher and the Social Order
- IT 444 - Classroom Use of Instructional Technology (Secondary)
- SEC 410 - Dynamics of Teaching
- SEC 411 - Philosophical Foundations of Education
- SEC 425 - Developmental Reading, Writing and Learning in Secondary Schools
- SEC 430 - Secondary School Methods I - Instructional Strategies, Daily Planning, and Standards
- SEC 431 - Secondary School Methods II-Assessment and Long Term Planning
- SEC 432 - Secondary School Methods III - Management, Motivation and Discipline
- SEC 433 - Peer Teaching Laboratory

- SEC 435 - Middle Level Practicum
- SEC 436 - Secondary School Practicum
- SEC 495 - Internship - Secondary
- SPED 363 - Secondary Students With Special Needs

## **Dance with a Teaching Endorsement, BFA**

### **Introduction**

The BA and BFA Dance majors lead to a baccalaureate degree without teacher certification. To receive a recommendation for state of Washington teacher certification, students must also complete the teacher certification program offered by the Department of Secondary Education as one of the following:

- A part of the undergraduate baccalaureate degree
- A post-baccalaureate program
- A part of the Master in Teaching program

See the Secondary Education link below for program admission, completion, and teacher certification requirements.

### **Grade Requirements**

Students must earn a grade of C (2.0) or better in the secondary education professional program and in all courses required for the endorsement.

### **Requirements**

This endorsement must be taken with the following major:

- Dance, BFA

### **Additional Requirements**

#### **Secondary Education Professional Program Requirements (68 credits)**

- EDUC 301 - Educational Psychology I: Development and Individual Differences
- EDUC 302 - Educational Psychology II: Motivation, Learning and Assessment
- EDUC 310 - The Teacher and the Social Order
- IT 444 - Classroom Use of Instructional Technology (Secondary)
- SEC 410 - Dynamics of Teaching
- SEC 411 - Philosophical Foundations of Education
- SEC 425 - Developmental Reading, Writing and Learning in Secondary Schools
- SEC 430 - Secondary School Methods I - Instructional Strategies, Daily Planning, and Standards
- SEC 431 - Secondary School Methods II-Assessment and Long Term Planning
- SEC 432 - Secondary School Methods III - Management, Motivation and Discipline
- SEC 433 - Peer Teaching Laboratory
- SEC 435 - Middle Level Practicum
- SEC 436 - Secondary School Practicum
- SEC 495 - Internship - Secondary
- SPED 363 - Secondary Students With Special Needs

## **Dance, BA**

**80-84 credits**

### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

### **Requirements**

- DNC 121 - Modern Dance I - Level 1
- DNC 122 - Modern Dance I - Level 2
- DNC 123 - Modern Dance I - Level 3
- DNC 211 - Ballet II - Level 1
- DNC 212 - Ballet II - Level 2
- DNC 213 - Ballet II - Level 3
- DNC 221 - Modern Dance II - Level 1
- DNC 222 - Modern Dance II - Level 2
- DNC 223 - Modern Dance II - Level 3
- DNC 231 - Introduction to Dance in Western Cultures
- DNC 232 - Movement and Culture
- DNC 242 - Choreography I
- DNC 251 - Dance Production I
- DNC 252 - Dance Production II
- DNC 257 - Performance
- DNC 321 - Modern Dance III - Level 1
- DNC 322 - Modern Dance III - Level 2
- DNC 323 - Modern Dance III - Level 3
- DNC 339 - Functional Alignment
- DNC 340 - Anatomy for Dancers
- DNC 342 - Choreography II
- DNC 357 - Repertory
- DNC 431 - History of Western Dance Since 1450
- DNC 433 - Creative Movement for Educators With Lab
- DNC 434 - Dance Arts in Education
- THTR 212 - Introduction to Stage Technology
- One course from:
  - THTR 216 - Introduction to Costuming
  - THTR 314 - Stage Management

## **Dance, BFA**

**102-112 credits**

### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

## Requirements

- DNC 121 - Modern Dance I - Level 1
- DNC 122 - Modern Dance I - Level 2
- DNC 123 - Modern Dance I - Level 3
- DNC 221 - Modern Dance II - Level 1
- DNC 222 - Modern Dance II - Level 2
- DNC 223 - Modern Dance II - Level 3
- DNC 231 - Introduction to Dance in Western Cultures
- DNC 232 - Movement and Culture
- DNC 242 - Choreography I
- DNC 251 - Dance Production I
- DNC 252 - Dance Production II
- DNC 257 - Performance
- DNC 321 - Modern Dance III - Level 1
- DNC 322 - Modern Dance III - Level 2
- DNC 323 - Modern Dance III - Level 3
- DNC 339 - Functional Alignment
- DNC 340 - Anatomy for Dancers
- DNC 342 - Choreography II
- DNC 345 - Fundamentals of Contemporary Partnering
- DNC 357 - Repertory
- DNC 403 - Senior Seminar
- DNC 404 - Capstone Preparation
- DNC 421 - Modern Dance IV - Level 1
- DNC 422 - Modern Dance IV - Level 2
- DNC 423 - Modern Dance IV - Level 3
- DNC 431 - History of Western Dance Since 1450
- DNC 434 - Dance Arts in Education
- DNC 442 - Advanced Choreography
- THTR 212 - Introduction to Stage Technology
- 12-18 credits from:
  - DNC 211 - Ballet II - Level 1
  - DNC 212 - Ballet II - Level 2
  - DNC 213 - Ballet II - Level 3
  - DNC 311 - Ballet III - Level 1
  - DNC 312 - Ballet III - Level 2
  - DNC 313 - Ballet III - Level 3
- Select one from the following:
  - THTR 216 - Introduction to Costuming
  - THTR 314 - Stage Management

## Theatre Arts - P-12, BAE

### 52 Credits

#### Introduction

This major must be accompanied by the professional preparation program in secondary education. See the Secondary Education section of this catalog for program admission, completion, and teacher certification requirements. Completion of this major leads to an endorsement in theatre arts.

#### Grade Requirements

A grade of C (2.0) or better is required for courses in the secondary education professional program and all courses required for the endorsement.

#### Requirements

- THTR 101 - Introduction to the Art of the Theatre
- THTR 160 - Introduction to Acting
- THTR 210 - Foundations in Design Communication  
 THTR 211
- THTR 212 - Introduction to Stage Technology
- THTR 213 - Stage Technology Practicum
- THTR 216 - Introduction to Costuming
- THTR 228 - Understanding Plays
- THTR 255 - Theatre Production: Technology
- THTR 314 - Stage Management
- THTR 350 - Theatre for Youth
- THTR 351 - Creativity Across the Curriculum
- THTR 355 - Intermediate Theatre Technology
- THTR 370 - Play Direction
- THTR 384 - Introduction to Dramatic Writing
- THTR 428 - Major Dramatists
- THTR 452 - Secondary Theatre Techniques
- THTR 496 - Senior Project

#### Secondary Education Professional Program Requirements (68 credits)

- EDUC 301 - Educational Psychology I: Development and Individual Differences
- EDUC 302 - Educational Psychology II: Motivation, Learning and Assessment
- EDUC 310 - The Teacher and the Social Order
- IT 444 - Classroom Use of Instructional Technology (Secondary)
- SEC 410 - Dynamics of Teaching
- SEC 411 - Philosophical Foundations of Education
- SEC 425 - Developmental Reading, Writing and Learning in Secondary Schools
- SEC 430 - Secondary School Methods I - Instructional Strategies, Daily Planning, and Standards
- SEC 431 - Secondary School Methods II-Assessment and Long Term Planning
- SEC 432 - Secondary School Methods III - Management, Motivation and Discipline

- SEC 433 - Peer Teaching Laboratory
- SEC 435 - Middle Level Practicum
- SEC 436 - Secondary School Practicum
- SEC 495 - Internship - Secondary
- SPED 363 - Secondary Students With Special Needs

## **Theatre Arts P-12, Additional Teaching Endorsement**

### **29-30 Credits**

#### **Introduction**

Completion of the following courses leads to an additional endorsement in theatre arts when accompanied by a first endorsement in another content area. See the Theatre Arts Education advisor for additional suggested reading resources. To receive a recommendation for state of Washington teacher certification, students must complete a professional preparation program. See the Elementary and Secondary Education sections of this catalog for program admission, completion, and teacher certification requirements.

#### **Grade Requirements**

Course required for a state teaching endorsement must be completed with a grade of C (2.0) or better.

#### **Requirements**

- THTR 101 - Introduction to the Art of the Theatre
- THTR 160 - Introduction to Acting  
 THTR 211
- THTR 212 - Introduction to Stage Technology
- THTR 228 - Understanding Plays
- THTR 255 - Theatre Production: Technology
- THTR 314 - Stage Management
- THTR 351 - Creativity Across the Curriculum
- THTR 370 - Play Direction  
 One course from:
- THTR 350 - Theatre for Youth (elementary-29 credits)
- THTR 452 - Secondary Theatre Techniques (secondary-30 credits)

#### **Elementary Education Professional Program Requirements (106 credits)**

##### **Professional Studies Core (25 credits)**

- EDUC 301 - Educational Psychology I: Development and Individual Differences
- EDUC 302 - Educational Psychology II: Motivation, Learning and Assessment
- EDUC 310 - The Teacher and the Social Order
- ELED 370 - Introduction to Teaching
- IT 344 - Basic Instructional Technology Skills

- IT 442 - Classroom Use of Instructional Technology (Elementary)
- SPED 364 - Teaching All Students

#### **Elementary Program — Methods, Curriculum Content, and Field Experiences (81 credits)**

- ART 380 - Art Educating the Child
- ELED 425 - Social Studies for the Elementary School
- ELED 470 - Developing Teaching
- ELED 471 - Documenting Teaching
- ELED 480 - Literacy: Beginning Communicators
- ELED 481 - Literacy: Fluent Communicators
- ELED 491 - September Experience
- ELED 492 - Practicum: Experience in Literacy Methods
- ELED 494 - Internship - Elementary
- HLED 455 - Health Education Grades K-8
- MATH 381 - Teaching K-8 Mathematics I
- MATH 382 - Teaching K-8 Mathematics II
- MATH 383 - Teaching K-8 Mathematics III
- MATH 491 - Internship Seminar - Teaching K-8 Mathematics
- MUS 361 - Music for Elementary Teachers
- PE 345 - Physical Education for Elementary School
- SCED 480 - Science Methods and Curriculum for the Elementary School
- SCED 490 - Laboratory/Field Experience in Elementary Science
- SPED 430 - Problem Solving for Diverse Needs

#### **Secondary Education Professional Program Requirements (68 credits)**

- EDUC 301 - Educational Psychology I: Development and Individual Differences
- EDUC 302 - Educational Psychology II: Motivation, Learning and Assessment
- EDUC 310 - The Teacher and the Social Order
- IT 444 - Classroom Use of Instructional Technology (Secondary)
- SEC 410 - Dynamics of Teaching
- SEC 411 - Philosophical Foundations of Education
- SEC 425 - Developmental Reading, Writing and Learning in Secondary Schools
- SEC 430 - Secondary School Methods I - Instructional Strategies, Daily Planning, and Standards
- SEC 431 - Secondary School Methods II-Assessment and Long Term Planning
- SEC 432 - Secondary School Methods III - Management, Motivation and Discipline
- SEC 433 - Peer Teaching Laboratory
- SEC 435 - Middle Level Practicum
- SEC 436 - Secondary School Practicum
- SEC 495 - Internship - Secondary
- SPED 363 - Secondary Students With Special Needs

## Theatre Minor

### 30 Credits

#### Grade Requirements

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

#### Requirements

- THTR 101 - Introduction to the Art of the Theatre
- THTR 160 - Introduction to Acting
- THTR 212 - Introduction to Stage Technology
- THTR 228 - Understanding Plays
- THTR 370 - Play Direction
- One course from:
  - THTR 380 - Theatre History I
  - THTR 381 - Theatre History II
  - THTR 382 - Theatre History III
  - THTR 428 - Major Dramatists
- One course from:
  - THTR 213 - Stage Technology Practicum
  - THTR 216 - Introduction to Costuming
  - THTR 260 - Acting Studio I: Theory
  - THTR 314 - Stage Management
  - THTR 384 - Introduction to Dramatic Writing
- Electives under advisement

## Theatre, BA

### 68 Credits

#### Grade Requirements

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

#### Requirements

- THTR 101 - Introduction to the Art of the Theatre
- THTR 212 - Introduction to Stage Technology
- THTR 213 - Stage Technology Practicum
- THTR 216 - Introduction to Costuming
- THTR 228 - Understanding Plays
- THTR 255 - Theatre Production: Technology
- THTR 355 - Intermediate Theatre Technology
- THTR 370 - Play Direction
- THTR 380 - Theatre History I
- THTR 381 - Theatre History II

- THTR 382 - Theatre History III
- THTR 384 - Introduction to Dramatic Writing
- THTR 496 - Senior Project
- One course from:
  - THTR 160 - Introduction to Acting
  - THTR 260 - Acting Studio I: Theory
- Two topics courses selected from:
  - THTR 428 - Major Dramatists
- Acting:
  - THTR 260 - Acting Studio I: Theory
- THTR 261 - Acting Studio I: Scene Study
- THTR 264 - Movement Studio I: Grotowski
- THTR 360 - Acting Studio II: Physical Interpretation of a Role
- THTR 361 - Acting Studio II: Vocal Interpretation of a Role
- THTR 364 - Movement Studio II: Suzuki/Viewpoints
- Directing:
  - THTR 210 - Foundations in Design Communication
  - THTR 314 - Stage Management
  - THTR 470 - Play Direction II

9 credits under advisement
- Dramatic Writing:
  - THTR 485 - Dramatic Writing Workshop
  - THTR 486 - Dramatic Writing Workshop
  - THTR 487 - Dramatic Writing Workshop

7 credits under advisement
- Educational Theatre:
  - THTR 350 - Theatre for Youth
  - THTR 351 - Creativity Across the Curriculum
  - THTR 450 - Theatre for Youth II
  - THTR 452 - Secondary Theatre Techniques

plus 6 credits under advisement
- Technical Theatre:
  - THTR 210 - Foundations in Design Communication
  - THTR 310 - Scene Painting
  - THTR 313 - Beginning Lighting Design
  - THTR 314 - Stage Management
  - THTR 320 - Computer Drafting and Design for the Theatre
  - THTR 455 - Advanced Production and Design
- Theatre Management:
  - THTR 210 - Foundations in Design Communication
  - THTR 314 - Stage Management
  - THTR 414 - Theatre Business Practices
  - ACCT 240 - Financial Accounting

5 credits under advisement
- Stage Management:
  - THTR 210 - Foundations in Design Communication
  - THTR 311 - Beginning Scene Design
  - THTR 313 - Beginning Lighting Design
  - THTR 314 - Stage Management

THTR 320 - Computer Drafting and Design for the Theatre

THTR 414 - Theatre Business Practices

THTR 455 - Advanced Production and Design

Costume Design:

THTR 210 - Foundations in Design Communication

- THTR 215 - Stage Make-Up

THTR 313 - Beginning Lighting Design

- THTR 316 - Beginning Costume Design

- THTR 383 - Costume History

- THTR 416 - Advanced Costume Design

THTR 420 - Advanced Theatre Design and Portfolio Development

Lighting Design:

THTR 210 - Foundations in Design Communication

THTR 311 - Beginning Scene Design

THTR 313 - Beginning Lighting Design

THTR 320 - Computer Drafting and Design for the Theatre

- THTR 413 - Advanced Lighting Design

THTR 420 - Advanced Theatre Design and Portfolio Development

Scenic Design:

THTR 210 - Foundations in Design Communication

THTR 310 - Scene Painting

THTR 311 - Beginning Scene Design

THTR 313 - Beginning Lighting Design

THTR 320 - Computer Drafting and Design for the Theatre

- THTR 411 - Advanced Scenic Design

THTR 420 - Advanced Theatre Design and Portfolio Development

## Theatre, MA

This program is not currently accepting new students. For further information contact the Graduate School, Western Washington University, 516 High St., Bellingham, WA 98225-9037, 360-650-3170, gradschool@wwu.edu.

# **College of Humanities and Social Sciences**

## **Introduction**

*Brent Carbajal, Dean*

The College of Humanities and Social Sciences, Western's largest academic unit, is composed of two divisions: the social and behavioral sciences (anthropology; communication sciences and disorders; physical education, health and recreation; political science; psychology, sociology) and the humanities (communication, English, history, journalism, liberal studies, modern and classical languages, philosophy). These 13 departments offer more than 40 bachelor's degrees and eight master's degrees, along with three interdisciplinary degrees in East Asian studies, linguistics, and student-faculty designed majors.

The college houses several research and service centers, including the Center for Cross-cultural Research, the Center for Performance Excellence, the Center for Healthy Living, the Office of Survey Research, and two community-based professional training centers: the Speech and Hearing Clinic and the Psychology Counseling Clinic. In addition, the college has five nationally accredited professional programs: school counseling, mental health counseling, speech pathology, audiology, and recreation.

The College of Humanities and Social Sciences partners with the College of Sciences and Technology to provide students with a three-component liberal education: first, a program of education-in-breadth through the General University Requirements (GURs) intended to prepare students for postgraduate life as educated persons and citizens; second, a program of education-in-depth in a disciplinary or interdisciplinary major designed to prepare students for careers or graduate study; and third, a choice of elective courses which can help satisfy the student's curiosity about any of the multitude of subjects that the University curriculum embraces. With each of these components, we intend to produce graduates who are capable of informed and critical thinking; who have learned to tolerate ambiguity; who can appreciate cultural differences; who have developed moral and aesthetic sensibilities; who have mastered the basic tools of literacy and technology and who have acquired levels of information about the natural and social worlds, past and present, sufficient for responsible citizenship and the enjoyment of a civilized society. The college places strong emphasis on student-faculty collaboration in developing these skills through active learning, including laboratory experiences, community-based faculty-directed service learning, and student involvement in faculty research programs.

## **Academic Programs Leading to Undergraduate and Graduate Degrees**

Anthropology	BA, BAE, MA
Anthropology/Archaeology Concentration	BA
Anthropology/Biocultural Concentration	BA
Anthropology/Biology	BA
Anthropology/Social Studies	BA
Archives and Records Management	MA
Behavioral Neuroscience	BA
Biology/Anthropology	BS
Canadian/American Studies	BA
Communication	BA, BAE
Communication Sciences & Disorders	BA, MA

Community Health	BS
East Asian Studies	BA
Economics/Political Science	BA
English	BAE, MA
English/Creative Writing Emphasis	BA, MA
English/Literature Emphasis	BA
Environmental Studies/Journalism	BA
Experimental Psychology	MS
General Studies	BA
History	BA, BAE, MA
History/Social Studies	BA
Human Movement and Performance	MS
Humanities	BA, BAE
Humanities/History of Culture	BA
Humanities/Religion & Culture	BA
Journalism	BA
Kinesiology	BS,
Linguistics	BA
Mental Health Counseling	MS
Modern and Classical Languages (French, German, Japanese, Spanish)	BA, BAE
Double Language Major (French, German, Spanish)	BA
Philosophy	BA
Physical Education and Health ~ P-12	BAE
Political Science	BA, MA
Political Science/Economics	BA
Political Science/Environmental Studies	MA
Political Science/Social Studies	BA
Politics/Philosophy/Economics	BA
Psychology	BA, BAE, MA
Recreation	BA
School Counseling	M/Ed

Sociology	BA, BAE, BS
Sociology/Social Studies	BA
Student-Faculty Designed Major	BA, BS

## Majors and Minors

In addition to the GURs and other common degree requirements of the University, the candidate for a Bachelor of Arts or Bachelor of Science degree must complete a major area emphasis which is usually accompanied by supporting courses. A minor is optional. A few concentrations are offered which encompass both a major and a minor. Students will confer with appropriate departmental advisors to plan study programs. Transfer students are expected to complete at least a portion of their work in the major and minor fields in this institution.

### *Student-Faculty Designed Majors*

Students desiring concentrated study in areas not listed as majors by departments of the College of Humanities and Social Sciences may design a major in conference with faculty members. Details of this procedure are available from the Academic Advising Center or the chair of the Department of Liberal Studies.

## College Admission and Advisement

### *Academic Advisement*

As the student completes the freshman year, which consists largely of courses that meet the GURs, he or she is referred to the academic departments for continued personalized advisement in planning and selecting courses of study. Faculty within each department share responsibility for counseling students electing concentrations in their area. In some cases, faculty from several departments may cooperate with a student in constructing his or her own interdisciplinary major; in others, faculty members may recommend to the department chair the waiving of certain course prerequisites (when it has been demonstrated that the student already has these competencies). Students who are undecided about a major may seek advisement through the Academic Advising Center in Old Main.

## Department Chairs

Dr. Dan Boxberger	Anthropology
Dr. Anna Eblen	Communication
Dr. Barbara Mathers-Schmidt	Communication Sciences and Disorders
Dr. Marc Geisler	English
Dr. Kathleen Kennedy	History
Shearlean Duke	Journalism
Dr. David Curley	Liberal Studies
Dr. Vicki Hamblin	Modern & Classical Languages
Dr. Hud Hudson	Philosophy

Dr. Charles Sylvester	Physical Education, Health & Recreation
Dr. Sara Weir	Political Science
Dr. Dale Dinnel	Psychology
Dr. Karen Bradley	Sociology

### **Other College Information**

#### *Departments, Courses and Programs*

Courses listed in this catalog constitute a record of the total academic program of the University. For an exact scheduling of courses at Western, students should consult the annual online Timetable of Classes, and Extended Education and Summer Programs' bulletins.

#### **Departments and Programs**

##### **Student/Faculty Designed, BA (College of Humanities and Social Sciences)**

Students desiring concentrated study in areas not listed as majors by departments of the College of Humanities and Social Sciences may design a major in conference with faculty members. Details of this procedure are available at <http://www.wwu.edu/liberalstudies/basfd.shtml> or the chair of the Department of Liberal Studies.

##### **Student/Faculty Designed, BS (College of Humanities and Social Sciences)**

Students desiring concentrated study in areas not listed as majors by departments of the College of Humanities and Social Sciences may design a major in conference with faculty members. Details of this procedure are at <http://www.wwu.edu/liberalstudies/basfd.shtml> or the chair of the Department of Liberal Studies.

##### **Student/Faculty Designed, Elementary Education, BAE (College of Humanities and Social Sciences)**

Students desiring concentrated study in areas not listed as majors by departments of the College of Humanities and Social Sciences may design a major in conference with faculty members. Details of this procedure are available at <http://www.wwu.edu/liberalstudies/basfd.shtml> or the chair of the Department of Liberal Studies.

##### **Student/Faculty Designed, Secondary Education, BAE (College of Humanities and Social Sciences)**

Students desiring concentrated study in areas not listed as majors by departments of the College of Humanities and Social Sciences may design a major in conference with faculty members. Details of this procedure are available at <http://www.wwu.edu/liberalstudies/basfd.shtml> or the chair of the Department of Liberal Studies.

# **Anthropology**

## **Introduction**

The discipline of anthropology studies humans in all the cultures of the world, both past and present. This includes humanity's physical development and the wide diversity of lifestyles people have created.

Anthropology has three main goals: first, providing a deep understanding of humans, both past and present; second, analyzing and organizing the knowledge gained and making it accessible; and third, engaging in the practical application of anthropology to various areas of contemporary human behavior.

Anthropology is a social science. It shares techniques and methods with other behavioral sciences and also draws upon physical and biological sciences.

Anthropology is unique among the social and behavioral sciences. Anthropologists obtain data primarily from field research and comparative cross-cultural studies in time and space. Thus, anthropology provides theoretical and empirical bases for development of hypotheses about human behavior, and for testing the breadth and application of such hypotheses.

The anthropology department provides training in each of the four main subdisciplines of anthropology.

**Cultural anthropology** seeks to understand and describe each culture in its own perspective. Cultural anthropologists gather data through first-hand field study in other cultures and do cross-cultural comparative studies which provide crucial insights and understanding of the modes and patterns of human life.

**Archaeology** uses scientific field work and laboratory techniques to investigate past human societies and the processes and effects of cultural evolution through the study of material remains.

**Physical anthropology** focuses on anatomical, physiological and genetic differences in past and contemporary human populations, and analyzes their evolutionary and cultural implications.

**Anthropological linguistics** studies the interrelationships between human culture and language with special focus on unwritten languages, the diversity of world languages, nonverbal human communication, and contemporary cultural linguistic interactions.

Utilizing ethnographic, ethnological and ethnohistorical tools, as well as information supplied by these four subdisciplines, the anthropologist comparatively studies cultures and the processes of human development. These findings have many practical uses.

## **Faculty**

**DANIEL L. BOXBERGER** (1983) Chair and Professor. BA, The Evergreen State College; MA, Western Washington University; PhD, University of British Columbia.

**SARAH K. CAMPBELL** (1988) Professor. BA, Indiana University; MA, PhD, University of Washington.

**JOYCE D. HAMMOND** (1984) Professor. BA, MA, Brown University; PhD, University of Illinois.

**TODD A. KOETJE** (1997) Associate Professor. BA, University of Washington; MA, State University of New York, Binghamton; PhD, University of Tennessee.

**JAMES LOUCKY** (1989) Professor. BA, Haverford College; MA, PhD, University of California, Los Angeles.

**ROBERT C. MARSHALL** (1985) Professor. BA, Youngstown State University; PhD, University of Pittsburgh.

**JUDITH M.S. PINE** (2008) Assistant Professor, BA Kansas State University, MA, PhD, University of Washington

**JOAN C. STEVENSON** (1979) Professor. BA, University of Washington; MA, PhD, University of Wisconsin-Milwaukee.

**KATHLEEN YOUNG** (1996) Associate Professor. BA, MA, Western Washington University; PhD, Simon Fraser University.

## **Declaration Process**

Students are eligible to declare the anthropology major if they have successfully completed any one of the following core courses: ANTH 301, 303, 335.

Students are advised to declare their major early in their academic career. Transfer students should declare after completion of one of the core courses listed above. Upper-division courses are restricted to declared majors during the first three days of registration and some courses may be available to majors only. Transfers and freshmen who are interested in the anthropology/biology major should seek advisement as soon as possible. Anthropology/biology BA or BS majors need to begin the chemistry/biology sequences required prior to declaring the major. This will assist them in shortening considerably the many quarters necessary for the anthropology/biology major.

## **Other Departmental Information**

### *Resources*

Opportunities for field work and library research in each of the four subfields of anthropology are available. Archaeological field school surveys are conducted alternate summers. The department engages in a series of funded projects, providing a wide diversity of research opportunities. Library holdings include resources for those pursuing cross-cultural and culture area research.

Degrees offered are the BA and the BA in Education. In addition a combined anthropology/biology BA or BS major is offered.

Careers for graduates in anthropology lie in both the public and private sectors of the economy and are increasing. Opportunities may be found in teaching (public school, community college and college), federal and state agencies, social services, applied health settings, museums and international business.

### *Mid-Program Checkpoint*

Students seeking to complete a BA degree in anthropology within a four-year time span should have completed the following courses by the start of their junior year. Major omissions from this list will make it difficult or impossible to complete this degree within two additional years.

- ANTH 201
- ANTH 210
- ANTH 215

Students seeking to complete a BA degree in anthropology with an archaeology concentration within a four-year time span should have completed the following courses by the start of their junior year. Major omissions from this list will make it difficult or impossible to complete this degree within two additional years.

- ANTH 201
- ANTH 210
- ANTH 215
- and prerequisites for supporting courses in sciences.

Students seeking to complete a BA or BS degree in biology/anthropology (human biology emphasis) within a four-year time span should have completed the following courses by the start of their junior year. Major omissions from this list will make it difficult or impossible to complete this degree within two additional years.

- ANTH 201
- ANTH 210
- ANTH 215

- BIOL 204
- BIOL 205
- BIOL 206
- One of the following sequences:
  - CHEM 121
  - CHEM 123
  - CHEM 122
  - or
  - CHEM 125
  - CHEM 126
  - CHEM 225
- Physics and calculus

### **Undergraduate Degrees and Programs**

Anthropology, BA  
 Anthropology/Biology, BA  
 Biology/Anthropology, BS  
 Anthropology — Archeology Concentration, BA  
 Anthropology — Biocultural Concentration, BA  
 Anthropology — Elementary, BAE  
 Anthropology/Social Studies, BA  
 Anthropology Minor

### **Graduate Degrees and Programs**

Anthropology, Thesis, MA

## **Anthropology Minor**

**25 credits**

### **Admission and Declaration Process**

Declaration of Major ([see Anthropology dept page](#))

### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

### **Requirements**

- ANTH 201 - Introduction to Cultural Anthropology
  - One course from:
- ANTH 102 - Introduction to Human Origins
- ANTH 210 - Introduction to Archaeology
- ANTH 215 - Introductory Biological Anthropology
  - Electives in anthropology under departmental advisement.

# **Anthropology — Archeology Concentration, BA**

## **80 Credits**

### **Introduction**

This concentration is intended for students who plan to do professional work or enroll in a graduate program in archaeology.

### **Admission and Declaration Process**

Declaration of Major ([see Anthropology dept page](#))

### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

### **Requirements**

- ANTH 201 - Introduction to Cultural Anthropology
- ANTH 301 - Anthropological Theory
- ANTH 303 - Qualitative Methods in Anthropology (Optional)
- ANTH 312 - Field Course in Archaeology or equivalent field experience recommended
- ANTH 335 - Quantitative Methods in Anthropology or another basic statistics course under advisement
- ANTH 490 - Senior Seminar in Anthropology or other culminating project under advisement (Optional)
- ANTH 496 - Portfolio Assembly
  - One course from:
  - ANTH 330 - Religion and Culture
  - ANTH 338 - Economic Anthropology
  - ANTH 350 - The Ecology of Human Variation
  - ANTH 351 - Family and Kinship Organization
  - ANTH 352 - Cross-Cultural Study of Aging
  - ANTH 353 - Sex and Gender in Culture
  - ANTH 424 - Medical Anthropology
  - ANTH 429 - Politics, Participation and the Critique of Power
  - ANTH 453 - Women of the Global South
  - ANTH 475 - Global Migration
  - ANTH 481 - Childhood and Culture
  - ANTH 484 - Cross-Cultural Education
- One course from:
  - ANTH 361 - Native Peoples of North America
  - ANTH 362 - Peoples of Asia
  - ANTH 365 - Peoples of Latin America
  - ANTH 460 - Culture and Society of Japan
  - ANTH 462 - Native Peoples of the Northwest
  - ANTH 463 - Peoples of East and Southeast Asia
  - ANTH 464
  - ANTH 465 - Peoples of Mexico and Central America

- ANTH 476 - Borderlands
  - Two courses from:
- ANTH 308 - Hunter-Gatherer Societies in World Prehistory
- ANTH 310 - The Rise of Civilizations
- ANTH 314 - Archaeology of North America
  - Two courses from:
- ANTH 406 - Archaeological Method and Theory
- ANTH 410 - Archaeological Analysis and Interpretation
- ANTH 411 - Archaeology of Northwestern North America
- ANTH 428 - Cultural Resource Management
  - Two courses from:
- ANTH 420 - Human Osteology and Forensic Anthropology
- ANTH 422 - Nutritional Anthropology
- ANTH 470 - Museology Studies
  - 12 credits of supporting courses in sciences, history or mathematics selected under advisement. Strongly recommended courses include:
- GEOL 310 - Geomorphology
- GEOL 316 - Research in Marine Paleontology
- GEOL 413 - Fluvial Geomorphology
- GEOL 415 - Stratigraphy and Sedimentation
- One course from:
- GEOL 442 - Introduction to Remote Sensing
- GEOL 447 - Introduction to GIS
- EGEO 330 - Geography of Landforms
- EGEO 351 - Map Reading and Analysis
- EGEO 352 - Computer Cartography
- EGEO 432 - Soil Landscapes
- One course from:
- EGEO 433 - Climate and Biophysical Processes
- EGEO 452 - Advanced GIS
  - At least one course each of the major subfields: physical anthropology, archaeology and linguistics (LING 201 or 204, ENG 370 may be substituted for an anthropological linguistics course)
  - Elective credits in anthropology

## Anthropology — Biocultural Concentration, BA

### 95-98 Credits

#### Admission and Declaration Process

Declaration of Major ([see Anthropology Dept page](#))

#### Grade Requirements

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

## Requirements

- ANTH 201 - Introduction to Cultural Anthropology
- ANTH 301 - Anthropological Theory
- ANTH 303 - Qualitative Methods in Anthropology (optional)
- ANTH 335 - Quantitative Methods in Anthropology
- ANTH 350 - The Ecology of Human Variation
- ANTH 424 - Medical Anthropology
- ANTH 490 - Senior Seminar in Anthropology (optional)
- ANTH 496 - Portfolio Assembly
- BIOL 204 - Introduction to Evolution, Ecology and Biodiversity
- BIOL 205 - Introduction to Cellular and Molecular Biology
- BIOL 206 - Introduction to Organismal Biology
- BIOL 348 - Human Anatomy and Physiology
- BIOL 349 - Human Physiology
- Two courses from:
  - ANTH 361 - Native Peoples of North America
  - ANTH 362 - Peoples of Asia
  - ANTH 365 - Peoples of Latin America
  - ANTH 422 - Nutritional Anthropology
  - ANTH 423 - Human Evolution
  - ANTH 457 - The Anthropology of Death and Dying
  - ANTH 460 - Culture and Society of Japan
  - ANTH 462 - Native Peoples of the Northwest
  - ANTH 463 - Peoples of East and Southeast Asia
  - ANTH 464
  - ANTH 465 - Peoples of Mexico and Central America
  - ANTH 466 - Reproductive Ecology
  - ANTH 476 - Borderlands
- Choose one of the following series:
  - CHEM 121 - General Chemistry I
  - CHEM 122 - General Chemistry II
  - CHEM 123 - General Chemistry III
    - or
  - CHEM 125 - General Chemistry I, Honors
  - CHEM 126 - General Chemistry II, Honors
  - CHEM 225 - General Chemistry III, Honors
- Choose either:
  - CHEM 251 - Elementary Organic Chemistry
    - or all three of the following:
  - CHEM 351 - Organic Chemistry
  - CHEM 352 - Organic Chemistry
  - CHEM 353 - Organic Chemistry
- At least one course each of the major subfields: physical anthropology, archaeology and linguistics (LING 201 or 204, ENG 370 may be substituted for an anthropological linguistics course)

Students are encouraged to further specialize according to their interests by pursuing appropriate course sequences and/or minors outside of the anthropology department, e.g., mathematics with an emphasis on

statistics if pursuing epidemiology. Please confer with your advisor to tailor your training to meet your post-baccalaureate plans.

Program advisors: Joan Stevenson

## **Anthropology — Elementary, BAE**

### **45 Credits**

#### **Introduction**

This major satisfies the academic major requirement for teacher certification with an endorsement in elementary education and must be accompanied by the professional preparation program in elementary education.

See the Elementary Education section of this catalog for program admission, completion, and teacher certification requirements.

#### **Admission and Declaration Process**

Declaration of Major ([see Anthropology Dept page](#))

#### **Grade Requirements**

A grade of C (2.0) or better is required for courses in the elementary education professional program and all courses required for the endorsement.

#### **Requirements**

- ANTH 201 - Introduction to Cultural Anthropology
- ANTH 210 - Introduction to Archaeology
- ANTH 215 - Introductory Biological Anthropology
- ANTH 496 - Portfolio Assembly
  - One course from:
  - ANTH 481 - Childhood and Culture
  - ANTH 484 - Cross-Cultural Education
- Electives under departmental advisement. Select one course from each of the following groups:
  - Cultural area courses:
    - ANTH 361 - Native Peoples of North America
    - ANTH 362 - Peoples of Asia
    - ANTH 365 - Peoples of Latin America
    - ANTH 460 - Culture and Society of Japan
    - ANTH 462 - Native Peoples of the Northwest
    - ANTH 463 - Peoples of East and Southeast Asia
    - ANTH 465 - Peoples of Mexico and Central America
    - ANTH 476 - Borderlands
  - Topical cultural anthropology courses:
    - ANTH 247 - Introduction to Linguistic Anthropology
    - ANTH 330 - Religion and Culture
    - ANTH 351 - Family and Kinship Organization
    - ANTH 352 - Cross-Cultural Study of Aging
    - ANTH 353 - Sex and Gender in Culture

- ANTH 424 - Medical Anthropology
- ANTH 429 - Politics, Participation and the Critique of Power
- ANTH 453 - Women of the Global South
- ANTH 475 - Global Migration
- ANTH 480 - Applied Anthropology

#### **Additional Requirements**

#### **Elementary Education Professional Program Requirements (106 credits)**

##### **Professional Studies Core (25 credits)**

- EDUC 301 - Educational Psychology I: Development and Individual Differences
- EDUC 302 - Educational Psychology II: Motivation, Learning and Assessment
- EDUC 310 - The Teacher and the Social Order
- ELED 370 - Introduction to Teaching
- IT 344 - Basic Instructional Technology Skills
- IT 442 - Classroom Use of Instructional Technology (Elementary)
- SPED 364 - Teaching All Students

##### **Elementary Program — Methods, Curriculum Content, and Field Experiences (81 credits)**

- ART 380 - Art Educating the Child
- ELED 425 - Social Studies for the Elementary School
- ELED 470 - Developing Teaching
- ELED 471 - Documenting Teaching
- ELED 480 - Literacy: Beginning Communicators
- ELED 481 - Literacy: Fluent Communicators
- ELED 491 - September Experience
- ELED 492 - Practicum: Experience in Literacy Methods
- ELED 494 - Internship - Elementary
- HLED 455 - Health Education Grades K-8
- MATH 381 - Teaching K-8 Mathematics I
- MATH 382 - Teaching K-8 Mathematics II
- MATH 383 - Teaching K-8 Mathematics III
- MATH 491 - Internship Seminar - Teaching K-8 Mathematics
- MUS 361 - Music for Elementary Teachers
- PE 345 - Physical Education for Elementary School
- SCED 480 - Science Methods and Curriculum for the Elementary School
- SCED 490 - Laboratory/Field Experience in Elementary Science
- SPED 430 - Problem Solving for Diverse Needs

# **Anthropology, BA**

## **65 Credits**

### **Admission and Declaration Process**

Declaration of Major (see Anthropology Dept page)

### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

### **Requirements**

- ANTH 201 - Introduction to Cultural Anthropology
- ANTH 301 - Anthropological Theory
- ANTH 303 - Qualitative Methods in Anthropology
- ANTH 335 - Quantitative Methods in Anthropology or another basic statistics course under advisement
- ANTH 490 - Senior Seminar in Anthropology or other culminating project under advisement (e.g., internship or directed independent study)
- ANTH 496 - Portfolio Assembly
  - Methods Component: At least one course from the following:
  - ANTH 410 - Archaeological Analysis and Interpretation
  - ANTH 420 - Human Osteology and Forensic Anthropology
  - ANTH 428 - Cultural Resource Management
  - ANTH 447 - Anthropological Semiotics
  - ANTH 470 - Museology Studies
  - ANTH 471 - Field Work Methods in Cultural Anthropology
  - ANTH 472 - Visual Anthropology
  - ANTH 473 - Filed Course in Ethnography
  - ANTH 480 - Applied Anthropology
    - (where appropriate an internship, practicum or archaeological methods course may be substituted under advisement)
  - Topical Component: At least one course from the following:
  - ANTH 330 - Religion and Culture
  - ANTH 338 - Economic Anthropology
  - ANTH 350 - The Ecology of Human Variation
  - ANTH 351 - Family and Kinship Organization
  - ANTH 352 - Cross-Cultural Study of Aging
  - ANTH 353 - Sex and Gender in Culture
  - ANTH 424 - Medical Anthropology
  - ANTH 429 - Politics, Participation and the Critique of Power
  - ANTH 440 - Cyborg Anthropology
  - ANTH 453 - Women of the Global South
  - ANTH 475 - Global Migration
  - ANTH 481 - Childhood and Culture
  - ANTH 484 - Cross-Cultural Education
- Culture Region Component: At least one course from the following:

- ANTH 361 - Native Peoples of North America
  - ANTH 362 - Peoples of Asia
  - ANTH 365 - Peoples of Latin America
  - ANTH 460 - Culture and Society of Japan
  - ANTH 462 - Native Peoples of the Northwest
  - ANTH 463 - Peoples of East and Southeast Asia
  - ANTH 465 - Peoples of Mexico and Central America
  - ANTH 476 - Borderlands
- At least one course each of the major subfields: physical anthropology, archaeology and linguistics (LING 201 or 204, ENG 370 may be substituted for an anthropological linguistics course)
- Electives in anthropology under departmental advisement. Student selection of a complementary minor under advisement is strongly recommended
- Only one 100-level course will count toward major, minor or archaeology concentration

## **Anthropology/Biology, BA**

Jointly offered by the Department of Anthropology, College of Humanities and Social Sciences and the Department of Biology, College of Sciences and Technology.

**89 credits including 23 in supporting courses**

### **Introduction**

Biology Phase II status required for admission into 300- and 400-level biology courses for biology majors.

### **Admission and Declaration Process**

Declaration of Major ([see Anthropology Dept page](#))

### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

### **Requirements**

- ANTH 201 - Introduction to Cultural Anthropology
- ANTH 210 - Introduction to Archaeology
- ANTH 215 - Introductory Biological Anthropology
- ANTH 496 - Portfolio Assembly
- BIOL 204 - Introduction to Evolution, Ecology and Biodiversity
- BIOL 205 - Introduction to Cellular and Molecular Biology
- BIOL 206 - Introduction to Organismal Biology
- BIOL 321 - Genetics
- BIOL 348 - Human Anatomy and Physiology
- BIOL 349 - Human Physiology
- Choose one of the following series:
- CHEM 121 - General Chemistry I
- CHEM 122 - General Chemistry II
- CHEM 123 - General Chemistry III

- or
- CHEM 125 - General Chemistry I, Honors
  - CHEM 126 - General Chemistry II, Honors
  - CHEM 225 - General Chemistry III, Honors
    - Choose either:
      - CHEM 251 - Elementary Organic Chemistry
      - or all three of the following:
      - CHEM 351 - Organic Chemistry
      - CHEM 352 - Organic Chemistry
      - CHEM 353 - Organic Chemistry
    - One course from:
      - PHYS 101 - Physics Analysis
      - PHYS 114 - Principles of Physics I
      - PHYS 115 - Principles of Physics II (recommended)
    - One course from:
      - ANTH 335 - Quantitative Methods in Anthropology
      - BIOL 340 - Biometrics
      - MATH 240 - Introduction to Statistics
    - 10 credits in anthropology under advisement
    - 8 credits of biology under advisement

Advisors: Joann Otto, Biology, and Joan Stevenson, Anthropology.

## **Anthropology/Social Studies, BA**

### **87-89 Credits**

Jointly offered by the Department of Anthropology, College of Humanities and Social Sciences and the Department of Social Studies Education, College of Humanities and Social Sciences

#### **Introduction**

To receive a recommendation for state of Washington certification, students must complete the "teacher certification" program, including the content methods course SEC 426, offered by the Department of Secondary Education, as a part of the undergraduate Bachelor of Arts degree, or as a post-baccalaureate program, or as a part of the Master's in Teaching degree. See the Secondary Education section of this catalog for program admission, completion, and teacher certification requirements. Completion of this combined major leads to an endorsement in social studies.

#### **Admission and Declaration Process**

Declaration of Major (see Anthropology Dept page)

#### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors. Courses required for a state teaching endorsement must be completed with a grade of C (2.0) or better.

## Requirements

- ANTH 201 - Introduction to Cultural Anthropology
- ANTH 210 - Introduction to Archaeology
- ANTH 215 - Introductory Biological Anthropology
- ANTH 496 - Portfolio Assembly
- EGEO 201 - Human Geography
- HIST 103 - Introduction to American Civilization: American History to 1865
- HIST 104 - Introduction to American Civilization: American History Since 1865
- HIST 391 - History of the Pacific Northwest
- PLSC 250 - The American Political System
- One course from:
  - ANTH 481 - Childhood and Culture
  - ANTH 484 - Cross-Cultural Education
- One course from:
  - ECON 206 - Introduction to Microeconomics
  - ECON 446 - Economics for the Teacher (preferred)
- One course from:
  - ECON 207 - Introduction to Macroeconomics
  - ECON 447 - Methods for Teaching About the National Economy in the Public Schools (preferred)
- One of the following:
  - EGEO 250 - Geographic Information Systems Survey
  - or 2 additional geography credits
- Electives under departmental advisement — at least one course from each of the following groups:
  - Cultural area courses:
    - ANTH 361 - Native Peoples of North America
    - ANTH 362 - Peoples of Asia
    - ANTH 365 - Peoples of Latin America
    - ANTH 460 - Culture and Society of Japan
    - ANTH 462 - Native Peoples of the Northwest
    - ANTH 463 - Peoples of East and Southeast Asia
    - ANTH 465 - Peoples of Mexico and Central America
    - ANTH 476 - Borderlands
  - Topical cultural anthropology courses:
    - ANTH 247 - Introduction to Linguistic Anthropology
    - ANTH 330 - Religion and Culture
    - ANTH 338 - Economic Anthropology
    - ANTH 351 - Family and Kinship Organization
    - ANTH 352 - Cross-Cultural Study of Aging
    - ANTH 353 - Sex and Gender in Culture
    - ANTH 424 - Medical Anthropology
    - ANTH 429 - Politics, Participation and the Critique of Power
    - ANTH 453 - Women of the Global South
    - ANTH 475 - Global Migration
    - ANTH 480 - Applied Anthropology

Three additional history course (minimum 12 credits) distributed as follows:

One course in Ancient History,

One course from two of the following areas:

Europe  
East and South Asia  
Africa and Middle East  
Western Hemisphere (Outside U.S.)

## Biology/Anthropology, BS (also see Biology Department)

Jointly offered by the Department of Biology, College of Sciences and Technology and the Department of Anthropology, College of Humanities and Social Sciences

### 101-104 Credits

#### Introduction

Required supporting courses 34-37 credits; basic, breadth, depth and elective courses 66 credits; 1 completion credit. Biology Phase II status required for admission into 300- and 400-level biology courses for biology majors.(Credits for recommended supporting courses cannot be applied toward credits in major.)

Anthropology: Joan Stevenson; Biology: Joann Otto

#### Admission and Declaration Process

Declaration Process ([See Anthropology Dept page](#))

#### Grade Requirements

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

#### Requirements

Supporting courses: 34-37 credits

- CHEM 351 - Organic Chemistry
- CHEM 352 - Organic Chemistry (or CHEM 251 only with approval of adviser)
- CHEM 353 - Organic Chemistry (recommended)
- CHEM 354 - Organic Chemistry Laboratory I (recommended)
  - Choose one of the following series:
- PHYS 114 - Principles of Physics I
- PHYS 115 - Principles of Physics II
- PHYS 116 - Principles of Physics III (recommended)
  - or
- PHYS 121 - Physics With Calculus I
- PHYS 122 - Physics With Calculus II
- PHYS 123 - Electricity and Magnetism
  - Choose one of the following series:
- CHEM 121 - General Chemistry I
- CHEM 122 - General Chemistry II
- CHEM 123 - General Chemistry III
  - or
- CHEM 125 - General Chemistry I, Honors
- CHEM 126 - General Chemistry II, Honors

- CHEM 225 - General Chemistry III, Honors
  - One course from:
- MATH 124 - Calculus and Analytic Geometry I
- MATH 134 - Calculus I Honors
- MATH 138 - Accelerated Calculus

Basic requirements: Biology 14 credits

- BIOL 204 - Introduction to Evolution, Ecology and Biodiversity
- BIOL 205 - Introduction to Cellular and Molecular Biology
- BIOL 206 - Introduction to Organismal Biology

Basic requirements: Anthropology 15 credits

- ANTH 201 - Introduction to Cultural Anthropology
- ANTH 210 - Introduction to Archaeology
- ANTH 215 - Introductory Biological Anthropology

Breadth requirements: 16-19 credits

- BIOL 321 - Genetics
  - One course from:
- BIOL 325 - Ecology
- ANTH 350 - The Ecology of Human Variation
  - One course from:
- BIOL 340 - Biometrics
- ANTH 335 - Quantitative Methods in Anthropology
  - One course from:
- BIOL 432 - Evolutionary Biology
- ANTH 423 - Human Evolution

Depth requirements: 12-15 credits

- BIOL 348 - Human Anatomy and Physiology
  - One course from:
- BIOL 349 - Human Physiology
- BIOL 467 - Comparative Vertebrate Physiology
  - One of the following:
- ANTH 308 - Hunter-Gatherer Societies in World Prehistory
- ANTH 422 - Nutritional Anthropology
- ANTH 424 - Medical Anthropology
- BIOL 410 - Animal Behavior

Electives: 3-9 credits to make 66 total when combined with the required biology and anthropology courses

- One course from:
- BIOL 322 - Genetics Lab
- BIOL 324 - Methods in Molecular Biology

- BIOL 323 - Cell and Molecular Biology
- BIOL 345 - Fundamentals of Microbiology
- BIOL 410 - Animal Behavior
- BIOL 465 - Vertebrate Zoology
- BIOL 467 - Comparative Vertebrate Physiology
- ANTH 308 - Hunter-Gatherer Societies in World Prehistory
- ANTH 422 - Nutritional Anthropology
- ANTH 424 - Medical Anthropology
- ANTH 466 - Reproductive Ecology
- other electives under advisement

Completion requirement: 1 credit

- ANTH 496 - Portfolio Assembly

## **Anthropology, Thesis, MA**

### **Graduate Faculty**

**Boxberger, Daniel L.**, PhD, ethnohistory, method and theory, North America, Northwest coast.

**Campbell, Sarah**, PhD, Pacific Northwest prehistory, archaeological method and theory, cultural resource management.

**Hammond, Joyce D.**, PhD, visual anthropology, gender studies, expressive culture, fieldwork methods, and Pacific Asian Rim tourism.

**Koetje, Todd A.**, PhD, archaeology, quantitative methods, spatial studies, method and theory; paleolithic Old World, paleoindian-archaic Northeast U.S.

**Lucky, James**, PhD, applied anthropology, socialization, immigration, cross-cultural education, Latin America.

**Pine, Judith**, M.S., PhD, linguistic anthropology, literacy theory, indigenousness, globalization/borders, language maintenance/endangerment, upland peoples of SE Asia/SW China.

**Marshall, Robert C.**, PhD, political economy, symbolism, Marxist anthropology, East Asia, Japan.

**Stevenson, Joan**, PhD, anthropological genetics and demography, osteology, AD/HD, sex differences, European immigrants.

**Young, Kathleen**, PhD, gender, religion, war and violence, death and dying, cross-cultural law.

Program Advisor: Dr. Sarah Campbell, Arntzen Hall 342

### **Goals**

- Provide structured training in academic core, appropriate specialization courses, and experience conducting independent research
- Prepare students for a variety of professional careers utilizing anthropology (e.g. social services, international corporations, cultural resource management, forensics, public health)
- Prepare students for PhD programs or other advanced degrees.

### **Prerequisites**

Undergraduate major in anthropology or equivalent in social sciences, biology or departmental permission; candidates with insufficient background in anthropological theory and method, will be expected to take undergraduate courses as deemed necessary by the anthropology program advisor.

## **Application Information**

**Deadline:** Please see Graduate School deadlines. Preferred consideration for admission will be given to applicants who have complete files by March 1.

**TA Deadline:** Preferred consideration will be given to applicants who have complete files by March 1.

### *Specific Entrance and Test Requirements*

- A 500-word essay stating reasons for wanting to do graduate work in anthropology, and indicating major interests within anthropology
- Graduate Record Exam, General Test

Both the essay and the GRE are required for admission, but the GRE may be waived for applicants with advanced degrees.

## **Program Requirements**

- ANTH 501 - History of Anthropology
- ANTH 502 - Theory in Anthropological Research
- ANTH 503 - Research Design and Method
- At least one course from each of the following areas or another course selected under advisement:

#### **Culture Region:**

- ANTH 460 - Culture and Society of Japan
- ANTH 462 - Native Peoples of the Northwest
- ANTH 511 - Current Archaeological Research in Northwestern North America
- ANTH 553 - Women of the Global South
- ANTH 563 - Peoples of East and Southeast Asia
- ANTH 565 - Peoples of Mexico & Central America
- ANTH 576 - Borderlands

#### **Methods:**

- ANTH 470 - Museology Studies
- ANTH 473 - Filed Course in Ethnography
- ANTH 506 - Archaeological Method and Theory
- ANTH 510 - Applied Archaeological Analysis and Interpretation
- ANTH 515 - Practicum in Archaeological Spatial Analysis
- ANTH 520 - Human Osteology
- ANTH 528 - Applied Cultural Resource Management
- ANTH 554 - Participatory Action Research Methods
- ANTH 571 - Field Work Methods in Cultural Anthropology
- ANTH 572 - Visual Anthropology
- ANTH 580 - Applied Anthropology

[Foreign language competency may substitute for the Methods requirement with approval from the program advisor; if approved, no credit will be awarded and an additional 3-5 credits must be added to the electives portion of the graduate program]

#### **Topical:**

- ANTH 456 - Anthropology of War and Human Rights
- ANTH 457 - The Anthropology of Death and Dying
- ANTH 475 - Global Migration
- ANTH 484 - Cross-Cultural Education
- ANTH 522 - Nutritional Anthropology

- ANTH 524 - Applied Medical Anthropology
- ANTH 525 - Primate Evolution
- ANTH 547 - Semiotic Anthropology
- ANTH 566 - Reproductive Ecology
- ANTH 581 - Childhood and Culture
- ANTH 690 - Thesis (3-12)

NOTE: Three credits of ANTH 690 are required. Not more than 12 credits of 690 will apply toward the 45-credit requirement for the degree.

Electives in Specialization: Courses selected under advisement from 400- or 500-level courses in anthropology

NOTE: No more than 10 credits of 400 level courses can be applied to the graduate degree. At least 35 credits must be from courses at the 500 or 600 (thesis) level.

Supporting Courses: Where appropriate to the student's specialty interests, the candidate may elect up to 15 credits from a related discipline, under Anthropology Graduate Committee advisement (0-15)

Advancement to candidacy is granted upon successful completion of 15 credits.

## **Canadian-American Studies**

### **Introduction**

The Canadian-American Studies major and minor are designed to expand knowledge of Canada and understanding of Canadian-American issues and problems.

The Canadian-American studies curriculum prepares students for positions in firms, agencies and organizations involved with Canada. Canadian-American studies combines well with other majors and minors to add depth and international expertise.

Examples include combinations with international business, marketing, geography and other specialties for employment in firms doing business in Canada or with Canadians. Political scientists, sociologists, environmental scientists and others employed by government agencies and nongovernment organizations will find the program of substantial value. The major also is intended for the individual who wishes to be knowledgeable about Canada and things Canadian. Canadian-American studies has a strong interdisciplinary orientation.

Opportunities for study and internships in Alberta, British Columbia, Ontario, and Québec are available.

For program advisement, contact Chuck Hart, program manager, phone 360-650-3728, fax 360-650-3995, e-mail: Chuck.Hart@wwu.edu.

### **Participating Canadian-American Studies Faculty**

**AMIR ABEDI**, Political Science. Comparative politics, European politics.

**TROY ABEL**, Environmental Studies. Environmental policy and resolutions.

**DONALD ALPER**, Director, Canadian-American Studies. Political science. Canadian politics/government.

**BIDISHA BISWAS**, Political Science. Security and counterterrorism.

**DANIEL BOXBERGER**, Anthropology. First Nations, Native Peoples and natural resources.

**PATRICK BUCKLEY**, Geography. Transborder economic modeling and GIS.

**SARAH CAMPBELL**, Anthropology. Pre-history of the Northwest coast.

**SARAH CLARK-LANGAGER**, Western Gallery Director.

**CECILIA DANYSK**, History. Canadian history.

**STEVEN GLOBERMAN**, Kaiser Professor of International Business and Director of the Center for International Business.

Canadian economy.

**VICKI HAMBLIN**, French. French literature.

**CÉCILE HANANIA**, French. Twentieth century French literature and literary theory and Québec culture.

**RUTH HARPER-ARABIE**, Environmental Sciences. Environmental toxicology and environmental chemistry.

**MARY ANN HENDRYSON**, Economics. Canadian economic history, cross border economic relations.

**CAROL JANSON**, Art. Art history.

**T.H. KAMENA**, Political Science. Canadian politics/government.

**CHRISTINA KEPPIE**, French. Acadian culture.

**KEVIN LEONARD**, History. Pacific Northwest history.

**ROBERT LOPRESTI**, Wilson Library. Canadian government information.

**JAMES LOUCKY**, Anthropology. North American borderlands.

**GEORGE MARIZ**, History, Honors Program Director. Britain, British Empire, European intellectual history.

**JEAN MELIOUS**, Environmental Studies. Canadian environmental policy and law.

**ROBERT MONAHAN**, Professor Emeritus, Geography. Canadian geography.

**DOUG NORD**, Director, Center for International Studies. Political Science. Canadian foreign policy.

**EDWARD OUSSELIN**, French. French cultural studies and film studies.

**NANCY PAGH**, English. Canadian literature.

**KRISTEN PARRIS**, Political science. East Asia-Canada immigration.

**JOHN PURDY**, English. Canadian literature.

**THOMAS ROEHL**, Management. International business and management.

**DAVID ROSSITER**, Geography. Canadian geography, environmental history and natural resource management.

**DEBRA SALAZAR**, Political science. Forest policy, environmental policy, political economy.

**PRESTON SCHILLER**, Adjunct faculty, Canadian-American Studies, Huxley College of the Environment. Transportation, environment.

**SARA SINGLETON**, Political Science. Public policy and environmental politics.

**PAUL STORER**, Economics. Canadian economic policy, macroeconomics, labor economics.

*Named Professorships*

Distinguished Visiting Professorship of Canadian Culture Ross Distinguished Professorship of Canada/U.S. Business and Economic Relations (position is in the College of Business and Economics).

**Courses in Canadian-American Studies (C/AM)**

**Anthropology**

ANTH 361 Native People of North America  
ANTH 411 Archaeology of Northwestern North America  
ANTH 462 Native Peoples of the Northwest  
ANTH 475 Global Migration  
ANTH 476 Borderlands

**Art History**

A/HI 310 Indigenous Arts of the Pacific Northwest

**Canadian-American Studies**

C/AM 200 Introduction to Canadian Studies  
C/AM 401 Research Problem Identification and Development  
C/AM 402 Research Analysis and Writing  
C/AM 400 STUDY CANADA Summer Institute  
C/AM 489 Managing International Ecosystems

**Economics**

ECON 365 The Canadian Economy  
ECON 383 Environmental Economics

**English**

ENG 235 Introduction to American Indian Literatures  
ENG 415 Special Topics in National Literatures: Canada

**Environmental Sciences**

ESCI 330 Natural History of the Pacific Northwest

## **Environmental Studies**

ESTU 380 History and Politics of Planning  
ESTU 465 International Environmental Policies  
ESTU 469 Canadian Environmental Policy

## **French**

FREN 101 Elementary French  
FREN 102 Elementary French  
FREN 103 Elementary French  
FREN 201 Intermediate French  
FREN 202 Intermediate French  
FREN 203 Intermediate French  
FREN 301 Grammar Review  
FREN 302 Written Exposition  
FREN 314 Phoenetics  
FREN 332 Civilisation et Culture du Québec  
FREN 340 Introduction to French Literature I  
FREN 341 Introduction to French Literature II  
FREN 342 Introduction to French Literature III  
FREN 440 Etude Sociolinguistique  
FREN 385 Culture and Conversation  
FREN 401 Elements de Stylistique  
FREN 402 French for Business  
FREN 410 Ecriture Feminine Francophone  
FREN 420 History of la Lange Française

## **Geography**

EGEO 328 Canada: Society and Environment  
EGEO 421 Borderlands  
EGEO 423 Pacific Rim  
EGEO 425 Colonial Landscapes of the Pacific Northwest  
EGEO 461 National Resources Management  
EGEO 497 Canadian Urban Geography

## **History**

HIST 277 Canada: A Historical Survey  
HIST 278 Multiculturalism in Canada  
HIST 376 French Colonial Canada 1534-1763  
HIST 390 Topics in History  
HIST 391 History of the Pacific Northwest  
HIST 440 Britain: 1688 to the Present  
HIST 499 Historical Research

## **International Business**

IBUS 473 International Trade Operations

## **International Studies**

IBUS 297 Global Distinguished Scholar

## **Political Science**

PLSC 291 Introduction to Comparative Politics

PLSC 301 The British Parliamentary System

PLSC 406 Canadian Government and Politics

PLSC 420 Environmental Politics

## **Sociology**

SOC 440 Globalization

## *Study Abroad*

The Center for Canadian-American Studies encourages students to spend one or more quarters in a study abroad program in Canada. We offer a number of exchange opportunities with universities across Canada. For more information, please contact Chuck Hart, program manager, phone 360-650-3728 or send e-mail to Chuck.Hart@wwu.edu.

## **Undergraduate Degrees and Programs**

Canadian-American Studies, BA

Canadian-American Studies Minor

## **Canadian-American Studies Minor**

### **30 credits**

#### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

#### **Requirements**

- C/AM 200 - Introduction to Canadian Studies
- HIST 277 - Canada: A Historical Survey
- PLSC 406 - Canadian Government and Politics
- One course from:
  - Egeo 328 - Canada: Society and Environment
  - Egeo 421 - Borderlands
- 12 additional credits under advisement from:
  - ANTH 361 - Native Peoples of North America
  - ANTH 411 - Archaeology of Northwestern North America
  - ANTH 462 - Native Peoples of the Northwest
  - ANTH 476 - Borderlands
- A/HI 490 - Seminar: Exhibition Theory and Practice
- C/AM 400 - Independent Study

- C/AM 401 - Research Problem Identification and Development
- C/AM 402 - Research Analysis and Writing
- C/AM 410 - Study Canada Summer Institute
- ECON 364 - Topics in Canadian Economic History
- ECON 365 - The Canadian Economy
- ENG 415 - Special Topics in National Literatures
- ESTU 465 - International Environmental Policies
- ESTU 469 - Canadian Environmental Policy
- FREN 101 - Elementary French
- FREN 102 - Elementary French
- FREN 103 - Elementary French (or equivalent)
- FREN 201 - Intermediate French
- FREN 202 - Intermediate French
- FREN 203 - Intermediate French (or equivalent)
- FREN 332 - Civilisation et Culture du Quebec
- FREN 401 - Elements de Stylistique
- FREN 450Q - Seminar: Theatre Quebecois
- HIST 376 - French Colonial Canada: 1534-1763
- HIST 479 - Medieval and Early-Modern Chinese History
- HIST 499 - Historical Research (under advisement)
- JOUR 460 - Special Reporting Project
- PLSC 301 - The British Parliamentary System
- SOC 390 - Global Families

## **Canadian-American Studies, BA**

**50 credits**

### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

### **Requirements**

#### **Track 1 - Canadian-American studies with French language**

- C/AM 200 - Introduction to Canadian Studies
- C/AM 401 - Research Problem Identification and Development
- C/AM 402 - Research Analysis and Writing
- ENG 415 - Special Topics in National Literatures (under advisement)
- FREN 201 - Intermediate French
- FREN 202 - Intermediate French
- FREN 203 - Intermediate French (or equivalent)
- HIST 277 - Canada: A Historical Survey
- PLSC 406 - Canadian Government and Politics
- One course from:
  - Egeo 328 - Canada: Society and Environment
  - Egeo 421 - Borderlands

- Select additional credits from the following to complete the major:
- ANTH 361 - Native Peoples of North America
- ANTH 411 - Archaeology of Northwestern North America
- ANTH 462 - Native Peoples of the Northwest
- ANTH 476 - Borderlands
- A/HI 490 - Seminar: Exhibition Theory and Practice  
C/AM 400 - Independent Study
- C/AM 410 - Study Canada Summer Institute
- ECON 364 - Topics in Canadian Economic History
- ECON 365 - The Canadian Economy
- ESTU 465 - International Environmental Policies
- ESTU 469 - Canadian Environmental Policy
- FREN 332 - Civilisation et Culture du Quebec
- FREN 401 - Elements de Stylistique
- FREN 450Q - Seminar: Theatre Quebecois
- HIST 376 - French Colonial Canada: 1534-1763
- HIST 479 - Medieval and Early-Modern Chinese History
- HIST 499 - Historical Research (under advisement)
- JOUR 460 - Special Reporting Project
- PLSC 301 - The British Parliamentary System
- SOC 390 - Global Families

**Track 2 (50 credits) - Canadian-American studies with area of concentration**

- C/AM 200 - Introduction to Canadian Studies
- C/AM 401 - Research Problem Identification and Development
- C/AM 402 - Research Analysis and Writing
- ENG 415 - Special Topics in National Literatures (under advisement)
- HIST 277 - Canada: A Historical Survey
- PLSC 406 - Canadian Government and Politics
- One course from:
  - EGEO 328 - Canada: Society and Environment
  - EGEO 421 - Borderlands
- plus 2 upper-division courses in an area of specialization (in consultation with Canadian-American

- Select additional credits from the following to complete the major:
- ANTH 361 - Native Peoples of North America
- ANTH 411 - Archaeology of Northwestern North America
- ANTH 462 - Native Peoples of the Northwest
- ANTH 476 - Borderlands
- A/HI 490 - Seminar: Exhibition Theory and Practice  
C/AM 400 - Independent Study
- C/AM 410 - Study Canada Summer Institute
- ECON 364 - Topics in Canadian Economic History
- ECON 365 - The Canadian Economy
- ESTU 465 - International Environmental Policies
- ESTU 469 - Canadian Environmental Policy
- FREN 101 - Elementary French

- FREN 102 - Elementary French
- FREN 103 - Elementary French (or equivalent)
- FREN 201 - Intermediate French
- FREN 202 - Intermediate French
- FREN 203 - Intermediate French (or equivalent)
- FREN 332 - Civilisation et Culture du Quebec
- FREN 401 - Elements de Stylistique
- FREN 450Q - Seminar: Theatre Quebecois
- HIST 376 - French Colonial Canada: 1534-1763
- HIST 479 - Medieval and Early-Modern Chinese History
- HIST 499 - Historical Research (under advisement)
- JOUR 460 - Special Reporting Project
- PLSC 301 - The British Parliamentary System
- SOC 390 - Global Families

# **Communication**

## **Introduction**

The mission of the Department of Communication is to teach communication that nurtures inclusive civil discourse, critical thinking, and cooperative solutions in a diverse world. We provide a strong liberal arts foundation and applied communication skills that enable our graduates to succeed in a wide range of business, education, government, non-profit, and professional careers. Many graduates also go on to pursue advanced degrees in communication studies, law, business, various human service professions, and other fields.

## ***Communication***

The Department of Communication offers a Bachelor of Arts in communication with courses in interpersonal and small group communication, organizational communication, mass communication, intercultural communication, communication technologies, research methods, ethics, rhetoric, persuasion, public speaking, and debate. An emphasis is placed on effective oral and written communication, as well as critical thinking, across the curriculum. The department sponsors student clubs and activities that encourage learning beyond formal classes. A nationally recognized program in debate and forensics is offered as well as service learning opportunities and supervised internships. Qualified students are also given opportunities to serve as instructional assistants in the Fundamentals of Speech program.

## ***Communication Education***

Education students may choose a communication major designed for the elementary level.

## **Faculty**

**ANNA EBLIN** (1986) Chair and Professor. BA, Duke University; MA, University of West Florida; PhD, University of Oregon.

**MICHAEL KARLBERG** (1997) Associate Professor. BA, University of California; MA, PhD, Simon Fraser University.

**EE LIN LEE** (2005) Assistant Professor. BA, MA, Western Michigan University; PhD, University of New Mexico.

**TARA PERRY** (2005) Assistant Professor. BA, Western Washington University; MA, PhD, Washington State University.

**KAREN ROHRBAUCK STOUT** (2000) Associate Professor. BA, University of Puget Sound; MA, University of Montana; PhD, University of Utah.

**RAE LYNN SCHWARTZ-DUPRE** (2006) Assistant Professor. BA, University of Vermont; MA, Wake Forest University; PhD, University of Iowa.

**JIANGLONG WANG** (1989) Professor. BA, Fudan University; MA, PhD, Northwestern University.

**STEVEN G. WOODS** (2001) Associate Professor. BS, MA, Kansas State University; PhD, Florida State University.

## **Affiliated Faculty**

**CARMEN WERDER** (1984). BA, MA English, Western Washington University; PhD, English, University of British Columbia.

## **Becoming a Communication Major**

Students wishing to declare a major in communication must have completed 90 credits, 12 to 15 of which have been completed at Western Washington University with a GPA of 2.5 or above. Students must submit a portfolio to the department (see below) in order to be admitted through a competitive selection process.

Admission to the major will, in part, be determined by the number of applicants and their qualifications in any given quarter. Cumulative grade point average (GPA) will be one of the major criteria for admission. In most quarters, the average GPA of successful applications is above 3.0. Other factors considered by faculty when selecting communication

majors are writing samples, work and service experiences with diverse populations, reference letters, and seniority at WWU.

Before applying to become a Communication major, students must:

- Complete COMM 101 or COMM 235 with a B- or better.
- Complete COMM 220, with a B- or better.

Once the above courses have been completed, students can submit a portfolio of their work on or before Monday of the fourth week of fall, winter and spring quarters. The faculty will then review the portfolios and announce the names of successful applicants before the end of each quarter. Students are allowed to make a maximum of two application attempts.

**The portfolio will include the following items:**

- Transcripts of all college work completed to date
- A letter of intent to major in communication
- A résumé including course of study, work experience, recreational and avocational activities, internships, awards and honors, and public service activities
- Two samples of the student's collegiate writing assignments including best research paper or class project
- Three letters of recommendation from employers, teachers, or supervisors
- A proposed program of study which includes a statement indicating a chosen minor or a self-designed minor. (A self-designed minor is comprised of at least 25 credits and is acceptable only when the student has a clear educational goal that cannot be met within existing minors on campus. Requests to pursue a self-designed minor must include a written statement prepared by the student indicating the rationale for the self-designed minor and the courses selected.)

Once admitted, communication majors whose cumulative GPA falls below 2.5 risk losing their major status. They will be warned of the risk in their first quarter below 2.5 and may be dropped from the major if their cumulative GPA is not 2.5 or higher in the subsequent quarter.

#### ***Mid-Program Checkpoint***

A student seeking to complete a BA degree with a communication major within a four-year time span should complete the following courses by the start of his/her junior year. Major omissions from this list will make it difficult to complete this degree within two additional years.

- COMM 101 or COMM 235 (with a B- or better)
- COMM 220 (with a B- or better)
- One of the following: COMM 235; HIST 398; LIBR 125, LIBR 201 ; PSY 301 (with a C or better grade)
- Two or more 200 or 300-level communication courses that are open to all undergraduates: JOUR 190 (Intro to Mass Media) will also count toward a COMM major and can be taken at this stage).
- Substantial progress in General University Requirements (GURs), including courses with substantial writing components (see portfolio writing sample requirements).
- COMM 398 (Research Methods in Communication) should be taken by the student as soon as possible once a student is accepted into the department.

#### **Undergraduate Degrees and Programs**

Communication, BA

Communication — Elementary, BAE

Communication Minor

## **Communication Minor**

**25 credits (minimum)**

### **Admission and Declaration Process**

Declaration of Major ([see Communication department page](#))

### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

### **Requirements**

- One course from:
  - COMM 101 - Fundamentals of Speech
  - COMM 235 - Exposition and Argumentation
  - COMM 220 - Communication Theory
    - Plus additional courses totaling a minimum of 16 credits and including one upper-division course from the following:
    - COMM 224 - Small Group Processes
    - COMM 230 - Introduction to Rhetorical Theory and Criticism
    - COMM 235 - Exposition and Argumentation
      - Only one of:
        - COMM 244 - Advocacy Through Media
        - JOUR 190 - Introduction to Mass Media
      - Only one of:
        - COMM 325 - Introduction to Intercultural Communication
        - COMM 327 - Interpersonal Communication
        - COMM 331 - Advanced Public Speaking
      - or other upper-division COMM courses when space is available
    - The minor may include no more than 3 credits from the following:
      - COMM 236 - Intercollegiate Forensics
      - COMM 300 - Independent Study
      - COMM 339 - Practicum in Applied Communication
      - COMM 400 - Independent Study
      - COMM 436 - Advanced Forensics and Debate
      - COMM 450 - Communication Pedagogy I
      - COMM 451 - Communication Pedagogy II

## **Communication — Elementary, BAE**

**50 Credits**

### **Introduction**

This major satisfies the academic major requirement for teacher certification with an endorsement in elementary education and must be accompanied by the professional preparation program in elementary education. See the Elementary Education section of this catalog for program admission, completion, and teacher certification requirements.

## **Admission and Declaration Process**

Declaration of Major (see Communication department page)

## **Grade Requirements**

A grade of C (2.0) or better is required for courses in the elementary education professional program and all courses required for the endorsements.

Maintain a GPA of 2.75 for all college work

## **Requirements**

- COMM 224 - Small Group Processes
- COMM 327 - Interpersonal Communication
- COMM 454 - Instructional Communication
- One course from:
  - COMM 235 - Exposition and Argumentation (unless used to satisfy departmental major requirement)
  - COMM 236 - Intercollegiate Forensics
    - Select 27 credits of departmental courses, under advisement. (Obtain recommended list from departmental office.) Twelve of the 27 credits must be upper division.
- A total of not more than six credits from the following may be applied to the 27 credits:
  - COMM 236 - Intercollegiate Forensics
  - COMM 300 - Independent Study
  - COMM 339 - Practicum in Applied Communication
  - COMM 400 - Independent Study
  - COMM 436 - Advanced Forensics and Debate
  - COMM 450 - Communication Pedagogy I
  - COMM 451 - Communication Pedagogy II

## **Additional Requirements**

### **Elementary Education Professional Program Requirements (106 credits)**

#### **Professional Studies Core (25 credits)**

- EDUC 301 - Educational Psychology I: Development and Individual Differences
- EDUC 302 - Educational Psychology II: Motivation, Learning and Assessment
- EDUC 310 - The Teacher and the Social Order
- ELED 370 - Introduction to Teaching
- IT 344 - Basic Instructional Technology Skills
- IT 442 - Classroom Use of Instructional Technology (Elementary)
- SPED 364 - Teaching All Students

## **Elementary Program — Methods, Curriculum Content, and Field Experiences (81 credits)**

- ART 380 - Art Educating the Child
- ELED 425 - Social Studies for the Elementary School
- ELED 470 - Developing Teaching
- ELED 471 - Documenting Teaching
- ELED 480 - Literacy: Beginning Communicators
- ELED 481 - Literacy: Fluent Communicators
- ELED 491 - September Experience
- ELED 492 - Practicum: Experience in Literacy Methods
- ELED 494 - Internship - Elementary
- HLED 455 - Health Education Grades K-8
- MATH 381 - Teaching K-8 Mathematics I
- MATH 382 - Teaching K-8 Mathematics II
- MATH 383 - Teaching K-8 Mathematics III
- MATH 491 - Internship Seminar - Teaching K-8 Mathematics
- MUS 361 - Music for Elementary Teachers
- PE 345 - Physical Education for Elementary School
- SCED 480 - Science Methods and Curriculum for the Elementary School
- SCED 490 - Laboratory/Field Experience in Elementary Science
- SPED 430 - Problem Solving for Diverse Needs

### **Departmental Honors**

A communication major who wishes to graduate with honors in communication must maintain a GPA of 3.5 in upper-division communication courses and successfully complete Com 492, Senior Thesis, under the direction of a faculty advisor. In addition, the student must provide evidence of excellence and extensive participation (from 2 to 6 quarters) in research, forensics, intercultural/international, or service activities, under advisement. A detailed list of courses and activities from which a student may earn departmental honors will be available from faculty advisors.

## **Communication, BA**

**50 credits (plus minor)**

### **Introduction**

Students contemplating a major in communication are encouraged to register as pre-majors with the communication department in Communication Facility 203.

Students who transfer to Western after completing an AA at a community college can enroll in upper-division communication classes as long as they meet the stated prerequisites. Students who enter Western as freshmen will enroll in required GUR classes and develop a GPA that is suitable to communication department majors.

### **Admission and Declaration Process**

Declaration of Major ([see Communication department page](#))

## **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

## **Requirements**

- Satisfy departmental requirements for declaration of major (stated above); see link
- COMM 398 - Research Methods in Communication
- COMM 498 - Communication Ethics
  - Complete a course that emphasizes library research strategies and skills. Only the following courses are approved:
    - COMM 235 - Exposition and Argumentation
    - LIBR 201 - Introduction to Research Strategies
  - Select 30 credits of departmental courses. Obtain recommended course list from departmental office; no more than 6 credits from the following may be included in the 30 major credits:
    - COMM 236 - Intercollegiate Forensics
    - COMM 300 - Independent Study
    - COMM 339 - Practicum in Applied Communication
    - COMM 400 - Independent Study
    - COMM 436 - Advanced Forensics and Debate
    - COMM 450 - Communication Pedagogy I
    - COMM 451 - Communication Pedagogy II
    - COMM 459 - Field Internship in Communication

Normally, majors will take an official minor comprised of 25 or more credits, approved at the time of declaration. The student may petition to substitute a self-designed major, comprised of at least 25 credits and including a written statement prepared by the student indicating the rationale for the courses selected. Students may substitute a second major, TESOL certification or Internet Studies certification for a minor. **Any communication courses taken as part of a double major, or a minor, or a certification, cannot be double-counted within both the communication major and the double major, minor or certification.**

## **Departmental Honors**

A communication major who wishes to graduate with honors in communication must maintain a GPA of 3.5 in upper-division communication courses and successfully complete Com 492, Senior Thesis, under the direction of a faculty advisor. In addition, the student must provide evidence of excellence and extensive participation (from 2 to 6 quarters) in research, forensics, intercultural/international, or service activities, under advisement. A detailed list of courses and activities from which a student may earn departmental honors will be available from faculty advisors.

# **Communication Sciences and Disorders**

## **Introduction**

### *The Disciplines*

Speech-language pathology and audiology are disciplines that have developed out of a concern for people with communication disorders. Preparation leading to a degree in communication sciences and disorders includes a wide range of courses and a variety of clinical practicum opportunities working with the infant through geriatric populations.

Students who intend to seek employment in this profession, whether in a public school, clinic, rehabilitation center, or hospital setting, are advised that a master's degree and certification/licensure at the state and/or national levels are required. Out-of-state students should recognize that other requirements may exist for employment in their locales.

### *Degree Programs in Communication Sciences and Disorders*

The Department of Communication Sciences and Disorders (CSD) offers both the Bachelor of Arts and the Master of Arts degrees. Two programs lead to a Bachelor of Arts degree. The graduate school track is a pre-professional degree that prepares the student for pursuing graduate studies in either audiology or speech-language pathology. The non-graduate school track is for students who do not intend to pursue a career in audiology or speech-language pathology, and therefore will not be preparing for graduate school. For the bachelor's degree, a minor area of study of 24 credits or more is required. The minor must be approved by the student's academic advisor. Suggested areas include audiology (in moratorium AY 2010-11), biology, business, education, psychology, or sociology. Individually designed minors are permissible with faculty advisor approval.

The Master of Arts degree is a professional degree and partially fulfills certification requirements at both the state and national levels. A student may specialize in speech-language pathology at the master's level. The MA degree program, Speech Language Pathology, is accredited by the American Speech-Language-Hearing Association (ASHA). The department does not offer a clinical doctorate program in audiology.

Due to the clinical requirements of the programs, enrollment in the undergraduate and graduate major may be limited.

A post-baccalaureate program is offered for those with an undergraduate degree in a field other than communication sciences and disorders for who hold a CSD degree that is five years of older. This program is designed to prepare such students for graduate-level study in speech-language pathology or audiology. The 45-50 credits four-quarter lockstep program begins fall quarter. The post-baccalaureate program is self-supporting and has a tuition rate that differs from that of regularly enrolled undergraduate students.

Students interested in the post-baccalaureate program need to complete the Extension Undergraduate Application. Extension admission and registration information is available from Extended Education and Summer Programs, 360-650-6854.

**NOTE:** Enrollment in the post-baccalaureate program does not guarantee a place in the graduate program.

## **Accreditation**

The Department of Communication Sciences and Disorders is accredited by the American Speech-Language-Hearing Association's Council on Academic Accreditation in Audiology and Speech-Language Pathology (CAA) and by the National Council for the Accreditation of Teacher Education.

## **Certification/Licensure in Speech-Language Pathology/Audiology**

There are three types of professional certification/licensure in the field: state licensure from the Washington state Department of Health; certification as an educational staff associate from the Washington state Office of the Superintendent of Public Instruction; and the Certificate of Clinical Competence, a national certification, from ASHA. Consult the department for additional information.

### **Faculty**

**BARBARA MATHERS-SCHMIDT** (1991) Chair and Professor. BA, Lewis and Clark College; MS, Portland State University; PhD, University of Washington. (speech-language pathology).

**EVA BAHARAV** (2003) Associate Professor. BA, MA, University of California-Berkeley; PhD, Boston University. Undergraduate advisor (speech-language pathology).

**RIEKO M. DARLING** (1995) Associate Professor. BS, MS, PhD, The Florida State University. Transfer advisor, undergraduate advisor; director, audiology clinics (audiology).

**KIMBERLY A. PETERS** (2002) Associate Professor. BA, Trinity College; MA, PhD, University of Connecticut. Undergraduate advisor; director, aural rehabilitation clinics (audiology).

**LINA ZEINE** (1983) Professor. BA, American University of Beirut-Lebanon; MA, University of Colorado; PhD, University of Kansas. Coordinator, graduate studies (speech-language pathology).

### **Clinical Educators**

**ANNA CHAMBERLIN** (1998) BA, MA, Western Washington University (audiology).

**JULIA GARBER** (2001) BA, MA, University of Central Florida (audiology).

**JENNIFER GRUENERT** (2008) BA, MS, University of Washington (speech-language pathology)

**JILL K. HUNT-THOMPSON** (1977) BA, MA, Western Washington University (speech-language pathology).

**GEOGETTA LILLEY** (1988) BS, MEd, California University of Pennsylvania (speech-language pathology).

**YARROW POSPISIL** (2001) BS, University of Nebraska; MA, Western Washington University (speech-language pathology).

**TERRY SACKS** (2005) BS, MA, Northwestern University. Director, speech-language pathology clinics. (speech-language pathology).

**KAREN-MARGRETHE, BRUUN,** (2010) MA, Western Washington University (speech-language pathology).

### **Declaration Process**

The communication sciences and disorders department (CSD) offers two tracks leading to a bachelor's degree. The **graduate track** is for students who intend to pursue a graduate degree after completing the undergraduate degree with a major in CSD. The **non-graduate track** is for students who will not be applying for admission to graduate programs in speech-language pathology or audiology. For either track, a **minor** of 24 credits or more is required. A self-designed minor is acceptable, with prior approval of the advisor.

Before officially being accepted into the graduate track, students must earn a B- or better in the four core courses (CSD 251, 352, 354 and 356) and maintain a GPA of 3.0 or better over the previous three academic quarters (e.g., fall, winter, spring). All students must make an appointment with their advisor for review of graduate-track status early in the quarter, prior to the quarter in which they intend to register for a graduate-track course. The student is responsible for presenting a transcript as evidence of having met the above criteria. The student will present a copy of the advisor-signed Graduate Track Plan of Study as evidence of graduate track status and approval for enrollment in graduate track courses.

As stated in the section regarding general university academic policies, "any grade below a C- is unacceptable in the student's major or minor." In the Communication Sciences and Disorders Department students also are required to complete each prerequisite course with a grade of C- or better before enrolling in the courses for which that serves as a prerequisite.

## **Other Departmental Information**

### ***Essential Functions of Candidates for Program Admission and Continuance***

#### ***Introduction***

The CSD department's speech-language pathology and audiology preparation programs lead to graduate degrees in speech language pathology and/or audiology. The core curriculum is designed to support student attainment of the academic and clinical competencies needed for graduation and for licensure in the state of Washington. The education of a speech-language pathologist or audiologist requires assimilation of knowledge, acquisition of skills, and development of judgment through patient care experience in preparation for independent and appropriate decision-making practices. The current practices of speech-language pathology and audiology emphasize collaboration among audiologists, speech-language pathologists, other allied health care professionals, physicians, and patients.

#### ***Policy***

The accredited graduate program in the CSD program at Western adheres to the standards set by ASHA. Within ASHA standards, the CSD program has the freedom and ultimate responsibility for the selection of students; the design, implementation, and evaluation of the curriculum; the evaluation of student progress; and the determination of who should be awarded a degree.

Faculty and professional staff in the CSD department have a responsibility for the welfare of patients tested, treated, or otherwise affected by students enrolled in the CSD program. The department has the ultimate responsibility to the public to assure that its graduates can become fully competent professionals, capable of delivering quality care in a timely manner and preserving the well-being of the patients they serve. Thus, it is important that persons admitted, retained, and graduated possess the intelligence, integrity, compassion, humanitarian concern, and physical and emotional capacity necessary to practice in communication sciences and disorders.

No student in CSD may participate as a primary clinician in the clinic or an internship until cleared by the Washington State Office of Superintendent of Public Instruction and the Federal Bureau of Investigation background check. Clearance is valid for specified time frames. Procedure and fee information are provided to students upon acceptance into the graduate program.

The CSD department is committed to the principle of equal opportunity. The University, College, and department do not discriminate on the basis of race, color, creed, religion, national origin, gender, sexual orientation, age, marital status, disability, disabled veteran or Vietnam-era veteran status. When requested, the University will provide reasonable accommodation to otherwise qualified students in the department. To fulfill this responsibility, the department has established academic standards and minimum essential requirements that must be met with or without reasonable accommodations in order to participate in the program and graduate.

#### ***Program***

The CSD department endeavors to select applicants who have the ability to become highly competent speech-language pathologists and audiologists. Admission and retention decisions are based not only on satisfactory prior and ongoing academic achievement, but also on nonacademic factors that serve to ensure that the candidate can complete the essential functions of the academic and clinical program required for graduation. Essential functions, as distinguished from academic standards, refer to those cognitive, physical, and behavioral abilities that are necessary for satisfactory completion of all aspects of the curriculum, and the development of professional attributes required by the faculty of all students at graduation. The essential functions required by the curriculum are in the following areas: motor, sensory, communication, intellectual/cognitive (conceptual, integrative, and quantitative abilities for problem solving and diagnosis), behavioral/emotional, and the professional aspects of the performance of a speech-language pathologist and/or audiologist.

- ***Motor Skills.*** The student should have sufficient motor function to be able to execute movements required to provide with acuity, accuracy, and facility a complete speech, language, and/or audiology examination and provide therapeutic services to patients of all ages and both genders in all clinical situations. The student must have the ability to safely assist patients in moving, for example, from room to room, from chair to chair, on and off an examination table.
- ***Sensory/Observation.*** The CSD curriculum requires essential ability in information acquisition. The student must have the ability to master information presented in course work in the form of lectures, written materials, and projected images. The student must also be able to acquire the information presented through demonstrations and experiences in the clinical training portion of the program. The student must be able to observe a patient accurately, both at a distance and close at hand, and observe and appreciate nonverbal communication and manual signs when performing clinical assessments and treatment activities. The student must have the ability to take a case history and perform a visual examination of various oral and craniofacial structures (i.e., ear, throat, oral cavity, skull, et cetera). The student must have sufficient sensory capability to perform all required examination and treatment protocols using instruments and tools necessary for accurate, efficient, and timely completion of such activities.
- ***Communication.*** The student must be able to accurately, effectively, and sensitively communicate information on patient status with other students, faculty, staff, patients, families, and other professionals. This information must be communicated in a succinct yet comprehensive manner and in settings in which time available may be limited. These skills require the ability to assess and effectively communicate all relevant information including the significance of nonverbal responses. These skills also require the ability to immediately assess incoming information to allow for well-focused, appropriate follow-up inquiry. The student must be capable of responsive, empathetic listening to establish rapport in a way that promotes openness on issues of concern and sensitivity to potential cultural differences. Students must express ideas and feelings clearly and demonstrate a willingness and ability to give and receive feedback.
- ***Cognitive.*** The student must have the cognitive abilities necessary to master relevant content in basic science and clinical courses at a level deemed appropriate by the faculty and professional staff. These skills may be described as the ability to comprehend, memorize, analyze, and synthesize material. Students must be able to develop reasoning and decision-making skills appropriate to the practice of speech-language pathology and/or audiology.
- ***Behavior/Emotional.*** The student must possess the emotional health required for the full utilization of his or her intellectual abilities, the exercise of good judgment, and the prompt completion of all responsibilities attendant to the diagnosis and treatment of communication disorders in patients. In addition, the student must be able to maintain mature, sensitive, and effective relationships with patients, students, faculty, staff, and other professionals under all conditions, including highly stressful situations. The student must have the emotional stability to function effectively under stress and to adapt to an environment that may change rapidly without warning and/or in unpredictable ways. The student must be able to experience empathy for the situations and circumstances of others and effectively communicate that empathy. The student must know if his or her values, attitudes, beliefs, emotions, and/or experiences affect his or her perceptions and relationships with others. The student must be willing and able to examine and change his or her behavior when it interferes with productive individual or team relationships. The student must possess skills and experience necessary for effective and harmonious relationships in diverse learning and working environments.
- ***Professional.*** The student must possess the ability to reason judiciously and practice speech-language pathology and/or audiology in an ethical manner. Students must be willing to learn and abide by professional standards of practice. Students must possess attributes that include compassion, empathy, altruism, integrity, honesty, responsibility, and tolerance. The student must be able to engage in patient care delivery in all clinical settings and be able to deliver care to all patient populations, including but not limited to, children, adolescents, adults, developmentally disabled persons, medically compromised patients, and vulnerable adults.

#### ***Writing Proficiency Guidelines***

Majors in Communication Sciences and Disorders must complete a minimum of three writing proficiency points in approved upper-division writing proficiency courses at WWU with a minimum grade of C-. Students must meet with an

undergraduate advisor no later than the fourth week of winter quarter of the junior year to file a plan of study. The plan of study will include signing up for specific writing proficiency courses and labs.

### **Undergraduate Degrees and Programs**

Communication Sciences and Disorders, BA  
Communication Sciences and Disorders Minor  
Audiology Minor (in moratorium AY 2010-11)

### **Graduate Degrees and Programs**

Speech-Language Pathology, Thesis, MA  
Speech-Language Pathology, Non-Thesis, MA  
Audiology-Aural Rehabilitation, Non-Thesis, MA

## **Audiology Minor (in moratorium AY 2010-11)**

### **24 Credits**

#### **Admission and Declaration Process**

Declaration of Major (see Communication Science & Disorders department page)

#### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

#### **Requirements**

- CSD 381 - Physiological and Psychological Bases of Hearing
- CSD 464 - Clinical Practice in Aural Rehabilitation
- CSD 468 - Clinical Practicum in Audiology
- CSD 482 - Clinical Hearing Technology
- CSD 483 - Amplification and Sensory Systems
- CSD 485 - Children With Hearing Loss in School
- CSD 487 - Fundamentals of Hearing Conservation
- Electives from:
  - CSD 400 - Independent Study
- CSD 491 - Senior Research Project
- CSD 499 - Field Placement/Observation in Speech-Language Pathology or Audiology

Meeting with CSD advisor required before registering for audiology minor.

## **Communication Sciences and Disorders Minor**

**25 credits minimum**

### **Admission and Declaration Process**

Declaration of Major ([see Communication Science & Disorders department page](#))

### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

### **Requirements**

- CSD 251 - Introduction to Communication Disorders
- CSD 352 - Anatomy and Physiology of Speech Mechanisms
- CSD 354 - Speech and Language Development in Children
- CSD 356 - Phonetics
- CSD 371 - Hearing Science
- Electives from:
  - CSD 253 - Speech and Hearing Sciences for the Liberal Arts
  - CSD 353 - Speech Science
  - CSD 361 - Language Disorders, Birth to Five
  - CSD 372 - Hearing Disorders
  - CSD 373 - Introduction to Phonology
  - CSD 451 - Language Disorders II
  - CSD 463 - Aural Rehabilitation

## **Communication Sciences and Disorders, BA**

**65 Credits**

### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

### **Requirements**

- CSD 251 - Introduction to Communication Disorders
- CSD 352 - Anatomy and Physiology of Speech Mechanisms
- CSD 353 - Speech Science
- CSD 354 - Speech and Language Development in Children
- CSD 356 - Phonetics
- CSD 361 - Language Disorders, Birth to Five
- CSD 371 - Hearing Science
- CSD 372 - Hearing Disorders

- CSD 373 - Introduction to Phonology
- CSD 450 - Neuroanatomy for Speech Pathology and Audiology
- CSD 451 - Language Disorders II
- CSD 457 - Clinical Processes
- CSD 463 - Aural Rehabilitation
- LIBR 403 - Research Tutorial
- 2 credits of:
  - CSD 301 - Writing Lab
  - CSD 401 - Writing Lab
  - Electives under departmental advisement
  - Required minor
  - One of the following tracks:

#### **Graduate Degree Track**

- CSD 458 - Application of Clinical Processes to CSD
- CSD 459 - Lab: Beginning Clinical Practice in Speech-Language Therapy
- CSD 462 - Audiometric Testing
- CSD 486 - Infants and Children With Hearing Loss
- CSD 488 - Hearing Loss in Adulthood

#### **Non-Graduate Degree Track**

- CSD 462 - Audiometric Testing
- CSD 486 - Infants and Children With Hearing Loss
- CSD 488 - Hearing Loss in Adulthood (with instructor permission)
- 4 credits (for Audiology minor) or 8 credits (for all others) of advisor-approved upper division courses

### **Audiology-Aural Rehabilitation, Non-Thesis, MA**

**Notice:** The Department of Communication Sciences and Disorders at Western Washington University admitted its last audiology master's degree students in fall 2004. The department placed a moratorium on admission until further notice. Please contact the department for more information.

This program is not currently accepting new students. For further information contact the Graduate School, Western Washington University, 516 High St., Bellingham, WA 98225-9037, 360-650-3170, gradschool@wwu.edu.

### **Speech-Language Pathology, Non-Thesis, MA**

#### **Graduate Faculty**

**Baharav, Eva**, PhD, speech-language pathology, child and adolescent language, typical and disordered language across the life span, phonology.

**Darling, Rieko M.**, PhD, audiology, amplification, geriatrics, central auditory processing disorders, aural rehabilitation.  
**Mathers-Schmidt, Barbara**, PhD, fluency disorders, neuromotor speech disorders, research methodology, speech science.

**Peters, Kimberly A.**, PhD, audiology, pediatric audiology, auditory physiology, aural (re)habilitation, cochlear implants.  
**Zeine, Lina**, PhD, adult language disorders, voice/laryngectomyee.

## Goals

The objectives of the program in Speech-Language Pathology are to prepare competent entry-level professionals in speech-language pathology and to prepare students for advanced study at the PhD level. The program includes an internship taken after other academic and clinical requirements have been completed.

Speech-language pathology is a discipline which has developed out of a concern for people with communication disorders. Preparation leading to a degree in communication sciences and disorders includes a wide range of course work and a variety of clinical practicum opportunities working with the infant through geriatric populations.

Students who intend to seek employment in this profession, whether in a public school, clinic, rehabilitation center or hospital setting, are advised that certification/licensure at the state and/or national levels is required. Out-of-state students should recognize that other requirements may exist for employment in different geographic locations.

## Prerequisites

Undergraduate major in Communication Sciences and Disorders (CSD) or equivalent professional core curriculum. The BA or BS in Communication Sciences and Disorders (Speech Pathology and Audiology) must have been completed within the past five years in order to be considered as an applicant for the graduate program in CSD. Grade point average requirements consistent with the Graduate School. Graduate Record Exam — minimum 430 in verbal and quantitative and 4.5 on the analytical writing.

Students who are not native speakers of English must demonstrate competence in written and spoken English. This can be done by submitting a satisfactory score on the international TOEFL, taken within one year of the date of application. A minimum composite score of 600 is required for the paper-based test; the scaled score for the computer-based test is 250; the Internet-based minimum score is 100. The TOEFL scores must be on file in the Graduate School prior to receipt of the application for graduate study.

## ASHA Standards

**Standard IIIA:** The applicant must demonstrate knowledge of the principles of biological sciences, physical sciences, mathematics, and the social/behavioral sciences.

**Implementation:** The applicant must have transcript credit (which could include course work, advanced placement, CLEP, or examination of equivalency) for each of the following areas: biological sciences, physical sciences, social/behavioral sciences, and mathematics. Appropriate course work may include human anatomy and physiology, neuroanatomy and neurophysiology, genetics, physics, inorganic and organic chemistry, psychology, sociology, anthropology, and nonremedial mathematics. The intent of this standard is to require students to have a broad liberal arts and science background. Courses in biological and physical sciences specifically related to communication sciences and disorders may not be applied for certification purposes in this category. In addition to transcript credit, applicants may be required by their graduate program to provide further evidence of meeting this requirement.

The graduate coordinator will review the student's transcript during the first quarter of graduate work and if any of the above course work needs to be completed, the student will be advised to do so, as an overload, before graduation.

## Application Information

**Notice:** The Department of Communication Sciences and Disorders at Western Washington University admitted its last audiology master's degree students in fall 2004. The department placed a moratorium on admission until further notice. Please contact the department for more information.

The above does not affect the speech-language pathology graduate program. The department will continue to offer the ASHA-accredited master's degree program in speech-language pathology.

Enrollment is limited to 20 new graduate students per year.

**Admit Quarter:** Fall quarter only. The communication sciences and disorders program is a lock-step program which offers courses in sequence once a year beginning in the fall.

**Deadline:** Application deadline is February 1.

**TA Deadline:** Application deadline is February 1.

**Specific Test Requirements:** Graduate Record Exam, General Test, with a minimum of 430 in each area and 4.5 on the Analytical Writing. (No test scores are required if an applicant holds an advanced degree — MA, MS, PhD.)

#### **Supporting Materials:**

- Application with \$50 fee (subject to change)
- Three recent letters of reference
- Two official transcripts from every school attended (no more than two years old)
- One-page statement of purpose
- One-page résumé

#### **Program Requirements (73 credits)**

- Requirements:
  - CSD 502 - Research Methods in Communication Sciences and Disorders
  - CSD 510 - Organic Disorders
  - CSD 515 - Seminar: Phonology
  - CSD 549 - Clinical Practicum
  - CSD 550 - Voice Disorders and Therapy
  - CSD 551 - Survey of Speech Pathology and Audiology
  - CSD 552 - Diagnostic Practicum in Speech-Language Pathology
  - CSD 553 - Seminar: Preschool Language Development and Disorders
  - CSD 554 - Stuttering
  - CSD 555 - Seminar: Language Disorders in the School Age Child
  - CSD 556 - Aphasia
  - CSD 557 - Advanced Speech Pathology
  - CSD 558 - Graduate Clinical Practice in Speech-Language Pathology
  - CSD 560 - Speech-Language Pathology Practicum
  - CSD 564 - Advanced Clinical Practice in Aural Rehabilitation
  - CSD 575 - Counseling in Communication Disorders
  - CSD 580 - Communication Disorders in the Public Schools #
  - CSD 581 - Infancy: Development, Disorders and Intervention \*
  - CSD 582 - Medical Speech Pathology
  - CSD 585 - Neuromotor Speech Disorders
  - CSD 586 - Diagnosis and Treatment of Adult Language Neurogenic Disorders
  - CSD 587 - Seminar: Dysphagia
  - CSD 588 - Seminar in Augmentative and Alternative Communication
  - CSD 589 - Library Research for CSD

- CSD 599 - Intern Speech/Lang Path/Aud
  - Non-Thesis:
- CSD 691 - Non-Thesis Option (3 credits) or Comprehensive exam
  - Electives:
- CSD 559 - Speech-Language Pathology Practicum
- CSD 570 - Medical Audiology
- CSD 598 - Internship in Speech-Language Pathology or Audiology \*\*

#Required for students intending to apply for Washington state CSD certificate.

\*Two of three courses in the series (580, 581, 582) are required.

\*\*Although the internship courses (598; 599) are 1-4 and 8 credits each, respectively, only a total of 6 credits can apply toward the MA degree.

## **Additional Information**

### **Clinical Competence**

In addition to meeting academic requirements, students specializing in speech-language pathology must demonstrate satisfactory competence in diagnostic and clinical practice. Refer to course description for additional information. No student in CSD may participate as a primary clinician in the clinic or an internship until cleared by the Washington State Office of Superintendent of Public Instruction and the Federal Bureau of Investigation background check. Clearance is valid for specified time frames. Procedure and fee information are provided to students upon acceptance into the graduate program. At times, the requirements for the completion of clinical practicum courses may fall outside the regular University calendar. Contact the department for further details.

Students are permitted to retake a clinical practicum only once. If a satisfactory grade is not achieved in the retake, students will not be permitted to continue in the practicum courses.

Not everyone is suited to work with clients in the clinical fields of speech-language pathology and audiology even though the student may maintain a satisfactory academic record. The faculty and staff of the Department of Communication Sciences and Disorders thus reserve the right to counsel students with this in mind, and to recommend a change of academic focus for the student who appears to have personality traits that would prevent the student from being successful in the discipline.

### **Internship**

An internship is required for all CSD students. This experience provides an opportunity for each student to refine and expand basic clinical skills by participating in a supervised, full-time work experience in a professional setting. The terminal objective of this training phase is to facilitate each clinician's transition from student in training to competent entry-level professional. As such, the internship is taken after other academic and clinical requirements have been completed with the exception of the research project. In addition to the required full-time internship (CSD 599), students also may choose to complete one or more part-time internships (CSD 598). Both the full-time and part-time placements require assignment to clinical settings off campus (e.g., schools, hospitals, private clinics, et cetera).

Due to the limited number of clinical credits that may be applied toward the graduate degree, students may use only 3 of the 8 CSD 599 credits toward the MA. An additional 3 credits of CSD 598 also may be applied toward the MA. Please see the graduate advisor or internship coordinator for further information.

### **Comprehensive Examination and Thesis/Non-Thesis Oral Defense**

The student will have a choice of writing a comprehensive exam or completing either a thesis or non-thesis research project and paper. The five-hour written comprehensive exam covers the student's area(s) of specialization and graduate

program up to the time of the exam. A minimum of 50 graduate credits must be completed before the comprehensive exams can be taken.

Should the student choose to complete a thesis or a non-thesis research project and paper, this will be followed by an oral exam based on the student's topic. For details regarding the comprehensive exam and oral defense, the student should consult the graduate coordinator. Any recent policy/procedure changes or exceptions will be listed in the current CSD Graduate Guide.

#### **Accreditation**

The graduate programs in speech-language pathology and audiology at Western Washington University are accredited by the Council of Academic Accreditation in Audiology and Speech-Language Pathology of the American Speech-Language Hearing Association and by the National Council for the Accreditation of Teacher Education.

#### **Professional Certification Requirements**

The American Speech-Language-Hearing Association (ASHA) 2005 requirements for Certification of Clinical Competence in Speech-Language Pathology stipulate the completion of 400 clock hours of practicum. Of these hours, at least 375 must be direct patient contact, at least 325 of which must be obtained at the graduate level. The requirement is met by taking an appropriate number of practicum credits (see application information above). Consult the department about specific requirements regarding clinical experience in the area in which the certificate is sought. The student must have a minimum of nine hours of classwork in the minor area of study (speech-language pathology or audiology). Consult the ASHA Membership and Certification Handbook for details.

### **Speech-Language Pathology, Thesis, MA**

#### **Graduate Faculty**

**Baharav, Eva**, PhD, speech-language pathology, child and adolescent language, typical and disordered language across the life span, phonology.

**Darling, Rieko M.**, PhD, audiology, amplification, geriatrics, central auditory processing disorders, aural rehabilitation.

**Mathers-Schmidt, Barbara**, PhD, fluency disorders, neuromotor speech disorders, research methodology, speech science.

**Peters, Kimberly A.**, PhD, audiology, pediatric audiology, auditory physiology, aural (re)habilitation, cochlear implants.

**Zeine, Lina**, PhD, adult language disorders, voice/laryngectomyee.

Graduate Coordinator: Dr. Lina Zeine, AI 376, 360-650-3178

#### **Goals**

The objectives of the program in Speech-Language Pathology are to prepare competent entry-level professionals in speech-language pathology and to prepare students for advanced study at the PhD level. The program includes an internship taken after other academic and clinical requirements have been completed.

Speech-language pathology is a discipline which has developed out of a concern for people with communication disorders. Preparation leading to a degree in communication sciences and disorders includes a wide range of course work and a variety of clinical practicum opportunities working with the infant through geriatric populations.

Students who intend to seek employment in this profession, whether in a public school, clinic, rehabilitation center or hospital setting, are advised that certification/licensure at the state and/or national levels is required. Out-of-state students should recognize that other requirements may exist for employment in different geographic locations.

## **Prerequisites**

Undergraduate major in Communication Sciences and Disorders (CSD) or equivalent professional core curriculum. The BA or BS in Communication Sciences and Disorders (Speech Pathology and Audiology) must have been completed within the past five years in order to be considered as an applicant for the graduate program in CSD. Grade point average requirements consistent with the Graduate School. Graduate Record Exam — minimum 430 in verbal and quantitative and 4.5 on the analytical writing.

Students who are not native speakers of English must demonstrate competence in written and spoken English. This can be done by submitting a satisfactory score on the international TOEFL, taken within one year of the date of application. A minimum composite score of 600 is required for the paper-based test; the scaled score for the computer-based test is 250; the Internet-based minimum score is 100. The TOEFL scores must be on file in the Graduate School prior to receipt of the application for graduate study.

## **ASHA Standards**

**Standard IIIA:** The applicant must demonstrate knowledge of the principles of biological sciences, physical sciences, mathematics, and the social/behavioral sciences.

**Implementation:** The applicant must have transcript credit (which could include course work, advanced placement, CLEP, or examination of equivalency) for each of the following areas: biological sciences, physical sciences, social/behavioral sciences, and mathematics. Appropriate course work may include human anatomy and physiology, neuroanatomy and neurophysiology, genetics, physics, inorganic and organic chemistry, psychology, sociology, anthropology, and nonremedial mathematics. The intent of this standard is to require students to have a broad liberal arts and science background. Courses in biological and physical sciences specifically related to communication sciences and disorders may not be applied for certification purposes in this category. In addition to transcript credit, applicants may be required by their graduate program to provide further evidence of meeting this requirement.

The graduate coordinator will review the student's transcript during the first quarter of graduate work and if any of the above course work needs to be completed, the student will be advised to do so, as an overload, before graduation.

## **Application Information**

**Notice:** The Department of Communication Sciences and Disorders at Western Washington University admitted its last audiology master's degree students in fall 2004. The department placed a moratorium on admission until further notice. Please contact the department for more information.

The above does not affect the speech-language pathology graduate program. The department will continue to offer the ASHA-accredited master's degree program in speech-language pathology.

Enrollment is limited to 20 new graduate students per year.

**Admit Quarter:** Fall quarter only. The communication sciences and disorders program is a lock-step program which offers courses in sequence once a year beginning in the fall.

**Deadline:** Application deadline is February 1.

**TA Deadline:** Application deadline is February 1.

**Specific Test Requirements:** Graduate Record Exam, General Test, with a minimum of 430 in each area and 4.5 on the Analytical Writing. (No test scores are required if an applicant holds an advanced degree — MA, MS, PhD.)

**Supporting Materials:**

- Application with \$50 fee (subject to change)
- Three recent letters of reference
- Two official transcripts from every school attended (no more than two years old)
- One-page statement of purpose
- One-page résumé

**Program Requirements Speech-Language Pathology**

(minimum 73 credits for non-thesis; minimum 76 for thesis)

 **Requirements:**

- CSD 502 - Research Methods in Communication Sciences and Disorders
- CSD 510 - Organic Disorders
- CSD 515 - Seminar: Phonology
- CSD 549 - Clinical Practicum
- CSD 550 - Voice Disorders and Therapy
- CSD 551 - Survey of Speech Pathology and Audiology
- CSD 552 - Diagnostic Practicum in Speech-Language Pathology
- CSD 553 - Seminar: Preschool Language Development and Disorders
- CSD 554 - Stuttering
- CSD 555 - Seminar: Language Disorders in the School Age Child
- CSD 556 - Aphasia
- CSD 557 - Advanced Speech Pathology
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- CSD 560 - Speech-Language Pathology Practicum
- CSD 564 - Advanced Clinical Practice in Aural Rehabilitation
- CSD 575 - Counseling in Communication Disorders
- CSD 580 - Communication Disorders in the Public Schools #
- CSD 581 - Infancy: Development, Disorders and Intervention \*
- CSD 582 - Medical Speech Pathology \*
- CSD 585 - Neuromotor Speech Disorders
- CSD 586 - Diagnosis and Treatment of Adult Language Neurogenic Disorders
- CSD 587 - Seminar: Dysphagia
- CSD 588 - Seminar in Augmentative and Alternative Communication
- CSD 589 - Library Research for CSD
- CSD 599 - Intern Speech/Lang Path/Aud \*\*

 **Thesis:**

- CSD 690 - Thesis (6 credits)

 **Electives**

- CSD 559 - Speech-Language Pathology Practicum
- CSD 570 - Medical Audiology
- CSD 598 - Internship in Speech-Language Pathology or Audiology \*\*  
and other 400- and 500-level courses selected under departmental advisement

#Required for students intending to apply for Washington state CSD certificate.

\*Two of three courses in the series (580, 581, 582) are required.

\*\*Although the internship courses (598; 599) are 1-4 and 8 credits each, respectively. Only a total of 6 credits can apply toward the MA degree.

## **Additional Information**

### **Clinical Competence**

In addition to meeting academic requirements, students specializing in speech-language pathology must demonstrate satisfactory competence in diagnostic and clinical practica. Refer to course description for additional information. No student in CSD may participate as a primary clinician in the clinic or an internship until cleared by the Washington State Office of Superintendent of Public Instruction and the Federal Bureau of Investigation background check. Clearance is valid for specified time frames. Procedure and fee information are provided to students upon acceptance into the graduate program. At times, the requirements for the completion of clinical practicum courses may fall outside the regular University calendar. Contact the department for further details.

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### **Internship**

An internship is required for all CSD students. This experience provides an opportunity for each student to refine and expand basic clinical skills by participating in a supervised, full-time work experience in a professional setting. The terminal objective of this training phase is to facilitate each clinician's transition from student in training to competent entry-level professional. As such, the internship is taken after other academic and clinical requirements have been completed with the exception of the research project. In addition to the required full-time internship (CSD 599), students also may choose to complete one or more part-time internships (CSD 598). Both the full-time and part-time placements require assignment to clinical settings off campus (e.g., schools, hospitals, private clinics, et cetera).

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### **Comprehensive Examination and Thesis/Non-Thesis Oral Defense**

The student will have a choice of writing a comprehensive exam or completing either a thesis or non-thesis research project and paper. The five-hour written comprehensive exam covers the student's area(s) of specialization and graduate program up to the time of the exam. A minimum of 50 graduate credits must be completed before the comprehensive exams can be taken.

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### **Professional Certification Requirements**

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## **East Asian Studies**

### **Introduction**

East Asia, as one of the world centers of high civilization, has long been the object of cultural interest and study. Increasingly, it has become important for economic and political reasons as well. The Center for East Asian Studies provides a focal point for the University's interaction with East Asia and for academic study of the region.

The program in East Asian studies emphasizes the interdisciplinary study of the area, primarily the countries of China, Japan, Korea and Mongolia. The course of study is designed to attain three major objectives. First, it offers students an opportunity to acquire accurate, detailed and comprehensive knowledge of a region that is becoming increasingly important in world affairs. Second, it prepares students who are attracted by job opportunities related to East Asia in business and government. For those who wish to teach about East Asia, the program provides appropriate preparation. Third, it provides solid undergraduate training for students who plan to enter East Asian programs for graduate studies.

Students interested in pursuing a major in East Asian studies should consult the director of the Center for East Asian Studies, Ed Vajda, 360-650-4856, e-mail: vajda@cc.wwu.edu.

### **Faculty**

**EDWARD J. VAJDA**, Director, Modern and Classical Languages. Central Asian and Siberian languages and history.

**PATRICK BUCKLEY**, Geography. Geography and economics of Japan.

**MASANORI DEGUCHI**, Modern and Classical Languages. Japanese language and linguistics.

**MARGARET FAST**, Wilson Library. Methods and materials in East Asia Research.

**JAMES HEARNE**, Computer Science. Chinese philosophy, Chinese science, East Asian language computing.

**ROBERT KIM**, Education. Korean language, literature and culture.

**ROBERT MARSHALL**, Anthropology. Japanese business culture, economy and politics of Japan.

**DEBNATH MOOKHERJEE**, Geography. Cultural geography, urbanism, East and South Asian geography.

**KRISTEN PARRIS**, Political Science. East Asian politics.

**SCOTT PEARCE**, Liberal Studies. Medieval Chinese history.

**TOM ROEHL**, Management, International business.

**WAYNE RICHTER**, Wilson Library. Mongolian language.

**JULIA SAPIN**, Art. Asian art history, Japanese art, art of the Pacific Rim.

**HENRY G. SCHWARZ**, History and East Asian Studies, Emeritus. Mongolian and modern Chinese history, minorities of Northern China.

**ROGER THOMPSON**, History. Traditional and modern Chinese history.

**MASSIMILIANO TOMASI**, Modern and Classical Languages. Japanese language and culture, modern Japanese rhetoric and literature.

**KATHLEEN TOMLONOVIC**, Modern and Classical Languages. Chinese language and culture; traditional and modern literature.

**JIANGLONG WANG**, Communications. Intercultural communications.

**MELISSA WALT**, Liberal Studies. Asian art and culture.

**DIANA WRIGHT**, History. Pre-modern Japanese history, religion in Japanese history.

**JANET XING**, Modern and Classical Languages. Chinese language, Chinese linguistics.

**NING YU**, English. Chinese and Chinese-American literatures.

**MICHIKO YUSA**, Modern and Classical Languages. History of religion, Japanese language and culture.

### **Adjunct Faculty**

**PAUL BUELL**, East Asian Studies. Chinese and Japanese culture, traditional Chinese medicine.

**CHARLES KRUSEKOPF**, Mongolian Studies.

**HO-CHIN YANG**, Modern and Classical Languages. Chinese language, history of Tibet.

**LILLY YANG**, Modern and Classical Languages. Chinese language.

## **Courses from Other Disciplines**

The major is intended to be broad in scope with courses that survey aspects of the regions countries. At the same time, concentration in one area is encouraged.

It is recommended that students take courses from among the various disciplines listed below; however, there is no distribution requirement.

### **History**

- HIST 362 - Asian-American History
- HIST 370 - Chinese History to 600 AD
- HIST 371 - Chinese History: 600-1880
- HIST 372 - Chinese History: 1800 to Present
- HIST 374 - Premodern Japanese History
- HIST 375 - Modern Japanese History
- HIST 480 - Modern Chinese Social History
- HIST 481 - The Chinese Revolution
- HIST 483 - Edo Social History
- HIST 484 - Women in Japanese History
- HIST 485 - Japanese Military History: Samurai Fact and Fiction
- HIST 486 - Religion in Japanese History

### **Liberal Studies and Art**

- LBRL 272 - Religion and Society in China and Japan
- LBRL 273 - Art and Society in China and Japan
- LBRL 275 - Humanities of Japan
- LBRL 277 - Humanities of China
- A/HI 271 - Visual Culture in East Asia
- A/HI 370 - Islamic Visual Cultures

### **Languages and Literature**

- EAST 367 - Chinese Literature in Translation
- EAST 368 - Japanese Literature in Translation
- CHIN 280 - Traditional Chinese Characters
- CHIN 330 - Chinese Culture Through Film and Literature
- CHIN 360 - Business Chinese
- CHIN 390 - Introduction to Chinese Language and Linguistics
- JAPN 280 - Kanji
- JAPN 330 - Japanese Culture Through Film
- JAPN 401 - Advanced Japanese
- ENG 236 - Introduction to Asian-American Literatures

## **Anthropology, Politics and Geography**

- AMST 205 - The Asian-American Experience
- ANTH 362 - Peoples of Asia
- ANTH 460 - Culture and Society of Japan
- EGEO 324 - East Asia: Society and Environment
- EGEO 423 - Pacific Rim
- PLSC 307 - East Asia
- PLSC 430 - Modern Chinese Politics
- IBUS 370 - Introduction to International Business
- IBUS 474 - Topics in International Business

## **Other Departmental Information**

### *Tutorials and Study Abroad*

The Center for East Asian Studies also offers tutorials in advanced Chinese and Japanese. Elementary and intermediate Mongolian language is offered through Extended Education and Summer Programs.

**Study Abroad:** Students are encouraged to spend up to one year in a study abroad program, including Asia University; Tsuda College; Oberin College, KCP in Tokyo; Inner Mongolia University, Hohhot; Seoul Women's University, Seoul; Yonsei University in Seoul; or Yunnan University, Kunming, China. Many other programs such as CET and CIEE provide opportunities for study in Beijing, Shanghai, Nanjing, Kunming and Taipei.

## **Undergraduate Degrees and Programs**

East Asian Studies, BA

East Asian Studies Minor

## **East Asian Studies Minor**

### **30 Credits**

#### **Introduction**

The following minor may be combined with a major in history or in political science for a major concentration, or may be elected as a minor by majors in other fields. For description of courses, see the sections of cooperating departments.

#### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

#### **Requirements**

- EAST 201 - Introduction to East Asian Civilizations
- EAST 202 - East Asian History in the Early-Modern Eras and Modern Eras
- One course from:
- EAST 367 - Chinese Literature in Translation

- EAST 368 - Japanese Literature in Translation
  - Additional credits from other East Asian courses or from courses approved by the Center for East Asian Studies
  - 4 credits must be at the 300-400 level

## East Asian Studies, BA

60 credits

### Grade Requirements

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

### Requirements

- Two years of Chinese or Japanese language (Mongolian or Korean by special arrangement)
- EAST 201 - Introduction to East Asian Civilizations
- EAST 202 - East Asian History in the Early-Modern Eras and Modern Eras
- EAST 302 - Methods and Materials in East Asian Studies
- One course from:
  - EAST 367 - Chinese Literature in Translation
  - EAST 368 - Japanese Literature in Translation
  - Additional credits from courses approved by the Center for East Asian Studies as listed below: (At least 8 credits must be at the 400 level)
    - A/HI 271 - Visual Culture in East Asia
    - A/HI 370 - Islamic Visual Cultures
    - AMST 205 - The Asian-American Experience
    - ANTH 362 - Peoples of Asia
    - ANTH 460 - Culture and Society of Japan  
ANTH 464: Peoples of East Asia
    - CHIN 280 - Traditional Chinese Characters
    - CHIN 330 - Chinese Culture Through Film and Literature
    - CHIN 360 - Business Chinese
    - CHIN 390 - Introduction to Chinese Language and Linguistics
    - E GEO 324 - East Asia: Society and Environment
    - E GEO 423 - Pacific Rim
    - ENG 236 - Introduction to Asian-American Literatures
    - HIST 362 - Asian-American History
    - HIST 370 - Chinese History to 600 AD
    - HIST 371 - Chinese History: 600-1880
    - HIST 372 - Chinese History: 1800 to Present
    - HIST 374 - Premodern Japanese History
    - HIST 375 - Modern Japanese History
    - HIST 480 - Modern Chinese Social History
    - HIST 481 - The Chinese Revolution
    - HIST 483 - Edo Social History
    - HIST 484 - Women in Japanese History

- HIST 485 - Japanese Military History: Samurai Fact and Fiction
- HIST 486 - Religion in Japanese History
- IBUS 370 - Introduction to International Business
- IBUS 474 - Topics in International Business
- JAPN 280 - Kanji
- JAPN 330 - Japanese Culture Through Film
- JAPN 401 - Advanced Japanese
- LBRL 272 - Religion and Society in China and Japan
- LBRL 273 - Art and Society in China and Japan
- LBRL 275 - Humanities of Japan
- LBRL 277 - Humanities of China
- PLSC 307 - East Asia
- PLSC 430 - Modern Chinese Politics

# **English**

## **Introduction**

The English major engages students in reflective reading, creative inquiry, critical analysis, and effective expression. The study of literature, linguistics, writing, film, and visual media prepares graduates to pursue a variety of careers, including law, business, government, professional writing, publishing, and education. These studies also prepare students for graduate programs.

The Department of English offers three major emphases: literature, creative writing, and teacher preparation.

Two programs lead to the Bachelor of Arts in English. English: Literature Emphasis focuses on the study of literature in historical and cultural contexts and includes course work in English language and literature, literary and rhetorical theory, creative writing and composition, technical writing, film, and visual media. English: Creative Writing Emphasis focuses on writing in fiction, drama, poetry, and in nonfiction prose, and it is complemented by courses in language and literature. An additional program leads to a Bachelor of Arts in Education: English Elementary. (For those interested in teaching English at the secondary level, see Teaching Endorsement-Secondary.)

The Department of English provides a dynamic intellectual environment and learning community. Faculty members introduce new genres, fields and methods of critical inquiry, and technologies to provide our students with the best possible education. The department offers small, student-centered classes, innovative pedagogy, and close faculty-student interaction. English faculty members have earned numerous awards for excellence in teaching, research, and writing; they are nationally and internationally recognized in creative and critical fields. Our students have amassed an enviable record of placement in graduate programs and professional positions.

## **Faculty**

**MARC GEISLER** (1992) Chair and Associate Professor. BA, Bates College; MA, PhD, University of California-Irvine.

**KAVEH ASKARI** (2007) Assistant Professor. BA, New College of Florida; MA, PhD, University of Chicago.

**BRUCE BEASLEY** (1992) Professor. BA, Oberlin College; MFA, Columbia University; MA, PhD, University of Virginia.

**NICOLE BROWN** (2002) Associate Professor. BS, BA, Salve Regina University; MA, Carnegie Mellon University; PhD, Purdue University.

**OLIVER DE LA PAZ** (2005) Associate Professor. BA, BS, Loyola Marymount University; MFA, Arizona State University.

**KRISTIN DENHAM** (2000) Associate Professor. BA, Swarthmore College; MA, University of Arizona; PhD, University of Washington.

**DAWN DIETRICH** (1992) Associate Professor. BA, Eastern Michigan University; MA, PhD, University of Michigan.

**ALLISON GIFFEN** (2001) Associate Professor. BA, Barnard College; MA, Yale University; PhD, Columbia University.

**BRUCE GOEBEL** (1996) Professor. BA, Eastern Washington University; MA, California State University, Fresno; PhD, The University of Iowa.

**CAROL GUESS** (1998) Associate Professor. BA, Columbia University; MA, MFA, Indiana University.

**NANCY J. JOHNSON** (1994), Professor. BA, University of Washington; MA, PhD, Michigan State University.

**ROSANNE D. KANHAI** (1990) Professor. BA, MPhil, University of the West Indies, Trinidad; PhD, Pennsylvania State University.

**LAURA LAFFRADO** (1993) Professor. AB, Vassar College; MFA, University of Montana; MA, PhD, State University of New York-Buffalo.

**ANNE LOBECK** (1990) Professor. BA, Whitman College; MA, PhD, University of Washington.

**KATHLEEN LUNDEEN** (1991) Professor. BA, MA, PhD, University of California-Santa Barbara.

**WILLIAM LYNE** (1995) Professor. BA, University of California, Los Angeles; MA, PhD, University of Virginia.

**KELLY MAGEE** (2008) Assistant Professor. BA, Auburn University; MFA, Ohio State University.

**KRISTIN MAHONEY** (2007) Assistant Professor. BA, New College of Florida; MA, PhD, University of Notre Dame.

**MARY JANELL METZGER** (1995) Professor. BA, University of Washington; MA, PhD, University of Iowa.

**BRENDA MILLER** (1999) Professor. BA, Humboldt State University; MFA, University of Montana; PhD, University of Utah.

**SUZANNE PAOLA** (1994) Professor. BA, Oberlin College; MFA, University of Virginia.

**DOUGLAS B. PARK** (1979) Professor. AB, Hamilton College; PhD, Cornell University.

**JOHN PURDY** (1991) Professor. BA, Oregon College of Education (Western Oregon University); MA, University of Idaho; PhD, Arizona State University.

**DONNA QUALLEY** (1994) Professor. BA, University of Kentucky; MST, PhD, University of New Hampshire.

**LYSA RIVERA** (2007) Assistant Professor. BA, University of California-Santa Cruz; MA, PhD, University of Washington.

**WILLIAM E. SMITH** (1990) Professor. BA, MA, Appalachian State University; PhD, University of Utah.

**SCOTT STEVENS** (2002) Associate Professor. BA, California State University; MA, PhD, University of Rochester.

**KATHRYN TRUEBLOOD** (2002) Associate Professor. BA, University of California-Berkeley; MFA, University of Washington.

**STEVEN VANDERSTAAY** (1996) Professor. BA, MA, University of Washington; PhD, University of Iowa.

**KATHRYN VULIC** (2004), Associate Professor. AB, Ohio State University; MA, PhD, University of California, Berkeley.

**CHRISTOPHER WISE** (1996) Professor. BA, Northwestern College; MA, University of Oklahoma; PhD, University of California, Riverside.

**NING YU** (1993) Associate Professor. BA, Beijing University of Aeronautics and Astronautics; MA, PhD, University of Connecticut.

### **Declaration Process**

The department offers majors leading to both Bachelor of Arts and Bachelor of Arts in Education degrees. Admission to these majors is by application to the appropriate advisor. Students are strongly urged to meet with a department advisor early in their careers at Western; students must declare their major at the start of their junior year. Though we cannot guarantee immediate enrollment in the major or access to any specific class, we matriculate students into the major on a rolling basis as space is available and offer a wide variety of topics each term.

### **Other Departmental Information**

#### *Mid-Program Checkpoint*

Students seeking to complete a BA degree program in English, with an emphasis in literature, creative writing, secondary education, or elementary education within a four-year time span should have completed the following courses by the start of their junior year:

- ENG 101 and ENG 202

#### *Additional Program Areas*

Along with a wide range of courses in literature, creative writing, and secondary and elementary education, the English department offers courses that provide training in linguistics, rhetoric, technical writing, and film.

### **Linguistics**

- ENG 270 Introduction to Language and Society
- ENG 370 Introduction to Language
- ENG 436 The Structure of Language
- ENG 438 Cultural History of English
- ENG 439 Topics in Language and Linguistics

### **Rhetoric and Composition**

- ENG 100 Introduction to College Writing
- ENG 101 Writing and Critical Inquiry
- ENG 201 Writing in the Humanities
- ENG 202 Writing About Literature

- ENG 301 Writing Studies
- ENG 371 Studies in Rhetoric and Rhetorical Analysis
- ENG 401 Senior Seminar in Writing and Rhetoric

### **Technical and Professional Communications**

- ENG 302 Introduction to Technical and Professional Writing
- ENG 402 Advanced Technical and Professional Writing
- ENG 461 Internship in English: Professional Identity
- ENG 462 Topics in Technical and Professional Writing

### **Visual Literacy**

- ENG 312 Film and Culture
- ENG 364 Introduction to Film Studies
- ENG 408 Cultural Studies
- ENG 464 Topics in Film Studies

### **Undergraduate Degrees and Programs**

English — Creative Writing Emphasis, BA  
English — Literature Emphasis, BA  
English — Elementary, BAE  
English Minor  
Creative Writing Minor  
Film Studies Minor  
Women's Literature Minor  
Writing and Rhetoric Studies Minor

### **Graduate Degrees and Programs**

English, Creative Writing, Thesis, MA  
English, English Studies, Thesis, MA  
English, English Studies, Non-Thesis, MA

## **Creative Writing Minor**

### **25 Credits**

#### **Introduction**

Courses taken for credit in minor programs may not be counted toward English majors.

#### **Admission and Declaration Process**

Declaration of Major ([see English department page](#))

### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

### **Requirements**

- Four creative writing courses including work in at least two genres
- An elective under advisement from the 300 and 400 level courses

## **English Minor**

### **25 Credits**

#### **Introduction**

Courses taken for credit in minor programs may not be counted toward English majors.

#### **Admission and Declaration Process**

Declaration of Major ([see English department page](#))

### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors

### **Requirements**

- 25 credits of English at the 200 level or above, with a minimum of 15 credits at the 300 or 400 level

## **English — Creative Writing Emphasis, BA**

### **58-60 Credits**

#### **Introduction**

The creative writing emphasis offers students the opportunity to develop their writing skills in the genres of fiction, creative nonfiction, poetry and drama. Introductory and advanced genre courses form the core of the major, giving students an opportunity to develop their craft and aesthetics through intensive writing, reading and workshops. Students must take courses in at least two different genres. Aside from the core courses, creative writing majors take 25 credits in literature (which may include literary/cultural theory and film studies) at the 300- or 400-level. Special modes courses (456, 457, 458, 460) introduce advanced students to distinct forms within their major genres.

#### **Admission and Declaration Process**

Declaration of Major ([see English department page](#))

## **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

## **Requirements**

- 25 credits in literature (which may include literary/cultural theory and film studies) at the 300- or 400-level, including a minimum of three writing proficiency points in approved upper-division writing proficiency courses at WWU with a minimum grade of C-.
  - ENG 370 - Introduction to Language (Students who earn a grade of 3.0 or better in Linguistics 201 may substitute a 300 or 400-level English course under advisement for English 370.)
    - Two courses from:
      - ENG 351 - Introduction to Fiction Writing
      - ENG 353 - Introduction to Poetry Writing
      - ENG 354 - Introduction to Creative Nonfiction Writing
      - THTR 384 - Introduction to Dramatic Writing
      - FAIR 354V - Scriptwriting Workshop I
    - Four courses from:
      - ENG 451 - Creative Writing Seminar - Fiction \*
      - ENG 453 - Creative Writing Seminar - Poetry \*
      - ENG 454 - Creative Writing Seminar - Creative Nonfiction \*
      - ENG 455 - Living Writers
      - ENG 456 - Special Topics in Fiction Writing
      - ENG 457 - Special Topics in Poetry Writing
      - ENG 458 - Special Topics in Creative Nonfiction Writing
      - ENG 459 - Editing and Publishing
      - ENG 460 - Special Topics I Creative Writing - Multi-Genre
      - THTR 485 - Dramatic Writing Workshop
      - THTR 486 - Dramatic Writing Workshop
      - THTR 487 - Dramatic Writing Workshop
      - FAIR 454Y - Scriptwriting Workshop II
- Creative writing courses offered by Canadian-American Studies may also be counted with approval of the English department advisor

*\*One of these courses is repeatable with a different instructor to a maximum of 10 credits.*

## **English — Elementary, BAE**

### **45 Credits**

#### **Introduction**

Elementary English education allows students to combine a major in English with the undergraduate teacher certification program provided by Woodring College of Education. It offers a focused background in English/language arts in preparation for certification as a K-8 teacher. Courses in the major are divided into four categories: literature studies, writing, language theory, and methods for teaching English/language arts. Literature courses include historical and cultural explorations of a variety of literary texts, including children's literature. This major also requires completion of required courses for elementary education certification offered through Woodring College of Education.

This major satisfies the academic major requirement for teacher certification with an endorsement in elementary education and must be accompanied by the professional preparation program in education. See the Elementary Education section of this catalog for program admission, completion, and certification requirements.

### **Admission and Declaration Process**

Declaration of Major ([see English department page](#))

### **Grade Requirements**

Recommendation for teaching endorsement normally requires completion of the major with a grade point of 2.50 or better in the required major courses. The state of Washington requires a minimum grade of C (2.0) or better for courses used to meet the endorsement requirements.

### **Requirements**

- ENG 370 - Introduction to Language (Students who earn a grade of 3.0 or better in Linguistics 201 may substitute a 300 or 400-level English course under advisement for English 370.)
- ENG 440 - Teaching English Language Arts in the Elementary School
- ENG 441 - Children's Literature for the Elementary and Middle School Teacher
- ENG 446 - Teaching Writing in the Elementary School
- One of the following:
  - ENG 436 - The Structure of English
  - ENG 438 - Cultural History of English
  - ENG 439 - Topics in Language and Linguistics
  - ENG 442 - Studies in Literacy and Learning
    - Three courses in literature at the 300 or 400 level
    - One of the following:
      - ENG 301 - Writing Studies
      - ENG 302 - Introduction to Technical and Professional Writing
      - ENG 350 - Introduction to Creative Writing
      - ENG 351 - Introduction to Fiction Writing
      - ENG 353 - Introduction to Poetry Writing
      - ENG 354 - Introduction to Creative Nonfiction Writing
      - ENG 401 - Senior Seminar in Writing and Rhetoric

### **Additional Requirements**

In certain situations the English education advisor may call a case conference, involving public school faculty and/or faculty acquainted with a student and a student's work, to determine his/her qualification for admission or retention in the Bachelor of Arts in Education program. Courses required for a state teaching endorsement must be completed with a grade of C (2.0) or better.

### **Elementary Education Professional Program Requirements (106 credits)**

#### **Professional Studies Core (25 credits)**

- EDUC 301 - Educational Psychology I: Development and Individual Differences
- EDUC 302 - Educational Psychology II: Motivation, Learning and Assessment

- EDUC 310 - The Teacher and the Social Order
- ELED 370 - Introduction to Teaching
- IT 344 - Basic Instructional Technology Skills
- IT 442 - Classroom Use of Instructional Technology (Elementary)
- SPED 364 - Teaching All Students

### **Elementary Program — Methods, Curriculum Content, and Field Experiences (81 credits)**

- ART 380 - Art Educating the Child
- ELED 425 - Social Studies for the Elementary School
- ELED 470 - Developing Teaching
- ELED 471 - Documenting Teaching
- ELED 480 - Literacy: Beginning Communicators
- ELED 481 - Literacy: Fluent Communicators
- ELED 491 - September Experience
- ELED 492 - Practicum: Experience in Literacy Methods
- ELED 494 - Internship - Elementary
- HLED 455 - Health Education Grades K-8
- MATH 381 - Teaching K-8 Mathematics I
- MATH 382 - Teaching K-8 Mathematics II
- MATH 383 - Teaching K-8 Mathematics III
- MATH 491 - Internship Seminar - Teaching K-8 Mathematics
- MUS 361 - Music for Elementary Teachers
- PE 345 - Physical Education for Elementary School
- SCED 480 - Science Methods and Curriculum for the Elementary School
- SCED 490 - Laboratory/Field Experience in Elementary Science
- SPED 430 - Problem Solving for Diverse Needs

## **English — Literature Emphasis, BA**

### **60 Credits**

#### **Introduction**

The literature emphasis offers students the opportunity for both breadth and depth in the study of literature and culture. In the “Literature and Culture” courses (ENG 307-311), which are the core of the major, students gain a sense of historical scope as they explore literatures from a range of periods. In addition, majors take required courses in critical and cultural theory, writing and the history and theory of language. All of these courses provide a solid foundation for intensive study of specialized topics in the upper-level electives and in the senior seminar.

The English – Literature Emphasis, BA major lead to a baccalaureate degree without teacher certification. To receive a recommendation for state of Washington teacher certification, students must also complete the teacher certification program offered by the Department of Secondary Education as one of the following:

- A part of the undergraduate baccalaureate degree
- A post-baccalaureate program
- A part of the Master in Teaching program

See the Secondary Education link below for program admission, completion, and teacher certification requirements.

Students seeking teaching certification are advised that the careful selection of English courses within the English-Literature major and the addition of one 5-credit English course are necessary in order to meet requirements for the English Language Arts – Secondary endorsement. Students must meet with the secondary education academic advisor in the English department to complete a plan of study.

#### **Admission and Declaration Process**

Declaration of Major ([see English department page](#))

#### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

#### **Requirements**

- Four courses from:
  - ENG 307 - Literature and Culture I: Pre-16th Century
  - ENG 308 - Literature and Culture II: 16th and 17th Centuries
  - ENG 309 - Literature and Culture III: 18th and 19th Centuries
  - ENG 310 - Literature and Culture IV: 19th and 20th Centuries
  - ENG 311 - Literature and Culture V: 20th and 21st Centuries
- One course from:
  - ENG 301 - Writing Studies
  - ENG 302 - Introduction to Technical and Professional Writing
  - ENG 350 - Introduction to Creative Writing
  - ENG 401 - Senior Seminar in Writing and Rhetoric
  - ENG 313 - History of Critical and Cultural Theory
  - ENG 418 - Senior Seminar
  - ENG 370 - Introduction to Language
    - (Students who earn a grade of 3.0 or better in Linguistics 201 may substitute a 300 or 400-level English course under advisement for English 370.)
- Electives: 20 credits. 15 credits must be at the 400 level, 5 credits at either the 300 or 400 level

## **Film Studies Minor**

#### **23-25 Credits**

#### **Introduction**

Courses taken for credit in minor programs may not be counted toward English majors.

#### **Admission and Declaration Process**

Declaration of Major ([see English department page](#))

### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

### **Requirements**

- ENG 312 - Film and Culture \*
- ENG 364 - Introduction to Film Studies
- ENG 464 - Topics in Film Studies \*
- Courses under advisement at the 300 and 400 level to be selected from courses in theory, film and other visual media, including offerings in other departments, such as HIST 364, FAIR 326, FAIR 361

*\*May be repeated once with a different topic.*

## **Women's Literature Minor**

### **25 Credits**

#### **Introduction**

Courses taken for credit in minor programs may not be counted toward English majors.

#### **Admission and Declaration Process**

Declaration of Major ([see English department page](#))

### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

### **Requirements**

- Courses under advisement at the 300 and 400 level, to be selected from courses in women writers, topics focused on the work of women writers, and topics in language and power of gender

## **Writing and Rhetoric Studies Minor**

### **25 Credits**

#### **Introduction**

Courses taken for credit in minor programs may not be counted toward English majors.

#### **Admission and Declaration Process**

Declaration of Major ([see English department page](#))

## **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

## **Requirements**

Two courses from:

- ENG 301 - Writing Studies
- ENG 302 - Introduction to Technical and Professional Writing
- ENG 371 - Studies in Rhetoric and Rhetorical Analysis

One course from:

- ENG 401 - Senior Seminar in Writing and Rhetoric
- ENG 402 - Advanced Technical and Professional Writing
- ENG 442 - Studies in Literacy and Learning
- ENG 461 - Internship in English: Professional Identity
- ENG 462 - Topics in Technical and Professional Writing \*

Courses under advisement at the 300 and 400 level to be selected from courses in visual media and writing, including offerings in other departments.

\*Repeatable once.

## **English, Creative Writing, Thesis, MA**

### **Graduate Faculty**

**Askari, Kaveh**, PhD, film history and theory, cross-media visual culture, global cinema.

**Beasley, Bruce**, PhD, creative writing (poetry), American literature.

**Brown, Nicole**, PhD, rhetoric and composition, technical writing, visual rhetoric, service learning and cybertextual studies.

**de la Paz, Oliver**, MFA, creative writing (poetry), Asian-American literature.

**Denham, Kristin**, PhD, linguistics, syntax and grammar, dialect, Native American languages and literatures.

**Dietrich, Dawn**, PhD, cinema studies, literature and technology, cybertextual, critical theory.

**Geisler, Marc**, PhD, Renaissance literature and culture, literary theory, politics and literature.

**Giffen, Allison**, PhD, American literature, women's literature.

**Goebel, Bruce**, PhD, American literature, postmodern literature, English education.

**Guess, Carol**, MFA, creative writing (creative nonfiction, fiction, poetry), gay/lesbian/bisexual/transgender literature and theory.

**Johnson, Nancy J.**, PhD, children's literature, English/language arts education.

**Kanhai, Rosanne**, PhD, feminist theory and criticism, post-colonial/global studies, Caribbean studies.

**Laffrado, Laura**, PhD, American literature, gender studies.

**Lobeck, Anne**, PhD, linguistics, literary theory, gender studies.

**Lundeen, Kathleen**, PhD, British literature, critical theory, intermedial art, literature and science, prophetic literature.

**Lyne, William**, PhD, American literature, African-American literature, cultural studies.

**Magee, Kelly**, MFA, creative writing (fiction, nonfiction, multi-genre).

**Mahoney, Kristin**, PhD, Victorian literature and culture, economics and literature.

**Metzger, Mary Janell**, PhD, early modern literature, critical theory, English education, women's literature.

**Miller, Brenda**, PhD, creative writing (fiction and nonfiction), autobiography.

**Paola, Suzanne**, MFA, creative writing, nonfiction, women's studies, poetry.

**Park, Douglas**, PhD, cinema studies, cybertextual, science fiction, 18th century women's literature.

**Purdy, John Lloyd**, PhD, contemporary American literature, Native American literatures, Canadian and New Zealand

literatures.

**Qualely, Donna**, PhD, composition theory and pedagogy, literacy, rhetoric and social class.

**Rivera, Lysa**, PhD, American literatures and culture, Chicana/o and African-American literature, cultural studies, critical theory.

**Smith, William E.**, PhD, Shakespeare, British Renaissance studies, horror film and disability studies, composition/rhetoric.

**Stevens, Scott**, PhD, rhetoric and composition, American literature.

**Trueblood, Kathryn**, MFA, creative writing (fiction), publishing and editing.

**Wise, Christopher**, PhD, comparative literature and critical theory.

**VanderStaay, Steven**, PhD, English education, creative writing (nonfiction), and linguistics.

**Vulic, Kathryn**, PhD, medieval British and Continental literatures and culture, devotional literature.

**Yu, Ning**, PhD, American literatures, science and literature.

Program Advisor: Graduate Program Office, Humanities 327, 360-650-3232

## Goals

The MA program in English is designed for those who desire to prepare for:

- PhD and MFA programs, as well as other advanced degrees
- Teaching at two-year colleges
- Public or private teaching (elementary, middle, secondary)
- Careers in technical writing and communication
- Careers in editing and publishing
- Careers in nonprofit and other business organizations

Depending on the chosen area of concentration, students will attain the following skills:

- Preparation in national and global literatures and cultures, creative writing, critical and cultural theory, film and media, pedagogy, composition and rhetoric, technical writing, professional writing, editing and publishing, and linguistics
- Teaching experience (if awarded a teaching assistantship or internship)
- Professional editing with scholarly and creative writing journals, such as the *Bellingham Review*
- Professional communication, oral and written
- Competency in the use of classroom and communications technologies
- Awareness of diversity, educational equity, and social justice issues
- Awareness of ethical and reflective pedagogical practices

## Prerequisites

Undergraduate major in English or departmental permission. Candidates with an insufficient background in English are normally requested to acquire 30 upper-division credits in literature and criticism with a grade of B or better in each course. The department reserves the right to approve a course of study.

## Admission

Enrollment is limited to program capacity.

## Application Information

**Deadlines:** Applications for the following academic year must be complete — all materials on file — by February 15 for priority consideration. Applications completed after that date may be considered on a space-available basis. Applications completed after June 1 will not be considered. Admission into the program is for fall quarter.

**TA Deadlines:** An application for a teaching assistantship should be submitted with the application for admission.

## **Supporting Materials:**

Normally the department expects a verbal score of at least 500 and a strong analytic score on the Graduate Record Exam, General Test. Candidates must also provide a 750-word personal statement of background and intention and a writing sample: for admission to creative writing, 10 to 15 pages of prose or 10 to 15 pages of poetry; for admission to English studies, 7 to 12 pages of written work in literary study.

### **Creative Writing (45 credits)**

- Core Requirements:
  - ENG 501 - Literary Theories and Practices  
20 credits in creative writing (fiction, drama, poetry, nonfiction prose, multigenre)
  - Five credits in ENG 690 - Thesis Writing
- Electives:  
15 credits in literature, criticism, rhetoric or ENG 513; only 5 of these 15 credits may be in ENG 500, Independent Study; occasionally electives in other departments may be chosen in consultation and with permission of the English department graduate program adviser.

### **Additional Information**

#### *Credits*

Courses are routinely taken at the 500 and 600 levels. With the permission of the graduate advisor, a student may count up to 10 credits of some combination of 400-level courses and independent study courses toward the degree requirements. No more than 5 credits of independent study can be applied toward the degree.

#### *Other Requirements*

Students in the Creative Writing concentration must demonstrate reading competence in a second language acceptable to the department's Graduate Studies Committee or take an additional 5-credit 400 or 500-level course focused on the study of language. Normally competence in a second language is demonstrated by successfully completing the final course in a second-year language sequence or by passing a reading competency exam in the language.

Students must also pass a written comprehensive final exam in their concentration.

Additional information about these requirements, the thesis option and program procedures may be found in the Graduate Program guidelines, available from the English graduate program office.

## **English, English Studies, Non-Thesis, MA**

### **Graduate Faculty**

**Askari, Kaveh**, PhD, film history and theory, cross-media visual culture, global cinema.

**Beasley, Bruce**, PhD, creative writing (poetry), American literature.

**Brown, Nicole**, PhD, rhetoric and composition, technical writing, visual rhetoric, service learning and cybertextual studies.

**de la Paz, Oliver**, MFA, creative writing (poetry), Asian-American literature.

**Denham, Kristin**, PhD, linguistics, syntax and grammar, dialect, Native American languages and literatures.

**Dietrich, Dawn**, PhD, cinema studies, literature and technology, cybertexture, critical theory.

**Geisler, Marc**, PhD, Renaissance literature and culture, literary theory, politics and literature.

**Giffen, Allison**, PhD, American literature, women's literature.

**Goebel, Bruce**, PhD, American literature, postmodern literature, English education.

**Guess, Carol**, MFA, creative writing (creative nonfiction, fiction, poetry), gay/lesbian/bisexual/transgender literature and theory.

**Johnson, Nancy J.**, PhD, children's literature, English/language arts education.

**Kanhai, Rosanne**, PhD, feminist theory and criticism, post-colonial/global studies, Caribbean studies.

**Laffrado, Laura**, PhD, American literature, gender studies.

**Lobeck, Anne**, PhD, linguistics, literary theory, gender studies.

**Lundeen, Kathleen**, PhD, British literature, critical theory, intermedial art, literature and science, prophetic literature.

**Lyne, William**, PhD, American literature, African-American literature, cultural studies.

**Magee, Kelly**, MFA, creative writing (fiction, nonfiction, multi-genre).

**Mahoney, Kristin**, PhD, Victorian literature and culture, economics and literature.

**Metzger, Mary Janell**, PhD, early modern literature, critical theory, English education, women's literature.

**Miller, Brenda**, PhD, creative writing (fiction and nonfiction), autobiography.

**Paola, Suzanne**, MFA, creative writing, nonfiction, women's studies, poetry.

**Park, Douglas**, PhD, cinema studies, cyberspace, science fiction, 18th century women's literature.

**Purdy, John Lloyd**, PhD, contemporary American literature, Native American literatures, Canadian and New Zealand literatures.

**Quale, Donna**, PhD, composition theory and pedagogy, literacy, rhetoric and social class.

**Rivera, Lysa**, PhD, American literatures and culture, Chicana/o and African-American literature, cultural studies, critical theory.

**Smith, William E.**, PhD, Shakespeare, British Renaissance studies, horror film and disability studies, composition/rhetoric.

**Stevens, Scott**, PhD, rhetoric and composition, American literature.

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**Vulic, Kathryn**, PhD, medieval British and Continental literatures and culture, devotional literature.

**Yu, Ning**, PhD, American literatures, science and literature.

Program Advisor: Graduate Program Office, Humanities 327, 360-650-3232

## Goals

The MA program in English is designed for those who desire to prepare for:

- PhD and MFA programs, as well as other advanced degrees
- Teaching at two-year colleges
- Public or private teaching (elementary, middle, secondary)
- Careers in technical writing and communication
- Careers in editing and publishing
- Careers in nonprofit and other business organizations

Depending on the chosen area of concentration, students will attain the following skills:

- Preparation in national and global literatures and cultures, creative writing, critical and cultural theory, film and media, pedagogy, composition and rhetoric, technical writing, professional writing, editing and publishing, and linguistics
- Teaching experience (if awarded a teaching assistantship or internship)
- Professional editing with scholarly and creative writing journals, such as the *Bellingham Review*
- Professional communication, oral and written
- Competency in the use of classroom and communications technologies
- Awareness of diversity, educational equity, and social justice issues
- Awareness of ethical and reflective pedagogical practices

The MA program in English offers two concentrations: 1) English studies and 2) creative writing.

## **Prerequisites**

Undergraduate major in English or departmental permission. Candidates with an insufficient background in English are normally requested to acquire 30 upper-division credits in literature and criticism with a grade of B or better in each course. The department reserves the right to approve a course of study.

## **Admission**

Enrollment is limited to program capacity.

## **Application Information**

**Deadlines:** Applications for the following academic year must be complete — all materials on file — by February 15 for priority consideration. Applications completed after that date may be considered on a space-available basis. Applications completed after June 1 will not be considered. Admission into the program is for fall quarter.

**TA Deadlines:** An application for a teaching assistantship should be submitted with the application for admission.

## **Supporting Materials:**

- Normally the department expects a verbal score of at least 500 and a strong analytic score on the Graduate Record Exam, General Test. Candidates must also provide a 750-word personal statement of background and intention and a writing sample: for admission to creative writing, 10 to 15 pages of prose or 10 to 15 pages of poetry; for admission to English studies, 7 to 12 pages of written work in literary study.

## **English Studies, Non-Thesis (48 credits)**

### Core Requirements:

- ENG 501 - Literary Theories and Practices  
25 credits in literature, criticism, rhetoric or
- ENG 513 - Seminar in Teaching College Composition  
only five of these 25 credits may be taken in English 500, Independent Study

### Electives:

18 credits (literature, criticism, creative writing, rhetoric, pedagogy, English language) Occasionally electives in other departments may be chosen in consultation and with permission of the English department graduate program advisor

## Additional Information

## Credits

Courses are routinely taken at the 500 and 600 levels. With the permission of the graduate advisor, a student may count up to 10 credits of some combination of 400-level courses and independent study courses toward the degree requirements. No more than 5 credits of independent study can be applied toward the degree.

## Other Requirements

Students in both concentrations (English Studies and Creative Writing) must demonstrate reading competence in a second language acceptable to the department's Graduate Studies Committee or take an additional 5-credit 400 or 500-level course focused on the study of language. Normally competence in a second language is demonstrated by successfully completing the final course in a second-year language sequence or by passing a reading competency exam in the language.

Students must also pass a written comprehensive final exam in their concentration.

Additional information about these requirements, the thesis option and program procedures may be found in the Graduate Program guidelines, available from the English graduate program office.

## **English, English Studies, Thesis, MA**

*College of Humanities and Social Sciences*

### **Graduate Faculty**

**Askari, Kaveh**, PhD, film history and theory, cross-media visual culture, global cinema.

**Beasley, Bruce**, PhD, creative writing (poetry), American literature.

**Brown, Nicole**, PhD, rhetoric and composition, technical writing, visual rhetoric, service learning and cybertextual studies.

**de la Paz, Oliver**, MFA, creative writing (poetry), Asian-American literature.

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**Dietrich, Dawn**, PhD, cinema studies, literature and technology, cybertexture, critical theory.

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**Giffen, Allison**, PhD, American literature, women's literature.

**Goebel, Bruce**, PhD, American literature, postmodern literature, English education.

**Guess, Carol**, MFA, creative writing (creative nonfiction, fiction, poetry), gay/lesbian/bisexual/transgender literature and theory.

**Johnson, Nancy J.**, PhD, children's literature, English/language arts education.

**Kanhai, Rosanne**, PhD, feminist theory and criticism, post-colonial/global studies, Caribbean studies.

**Laffrado, Laura**, PhD, American literature, gender studies.

**Lobeck, Anne**, PhD, linguistics, literary theory, gender studies.

**Lundeen, Kathleen**, PhD, British literature, critical theory, intermedial art, literature and science, prophetic literature.

**Lyne, William**, PhD, American literature, African-American literature, cultural studies.

**Magee, Kelly**, MFA, creative writing (fiction, nonfiction, multi-genre).

**Mahoney, Kristin**, PhD, Victorian literature and culture, economics and literature.

**Metzger, Mary Janell**, PhD, early modern literature, critical theory, English education, women's literature.

**Miller, Brenda**, PhD, creative writing (fiction and nonfiction), autobiography.

**Paola, Suzanne**, MFA, creative writing, nonfiction, women's studies, poetry.

**Park, Douglas**, PhD, cinema studies, cybertexture, science fiction, 18th century women's literature.

**Purdy, John Lloyd**, PhD, contemporary American literature, Native American literatures, Canadian and New Zealand literatures.

**Quale, Donna**, PhD, composition theory and pedagogy, literacy, rhetoric and social class.

**Rivera, Lysa**, PhD, American literatures and culture, Chicana/o and African-American literature, cultural studies, critical theory.

**Smith, William E.**, PhD, Shakespeare, British Renaissance studies, horror film and disability studies, composition/rhetoric.

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**Vulic, Kathryn**, PhD, medieval British and Continental literatures and culture, devotional literature.

**Yu, Ning**, PhD, American literatures, science and literature.

Program Advisor: Graduate Program Office, Humanities 327, 360-650-3232

## **Goals**

The MA program in English is designed for those who desire to prepare for:

- PhD and MFA programs, as well as other advanced degrees
- Teaching at two-year colleges
- Public or private teaching (elementary, middle, secondary)
- Careers in technical writing and communication
- Careers in editing and publishing
- Careers in nonprofit and other business organizations

Depending on the chosen area of concentration, students will attain the following skills:

- Preparation in national and global literatures and cultures, creative writing, critical and cultural theory, film and media, pedagogy, composition and rhetoric, technical writing, professional writing, editing and publishing, and linguistics
- Teaching experience (if awarded a teaching assistantship or internship)
- Professional editing with scholarly and creative writing journals, such as the *Bellingham Review*
- Professional communication, oral and written
- Competency in the use of classroom and communications technologies
- Awareness of diversity, educational equity, and social justice issues
- Awareness of ethical and reflective pedagogical practices

## **Prerequisites**

Undergraduate major in English or departmental permission. Candidates with an insufficient background in English are normally requested to acquire 30 upper-division credits in literature and criticism with a grade of B or better in each course. The department reserves the right to approve a course of study.

## **Admission**

Enrollment is limited to program capacity.

## **Application Information**

**Deadlines:** Applications for the following academic year must be complete — all materials on file — by February 15 for priority consideration. Applications completed after that date may be considered on a space-available basis. Applications completed after June 1 will not be considered. Admission into the program is for fall quarter.

**TA Deadlines:** An application for a teaching assistantship should be submitted with the application for admission.

## **Supporting Materials:**

Normally the department expects a verbal score of at least 500 and a strong analytic score on the Graduate Record Exam, General Test. Candidates must also provide a 750-word personal statement of background and intention and a writing sample: for admission to creative writing, 10 to 15 pages of prose or 10 to 15 pages of poetry; for admission to English studies, 7 to 12 pages of written work in literary study.

## **English Studies, Thesis (46 credits)**

### **Requirements:**

- ENG 501 - Literary Theories and Practices  
25 credits in literature, criticism, rhetoric or
- ENG 513 - Seminar in Teaching College Composition

- only five of these 25 credits may be taken in English 500, Independent Study
- Electives: 10 credits in literature, criticism, creative writing, rhetoric, pedagogy, or English language  
Occasionally electives in other departments may be chosen in consultation and with permission of the English department graduate program advisor
- Thesis: ENG 690 - Thesis Writing , 5 credits

#### Additional Information

#### Credits

Courses are routinely taken at the 500 and 600 levels. With the permission of the graduate advisor, a student may count up to 10 credits of some combination of 400-level courses and independent study courses toward the degree requirements. No more than 5 credits of independent study can be applied toward the degree.

#### Other Requirements

Students in both concentrations (English Studies and Creative Writing) must demonstrate reading competence in a second language acceptable to the department's Graduate Studies Committee or take an additional 5-credit 400 or 500-level course focused on the study of language. Normally competence in a second language is demonstrated by successfully completing the final course in a second-year language sequence or by passing a reading competency exam in the language.

Students must also pass a written comprehensive final exam in their concentration.

Additional information about these requirements, the thesis option and program procedures may be found in the Graduate Program guidelines, available from the English graduate program office.

## **General Studies**

### **Introduction**

The general studies major is designed for students seeking a flexible academic focus that transcends disciplinary boundaries. Students may develop a personalized plan of study utilizing resources across multiple departments. The major affords students the opportunity to prepare themselves for work in a variety of areas. In consultation with the General Studies Advisor, students design their program of study under the general studies major guidelines.

The BA in General Studies is administered and awarded by the College of Humanities and Social Sciences (CHSS). In keeping with the goals, mission, and standards for all students in CHSS, the general studies major aspires to graduate individuals who: can appreciate cultural differences and differences of opinion; have developed moral and aesthetic sensibilities; have mastered the basic tools of literacy, communication, and technology; have acquired levels of knowledge about the natural and social worlds, past and present, sufficient for responsible citizenship and the enjoyment of a civilized society, and are lifelong learners.

Students interested in pursuing the General Studies Major should contact the General Studies Advisor. See [www.wwu.edu/generalstudies](http://www.wwu.edu/generalstudies).

### **Declaration Process**

A general studies major is available only through an application process.

1. Students are required to meet with the General Studies Advisor to develop a plan of study.
2. The plan of study for the proposed general studies major must identify educational objectives and the course planning should be linked to the objectives. A program theme should be developed and designed with advisement from the General Studies Advisor.
  - a. Students must meet all of the prerequisites for courses in the proposed major. No plan of study will be approved if it is apparent that the student hopes to avoid course prerequisites or sequencing.
  - b. Upper division courses in some departments may not be available due to competitive access with the departmental majors and cannot be included in the plan of study unless some prior arrangement and approval has been granted by the department.
3. Students must obtain final approval of the plan of study from the College of Humanities and Social Sciences through the General Studies Advisor.
4. Major declaration forms may be picked up from the General Studies Advisor. The original signed form must be returned to the Registrar's Office.

**NOTE:** Fairhaven students cannot major in general studies. A general studies major cannot be earned concurrently with another major. Any major earned after the degree is awarded may not be based on essentially the same constellation of courses as the student's general studies major. Students who have earned a baccalaureate degree at Western cannot major in general studies. A minor in General Studies is not offered.

### **Undergraduate Degrees**

General Studies, BA

## **General Studies, BA**

### **60 Credits**

#### **Admission and Declaration Process**

Admission and Declaration of Major ([see General Studies department page](#))

#### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

#### **Requirements**

- 35 upper division level credits in thematic areas requiring General Studies Advisor approval.
- Examples of thematic areas include:
  - Social Sciences
  - Humanities
  - Sciences
  - Business
  - Health
  - Liberal Arts
- 25 additional credits of electives at the upper division level in any area (including the thematic area)

#### **Additional Requirements**

- All courses must be approved on the Plan of Study
- 15 of the 60 credits are credits required after approval of General Studies Plan of Study
- 5 credits maximum of internship or field experience may be included within the 60 credits.
- Students are limited to no more than 40 upper division credits in any single academic department and students are limited to no more than 44 credits in courses taught in business (classes by the departments of accounting, decision sciences, finance and marketing, and management).
- At least 50 percent of the credits used in the general studies major must be earned at Western Washington University.

# **History**

## **Introduction**

Without a knowledge of the past, we are, as one writer has phrased it, like victims of collective amnesia groping in the dark for our identity. History as a discipline is rooted in that fundamental human urge, curiosity. It confronts and weighs the relative significance of chance, inevitability and choice in the passage of time.

History is humanistic in its emphasis on the influence of ideas and values, its capacity to both instruct and entertain, and as interpretive literature. In its investigation of social processes, groups and institutions, and the examination of human motivation, it is a social science. It acts as a bridge among disciplines, borrowing from all and contributing a sense of context and sequence to the perception of actions and individuals.

The American historian Carl Becker wrote: "The value of history is, indeed, not scientific but moral: by liberalizing the mind, by deepening the sympathies, by fortifying the will, it enables us to control, not society, but ourselves — a much more important thing; it prepares us to live more humanely in the present and to meet rather than to foretell the future."

## **Faculty**

**SUSAN E. COSTANZO** (1993) Associate Professor. BA, MA, PhD, Northwestern University.

**CECILIA A. DANYSK** (1996) Associate Professor. BA, Concordia University; MA, PhD, McGill University.

**PETER D. DIEHL** (1992) Associate Professor. BA, Yale University; MA, PhD, University of California-Los Angeles.

**SUSAN AMANDA EURICH** (1986) Professor. BA, Portland State University; MA, PhD, Emory University.

**CHRISTOPHER C. FRIDAY** (1992) Professor. BA, Lewis and Clark College; MA, PhD, University of California-Los Angeles.

**STEVEN J. GARFINKLE** (2001) Associate Professor. BA, Tufts University; MA, University of London; PhD, Columbia University.

**LEONARD M. HELFGOTT** (1970) Professor. BA, MA, PhD, University of Maryland.

**LAURIE HOCHSTETLER** (2006) Assistant Professor. BA, Johns Hopkins University; MA, PhD, University of Virginia.

**RANDALL C. JIMERSON** (1994) Professor. BA, Earlham College; MA, PhD, University of Michigan.

**KATHLEEN A. KENNEDY** (1995) Professor. BA, State University of New York-Plattsburgh; MA, PhD, University of California-Irvine.

**KEVIN A. LEONARD** (1997) Professor. BA, Pomona College; MA, PhD, University of California-Davis.

**A. RICARDO LOPEZ** (2008) Assistant Professor. BA, National University of Columbia; MA, PhD, University of Maryland, College Park.

**GEORGE MARIZ** (1970) Professor. BA, MA, PhD, University of Missouri.

**JOHANN N. NEEM** (2004) Associate Professor. BA, Brown University; MA, PhD, University of Virginia.

**MART A. STEWART** (1992) Professor. BA, Willamette University; MA, Portland State University; PhD, Emory University.

**ROGER R. THOMPSON** (2003) Associate Professor. BA, Stanford University; MA, PhD, Yale University.

**LOUIS W. TRUSCHEL** (1970) Associate Professor. BA, Pacific Lutheran University; MA, PhD, Northwestern University.

**DIANA E. WRIGHT** (1997) Associate Professor. BA, MA, University of Michigan; PhD, University of Toronto.

## **Affiliated Faculty**

**KITTY FRIESEN**, Archivist, Center for Pacific Northwest Studies.

**ROBERT H. KIM**, Professor. Educational Administration and Foundations.

**ANTHONY KURTZ**, Archives and Records Management.

**MIDORI TAKAGI**, Associate Professor. Fairhaven College.

## **Other Departmental Information**

### *Mid-Program Checkpoint*

A student seeking to complete a Bachelor of Arts degree in history within a four-year time span should have completed at least three courses from Hist 103, 104, 111, 112, 113, 280, 281 or East 201 or 202 by the start of the junior year. Major omissions from this list will make it difficult or impossible to complete this degree within two additional years.

## **Undergraduate Degrees and Programs**

History, BA  
History/Social Studies, BA  
History — Elementary, BAE  
History Minor  
Foreign Cultures Minor  
Latin American Studies Minor  
Public History Minor

## **Graduate Degrees and Programs**

History, Thesis, MA  
History, Non-Thesis, MA  
History, Archives and Records Management, Thesis, MA  
Archives and Records Management Certificate Program

## **Foreign Cultures Minor**

### **Introduction**

The history department offers a minor in foreign cultures for foreign language majors and other interested students.

### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

### **Requirements**

- HIST 425
- HIST 428 - Modern Europe: 1914-1945
- Two courses in one of the following areas:
  - France and the French-speaking world:
    - HIST 277 - Canada: A Historical Survey
    - HIST 286 - Modern Africa
    - HIST 377 - Japanese History Through Film
    - HIST 441 - France: 1453-1815
    - HIST 442 - France Since 1815
    - HIST 479 - Medieval and Early-Modern Chinese History
  - Germany:
    - HIST 432 - Germany: 1914 to the Present
  - Latin America:

- HIST 273 - Latin America: 1492-1824
  - HIST 274 - Latin America: 1824 to the Present
  - HIST 471
  - HIST 473
- Russia:
- HIST 333 - Imperial Russia: 1689-1917
  - HIST 334 - History of Soviet Russia
- Electives under advisement

## History Minor

### 25 Credits

#### Grade Requirements

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors. A minimum grade point average in history courses of 2.50 is required for graduation.

#### Requirements

For this program history courses are grouped into the following fields:

- United States
- Europe
- East and South Asia
- Africa and Middle East
- Western Hemisphere (outside U.S.)
- Ancient

Credits should be distributed as follows:

- Three courses in one of the above fields
- Two courses in a second field
- Electives under advisement
- One half of credits must be in upper-division courses

## History — Elementary, BAE

### 45 Credits

#### Introduction

This major satisfies the academic major requirement for teacher certification with an endorsement in elementary education and must be accompanied by the professional preparation program in elementary education. See the Elementary Education section of this catalog for program admission, completion, and teacher certification requirements.

## **Grade Requirements**

A grade of C (2.0) or better is required for courses in the elementary education professional program and all courses required for the endorsement.

A minimum grade point average in history courses of 2.50 is required for graduation. At least 15 of the credits must be in upper-division courses. No course with a grade of less than C (2.0) may be counted in this major.

## **Requirements**

- Two courses in United States history
- Two courses in European history
- Two courses from one of the following areas: East and South Asia; or Africa and Middle East; or Western Hemisphere (outside U.S.)
- HIST 391 - History of the Pacific Northwest
- Electives under advisement

## **Additional Requirements**

### **Elementary Education Professional Program Requirements (106 credits)**

#### **Professional Studies Core (25 credits)**

- EDUC 301 - Educational Psychology I: Development and Individual Differences
- EDUC 302 - Educational Psychology II: Motivation, Learning and Assessment
- EDUC 310 - The Teacher and the Social Order
- ELED 370 - Introduction to Teaching
- IT 344 - Basic Instructional Technology Skills
- IT 442 - Classroom Use of Instructional Technology (Elementary)
- SPED 364 - Teaching All Students

#### **Elementary Program — Methods, Curriculum Content, and Field Experiences (81 credits)**

- ART 380 - Art Educating the Child
- ELED 425 - Social Studies for the Elementary School
- ELED 470 - Developing Teaching
- ELED 471 - Documenting Teaching
- ELED 480 - Literacy: Beginning Communicators
- ELED 481 - Literacy: Fluent Communicators
- ELED 491 - September Experience
- ELED 492 - Practicum: Experience in Literacy Methods
- ELED 494 - Internship - Elementary
- HLED 455 - Health Education Grades K-8
- MATH 381 - Teaching K-8 Mathematics I
- MATH 382 - Teaching K-8 Mathematics II
- MATH 383 - Teaching K-8 Mathematics III
- MATH 491 - Internship Seminar - Teaching K-8 Mathematics
- MUS 361 - Music for Elementary Teachers

- PE 345 - Physical Education for Elementary School
- SCED 480 - Science Methods and Curriculum for the Elementary School
- SCED 490 - Laboratory/Field Experience in Elementary Science
- SPED 430 - Problem Solving for Diverse Needs

## **History, BA**

### **60 Credits**

#### **Grade Requirements**

A minimum grade point average in history courses of 2.50 is required for graduation. No course with a grade of less than C- may be counted toward this major.

#### **Requirements**

For this program history courses are grouped into the following fields:

- United States
- Europe
- East and South Asia
- Africa and Middle East
- Ancient
- Western Hemisphere (outside U.S.)

Credits to be distributed as follows:

- Four courses in one of the above fields
- Three courses in a second field
- Two courses in a third field
- HIST 499 - Historical Research (4 credits)
- Electives under advisement

At least one-half of the total credits taken in fulfillment of the History requirement must be in upper division (300-400 level) courses.

#### **Additional Requirements**

The department recommends that majors take the maximum permissible number of history courses in the General University Requirements program. Further, history majors are encouraged to enroll in Methods of Research and Analysis (Hist 398), which offers practical training in the tools of historical research. Students planning to declare a history major should do so at the earliest possible date.

It is strongly recommended that majors who elect a four-course history concentration in a field where languages other than English predominate take enough language study to become proficient in appropriate language(s). Students planning on graduate study in history are cautioned that many graduate schools require foreign language proficiency for admission.

## **History/Social Studies, BA**

Jointly offered by the Department of History, College of Humanities and Social Sciences and the Department of Social Studies Education, College of Humanities and Social Sciences

### **90 Credits**

#### **Introduction**

This degree is appropriate for students who intend to pursue careers in secondary teaching with specialization in history and social studies.

To receive certification, students must also complete an approved teacher certification program. To receive a recommendation for state of Washington certification, students must complete the teacher certification program, including SEC 426, which is offered by the Department of Secondary Education as a part of 1) the undergraduate Bachelor of Arts degree, or as 2) a post-baccalaureate program, or as 3) a part of the Masters in Teaching degree. See the Secondary Education section of this catalog for program admission, completion, and teacher certification requirements. Completion of this combined major leads to an endorsement in social studies.

#### **Grade Requirements**

No course with a grade of less than C (2.0) may be counted in this major. Students must achieve a GPA of at least 2.5 in the courses counted in the major. Courses required for a state teaching endorsement must be completed with a grade of C (2.0) or better.

#### **Requirements**

- EGEO 201 - Human Geography
- PLSC 101 - Government and Politics in the Modern World
- PLSC 250 - The American Political System
- One course from:
  - ECON 206 - Introduction to Microeconomics
  - ECON 446 - Economics for the Teacher (preferred)
- One course from:
  - ECON 207 - Introduction to Macroeconomics
  - ECON 447 - Methods for Teaching About the National Economy in the Public Schools (preferred)
- Additional credits in any of the above disciplines or anthropology, sociology or psychology to a total of at least 30 credits
- History credits should be distributed under advisement as follows:
  - 2 courses in the United States, one pre-1865 and one post 1865
  - 2 courses in Europe, one with an emphasis on the 600 CE-1450 period and one with an emphasis the post-1450 CE period
  - 2 courses in the Ancient world (prior to 600 CE) covering two different continents
  - 2 courses in one of the following areas (one with an emphasis on the period 600-1450 CE and one with an emphasis on the period post-1450) East and South Asia African and Middle East Western Hemisphere (excluding U.S.)
- HIST 391 - History of the Pacific Northwest
- HIST 499 - Historical Research
- Electives under advisement

NOTE: At least 30 of the 60 history course credits must be at the upper-division level.

To assure that competency requirements have been met, students should consult the department's approved list for courses for periods and geographical regions.

## **Latin American Studies Minor**

### **30 Credits**

#### **Introduction**

This program is offered so that students interested in Latin America may be able to build expertise by drawing on the separate courses in this area offered by the departments of this University.

A major in Latin American Studies is available through the student-faculty designed majors program (see the Liberal Studies section of this catalog).

For further information and advisement, consult the Department of History or the Department of Anthropology.

#### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

#### **Requirements**

- Two courses in Spanish above the 201 level
- 10 credits from:
  - HIST 273 - Latin America: 1492-1824
  - HIST 274 - Latin America: 1824 to the Present
  - ANTH 365 - Peoples of Latin America
- Remainder in courses relating to Latin America from at least one other academic department other than Spanish

## **Public History Minor**

### **25 Credits**

#### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

#### **Requirements**

- HIST 493 - Public History Seminar
- HIST 494 - Public History Internship (repeatable to 10 credits)
- 15-17 additional credits under advisement outside the department of the student's declared major (one methods course strongly recommended)

Courses taken for credit in these programs may not be counted toward the major.

## **Archives and Records Management Certificate Program**

The department also offers a post-master's certificate in archives and records management to students who already possess an advanced degree from an accredited institution.

### *Application Information*

Admissions: Those seeking the ARM certificate apply to the Graduate School as post-master's degree candidates. Applicants whose advanced degree is in a field other than history must take at least one history course in addition to certificate requirements (see below). Graduate Record Examination scores are recommended, but not required. See other application information for the History MA program.

### *Language Requirement*

The foreign language requirement may be met in one of two ways: by passing an exam approved or administered by the department; or by earning a B grade or higher in the last course of a second-year language program. Courses graded on a pass/no pass basis would not qualify for satisfying the language requirement. Tests and course work taken before entry into the graduate program may be counted if completed within five years of acceptance into the graduate program. Both ARM master's and post-master's students may demonstrate computer programming competence, in lieu of a foreign language, by completing a three-course sequence (CSCI 112, CSCI 202, MIS 314) with final course grade of B or better, or as approved by the history faculty.

### **ARM Certificate Requirements**

ARM certificate students with an advanced degree in history must complete 36 credits.

- HIST 525 - History of Principles of Archives Administration & Records Management
  - ❑ One course from:
  - HIST 530 - Arrangement and Description of Archives
  - HIST 532 - Records and Information Management
  - HIST 535 - Internship in Archives and Records Management
  - HIST 536 - Internship in Archives and Records Management
    - ❑ Two of the following:
    - HIST 526 - Selection and Appraisal
    - HIST 528 - Reference, Access and Outreach
      - HIST 530 - Arrangement and Description of Archives (4)
    - HIST 534 - Preservation of Archival Materials
      - HIST 532 - Records and Information Management (4)
    - HIST 538 - Advanced Seminar in Archives and Records Management

ARM certificate students with an advanced degree in a field other than history must complete 36 credits, plus one additional history course at the 500 level (4 credits).

## **History, Archives and Records Management, Thesis, MA**

### **Graduate Faculty**

**Costanzo, Susan E.**, PhD, Russian/Soviet, Europe.

**Danysk, Cecilia A.**, PhD, Canada.

**Diehl, Peter D.**, PhD, Medieval, Ecclesiastical, Social.  
**Eurich, S. Amanda**, PhD, early modern Europe, France and European social history.  
**Friday, Christopher C.**, PhD, Pacific Northwest, U.S. West, immigration and labor, race and ethnicity.  
**Garfinkle, Steven J.**, PhD, ancient Near East and Mediterranean, historical theory and methods.  
**Helfgott, Leonard M.**, PhD, modern Middle East and modern Europe.  
**Hochstetler, Laurie**, PhD, U.S. colonial.  
**Jimerson, Randall C.**, PhD, archives and records management, 19th-century U.S.  
**Kennedy, Kathleen A.**, PhD, U.S. women's history, political history.  
**Leonard, Kevin A.**, PhD, U.S. West.  
**Lopez, A. Ricardo**, PhD, Latin America  
**Mariz, George**, PhD, European intellectual history, Great Britain.  
**Neem, Johann N.**, PhD, Early U.S. Republic.  
**Stewart, Mart A.**, PhD, 19th-century U.S., Civil War and Reconstruction, Environmental.  
**Thompson, Roger R.**, PhD, China.  
**Truschel, Louis W.**, PhD, African history.  
**Wright, Diana E.**, PhD, Japan.

#### *Affiliates*

**Friesen, Kitty**, paper conservator, Archives.  
**Kurtz, Anthony**, MA, MLS, Archives and Records Management.

Program Advisor: Dr. Randall Jimerson, Bond Hall 324, 360-650-3139, Rand.Jimerson@wwu.edu

#### **Goals**

The program prepares students to: 1) enter a professional career as an archivist or records manager; 2) apply analytical skills to problem-solving and to evaluation of a broad range of record keeping needs within organizations; 3) enter doctoral programs or pursue other advanced academic training; and 4) assume positions as researchers, writers, teachers, or curators in a variety of public and private settings.

The Department of History offers a graduate program leading to the degree of Master of Arts in history with a certificate in archives and records management. The Graduate Program in Archives and Record Management (ARM) prepares students for professional careers in both archives and records management. The curriculum emphasizes the interdependence of these two disciplines, both of which are essential to the challenges of documenting and preserving essential evidence of modern organizations and individuals.

Grounded in the study of history, the program recognizes the value of historical knowledge and understanding as a basis for identifying and preserving records of enduring value to society. The curriculum integrates automation and electronic records with traditional methods for textual, audio, and visual records. Students examine basic principles of archives and records management, learn methods of selecting, organizing, and using recorded information, and gain practical work experience in applying these techniques through an extended internship. A required master's thesis provides opportunity for original research and writing. The purpose of this program is to prepare students for a career and to enable them to learn to think and function as professional archivists and/or records managers.

#### **Prerequisites**

A baccalaureate degree from an accredited U.S. college or university, or an equivalent degree from a foreign university, or the permission of the department. Applicants with less than 25 credits in history or historical studies will be required to demonstrate knowledge of history and an ability to conduct historical research. For further information on admission requirements and procedures, contact the program director. Applicants with an advanced degree from an accredited institution are recommended, but not required, to submit GRE scores.

## **Program Requirements (72 credits)**

The ARM requires 72 credits and foreign language competence. Two years minimum are required to complete the program although some students may take longer.

- HIST 505 - Historical Theory and Methods
- HIST 525 - History of Principles of Archives Administration & Records Management
  - One course from:
- HIST 526 - Selection and Appraisal
- HIST 528 - Reference, Access and Outreach
  - One course from:
- HIST 530 - Arrangement and Description of Archives
- HIST 532 - Records and Information Management
- HIST 535 - Internship in Archives and Records Management
- HIST 536 - Internship in Archives and Records Management
- HIST 538 - Advanced Seminar in Archives and Records Management (4)
- HIST 690 - Research and Writing Seminar: Thesis (12)
  - Two graduate courses in history (8)
  - Elective courses (12)

### **Additional Information**

#### *Language Requirement*

The foreign language requirement may be met in one of two ways: by passing an exam approved or administered by the department; or by earning a B grade or higher in the last course of a second-year language program. Courses graded on a pass/no pass basis would not qualify for satisfying the language requirement. Tests and course work taken before entry into the graduate program may be counted if completed within five years of acceptance into the graduate program.

Both ARM master's and post-master's students may demonstrate computer programming competence, in lieu of a foreign language, by completing a three-course sequence (CSCI 112, CSCI 202, MIS 314) with final course grade of B or better, or as approved by the history faculty.

#### *Internship*

Students complete a 500-hour internship (HIST 535/536) at a cooperating archives or records management agency. This provides supervised practical experience in professional work. Internships have been available in recent years in governmental, academic, business, and historical organizations in the Pacific Northwest and throughout the U.S. and Canada. Selection of internships is based on individual needs and interests, in consultation with the program advisor.

#### *Electives*

Electives, including courses in history, archives, records management, or another discipline related to the student's goals and interests, should be chosen in consultation with the program advisor.

#### *Research Thesis*

A research thesis (HIST 690) is required. Topics may relate to any aspect of archives, records management, or to any field of history.

## **History, Non-Thesis, MA**

### **Graduate Faculty**

**Costanzo, Susan E.**, PhD, Russian/Soviet, Europe.  
**Danysk, Cecilia A.**, PhD, Canada.  
**Diehl, Peter D.**, PhD, Medieval, Ecclesiastical, Social.  
**Eurich, S. Amanda**, PhD, early modern Europe, France and European social history.  
**Friday, Christopher C.**, PhD, Pacific Northwest, U.S. West, immigration and labor, race and ethnicity.  
**Garfinkle, Steven J.**, PhD, ancient Near East and Mediterranean, historical theory and methods.  
**Helfgott, Leonard M.**, PhD, modern Middle East and modern Europe.  
**Hochstetler, Laurie**, PhD, U.S. colonial.  
**Jimerson, Randall C.**, PhD, archives and records management, 19th-century U.S.  
**Kennedy, Kathleen A.**, PhD, U.S. women's history, political history.  
**Leonard, Kevin A.**, PhD, U.S. West.  
**Lopez, A. Ricardo**, PhD, Latin America  
**Mariz, George**, PhD, European intellectual history, Great Britain.  
**Neem, Johann N.**, PhD, Early U.S. Republic.  
**Stewart, Mart A.**, PhD, 19th-century U.S., Civil War and Reconstruction, Environmental.  
**Thompson, Roger R.**, PhD, China.  
**Truschel, Louis W.**, PhD, African history.  
**Wright, Diana E.**, PhD, Japan.

### *Affiliates*

**Friesen, Kitty**, paper conservator, Archives.  
**Kurtz, Anthony**, MA, MLS, Archives and Records Management.

### **Goals**

The program prepares students to: 1) enter doctoral programs or pursue other advanced academic training in history; 2) teach at the secondary or community-college level, and 3) assume positions as researchers, writers, teachers and curators in a variety of public and private settings

### **Prerequisites**

Admission to graduate status and to graduate courses requires completion of an undergraduate major in history or the permission of the department. Applicants must also complete the general section of the Graduate Record Examination prior to admission to the program.

### **Application Information**

**Admit Quarter:** Students are generally admitted only for the academic year, not summer.

**TA Deadlines:** April 1 for all program specializations.

### **Supporting Materials:**

- In addition to the Graduate School application requirements, all history applicants must submit a brief statement of purpose and goals, and a writing sample, such as a research paper or similar example of writing ability

## **Program Requirements**

### **Non-Thesis: Basic Requirements 48 credits**

- HIST 505 - Historical Theory and Methods (4)
- Three courses in one field and three courses in another, with no more than one 400-level course in each area (maximum 10 credits at the 400 level)  
Submission of three revised graduate seminar papers to a committee of three department faculty no later than week seven of the final term of study. Proposed revisions to be arranged with that committee no later than week seven in the term prior to the final term of study
- Completion of Language Requirement (see below)

### **Additional Information**

#### **Fields of Study**

Fields of study fall into four broad areas:

- National, Continental, or Regional Studies
- Ancient, Medieval, Early Modern, or Modern Periods
- Comparative History (see graduate faculty areas of specialization)
- Archives and Records Management.

Students who choose the non-thesis option are required to complete at least three courses in one field and three courses in another, with no more than one 400-level course in each as determined in consultation with the graduate advisor (maximum 10 credits at the 400 level).

#### **Electives**

To complete a program in the Non-Thesis option electives may be chosen, in consultation with the graduate advisor from other seminars, readings courses, 400-level undergraduate courses (maximum of 10 credits) or HIST 500 (in rare cases, only with permission of the graduate advisor).

#### **Language Requirement**

The foreign language requirement may be met in one of two ways: by passing an exam approved or administered by the department; or by earning a B grade or higher in the last course of a second-year language program. Courses graded on a pass/no pass basis would not qualify for satisfying the language requirement. Tests and course work taken before entry into the graduate program may be counted if completed within five years of acceptance into the graduate program, or, where appropriate and with departmental permission, a demonstrated competence in mathematics, statistics, or appropriate computer programs/processes, as determined by advisor.

For further information, contact departmental office, Bond Hall 364, 360-650-3429.

## **History, Thesis, MA**

### **Graduate Faculty**

**Costanzo, Susan E.**, PhD, Russian/Soviet, Europe.

**Danysk, Cecilia A.**, PhD, Canada.

**Diehl, Peter D.**, PhD, Medieval, Ecclesiastical, Social.

**Eurich, S. Amanda**, PhD, early modern Europe, France and European social history.

**Friday, Christopher C.**, PhD, Pacific Northwest, U.S. West, immigration and labor, race and ethnicity.  
**Garfinkle, Steven J.**, PhD, ancient Near East and Mediterranean, historical theory and methods.  
**Helfgott, Leonard M.**, PhD, modern Middle East and modern Europe.  
**Hochstetler, Laurie**, PhD, U.S. colonial.  
**Jimerson, Randall C.**, PhD, archives and records management, 19th-century U.S.  
**Kennedy, Kathleen A.**, PhD, U.S. women's history, political history.  
**Leonard, Kevin A.**, PhD, U.S. West.  
**Lopez, A. Ricardo**, PhD, Latin America  
**Mariz, George**, PhD, European intellectual history, Great Britain.  
**Neem, Johann N.**, PhD, Early U.S. Republic.  
**Stewart, Mart A.**, PhD, 19th-century U.S., Civil War and Reconstruction, Environmental.  
**Thompson, Roger R.**, PhD, China.  
**Truschel, Louis W.**, PhD, African history.  
**Wright, Diana E.**, PhD, Japan.

#### *Affiliates*

**Friesen, Kitty**, paper conservator, Archives.  
**Kurtz, Anthony**, MA, MLS, Archives and Records Management.

#### **Goals**

The program prepares students to: 1) enter doctoral programs or pursue other advanced academic training in history; 2) teach at the secondary or community-college level, and 3) assume positions as researchers, writers, teachers and curators in a variety of public and private settings

#### **Prerequisites**

Admission to graduate status and to graduate courses requires completion of an undergraduate major in history or the permission of the department. Applicants must also complete the general section of the Graduate Record Examination prior to admission to the program.

#### **Application Information**

**Admit Quarter:** Students are generally admitted only for the academic year, not summer.

**TA Deadlines:** April 1 for all program specializations.

#### **Supporting Materials:**

- In addition to the Graduate School application requirements, all history applicants must submit a brief statement of purpose and goals, and a writing sample, such as a research paper or similar example of writing ability

#### **Program Requirements**

##### **Thesis: Basic Requirements 45 credits**

- HIST 505 - Historical Theory and Methods (4)
- HIST 690 - Research and Writing Seminar: Thesis (12)
  - A written thesis prospectus is a prerequisite for 690 registration
  - Three courses in a primary field and two in a secondary field

- Elective courses to total minimum 45-credit requirement
- Completion of Language Requirement (see below)

#### Additional Information

#### Fields of Study

Fields of study fall into four broad areas:

- National, Continental, or Regional Studies
- Ancient, Medieval, Early Modern, or Modern Periods
- Comparative History (see graduate faculty areas of specialization)
- Archives and Records Management.

Students who choose the thesis option are required to complete at least three courses in a primary field and two courses in a secondary field, those fields to be determined in consultation with the graduate advisor and thesis committee chair.

#### Electives

To complete the program in the Thesis option, electives may be chosen, in consultation with the graduate advisor from other seminars, readings courses, 400-level undergraduate courses (maximum of 10 credits) or HIST 500 (in rare cases, only with permission of the graduate advisor).

#### Language Requirement

The foreign language requirement may be met in one of two ways: by passing an exam approved or administered by the department; or by earning a B grade or higher in the last course of a second-year language program. Courses graded on a pass/no pass basis would not qualify for satisfying the language requirement. Tests and course work taken before entry into the graduate program may be counted if completed within five years of acceptance into the graduate program, or, where appropriate and with departmental permission, a demonstrated competence in mathematics, statistics, or appropriate computer programs/processes, as determined by advisor.

For further information, contact departmental office, Bond Hall 364, 360-650-3429.

## **Journalism**

### **Introduction**

The journalism department offers a degree program, the Bachelor of Arts, and also maintains a commitment to the liberal arts tradition by offering courses in support of the General University Requirements (GURs) and other departments.

Journalism majors and minors pursue theoretical and practical communication studies in a liberal arts setting. Students of journalism gain practical experience on Western's award-winning student media, and majors additionally take field internships with newspapers, magazines, broadcast stations, public relations agencies and other professional organizations.

Courses in the news-editorial sequence emphasize the gathering, writing and ethical presentation of news. Understanding news processes and learning to report with accuracy, clarity and precision prepares graduates to communicate swiftly and lucidly in a changing world.

Courses in the public relations sequence follow the news-editorial emphasis, adding communication skills important for careers in this rapidly growing field.

Courses in the visual journalism sequence prepare students in the concepts, professional practices and course work applications of visual components of news: photojournalism, information graphics, video and audio clips, mapping and typography.

A combined major, environmental studies/journalism, is available in cooperation with Huxley College of the Environment.

Students are challenged to explore a range of other disciplines and to seek depth in one or more specialized areas through concentrations, major-minor combinations or even double majors.

Graduates find careers in newspapers, magazines, radio, television, publishing, advertising, public relations, teaching, and throughout government and industry wherever communications skills, with general knowledge, are vital.

Because enrollment in the journalism department is limited, students considering a major should consult a journalism advisor before embarking on classes beyond JOUR 190 and JOUR 207.

### **Faculty**

**SHEARLEAN DUKE** (1999) Chair and Associate Professor. BS, Tennessee Tech University; MA, Chapman University.

**CAROLYN DALE** (1977) Associate Professor. BA, MC, University of Washington.

**JOHN M. HARRIS** (1998) Associate Professor. BA, Wittenberg University; MS, University of Oregon.

**BRAD HOWARD** (2005) Associate Professor. BA, Christopher Newport College; MA, PhD, University of Delaware.

**JENNIFER KELLER** (2007) Assistant Professor. BA, Kenyon College; MA, Salisbury State University; MA, Syracuse University.

**CAROLYN NIELSEN** (2008) Assistant Professor. BS, California Polytechnic State University; MSJ Northwestern University

**TIM PILGRIM** (1992) Associate Professor. BA, Western Montana College; MA, University of Montana; MA, PhD, University of Washington.

**PEGGY WATT** (2004) Assistant Professor. BA, Western Washington University; MA, Stanford University.

**SHEILA WEBB** (2008) Assistant Professor. BA, University of Michigan; MA's, University of Wisconsin; PhD, University of Wisconsin

## **Declaration of Major**

The Department of Journalism offers three sequences leading to a Bachelor of Arts degree: a news-editorial sequence, a public relations sequence, and a visual journalism sequence.

Students seeking admission to the major should see a member of the journalism faculty for advising and obtain a copy of admission requirements. Admission to the department and to specific courses may be limited.

Students seeking admission to the major must meet the following conditions:

- Have at least 30 college credits with a cumulative 2.50 grade point average
- Pass JOUR 207 with a B- or better (transfer students must meet the same requirement for any course accepted as an equivalent of JOUR 207)
- Complete with a B- or better one journalism staff course
- Submit a letter of application

Students meeting qualifications but not admitted because of space limitations will be listed as pre-majors and admitted as space allows.

Majors must maintain a 2.50 grade point average both overall and in journalism courses. Students below that average for two consecutive quarters will be placed on probation; a third consecutive quarter will result in removal from the major.

For additional details on admission to the major, consult the department manager or any journalism faculty member.

## **Other Departmental Information**

### *Mid-Program Checkpoint*

Students seeking to complete a BA degree in journalism within a four-year time span should have completed the following courses by the start of their junior year. Major omissions from this list will make it difficult or impossible to complete this degree within two additional years.

- JOUR 190
- JOUR 207
- ENG 101
- 100- and 200-level GURs

## **Undergraduate Degrees and Programs**

Journalism, BA

Journalism — Public Relations, BA

Journalism — Visual Journalism, BA

Environmental Studies/Journalism, BA

Journalism Minor

# **Environmental Studies/Journalism, BA**

**120-126 credits (preparatory courses and major)**

## **Introduction**

Students wishing to complete an Environmental Studies major in four years should complete all GUR requirements in their first two years. Prospective environmental science majors are strongly advised to take additional preparatory course work that provides a strong background in chemistry, biology and mathematics. The preparatory courses listed below may be used to fulfill both Huxley College and GUR requirements.

## **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors. All preparatory courses required for admission should be completed on a lettered or numeric grading scale, not P/NP, and must be completed with a grade of C- or better.

## **Requirements**

### **Preparatory Courses (36-42 credits)**

- ❑ One course from:
  - BIOL 101 - Introduction to Biology
  - BIOL 204 - Introduction to Evolution, Ecology and Biodiversity
  - ❑ CHEM 121 - General Chemistry I
  - ❑ ECON 206 - Introduction to Microeconomics
  - ❑ EGEO 203 - Physical Geography
- ❑ One course from:
  - MATH 114 - Precalculus I
  - MATH 156 - Algebra With Applications to Business and Economics
  - ❑ Any BCOM and CCOM GUR requirement course
  - ❑ Any PLSC course
  - ❑ Additional Lab Science course in BIOL, CHEM, GEOL or PHYS
- ❑ One Introductory Statistics course from:
  - ANTH 335 - Quantitative Methods in Anthropology
  - DSCI 205 - Business Statistics
  - FAIR 232P - User-Friendly Statistics
  - MATH 240 - Introduction to Statistics
  - SOC 215 - Social Statistics

### **Major (84 credits)**

- ❑ ESTU 480 - The Planet Staff
- ❑ ESTU 481 - Environmental Journalism
- ❑ JOUR 207 completed with a grade of B- or better
- ❑ JOUR 190 - Introduction to Mass Media
- ❑ JOUR 307 - Reporting
- ❑ JOUR 309 - Editing
- ❑ JOUR 350 - Mass Media Law

- JOUR 430 - Field Internship
  - JOUR 450 - Advanced Reporting
  - JOUR 480 - Senior Seminar
  - One course from:
    - ESCI 302 - Environmental Pollution
    - ESCI 310 - Environmental Systems
    - ESCI 325 - Fundamentals of Ecology
    - ESCI 392 - Introduction to Global Change
  - One course from:
    - ESCI 309 - Exploring Environmental Data
    - ESCI 321 - Oceanography
    - ESCI 330 - Natural History of the Pacific Northwest
    - ESCI 333 - Introduction to Environmental Toxicology
    - ESCI 361 - Water Quality
    - ESCI 463 - Wetlands for Wastewater Treatment
  - One course from:
    - ESCI 436 - Environmental Impact Assessment
    - ESCI 470 - Ecological Restoration
    - ESCI 490 - Environmental Risk Assessment
    - ESCI 491 - Oceanography of Puget Sound
    - ESTU 436 - Environmental Impact Assessment
    - ESTU 470 - Planning Studio
    - ESTU 496 - Environmental Stewardship
  - One course from:
    - JOUR 214 - Newspaper Staff
    - JOUR 314 - Newspaper Staff
    - JOUR 414 - Newspaper Staff
    - JOUR 415 - Newspaper Editorship
  - One course from:
    - JOUR 321 - Periodical Staff
    - JOUR 421 - Periodical Staff
    - JOUR 422 - Periodical Editorship
  - One course from:
    - JOUR 214 - Newspaper Staff
    - JOUR 314 - Newspaper Staff
    - JOUR 321 - Periodical Staff
    - JOUR 414 - Newspaper Staff
    - JOUR 415 - Newspaper Editorship
    - JOUR 421 - Periodical Staff
    - JOUR 422 - Periodical Editorship
    - ESTU 480 - The Planet Staff
  - ESTU 482 - Editing the Planet \*
- \*ESTU 482 offered only to Environmental/Journalism Majors - Editor status.*
- Electives under advisement (11-18 credits):
    - ECON 383 - Environmental Economics
    - ECON 384 - Energy Economics
    - ECON 483 - Resource Economics
    - EGEO 300- and 400-level
    - ESCI 300- and 400-level

- ESTU 300- and 400-level
- FAIR 300- and 400-level
- HIST 480 - Modern Chinese Social History
- JOUR 300- and 400-level
- PLSC 346 - Politics of Inequality
- PLSC 347 - Race, Politics and Public Policy
- PLSC 390 - The Politics of Development
- PLSC 420 - Environmental Politics
- SOC 321 - Demography
- SOC 385

## **Journalism Minor**

**41 credits**

### **Admission and Declaration Process**

Declaration of Major ([see Journalism department page](#))

### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

### **Requirements**

- JOUR 190 - Introduction to Mass Media
- JOUR 207 - Newswriting
- JOUR 307 - Reporting
- JOUR 309 - Editing
- JOUR 340 - History of U.S. Journalism
- JOUR 350 - Mass Media Law
- JOUR 351 - Mass Media Ethics
- Three quarters on student publication staff:
  - One course from list (a):
    - JOUR 214 - Newspaper Staff
    - JOUR 314 - Newspaper Staff
    - JOUR 414 - Newspaper Staff
    - JOUR 415 - Newspaper Editorship
  - One from list (b):
    - JOUR 321 - Periodical Staff
    - JOUR 421 - Periodical Staff
    - JOUR 422 - Periodical Editorship
  - One additional from list (a) or (b), or:
- ESTU 480 - The Planet Staff or equivalent professional experience

## **Journalism — Public Relations, BA**

### **78 Credits**

#### **Admission and Declaration Process**

Declaration of Major ([see Journalism department page](#))

#### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors. Cumulative GPA of 2.50 or higher in major is required.

#### **Requirements**

- JOUR 190 - Introduction to Mass Media
  - JOUR 207 - Newswriting
  - JOUR 309 - Editing
  - JOUR 330 - Principles of Public Relations
  - JOUR 350 - Mass Media Law
  - JOUR 351 - Mass Media Ethics
  - JOUR 380 - Advanced Public Relations Writing and Techniques
  - JOUR 404 - Feature Writing
  - JOUR 430 - Field Internship
  - JOUR 480 - Senior Seminar
  - COMM 428 - Organizational Communication
  - Three quarters on publication staff:
    - One course from list (a):
    - JOUR 214 - Newspaper Staff
    - JOUR 314 - Newspaper Staff
    - JOUR 414 - Newspaper Staff
    - JOUR 415 - Newspaper Editorship
  - One from list (b):
    - JOUR 321 - Periodical Staff
    - JOUR 421 - Periodical Staff
    - JOUR 422 - Periodical Editorship
  - and one additional from (a) or (b), or:
  - ESTU 480 - The Planet Staff
- 12 upper-division credits in another academic area, under departmental advisement
- A maximum of 73 journalism course credits may be applied to the 180-credit minimum for graduation

# **Journalism — Visual Journalism, BA**

## **83 Credits**

### **Admission and Declaration Process**

Declaration of Major ([see Journalism department page](#))

### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors. Cumulative GPA of 2.50 or higher in major is required.

### **Requirements**

- JOUR 190 - Introduction to Mass Media
- JOUR 207 - Newswriting
- JOUR 305 - Photojournalism
- JOUR 307 - Reporting
- JOUR 309 - Editing
- JOUR 346 - Introduction to Visual Journalism
- JOUR 350 - Mass Media Law
- JOUR 351 - Mass Media Ethics
- JOUR 370 - Online Journalism
- JOUR 430 - Field Internship
- JOUR 446 - Advanced Visual Journalism
- JOUR 480 - Senior Seminar
- One course from:
  - ART 109 - Visual Dialogue
  - DSGN 211 - Foundations of Visual Communication
- Four quarters on publication staff:
  - Two courses from list (a):
    - JOUR 214 - Newspaper Staff
    - JOUR 314 - Newspaper Staff
    - JOUR 414 - Newspaper Staff
    - JOUR 415 - Newspaper Editorship
  - One from list (b):
    - JOUR 321 - Periodical Staff
    - JOUR 421 - Periodical Staff
    - JOUR 422 - Periodical Editorship
- And one additional from list (a) or (b), or:
  - ESTU 480 - The Planet Staff
- 12 upper-division credits in another academic area, under departmental advisement
- A maximum of 73 journalism course credits may be applied to the 180-credit minimum for graduation

## **Journalism, BA**

### **79 Credits**

#### **Admission and Declaration Process**

Declaration of Major ([see Journalism department page](#))

#### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors. Cumulative GPA of 2.50 or higher in major is required.

#### **Requirements**

- JOUR 190 - Introduction to Mass Media
- JOUR 207 - Newswriting
- JOUR 307 - Reporting
- JOUR 309 - Editing
- JOUR 340 - History of U.S. Journalism
- JOUR 350 - Mass Media Law
- JOUR 351 - Mass Media Ethics
- JOUR 404 - Feature Writing
- JOUR 430 - Field Internship
- JOUR 450 - Advanced Reporting
- JOUR 480 - Senior Seminar
- Five quarters on publication staff:
  - Three courses from list (a):
  - JOUR 214 - Newspaper Staff
  - JOUR 314 - Newspaper Staff
  - JOUR 414 - Newspaper Staff
  - JOUR 415 - Newspaper Editorship
- One course from list (b):
  - JOUR 321 - Periodical Staff
  - JOUR 421 - Periodical Staff
  - JOUR 422 - Periodical Editorship
- And one additional from list (a) or (b), or:
- ESTU 480 - The Planet Staff
- 12 upper-division credits in another academic area under departmental advisement
- A maximum of 73 journalism course credits may be applied toward the 180-credit minimum for graduation

# Liberal Studies

## Introduction

Liberal studies is an interdisciplinary humanities department. The humanities include the disciplines which study philosophy, religion, history, literature, and the arts. Through these disciplines, people in different cultures have thought about truth and the meaning of human experience, standards of moral judgment for human actions, and the nature of beauty and the cultivation of taste in the arts.

The department teaches students to ask how works of the humanities have been shaped by their historical and cultural contexts, and how they in turn have influenced readers and audiences. The department supports the study of humanities in the cultures of Europe, the Americas, China, Japan, South Asia, sub-Saharan Africa, and in predominately Islamic areas. Its courses give attention to historical development and cross-cultural interaction, both in the past and in the modern period.

The department offers the BA in Humanities with two areas of concentration: the history of culture, and the academic study of religion. The department also offers a BA in Humanities — Elementary Education in conjunction with Woodring College of Education. Students in the BA degree programs practice what they have learned about analyzing texts, works of art and historical contexts in their own supervised research. In the degree programs and in General University Requirements courses students develop habits of mind characterized by awareness of methodological issues, analysis from more than one perspective, aesthetic appreciation, and clear communication, habits which have proved to be broadly useful to them in a variety of professional careers and in civic life.

## Information

For additional information, contact the Department of Liberal Studies, Western Washington University, 516 High St., Bellingham, WA 98225-9064. The department office is located in Bond Hall 152, telephone 360-650-3031, fax 360-650-6713, e-mail: [Liberal.Studies@wwu.edu](mailto:Liberal.Studies@wwu.edu). Web access: [www.wwu.edu/liberalstudies](http://www.wwu.edu/liberalstudies).

- The department offers interdisciplinary courses which partially fulfill the WWU General University Requirements in humanities and in comparative, gender and multicultural studies; see the *University Graduation Requirements* section of this catalog for the complete General University Requirements and options for satisfying them
- The department offers a BA in humanities with a choice of two concentrations, in history of culture and in religion and culture. It offers a BA in humanities — elementary education in conjunction with Woodring College of Education.
- The department offers interdisciplinary minor programs in humanities and in the study of religion.
- The department administers and offers courses in the minor in Arabic and Islamic studies
- The department offers courses in the East Asian Studies program
- The department administers the Student/Faculty-Designed Major in the College of Humanities and Social Sciences. This program allows students, in consultation with appropriate faculty, to design an interdisciplinary course of study in areas not available through existing departmental majors

Additional information about all of the foregoing is available from the Liberal Studies Office, Bond Hall 152.

## Faculty

**DAVID L. CURLEY** (1996) Chair and Professor. BA, MA, PhD, University of Chicago.

**HOLLY FOLK** (2007) Assistant Professor. BA, Wesleyan University; MA, Columbia University; PhD, Indiana University.

**ANDREA GOGRÖF-VOORHEES** (1996) Associate Professor. BA, MA, University of Paris, Nanterre; PhD, University of Washington.

**KIMBERLY LYNN** (2006) Assistant Professor. BA, College of William and Mary; MA, PhD, Johns Hopkins University.

**JONATHAN MIRAN** (2003) Associate Professor. BA, MA, Institut National des Langues et Civilisations Orientales, Paris; PhD, Michigan State University.

**SEAN E. MURPHY** (2002) Associate Professor. AB, MA, PhD, Cornell University.

**SCOTT PEARCE** (1992) Associate Professor. BA, Rutgers University; PhD, Princeton University.  
**ROBERT F. STOOPS, JR.** (1983) Professor. AB, University of North Carolina at Chapel Hill; MDiv, Harvard Divinity School; MA, PhD, Harvard University.

### **Other Departmental Information**

#### *Mid-Program Checkpoint*

Students seeking to complete a BA in humanities degree within four years should take LBRL 121 and LBRL 122 before spring quarter of their junior year. LBRL 302 should be taken in spring quarter of the junior year. If not taken before this quarter, LBRL 123 must be taken in the same quarter as LBRL 302. By the end of their junior year students also should complete 12-15 additional credits from the courses required for the BA in humanities degree. Transfer students should contact the department for advisement as early as possible.

### **Undergraduate Degrees and Programs**

Humanities — History of Culture, BA

Humanities – Religion and Culture, BA

Humanities — Elementary, BA

Arabic and Islamic Studies Minor

Humanities Minor

The Study of Religion Minor

### **Arabic and Islamic Studies Minor**

#### **28-30 credits**

#### **Introduction**

The Minor in Arabic and Islamic Studies provides intermediate instruction in Arabic, an introduction to the history of Islamic civilization, and upper division electives from several academic departments.

#### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors. A GPA of 2.5 or above is required in the Arabic courses.

#### **Requirements**

- ARAB 201 - Intermediate Arabic
- ARAB 202 - Intermediate Arabic
- ARAB 203 - Intermediate Arabic
- One course from:
  - LBRL 278 - Humanities of Islamic Civilization
  - HIST 287 - Introduction to Islamic Civilization
- Select 8-10 credits of electives from the list below, or other electives under advisement, including ANTH 490 when it is taught as Islam and Conflict in Europe:
  - EAST 314 - The Mongols
  - FAIR 371B - Topics in Middle East Studies
  - HIST 405 - The Traditional Middle East

- HIST 406 - Middle East, 1800 to the Present
- HIST 407 - History of the Israel/Palestinian Conflict
- HIST 488 - Modern Egypt, Libya and the Nile Valley
- LBRL 340 - Sufism: The Islamic Mystical Tradition
- LBRL 362 - Islam and Muslims in the Indian Ocean World
- LBRL 478 - Renewal and Reform in the Islamic World Since the Eighteenth Century
- PLSC 271 - Introduction to International Relations

## **Humanities Minor**

**24-30 credits**

### **Introduction**

The Minor in Humanities provides interdisciplinary study of the humanities (philosophy, religion, history, literature and the arts) in Western and other civilizations.

### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

### **Requirements**

Two courses (8-10 credits):

One of:

- LBRL 121 - The Western Tradition I: The Ancient World
- HNRS 103 - Major Cultural Traditions I

One of:

- LBRL 122 - The Western Tradition II: Medieval and Early Modern Europe
- HNRS 104 - Major Cultural Traditions II
- LBRL 123 - The Western Tradition III: Modern World

One course (4-5 credits) from:

- LBRL 231 - Introduction to the Study of Religion
- LBRL 243 - Art and Ideas
- LBRL 281 - Representations of Otherness
- LBRL 301 - Historical Methods in the Humanities
- LBRL 303 - Methods in the Study of Religion

One course from:

- LBRL 232 - Myth and Folklore
- LBRL 271 - Humanities of India
- LBRL 272 - Religion and Society in China and Japan
- LBRL 273 - Art and Society in China and Japan
- LBRL 275 - Humanities of Japan
- LBRL 276 - Humanities of Africa
- LBRL 277 - Humanities of China
- LBRL 278 - Humanities of Islamic Civilization
- LBRL 372 - Postcolonial Novels: Art, Rhetoric and Social Context
- LBRL 375 - Buddhism
- LBRL 378 - Religion and Society in India

- Three additional courses (12-15 credits) from:
    - LBRL 301 - Historical Methods in the Humanities
  - LBRL 302 - Methods of Interdisciplinary Study
  - LBRL 303 - Methods in the Study of Religion
  - LBRL 323 - The Romantic Paradox: Love, Life and Death
  - LBRL 325 - Surveillance, Voyeurism and the Culture of Suspicion
  - LBRL 332 - Universal Religions: Founders and Disciples
  - LBRL 334 - Hebrew Bible and the Religion of Ancient Israel
  - LBRL 336 - New Testament and Early Christianity
  - LBRL 338 - Mysticism
  - LBRL 340 - Sufism: The Islamic Mystical Tradition
  - LBRL 360 - China and the Emerging World Economy: From Antiquity to the Early Modern
  - LBRL 362 - Islam and Muslims in the Indian Ocean World
  - LBRL 375 - Buddhism
  - LBRL 378 - Religion and Society in India
  - LBRL 478 - Renewal and Reform in the Islamic World Since the Eighteenth Century
- And other appropriate courses under advisement

## **Humanities – Religion and Culture, BA**

**63-71 credits (including core courses)**

### **Introduction**

The two concentrations for a BA in humanities provide interdisciplinary study of the humanities (philosophy, religion, history, literature and the arts) in Western and other civilizations. The major emphasizes critical reading, analysis and writing and culminates in a senior paper written under advisement. It provides skills and habits of mind which have proved broadly useful in a variety of professional careers, in both public and private settings, and it prepares students for knowledgeable participation in civic life. The major also proved to be excellent preparation for graduate study in law, library science, history, English, comparative literature, and religion.

The Religion and Culture Concentration provides scholarly, critical, nonsectarian study of religions. Students study religious beliefs, practices, identities and organizations, and how they have influenced and been influenced by other aspects of society and culture. The concentration includes a broad survey of Western civilization as a basis for understanding its religious traditions. Students also become familiar with religious traditions in non-Western civilizations, and with their modern interactions and changes. Students study the origin, history, and methods of the academic study of religion as it has developed in Europe and North America. They are introduced to methodological issues in the study of religion, and learn to use methods appropriate to different kinds of problems.

For information or advisement, contact the Liberal Studies Office.

### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

An average grade of B in liberal studies courses is required for admission to LBRL 302. (NOTE: LBRL 302 is ordinarily offered spring quarter only.) LBRL 302 is prerequisite to LBRL 421, 422, 423, 424. LBRL 498 (2 credits) should be taken with a liberal studies faculty member in the quarter prior to enrolling in LBRL 499, to prepare for the latter. It is recommended that students undertake study of a foreign language concurrently with the major.

## Requirements

### Core 23-25 credits

- One course from:
  - LBRL 121 - The Western Tradition I: The Ancient World
  - HNRS 103 - Major Cultural Traditions I
- One course from:
  - LBRL 122 - The Western Tradition II: Medieval and Early Modern Europe
  - HNRS 104 - Major Cultural Traditions II
  - LBRL 123 - The Western Tradition III: Modern World
  - LBRL 302 - Methods of Interdisciplinary Study
  - LBRL 498 - Readings for Research in Humanities
  - LBRL 499 - Research in Humanities

### Concentration 40-46 credits

- LBRL 231 - Introduction to the Study of Religion
    - Two courses (8-10 credits) from:
      - LBRL 271 - Humanities of India
      - LBRL 272 - Religion and Society in China and Japan
      - LBRL 278 - Humanities of Islamic Civilization
      - LBRL 283 - Religion and Globalization
      - LBRL 340 - Sufism: The Islamic Mystical Tradition
      - LBRL 375 - Buddhism
      - LBRL 378 - Religion and Society in India
    - Three courses (12-16 credits) from:
      - LBRL 301 - Historical Methods in the Humanities
      - LBRL 321 - Between Renaissance and Inquisition: Censorship and Religious Conflict in Spain's Golden Age
      - LBRL 332 - Universal Religions: Founders and Disciples
      - LBRL 333 - Religion in America
      - LBRL 334 - Hebrew Bible and the Religion of Ancient Israel
      - LBRL 336 - New Testament and Early Christianity
      - LBRL 338 - Mysticism
      - LBRL 375 - Buddhism
      - LBRL 378 - Religion and Society in India
  - LBRL 478 - Renewal and Reform in the Islamic World Since the Eighteenth Century
    - Other appropriate upper-division courses in the Humanities & Social Sciences, under advisement.
  - Two courses (10 credits) from:
    - LBRL 421 - Senior Seminar: Approaches to Cultural History
    - LBRL 422 - Senior Seminar: Literary Traditions in Western Culture
    - LBRL 423 - Senior Seminar: Self, Culture, and Society
    - LBRL 424 - Senior Seminar: Social Change in Cross-Cultural Contexts
- LBRL 375 and 378 may be counted in one group only.

## **Humanities — Elementary, BA**

**48-55 credits**

### **Introduction**

This major offers the same approach as and much of the subject matter of the BA in Humanities, History of Culture Concentration described above. Students acquire a substantial knowledge of religious, philosophical, literary and aesthetic movements in Western civilization. Students are encouraged to acquire some knowledge of works of the humanities in at least one other culture, and of its history. Students learn methods of study that are applicable to teaching the humanities. This major satisfies the academic major requirement for teacher certification with an endorsement in elementary education and must be accompanied by the professional preparation program in elementary education. See the Elementary Education section of this catalog for program admission, completion, and teacher certification requirements.

### **Grade Requirements**

An average grade of B in liberal studies courses is required for admission to LBRL 302. (NOTE: LBRL 302 is ordinarily offered spring quarter only.) LBRL 302 is prerequisite to LBRL 421, 422, 423, 424. Permission of the instructor is required for enrollment in LBRL 421, 422, 423, 424. LBRL 498 (2 credits) should be taken with a liberal studies faculty member in the quarter before enrolling in LBRL 499, to prepare for the latter.

For information or advisement, contact the Liberal Studies Office.

A grade of C (2.0) or better is required for courses in the elementary education professional program and all courses required for the endorsement.

### **Requirements**

#### **Core (13-15 credits)**

One from:

- LBRL 121 - The Western Tradition I: The Ancient World
- HNRS 103 - Major Cultural Traditions I
- One from:
  - LBRL 122 - The Western Tradition II: Medieval and Early Modern Europe
  - HNRS 104 - Major Cultural Traditions II
  - LBRL 123 - The Western Tradition III: Modern World
- Two courses (8-10 credits) from the following:
  - LBRL 271 - Humanities of India
  - LBRL 272 - Religion and Society in China and Japan
  - LBRL 273 - Art and Society in China and Japan
  - LBRL 275 - Humanities of Japan
  - LBRL 276 - Humanities of Africa
  - LBRL 277 - Humanities of China
  - LBRL 278 - Humanities of Islamic Civilization
  - LBRL 281 - Representations of Otherness
  - LBRL 283 - Religion and Globalization
- One course (4-5 credits) under advisement from:
  - LBRL 231 - Introduction to the Study of Religion
  - LBRL 243 - Art and Ideas

- LBRL 301 - Historical Methods in the Humanities
- LBRL 303 - Methods in the Study of Religion
- LBRL 302 - Methods of Interdisciplinary Study
- Two courses (10 credits) under advisement from:
  - LBRL 421 - Senior Seminar: Approaches to Cultural History
  - LBRL 422 - Senior Seminar: Literary Traditions in Western Culture
  - LBRL 423 - Senior Seminar: Self, Culture, and Society
  - LBRL 424 - Senior Seminar: Social Change in Cross-Cultural Contexts
- Two courses (8-10 credits) under advisement from
  - LBRL 321 - Between Renaissance and Inquisition: Censorship and Religious Conflict in Spain's Golden Age
  - LBRL 323 - The Romantic Paradox: Love, Life and Death
  - LBRL 325 - Surveillance, Voyeurism and the Culture of Suspicion
  - LBRL 332 - Universal Religions: Founders and Disciples
  - LBRL 333 - Religion in America
  - LBRL 334 - Hebrew Bible and the Religion of Ancient Israel
  - LBRL 336 - New Testament and Early Christianity
  - LBRL 338 - Mysticism
  - LBRL 340 - Sufism: The Islamic Mystical Tradition
  - LBRL 360 - China and the Emerging World Economy: From Antiquity to the Early Modern
  - LBRL 362 - Islam and Muslims in the Indian Ocean World
  - LBRL 372 - Postcolonial Novels: Art, Rhetoric and Social Context
  - LBRL 375 - Buddhism
  - LBRL 378 - Religion and Society in India
  - LBRL 478 - Renewal and Reform in the Islamic World Since the Eighteenth Century
  - LBRL 499 - Research in Humanities

And other appropriate upper-division courses in the Humanities and Social Sciences, under advisement.

## **Additional Requirements**

### **Elementary Education Professional Program Requirements (106 credits)**

#### **Professional Studies Core (25 credits)**

- EDUC 301 - Educational Psychology I: Development and Individual Differences
- EDUC 302 - Educational Psychology II: Motivation, Learning and Assessment
- EDUC 310 - The Teacher and the Social Order
- ELED 370 - Introduction to Teaching
- IT 344 - Basic Instructional Technology Skills
- IT 442 - Classroom Use of Instructional Technology (Elementary)
- SPED 364 - Teaching All Students

#### **Elementary Program — Methods, Curriculum Content, and Field Experiences (81 credits)**

- ART 380 - Art Educating the Child
- ELED 425 - Social Studies for the Elementary School
- ELED 470 - Developing Teaching
- ELED 471 - Documenting Teaching
- ELED 480 - Literacy: Beginning Communicators

- ELED 481 - Literacy: Fluent Communicators
- ELED 491 - September Experience
- ELED 492 - Practicum: Experience in Literacy Methods
- ELED 494 - Internship - Elementary
- HLED 455 - Health Education Grades K-8
- MATH 381 - Teaching K-8 Mathematics I
- MATH 382 - Teaching K-8 Mathematics II
- MATH 383 - Teaching K-8 Mathematics III
- MATH 491 - Internship Seminar - Teaching K-8 Mathematics
- MUS 361 - Music for Elementary Teachers
- PE 345 - Physical Education for Elementary School
- SCED 480 - Science Methods and Curriculum for the Elementary School
- SCED 490 - Laboratory/Field Experience in Elementary Science
- SPED 430 - Problem Solving for Diverse Needs

## **Humanities — History of Culture, BA**

**61-70 credits (including core courses)**

### **Introduction**

The two concentrations for a BA in humanities provide interdisciplinary study of the humanities (philosophy, religion, history, literature and the arts) in Western and other civilizations. The major emphasizes critical reading, analysis and writing and culminates in a senior paper written under advisement. It provides skills and habits of mind which have proved broadly useful in a variety of professional careers, in both public and private settings, and it prepares students for knowledgeable participation in civic life. The major also proved to be excellent preparation for graduate study in law, library science, history, English, comparative literature, and religion.

The History of Culture Concentration focuses on how cultures change. Students acquire a substantial knowledge of religious, philosophical, literary and aesthetic movements in Western civilization. Students also acquire some knowledge of works of the humanities in at least one other culture, and of that culture's history. Students learn to analyze individual works of the humanities and to relate them to social and cultural developments. Students become familiar with methodological issues in the humanities and in cultural history, and learn to use methods appropriate to different kinds of problems.

### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

An average grade of B in liberal studies courses is required for admission to LBRL 302. (NOTE: LBRL 302 is ordinarily offered spring quarter only.) LBRL 302 is prerequisite to LBRL 421, 422, 423, 424. LBRL 498 (2 credits) should be taken with a liberal studies faculty member in the quarter prior to enrolling in LBRL 499, to prepare for the latter. It is recommended that students undertake study of a foreign language concurrently with the major.

### **Requirements**

#### **Core 23-25 credits**

One course from:

- LBRL 121 - The Western Tradition I: The Ancient World
- HNRS 103 - Major Cultural Traditions I

One course from:

- LBRL 122 - The Western Tradition II: Medieval and Early Modern Europe
- HNRS 104 - Major Cultural Traditions II
- LBRL 123 - The Western Tradition III: Modern World
- LBRL 302 - Methods of Interdisciplinary Study
- LBRL 498 - Readings for Research in Humanities
- LBRL 499 - Research in Humanities

**Concentration 38-45 credits**

One course (4-5 credits) from

- LBRL 231 - Introduction to the Study of Religion
- LBRL 243 - Art and Ideas
- LBRL 301 - Historical Methods in the Humanities
- LBRL 303 - Methods in the Study of Religion

Two courses (8-10 credits) from

- LBRL 271 - Humanities of India
- LBRL 272 - Religion and Society in China and Japan
- LBRL 273 - Art and Society in China and Japan
- LBRL 275 - Humanities of Japan
- LBRL 276 - Humanities of Africa
- LBRL 277 - Humanities of China
- LBRL 278 - Humanities of Islamic Civilization
- LBRL 281 - Representations of Otherness
- LBRL 360 - China and the Emerging World Economy: From Antiquity to the Early Modern
- LBRL 362 - Islam and Muslims in the Indian Ocean World
- LBRL 372 - Postcolonial Novels: Art, Rhetoric and Social Context

Two courses (10 credits) from

- LBRL 421 - Senior Seminar: Approaches to Cultural History
- LBRL 422 - Senior Seminar: Literary Traditions in Western Culture
- LBRL 423 - Senior Seminar: Self, Culture, and Society
- LBRL 424 - Senior Seminar: Social Change in Cross-Cultural Contexts

Four courses (16-20 credits) under advisement from

- LBRL 321 - Between Renaissance and Inquisition: Censorship and Religious Conflict in Spain's Golden Age
- LBRL 323 - The Romantic Paradox: Love, Life and Death
- LBRL 325 - Surveillance, Voyeurism and the Culture of Suspicion
- LBRL 332 - Universal Religions: Founders and Disciples
- LBRL 333 - Religion in America
- LBRL 334 - Hebrew Bible and the Religion of Ancient Israel
- LBRL 336 - New Testament and Early Christianity
- LBRL 338 - Mysticism
- LBRL 340 - Sufism: The Islamic Mystical Tradition

LBRL 360 - China and the Emerging World Economy: From Antiquity to the Early Modern

LBRL 362 - Islam and Muslims in the Indian Ocean World

LBRL 372 - Postcolonial Novels: Art, Rhetoric and Social Context

- LBRL 375 - Buddhism

- LBRL 378 - Religion and Society in India

- LBRL 478 - Renewal and Reform in the Islamic World Since the Eighteenth Century

Or other appropriate upper-division courses in Humanities and Social Sciences, under advisement.

LBRL 360, 362, and 372 may be counted in one group only.

## **The Study of Religion Minor**

**30-35 credits**

### **Introduction**

The Minor in the Study of Religion provides scholarly, critical, nonsectarian study of religions. Students study religious beliefs, practices, identities and organizations, and how they have influenced and been influenced by other aspects of society and culture.

For advisement regarding the minor, contact the Liberal Studies Office.

### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

### **Requirements**

- LBRL 231 - Introduction to the Study of Religion
  - LBRL 303 - Methods in the Study of Religion
  - Two courses (8-10 credits) from:
    - LBRL 232 - Myth and Folklore
    - LBRL 271 - Humanities of India
    - LBRL 272 - Religion and Society in China and Japan
    - LBRL 278 - Humanities of Islamic Civilization
    - LBRL 283 - Religion and Globalization
  - Three courses (12-15 credits) from:
    - LBRL 332 - Universal Religions: Founders and Disciples
    - LBRL 333 - Religion in America
    - LBRL 334 - Hebrew Bible and the Religion of Ancient Israel
    - LBRL 336 - New Testament and Early Christianity
    - LBRL 338 - Mysticism
    - LBRL 340 - Sufism: The Islamic Mystical Tradition
    - LBRL 375 - Buddhism
    - LBRL 378 - Religion and Society in India
    - LBRL 478 - Renewal and Reform in the Islamic World Since the Eighteenth Century
- And other appropriate courses under advisement.

# Linguistics

## Introduction

Linguistics, the science of language, is an interdisciplinary field which relates to the diversity of the cultures and languages of the world. It is an integral part of most serious pursuits dealing with aspects of language study and/or analysis. As the boundaries of the world change, an understanding of individual languages and cultures becomes increasingly more important. Communication in this complex society requires knowledge of the workings of languages as well as their interrelationship with their respective cultures. All linguistics majors are expected to acquire a rudimentary knowledge of the functions of language at various levels and knowledge of the techniques/methods used in language analysis. A student of linguistics will thereby significantly advance his/her appreciation of linguistic and cultural diversity.

Students interested in pursuing a major or minor in linguistics should contact Dr. Shaw N. Gynan, Humanities 249, 360-650-4853, for advisement. Fax: 360-650-6110, e-mail shaw.gynan@wwu.edu. Website: <http://linguistics.wwu.edu/>.

## Faculty

**SHAW N. GYNAN**, Director. Modern and Classical Languages. Sociolinguistics, second language acquisition, syntax and phonology.

**EVA BAHARAV**, Communication Sciences and Disorders. Language acquisition, language analysis, language disorders.

**JORDAN BREWER**, Linguistics. Semantics, phonology, phonetics.

**MASANORI DEGUCHI**, Modern and Classical Languages. Japanese linguistics, syntax and semantics.

**KRISTIN DENHAM**, English. Syntactic theory, morphology, sociolinguistics, psycholinguistics, Native American languages.

**KENDRA DOUGLAS**, Modern and Classical Languages. Sociolinguistics, language contact, phonology.

**THOMAS DOWNING**, Philosophy. Philosophy of language, ethics.

**SHANNON DUBENION-SMITH**, Modern and Classical Languages. Germanic linguistics, syntax, phonology, historical linguistics.

**TODD HASKELL**, Psychology. Psychology of language, visual and auditory perception, cognition.

**JAMES W. HEARNE**, Computer Science. General linguistics, computational linguistics, narratology.

**MCNEEL JANTZEN**, Psychology. Cognition, speech perception, language acquisition.

**CHRISTINA KEPPIE**, Modern and Classical Languages. Applied French linguistics, sociolinguistics, general linguistics.

**ANNE LOBECK**, English. Syntactic theory, historical linguistics, sociolinguistics.

**NED MARKOSIAN**, Philosophy. Philosophy of language, metaphysics.

**JUDY PINE**, Anthropology. Anthropological linguistics, language and society.

**DWAN SHIPLEY**, Linguistics. General linguistics, sociolinguistics.

**TRISH SKILLMAN**, TESOL. Language, teaching methodologies, sociolinguistics, second language acquisition.

**JOHN UNDERWOOD**, Modern and Classical Languages. Hispanic linguistics, language technology, applied linguistics.

**EDWARD J. VAJDA**, Modern and Classical Languages. Morphology and semantics, language typology, general historical linguistics.

**KATHRYN VULIC**, English. History of the English language, Old English in translation, medieval literatures and cultures.

**RYAN WASSERMAN**, Philosophy. Metaphysics, philosophy of language, epistemology, ethics.

**JANET ZHIQUN XING**, Modern and Classical Languages. Chinese linguistics, historical linguistics, discourse analysis, SLA.

**LINA ZEINE**, Communication Sciences and Disorders. Phonetics, phonological acquisition.

### Linguistics Area Advisors:

**English** — Kristin Denham, Anne Lobeck

**Anthropology** — Judy Pine

**Communication Sciences and Disorders** — Eva Baharav, Lina Zeine

**Computer Sciences** — James W. Hearne

**Modern and Classical Languages** — Shaw N. Gynan

**Philosophy** — Ned Markosian

**Psychology** — Todd Haskell

**TESOL** — Trish Skillman

## **Undergraduate Degrees and Programs**

Linguistics, BA  
Linguistics Minor

### **Linguistics Minor**

**25 credits**

#### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

#### **Requirements**

- LING 314 - Phonetics
- LING 315 - Phonology
- LING 321 - Syntax I
- LING 331 - Semantics
- One course from:
  - LING 201 - Introduction to Linguistics Science
  - ENG 370 - Introduction to Language
  - TESL 401 - Introduction to English Linguistics for TESOL
- One course from:
  - LING 204 - Sociolinguistics
  - ENG 270 - Introduction to Language and Society

### **Linguistics, BA**

**59 credits**

#### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors. To declare a major in linguistics, students must have completed the introductory course (LING 201 or ENG 370 or TESL 401) with a grade of B- or better and have a minimum overall GPA of at least 2.5.

#### **Requirements**

- For native speakers of Indo-European languages, one year of a non-IE language (Arabic, Chinese, Japanese, Korean, ASL, or other) or second year of an Indo-European language; alternative arrangements may be made for native speakers of non-Indo-European languages (12-15 credits)
- One course from:
  - LING 201 - Introduction to Linguistics Science
  - ENG 370 - Introduction to Language
  - TESL 401 - Introduction to English Linguistics for TESOL
- One course from:
  - LING 204 - Sociolinguistics
  - ENG 270 - Introduction to Language and Society

- LING 314 - Phonetics
- LING 315 - Phonology
- LING 321 - Syntax I
- LING 322 - Syntax II
- LING 331 - Semantics
- Two LING 400-level courses (LING 425 cannot count towards the major)
- LING 099 - Linguistics Colloquium A presentation or co-presentation at one of the scheduled student colloquia is a requirement for completion of the major. Students are required to enroll for LING 099 during the quarter in which the presentation is given.
- Additional credit concentration with at least one additional upper division course in related department under advisement:

*English option*

Eng 370 (replaces Ling 201)

Selected courses (may include Eng 436, 438, 439, 442) under departmental advisement

*Anthropology option*

- ANTH 247 - Introduction to Linguistic Anthropology  
Electives under advisement to include anthropology linguistics courses
- ANTH 347 - The Ethnography of Communication
- ANTH 447 - Anthropological Semiotics  
and select sections of ANTH 490

*Communication Sciences and Disorders option*

Selected courses under departmental advisement from:

- CSD 352 - Anatomy and Physiology of Speech Mechanisms
- CSD 353 - Speech Science
- CSD 354 - Speech and Language Development in Children
- CSD 356 - Phonetics
- CSD 361 - Language Disorders, Birth to Five
- CSD 373 - Introduction to Phonology
- CSD 451 - Language Disorders II

*Computer Sciences option*

Applicable courses in computational linguistics under departmental advisement

Additional work under advisement

*Modern and Classical Languages option*

314 course in the language (4 credits)

Additional credits under advisement; this may include a second foreign language, additional coursework in Linguistics or LANG 410

*Philosophy option*

- PHIL 102 - Introduction to Logic
- PHIL 202 - Intermediate Logic
- PHIL 403 - Philosophy of Language

*Psychology option*

- PSY 101 - Introduction to Psychology
- PSY 210 - Cognition
- PSY 220 - Introduction to Behavioral Neuroscience
- PSY 301 - Overview of Research Methods
- PSY 318 - Psychology of Language

*TESOL/Bilingual Education option*

Completion of the TESOL/Bilingual Education Certificate or Minor, coursework under advisement.

# **Modern and Classical Languages**

## **Introduction**

The Department of Modern and Classical Languages provides to Western Washington University students the skills to learn firsthand about major world societies. The department believes that the best way to understand a culture directly is through its language. The modern languages offered in the department — Arabic, Chinese, French, German, Japanese, Russian and Spanish — are spoken natively by nearly two billion people. Latin and Classical Greek provide students with the tools to study directly written works that form the foundation of Western civilization.

In keeping with the aim of providing the skills needed to learn about a culture in depth, the department trains in two areas: language structure and literary analysis. Language structure is taught both holistically and analytically.

Holistic language learning is facilitated by modern methods and multimedia technology, as well as study abroad opportunities. The department supports the analytical instruction of language structure through a full range of language skills courses, as well as a significant number of courses in linguistics.

Literary analysis is essential to a student's understanding of the highest achievements in aesthetic expression of a culture's values. The department provides instruction in history and culture, as well as literary theory, with an end to enabling the student to gain access to the intellectual life in the culture.

Furthermore, the department imparts skills to future foreign language teachers so that they may similarly enable high school students to begin the acquisition of foreign languages. To this end the department includes specialists in foreign language methods.

While offering majors in French, German, Japanese and Spanish, the department also provides Western students the opportunity to acquire intermediate skills in three other languages: Arabic, Chinese and Russian. The department also supports the studies of Latin and Greek, and houses the Classical Studies program.

Hence, the multifaceted programs of the department provide an opening to the world through language, literature, culture and civilization. It is, therefore, a meeting place for true diversity.

## **Faculty**

**VICKI L. HAMBLIN** (1989) Chair and Professor of French. BS, Southwest Missouri State University; MA, Arizona State University; PhD, University of Arizona.

**SANDRA ALFERS** (2008) BA, MA, University of Nebraska; PhD, University of Massachusetts.

**BRENT J. CARBAJAL** (1997) Professor of Spanish and Dean of the College of Humanities and Social Sciences. BA, Lewis and Clark College; MA, PhD, University of Washington.

**MASANORI DEGUCHI** (2006) Assistant Professor of Japanese and Linguistics. BA, Kansai Gaidai University; MA, PhD, Indiana University.

**KENDRA DOUGLAS** (2005) Assistant Professor of Spanish and Linguistics. BA, California State University; MA, PhD, University of Wisconsin-Madison.

**SHANNON DUBENION-SMITH** (2008) Assistant Professor of German and Linguistics. BA University of Michigan-Ann Arbor; MA, PhD, University of Wisconsin-Madison.

**PETRA S. FIERO** (1995) Professor of German. MA, PhD, University of Nebraska, Lincoln.

**HUGO GARCÍA** (2006) Assistant Professor of Spanish. BA, University of Havana, Cuba; MA, St. John's University; PhD, Ohio State University.

**SHAW N. GYNAN** (1986) Professor of Spanish and Linguistics. BS, Georgetown University; MA, University of Texas-El Paso; PhD, University of Texas-Austin.

**CÉCILE HANANIA** (2002) Associate Professor of French. PhD, University of Maryland; Doctorat, Université Paris; Maitrise, Université de Provence.

**JOAN M. HOFFMAN** (1994) Professor of Spanish. BA, University of Washington; MA, University of North Carolina-Chapel Hill; PhD, Indiana University.

**DIANE L. JOHNSON** (2004) Associate Professor of Classical Studies. BA, MA, University of Washington; MA, Western Washington University; PhD, University of British Columbia.

**CHRISTINA KEPPIE** (2008) Assistant Professor of French and Linguistics. BA University of New Brunswick; MA Carleton University; PhD, University of Alberta.

**EDWARD OUSSELIN** (2001) Associate Professor of French. MBA, University of Kentucky; PhD, Ohio State University.

**MARÍA PAREDES MÉNDEZ** (2002) Associate Professor of Spanish. MA, PhD, University of Kansas.

**CORNELIUS PARTSCH** (2003) Associate Professor of German. MA, PhD, Brown University.

**DANIEL RANGEL GUERRERO** (1969) Associate Professor of Spanish. AA, Sierra College; BA, Stanford University; MA, PhD, University of Oregon.

**MASSIMILIANO TOMASI** (1998) Professor of Japanese. Laurea (BA), University of Florence, Italy; MA, PhD, Nagoya University, Japan.

**KATHLEEN M. TOMLONOVIC** (1987) Professor of Chinese. BA, Marycrest College; MA, Fordham University; MA, University of Iowa; PhD, University of Washington.

**EDWARD J. VAJDA** (1987) Professor of Russian and Linguistics. BA, Indiana University; MA, PhD, University of Washington.

**JANET Z. XING** (1999), Professor of Chinese and Linguistics. BA, Shanxi University, China; MA, Western Michigan University; PhD, University of Michigan-Ann Arbor.

**MICHIKO YUS A** (1983) Professor of Japanese and East Asian Studies. BA, International Christian University, Tokyo; MA, C Phil, PhD, University of California-Santa Barbara.

## **Other Departmental Information**

### *Mid-Program Checkpoint*

Students seeking to complete a BA in French, German, Japanese or Spanish within a four-year time span should have completed the second-year sequence (e.g., 201, 202, 203) in the language by the start of their junior year. Otherwise it will be difficult or impossible to complete this degree program within two additional years.

### *Experienced Speakers of a Language*

First-year courses in the Department of Modern and Classical Languages are designed for students with minimal or no previous exposure to the target language. Students enrolling in second-year courses should have no more than foundational knowledge, equivalent to the first year. Students having previous experience with the language, such as attending junior high school, high school, community or technical college, or university in which the language in question was the primary language of instruction, may be required to begin study at a more appropriate level, if available. The decision will be left to the discretion of the instructor and the language department.

### *Study Abroad*

Students can increase language proficiency through travel, work and study abroad. WWU offers programs at study centers in Morelia, Mexico; Quito, Ecuador; Valdivia, Chile; Segovia, Oviedo and Cadiz, Spain; Angers and Rennes, France; Vienna, Austria; Macerata and Siena, Italy; Tokyo, Japan; and Beijing and Kunming, China. Designed to give students a complete foreign study experience in the host country, each program includes numerous excursions to historical and cultural sites and a wide range of activities which complement formal classroom work. WWU also sponsors academic-year university exchange programs (a) with Asia, Tsuda and Obirin universities in Tokyo, Japan; (b) Beijing Foreign Studies University; and (c) with ISEP at 70 universities in 32 countries. Students also may access language schools in Québec, Costa Rica, Germany and many other countries. Special application and registration procedures are required for participation in foreign study programs, and students should consult with the International Programs and Exchanges Office, College Hall 104, well in advance of their planned quarter abroad, as well as with the coordinator of the language section to discuss transfer credit.

#### *Advanced Placement Credit*

The student who has studied a foreign language in high school may be granted additional university credit upon completion of foreign language courses at WWU. Advanced placement credit is not awarded for 100-level courses. Request for advanced placement credit is to be made to the coordinator of the language section.

#### *Transfer Placement*

Students transferring from another university with some course work in a foreign language should consult with the language coordinator of the section about placement. Transfer students majoring in a foreign language must complete at least 9 credits in residence, including two fourth-year stylistics/composition courses (401/402).

#### *Attendance*

The learning and studying of a foreign language involves a level of student participation considerably higher than that required by some disciplines. It is the students' responsibility to ascertain the specific attendance requirements of their individual instructors.

#### *Endorsement of Post-baccalaureate Students*

Post-baccalaureate students with a degree in a foreign language are required to:

- Have a GPA of 3.00 or above in the major
- Obtain a letter of recommendation from a faculty member in reference to the candidate's potential as a teacher
- Satisfactorily pass the departmental oral proficiency exam given by appointment only
- Complete the endorsement sequence LANG 410, 420, 430
- Complete 314 (phonetics) in language to be endorsed

Additional work in the language may also be required. Students should consult the coordinator of the language section.

#### **Undergraduate Degrees and Programs**

French, BA

German, BA

Japanese, BA

Spanish, BA

French/German, BA

French/Spanish, BA

German/Spanish, BA

French — Elementary, BAE

German — Elementary, BAE

Spanish — Elementary, BAE

French with a Teaching Endorsement, BA

German with a Teaching Endorsement, BA

Japanese with a Teaching Endorsement, BA

Spanish with a Teaching Endorsement, BA

Chinese Minor

Classical Studies Minor

Eurasian Studies Minor

French Minor

German Minor

Greek Minor

Japanese Minor

Latin Minor  
Russian Minor  
Spanish Minor

## Chinese Minor

### Grade Requirements

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors. A GPA of 2.50 or above in minor language is required.

### Requirements

- A minimum of 24 credits at the 200 level or above, to include *three courses* at 300 or 400 level in minor language; limit of 15 credits at 200 level; 425 is not applicable to minor
- CHIN 301 - Third-Year Chinese
- CHIN 302 - Third-Year Chinese
- CHIN 303 - Third-Year Chinese

## Classical Studies Minor

27 credits

### Grade Requirements

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors. A GPA of 2.50 or above in minor courses is required.

### Requirements

- CLST 260 - Masterworks of Ancient Greek Literature
- CLST 270 - Literature of Rome and Her Empire
- CLST 350 - Greek Mythology
  - Select 15 credits from:
    - CLST 450 - Topics in Classical Studies
    - HIST 312 - History of Ancient Greece
    - HIST 313 - History of Ancient Rome
    - HIST 410 - The First Cities: Urbanization in the Ancient World
    - PHIL 364 - History of Philosophy: Ancient Philosophy
    - A/HI 220 - Visual Culture in Ancient Greece and Rome
    - A/HI 221 - Visual Culture in Medieval Europe
  - A maximum of one course from the following may be used toward the 15 credits:
    - LAT 101 - Elementary Latin
    - LAT 102 - Elementary Latin
    - LAT 103 - Elementary Latin
    - GREK 101 - Elementary Greek
    - GREK 102 - Elementary Greek
    - GREK 103 - Elementary Greek

## Eurasian Studies Minor

**25 credits**

### Grade Requirements

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

### Requirements

*All EUS courses are taught in English.*

- EUS 201 - Introduction to Russian Civilization
- EUS 210 - Nomads of Eurasia
- EUS 310 - Origins of Europe
- 11 credits from the following:
  - EAST 313 - Early Inner Asia
  - EAST 314 - The Mongols
  - HIST 287 - Introduction to Islamic Civilization
  - ANTH 362 - Peoples of Asia
  - RUSS 201 - Intermediate Russian
  - EUS 450 - Topics in Eurasian Studies

## French Minor

### Grade Requirements

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors. A GPA of 2.50 or above in minor language is required.

### Requirements

- A minimum of 24 credits at the 200 level or above, to include three courses at 300 or 400 level in minor language; 425 is not applicable to minor
- FREN 301 - Grammar Review
- FREN 302 - Written Exposition

## French with a Teaching Endorsement, BA

### Introduction

The BA in French, German, Japanese or Spanish leads to a BA degree without teacher certification. In order to receive a recommendation for state of Washington certification students must complete the "teacher certification" program which is offered by the Department of Secondary Education as one of the following

- a part of the undergraduate BA degree
- a post-baccalaureate program
- a part of the Master's in Teaching degree.

See the Secondary Education section of this catalog for program admission, completion, and teacher certification requirements.

Regulations for teaching endorsement are subject to change. For teaching endorsement program, contact the foreign language endorsement advisor.

### **Grade Requirements**

Students must earn a grade of C (2.0) or better in the secondary education professional program and in all courses required for the endorsement.

A GPA of 3.00 is required in the language major and a GPA of 3.00 or above is required in endorsement courses.

### **Requirements**

**Complete both A and B:**

#### **A. Language Component**

- French, BA

#### **B. Endorsement Requirements (10 credits)**

- LANG 410 - Second Language Acquisition: Theory
- LANG 420 - Second Language Acquisition: Practice
- FREN 425 - Teaching-Learning Processes in Elementary French
- Be recommended by a faculty member in the major field
- Pass the departmental foreign language oral proficiency exam given during spring quarter
- Complete the professional preparation program in secondary education. See the Secondary Education section of this catalog for program admission, completion, and teacher certification requirements.

### **Additional Requirements**

#### **Secondary Education Professional Program Requirements (68 credits)**

- EDUC 301 - Educational Psychology I: Development and Individual Differences
- EDUC 302 - Educational Psychology II: Motivation, Learning and Assessment
- EDUC 310 - The Teacher and the Social Order
- IT 444 - Classroom Use of Instructional Technology (Secondary)
- SEC 410 - Dynamics of Teaching
- SEC 411 - Philosophical Foundations of Education
- SEC 425 - Developmental Reading, Writing and Learning in Secondary Schools
- SEC 430 - Secondary School Methods I - Instructional Strategies, Daily Planning, and Standards
- SEC 431 - Secondary School Methods II-Assessment and Long Term Planning
- SEC 432 - Secondary School Methods III - Management, Motivation and Discipline
- SEC 433 - Peer Teaching Laboratory
- SEC 435 - Middle Level Practicum
- SEC 436 - Secondary School Practicum
- SEC 495 - Internship - Secondary
- SPED 363 - Secondary Students With Special Needs

## **French — Elementary, BAE**

**45 credits**

### **Introduction**

This major satisfies the academic major requirement for teacher certification with an endorsement in elementary education and must be accompanied by the professional preparation program in elementary education. See the Elementary Education section of this catalog for program admission, completion, and teacher certification requirements.

No foreign language endorsement granted.

This program is designed for prospective elementary teachers who wish to concentrate their major efforts in a foreign language. This program is not intended to result in a teaching endorsement by the department, but does satisfy the academic major requirement for certification in elementary education.

### **Grade Requirements**

Students must earn a grade of C (2.0) or better in the elementary education professional program and in all courses required for the endorsement.

A GPA of 2.75 is required in major language.

### **Requirements**

- Minimum of 21 credits must be taken in language skills courses (e.g., 201, 202, 301, 302, 401) through the fourth year
- Remaining credits are to be earned in selected courses under advisement at the 300- or 400-level in the language; up to 24 of these credits may be earned through foreign study course work in language, culture or literature (if taken in the target language)

### **Additional Requirements**

#### **Elementary Education Professional Program Requirements (106 credits)**

##### **Professional Studies Core (25 credits)**

- □ EDUC 301 - Educational Psychology I: Development and Individual Differences
- □ EDUC 302 - Educational Psychology II: Motivation, Learning and Assessment
- □ EDUC 310 - The Teacher and the Social Order
- □ ELED 370 - Introduction to Teaching
- □ IT 344 - Basic Instructional Technology Skills
- □ IT 442 - Classroom Use of Instructional Technology (Elementary)
- □ SPED 364 - Teaching All Students

##### **Elementary Program — Methods, Curriculum Content, and Field Experiences (81 credits)**

- □ ART 380 - Art Educating the Child
- □ ELED 425 - Social Studies for the Elementary School
- □ ELED 470 - Developing Teaching

- ELED 471 - Documenting Teaching
- ELED 480 - Literacy: Beginning Communicators
- ELED 481 - Literacy: Fluent Communicators
- ELED 491 - September Experience
- ELED 492 - Practicum: Experience in Literacy Methods
- ELED 494 - Internship - Elementary
- HLED 455 - Health Education Grades K-8
- MATH 381 - Teaching K-8 Mathematics I
- MATH 382 - Teaching K-8 Mathematics II
- MATH 383 - Teaching K-8 Mathematics III
- MATH 491 - Internship Seminar - Teaching K-8 Mathematics
- MUS 361 - Music for Elementary Teachers
- PE 345 - Physical Education for Elementary School
- SCED 480 - Science Methods and Curriculum for the Elementary School
- SCED 490 - Laboratory/Field Experience in Elementary Science
- SPED 430 - Problem Solving for Diverse Needs

## **French, BA**

**55 credits**

### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors. A GPA of 2.50 or above in major is required.

### **Requirements**

- 55 credits above the 100 level; maximum of 15 credits at the 200 level; FREN 425 is not applicable to major.
- FREN 301 - Grammar Review
- FREN 302 - Written Exposition
- FREN 314 - Phonetics
- One course from:
  - FREN 331 - Civilisation et Culture Francaises
  - FREN 332 - Civilisation et Culture du Quebec
- Two courses from:
  - FREN 340 - Introduction to French Literature I
  - FREN 341 - Introduction to French Literature II
  - FREN 342 - Introduction to French Literature III
  - FREN 385 - Culture and Conversation
  - FREN 401 - Elements de Stylistique (must be taken on campus)
    - and one other 400-level French course

## **French/German, BA**

**90 credits**

### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors. A GPA of 2.50 or above in both languages is required.

### **Requirements**

- 45 credits at the 200 level or above in a first language, 45 credits at the 200 level or above in a second language (90 credits total)
- Student must successfully complete the most advanced skills course in both languages (must be taken on campus) as well as at least one course per language in culture, literature, and phonetics; limit of 15 credits at 200 level per language

## **French/Spanish, BA**

**90 credits**

### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors. A GPA of 2.50 or above in both languages is required.

### **Requirements**

- 45 credits at the 200 level or above in a first language, 45 credits at the 200 level or above in a second language (90 credits total)
- Student must successfully complete the most advanced skills course in both languages (must be taken on campus) as well as at least one course per language in culture, literature, and phonetics; limit of 15 credits at 200 level per language

## **German Minor**

### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors. A GPA of 2.50 or above in minor language is required.

### **Requirements**

- A minimum of 24 credits at the 200 level or above, to include three courses at 300 or 400 level in minor language; limit of 15 credits at 200 level; 425 is not applicable to minor
- GERM 301 - Grammar Review and Composition
- GERM 302 - Grammar Review and Composition

## **German with a Teaching Endorsement, BA**

### **Introduction**

The BA in French, German, Japanese or Spanish leads to a BA degree *without* teacher certification. In order to receive a recommendation for state of Washington certification students must complete the "teacher certification" program which is offered by the Department of Secondary Education as one of the following

- a part of the undergraduate BA degree
- a post-baccalaureate program
- a part of the Master's in Teaching degree.

See the *Secondary Education* section of this catalog for program admission, completion, and teacher certification requirements.

Regulations for teaching endorsement are subject to change. For teaching endorsement program, contact the foreign language endorsement advisor.

### **Grade Requirements**

Students must earn a grade of C (2.0) or better in the secondary education professional program and in all courses required for the endorsement.

A GPA of 3.00 is required in the language major and a GPA of 3.00 or above is required in endorsement courses.

### **Requirements**

#### **Complete both A and B:**

##### **A. Language Component**

- German, BA

##### **B. Endorsement Requirements (10 credits)**

- LANG 410 - Second Language Acquisition: Theory
- LANG 420 - Second Language Acquisition: Practice
- GERM 425 - Teaching-Learning Process in Elementary German
  - Be recommended by a faculty member in the major field
  - Pass the departmental foreign language oral proficiency exam given during spring quarter
  - Complete the professional preparation program in secondary education. See the Secondary Education section of this catalog for program admission, completion, and teacher certification requirements

### **Additional Requirements**

#### **Secondary Education Professional Program Requirements (68 credits)**

- EDUC 301 - Educational Psychology I: Development and Individual Differences
- EDUC 302 - Educational Psychology II: Motivation, Learning and Assessment
- EDUC 310 - The Teacher and the Social Order
- IT 444 - Classroom Use of Instructional Technology (Secondary)

- SEC 410 - Dynamics of Teaching
- SEC 411 - Philosophical Foundations of Education
- SEC 425 - Developmental Reading, Writing and Learning in Secondary Schools
- SEC 430 - Secondary School Methods I - Instructional Strategies, Daily Planning, and Standards
- SEC 431 - Secondary School Methods II-Assessment and Long Term Planning
- SEC 432 - Secondary School Methods III - Management, Motivation and Discipline
- SEC 433 - Peer Teaching Laboratory
- SEC 435 - Middle Level Practicum
- SEC 436 - Secondary School Practicum
- SEC 495 - Internship - Secondary
- SPED 363 - Secondary Students With Special Needs

## **German — Elementary, BAE**

**45 credits**

### **Introduction**

This major satisfies the academic major requirement for teacher certification with an endorsement in elementary education and must be accompanied by the professional preparation program in elementary education. See the Elementary Education section of this catalog for program admission, completion, and teacher certification requirements.

No foreign language endorsement granted.

This program is designed for prospective elementary teachers who wish to concentrate their major efforts in a foreign language. This program is not intended to result in a teaching endorsement by the department, but does satisfy the academic major requirement for certification in elementary education.

### **Grade Requirements**

Students must earn a grade of C (2.0) or better in the elementary education professional program and in all courses required for the endorsement.

A GPA of 2.75 is required in major language.

### **Requirements**

- A minimum of 24 credits at the 200 level or above, to include three courses at 300 or 400 level in minor language; limit of 15 credits at 200 level; 425 is not applicable to minor
- GERM 301 - Grammar Review and Composition
- GERM 302 - Grammar Review and Composition

### **Additional Requirements**

#### **Elementary Education Professional Program Requirements (106 credits)**

##### **Professional Studies Core (25 credits)**

- EDUC 301 - Educational Psychology I: Development and Individual Differences
- EDUC 302 - Educational Psychology II: Motivation, Learning and Assessment

- EDUC 310 - The Teacher and the Social Order
- ELED 370 - Introduction to Teaching
- IT 344 - Basic Instructional Technology Skills
- IT 442 - Classroom Use of Instructional Technology (Elementary)
- SPED 364 - Teaching All Students

#### **Elementary Program — Methods, Curriculum Content, and Field Experiences (81 credits)**

- ART 380 - Art Educating the Child
- ELED 425 - Social Studies for the Elementary School
- ELED 470 - Developing Teaching
- ELED 471 - Documenting Teaching
- ELED 480 - Literacy: Beginning Communicators
- ELED 481 - Literacy: Fluent Communicators
- ELED 491 - September Experience
- ELED 492 - Practicum: Experience in Literacy Methods
- ELED 494 - Internship - Elementary
- HLED 455 - Health Education Grades K-8
- MATH 381 - Teaching K-8 Mathematics I
- MATH 382 - Teaching K-8 Mathematics II
- MATH 383 - Teaching K-8 Mathematics III
- MATH 491 - Internship Seminar - Teaching K-8 Mathematics
- MUS 361 - Music for Elementary Teachers
- PE 345 - Physical Education for Elementary School
- SCED 480 - Science Methods and Curriculum for the Elementary School
- SCED 490 - Laboratory/Field Experience in Elementary Science
- SPED 430 - Problem Solving for Diverse Needs

## **German, BA**

**55 credits**

### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors. A GPA of 2.50 or above in major is required.

### **Requirements**

- 55 credits above the 100 level; maximum of 15 credits at the 200 level; Germ 425 is not applicable to major.
- GERM 301 - Grammar Review and Composition
- GERM 302 - Grammar Review and Composition
- GERM 314 - Phonetics
- One course from:
- GERM 331 - Civilization of Germany Through the Nineteenth Century

- GERM 332 - German Civilization Today
- GERM 340 - Introduction to German Literature
- One course from:
- GERM 341 - Nineteenth-Century German Literature
- GERM 343 - Eighteenth-Century German Literature
- GERM 401 - Advanced Grammar
- GERM 402 - Advanced Grammar and Composition (must be taken on campus)
- GERM 450 - Studies in German Literature

## **German/Spanish, BA**

**90 credits**

### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors. A GPA of 2.50 or above in both languages is required.

### **Requirements**

- 45 credits at the 200 level or above in a first language, 45 credits at the 200 level or above in a second language (90 credits total)
- Student must successfully complete the most advanced skills course in both languages (must be taken on campus) as well as at least one course per language in culture, literature, and phonetics; limit of 15 credits at 200 level per language

## **Greek Minor**

**12 credits**

### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors. A GPA of 2.50 or above in minor courses is required.

### **Requirements**

- 12 credits above the 100 level

## **Japanese Minor**

**24 credits**

### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors. A GPA of 2.50 or above in Japanese courses is required.

## **Requirements**

- 24 credits at the 200 level or above; limit of 12 credits at 200 level. JAPN 280 and 425 are not applicable to minor.
- JAPN 301 - Third-Year Japanese
- JAPN 302 - Third-Year Japanese
- One course from:
  - JAPN 303 - Third-Year Japanese
  - JAPN 401 - Advanced Japanese
- JAPN 303 or 401 must be taken on campus.

## **Japanese with a Teaching Endorsement, BA**

### **Introduction**

The BA in French, German, Japanese or Spanish leads to a BA degree without teacher certification. In order to receive a recommendation for state of Washington certification students must complete the "teacher certification" program which is offered by the Department of Secondary Education as one of the following

- a part of the undergraduate BA degree
- a post-baccalaureate program
- a part of the Master's in Teaching degree.

See the Secondary Education section of this catalog for program admission, completion, and teacher certification requirements.

Regulations for teaching endorsement are subject to change. For teaching endorsement program, contact the foreign language endorsement advisor.

### **Grade Requirements**

Students must earn a grade of C (2.0) or better in the secondary education professional program and in all courses required for the endorsement.

A GPA of 3.00 is required in the language major and a GPA of 3.00 or above is required in endorsement courses.

### **Requirements**

#### **Complete both A and B:**

##### **A. Language Component**

- Japanese, BA

##### **B. Endorsement Requirements (10 credits)**

- LANG 410 - Second Language Acquisition: Theory
- LANG 420 - Second Language Acquisition: Practice

- JAPN 425 - Teaching-Learning Process in Elementary Japanese
- Be recommended by a faculty member in the major field
- Pass the departmental foreign language oral proficiency exam given during spring quarter
- Complete the professional preparation program in secondary education. See the Secondary Education section of this catalog for program admission, completion, and teacher certification requirements.

#### **Additional Requirements**

#### **Secondary Education Professional Program Requirements (68 credits)**

- EDUC 301 - Educational Psychology I: Development and Individual Differences
- EDUC 302 - Educational Psychology II: Motivation, Learning and Assessment
- EDUC 310 - The Teacher and the Social Order
- IT 444 - Classroom Use of Instructional Technology (Secondary)
- SEC 410 - Dynamics of Teaching
- SEC 411 - Philosophical Foundations of Education
- SEC 425 - Developmental Reading, Writing and Learning in Secondary Schools
- SEC 430 - Secondary School Methods I - Instructional Strategies, Daily Planning, and Standards
- SEC 431 - Secondary School Methods II-Assessment and Long Term Planning
- SEC 432 - Secondary School Methods III - Management, Motivation and Discipline
- SEC 433 - Peer Teaching Laboratory
- SEC 435 - Middle Level Practicum
- SEC 436 - Secondary School Practicum
- SEC 495 - Internship - Secondary
- SPED 363 - Secondary Students With Special Needs

## **Japanese, BA**

**55 credits**

#### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors. A GPA of 2.50 or above in major is required.

#### **Requirements**

- 55 credits above the 100 level; maximum of 15 credits at the 200 level. While not required, study abroad in Japan is strongly encouraged.
- JAPN 201 - Second-Year Japanese
- JAPN 202 - Second-Year Japanese
- JAPN 203 - Second-Year Japanese
- JAPN 301 - Third-Year Japanese
- JAPN 302 - Third-Year Japanese
- JAPN 303 - Third-Year Japanese
- JAPN 350 - Japanese Culture, History and Society
- JAPN 401 - Advanced Japanese (must be taken on campus)
- JAPN 402 - Topics in Japanese Literature (must be taken on campus)

- JAPN 403 - Topics in Japanese Thought (must be taken on campus)

## **Electives**

- HIST 484 - Women in Japanese History
- HIST 485 - Japanese Military History: Samurai Fact and Fiction
- HIST 486 - Religion in Japanese History
- ANTH 460 - Culture and Society of Japan
- EAST 368 - Japanese Literature in Translation
- HIST 374 - Premodern Japanese History
- HIST 375 - Modern Japanese History
- JAPN 314 - Japanese Phonetics
- JAPN 330 - Japanese Culture Through Film

## **Latin Minor**

### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors. A GPA of 2.50 or above in minor courses is required.

### **Requirements**

- 12 credits above the 100 level

## **Russian Minor**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors. A GPA of 2.50 or above in minor language is required.

### **Requirements**

- A minimum of 24 credits at the 200 level or above, to include three courses at 300 or 400 level in minor language; limit of 15 credits at 200 level; 425 is not applicable to minor
- RUSS 301 - Third-Year Composition
- RUSS 302 - Third-Year Composition

## **Spanish Minor**

### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors. A GPA of 2.50 or above in minor language is required.

### **Requirements**

- A minimum of 24 credits at the 200 level or above, to include three courses at 300 or 400 level in minor language; limit of 15 credits at 200 level; 425 is not applicable to minor
- SPAN 301 - Grammar Review and Composition
- SPAN 302 - Grammar Review and Composition

## Spanish with a Teaching Endorsement, BA

### Introduction

The BA in French, German, Japanese or Spanish leads to a BA degree without teacher certification. In order to receive a recommendation for state of Washington certification students must complete the "teacher certification" program which is offered by the Department of Secondary Education as one of the following

- a part of the undergraduate BA degree
- a post-baccalaureate program
- a part of the Master's in Teaching degree.

See the Secondary Education section of this catalog for program admission, completion, and teacher certification requirements.

Regulations for teaching endorsement are subject to change. For teaching endorsement program, contact the foreign language endorsement advisor.

### Grade Requirements

Students must earn a grade of C (2.0) or better in the secondary education professional program and in all courses required for the endorsement.

A GPA of 3.00 is required in the language major and a GPA of 3.00 or above is required in endorsement courses

### Requirements

#### Complete both A and B:

##### A. Language Component

- Spanish, BA

##### B. Endorsement Requirements (10 credits)

- LANG 410 - Second Language Acquisition: Theory
- LANG 420 - Second Language Acquisition: Practice
- SPAN 425 - Teaching-Learning Processes in Elementary Spanish
  - Be recommended by a faculty member in the major field
  - Pass the departmental foreign language oral proficiency exam given during spring quarter

- ❑ Complete the professional preparation program in secondary education. See the Secondary Education section of this catalog for program admission, completion, and teacher certification requirements.

## **Additional Requirements**

### **Secondary Education Professional Program Requirements (68 credits)**

- ❑ EDUC 301 - Educational Psychology I: Development and Individual Differences
- ❑ EDUC 302 - Educational Psychology II: Motivation, Learning and Assessment
- ❑ EDUC 310 - The Teacher and the Social Order
- ❑ IT 444 - Classroom Use of Instructional Technology (Secondary)
- ❑ SEC 410 - Dynamics of Teaching
- ❑ SEC 411 - Philosophical Foundations of Education
- ❑ SEC 425 - Developmental Reading, Writing and Learning in Secondary Schools
- ❑ SEC 430 - Secondary School Methods I - Instructional Strategies, Daily Planning, and Standards
- ❑ SEC 431 - Secondary School Methods II-Assessment and Long Term Planning
- ❑ SEC 432 - Secondary School Methods III - Management, Motivation and Discipline
- ❑ SEC 433 - Peer Teaching Laboratory
- ❑ SEC 435 - Middle Level Practicum
- ❑ SEC 436 - Secondary School Practicum
- ❑ SEC 495 - Internship - Secondary
- ❑ SPED 363 - Secondary Students With Special Needs

## **Spanish — Elementary, BAE**

**45 credits**

### **Introduction**

This major satisfies the academic major requirement for teacher certification with an endorsement in elementary education and must be accompanied by the professional preparation program in elementary education. See the Elementary Education section of this catalog for program admission, completion, and teacher certification requirements.

No foreign language endorsement granted; GPA of 2.75 required in major language.

This program is designed for prospective elementary teachers who wish to concentrate their major efforts in a foreign language. This program is not intended to result in a teaching endorsement by the department, but does satisfy the academic major requirement for certification in elementary education.

### **Grade Requirements**

Students must earn a grade of C (2.0) or better in the elementary education professional program and in all courses required for the endorsement.

A GPA of 2.75 is required in major language.

## **Requirements**

- ❑ Minimum of 21 credits must be taken in language skills courses (e.g., 201, 202, 301, 302, 401) through the fourth year
- ❑ Remaining credits are to be earned in selected courses under advisement at the 300- or 400-level in the language; up to 24 of these credits may be earned through foreign study course work in language, culture or literature (if taken in the target language)

## **Additional Requirements**

### **Elementary Education Professional Program Requirements (106 credits)**

#### **Professional Studies Core (25 credits)**

- ❑ EDUC 301 - Educational Psychology I: Development and Individual Differences
- ❑ EDUC 302 - Educational Psychology II: Motivation, Learning and Assessment
- ❑ EDUC 310 - The Teacher and the Social Order
- ❑ ELED 370 - Introduction to Teaching
- ❑ IT 344 - Basic Instructional Technology Skills
- ❑ IT 442 - Classroom Use of Instructional Technology (Elementary)
- ❑ SPED 364 - Teaching All Students

#### **Elementary Program — Methods, Curriculum Content, and Field Experiences (81 credits)**

- ❑ ART 380 - Art Educating the Child
- ❑ ELED 425 - Social Studies for the Elementary School
- ❑ ELED 470 - Developing Teaching
- ❑ ELED 471 - Documenting Teaching
- ❑ ELED 480 - Literacy: Beginning Communicators
- ❑ ELED 481 - Literacy: Fluent Communicators
- ❑ ELED 491 - September Experience
- ❑ ELED 492 - Practicum: Experience in Literacy Methods
- ❑ ELED 494 - Internship - Elementary
- ❑ HLED 455 - Health Education Grades K-8
- ❑ MATH 381 - Teaching K-8 Mathematics I
- ❑ MATH 382 - Teaching K-8 Mathematics II
- ❑ MATH 383 - Teaching K-8 Mathematics III
- ❑ MATH 491 - Internship Seminar - Teaching K-8 Mathematics
- ❑ MUS 361 - Music for Elementary Teachers
- ❑ PE 345 - Physical Education for Elementary School
- ❑ SCED 480 - Science Methods and Curriculum for the Elementary School
- ❑ SCED 490 - Laboratory/Field Experience in Elementary Science
- ❑ SPED 430 - Problem Solving for Diverse Needs

## **Spanish, BA**

**55 credits**

### **Introduction**

Students seeking admission to the major must meet the following conditions:

- Complete Span 203 with a "B" or better (transfer students must meet the same requirement for any course accepted as an equivalent to Span 203)
- Complete at least one Spanish course at Western
- Submit application (available from Spanish coordinator or department office)
- Students meeting qualifications but not admitted because of space limitations may reapply

### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors. A GPA of 2.50 or above in major is required.

### **Requirements**

- 55 credits above the 100 level; maximum of 15 credits at the 200 level; Spanish 425 is not applicable to major
  - SPAN 301 - Grammar Review and Composition
  - SPAN 302 - Grammar Review and Composition
  - SPAN 314 - Phonetics
    - SPAN 340 - Introduction to Hispanic Literature
    - SPAN 401 - Advanced Grammar (must be taken on campus)
    - SPAN 402 - Advanced Composition (must be taken on campus)
- One course from:
  - SPAN 331 - Culture of Spain
  - SPAN 332 - Culture of Latin America
- One course from:
  - SPAN 351 - Survey of the Literature of Spain
  - SPAN 352 - Survey of the Literature of Latin America
- One topic course from:
  - SPAN 450 - Studies in Hispanic Literature

# **Philosophy**

## **Introduction**

Philosophy is among the oldest of intellectual disciplines. Many areas of study now distinct from philosophy — for example, the various sciences — may be regarded as offspring of philosophy which have come of age. Nevertheless, the central philosophical questions remain as vital as ever.

Historically, philosophy has been regarded by many as the most basic of intellectual disciplines; it is the firm conviction of the faculty of the Department of Philosophy that it is among the most relevant. Among the questions dealt with in one philosophy course or another are "What is knowledge?" "What is truth?" "Can we gain knowledge?" "Can we know the truth?" "Are there such things as right and wrong?" "Does God exist?" "What is the nature of the distinction between minds and bodies?" "Are persons machines?" and the like. The department believes that consideration of these and related questions is fundamental to being educated and, as such, should be of interest to all students; moreover, the department believes that many students are sufficiently able and mature intellectually to pursue answers to these questions at an advanced level with profit, and the faculty invite them to join in this pursuit.

The Department of Philosophy offers a wide range of courses in most of the traditional areas of philosophical concern: history of philosophy, ethics, philosophy of religion, metaphysics, to name only a few. A number of courses satisfy General University Requirements. Beyond this, the department offers a major and a minor program in philosophy. The major program is intentionally one of the smallest in the University to allow students maximum opportunity to explore other areas of interest.

Work in philosophy fits well into many pre-professional programs. It is highly desirable as preparation for law school; indeed, some law schools have historically listed it as the preferred undergraduate major. Emphasizing, as it does, careful, deep, critical analysis of concepts and problems, philosophy is an excellent major for students who will seek positions in business and government which require a liberal arts background.

Recent studies show that students who major in philosophy are among the very highest groups in performance on the Graduate Record and other such qualifying examinations.

## **Faculty**

**HUD HUDSON** (1992) Chair and Professor. BA, Boise State University; MA, PhD, University of Rochester.

**THOMAS E. DOWNING** (1968) Associate Professor. AB, Wayne State University; PhD, Stanford University.

**DANIEL HOWARD-SNYDER** (2001) Professor. BA, Seattle Pacific University; PhD, Syracuse University.

**FRANCES HOWARD-SNYDER** (1993) Professor. BA, MA, University of Capetown; PhD, Syracuse University.

**NED MARKOSIAN** (1998) Professor. BA, Oberlin College; PhD, University of Massachusetts.

**RYAN WASSERMAN** (2005) Associate Professor. BA, Western Washington University; PhD, Rutgers University.

**DENNIS WHITCOMB** (2007) Assistant Professor. BS, Kansas State University; PhD, Rutgers University.

## **Undergraduate Degrees and Programs**

Philosophy, BA

Politics/Philosophy/Economics, BA

Philosophy Minor

## **Philosophy Minor**

**24 credits**

### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

### **Requirements**

- PHIL 102 - Introduction to Logic
- PHIL 112 - Introduction to Philosophy: Moral Issues
- PHIL 114 - Introduction to Philosophy: Knowledge and Reality
- One course from:
  - PHIL 364 - History of Philosophy: Ancient Philosophy
  - PHIL 366 - History of Philosophy: the Rationalists
  - PHIL 367 - History of Philosophy: the Empiricists
  - PHIL 368 - History of Philosophy: Kant and Post-Kantian Philosophy
- Two courses from:
  - PHIL 310 - Theory of Knowledge
  - PHIL 320 - Ethical Theory I
  - PHIL 330 - Metaphysics I
- Electives under departmental advisement

## **Philosophy, BA**

**58 credits**

### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

### **Requirements**

- PHIL 102 - Introduction to Logic
- PHIL 112 - Introduction to Philosophy: Moral Issues
- PHIL 114 - Introduction to Philosophy: Knowledge and Reality
- PHIL 202 - Intermediate Logic
- PHIL 310 - Theory of Knowledge
- PHIL 320 - Ethical Theory I
- PHIL 330 - Metaphysics I
- PHIL 364 - History of Philosophy: Ancient Philosophy
- PHIL 366 - History of Philosophy: the Rationalists
- PHIL 367 - History of Philosophy: the Empiricists
- PHIL 410 - Theory of Knowledge II
- PHIL 417
- PHIL 420 - Ethical Theory II
- PHIL 430 - Metaphysics II

- ❑ Three courses from:
  - PHIL 335 - Philosophy of Religion
  - PHIL 340 - Philosophy of Science
  - PHIL 355 - Aesthetics and the Philosophy of Art
  - PHIL 368 - History of Philosophy: Kant and Post-Kantian Philosophy
  - PHIL 403 - Philosophy of Language
  - PHIL 425 - Philosophy of Mind
- ❑ Electives under departmental advisement

## **Politics/Philosophy/Economics, BA (also see Economics Departments)**

**83 credits**

### **Introduction**

A multidisciplinary major designed to provide a solid grounding in disciplines that are critical to decision making and leadership in economic, political and social service institutions.

### **Admission and Declaration Process**

Admission and Major Declaration

### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

### **Requirements**

- ❑ ECON 206 - Introduction to Microeconomics
- ❑ ECON 207 - Introduction to Macroeconomics
- ❑ ECON 303 - The History of Economic Thought
- ❑ ECON 310 - Public Finance
- ❑ PHIL 102 - Introduction to Logic
- ❑ PHIL 112 - Introduction to Philosophy: Moral Issues
- ❑ PHIL 114 - Introduction to Philosophy: Knowledge and Reality
- ❑ PHIL 310 - Theory of Knowledge
- ❑ PHIL 320 - Ethical Theory I
- ❑ PHIL 350 - Political Philosophy
- ❑ PHIL 360 - Society, Law and Morality
- ❑ PHIL 364 - History of Philosophy: Ancient Philosophy
- ❑ PHIL 420 - Ethical Theory II
- ❑ PLSC 250 - The American Political System
- ❑ PLSC 261 - Introduction to Political Theory
- ❑ One course from:
  - PLSC 271 - Introduction to International Relations
  - PLSC 291 - Introduction to Comparative Politics
  - ❑ 12 additional upper-division economics credits
  - ❑ 9 additional credits from the American Politics and Public Policy field

- 4 additional credits from the Political Theory field
- Take one Communication Focus (CF) course and a minimum of three writing proficiency points in approved upper-division writing proficiency courses (WP-3 points) at WWU with a minimum grade of C-. The CF course must be taken within the College of Business and Economics, while the WP requirement can be met with courses from any of the combined major departments. These requirements can be completed as part of the above required and elective credits. Consult the Timetable of Classes for the specific course sections that fulfill the CF and WP requirements.

# **Physical Education, Health and Recreation**

## **Introduction**

The Department of Physical Education, Health and Recreation offers degree programs for students interested in professions related to kinesiology, P-12 physical education and health, community health education, and recreation.

In addition to major/minor programs, a broad selection of activities is offered for students interested in developing lifetime sports skills or the promotion of personal fitness and health. Along with individual and team sports classes, courses are offered in outdoor pursuits including skiing and sailing.

## *Faculty*

The department currently consists of 15 faculty members whose backgrounds span the entire range of kinesiology and physical education, health education and recreation. Students are provided opportunities to interact individually with faculty who are involved in community projects and research in public schools, kinesiology, health and recreation.

## *Facilities*

The department is housed in the Carver Facility. Exercise physiology and biomechanics laboratories afford students an opportunity for in-depth study in the exercise sciences and health assessment as applied to health and sports medicine. Considerable practical experience using laboratory and computerized equipment enables students to develop skills in cardiorespiratory, anthropometric, strength and movement analysis, and health appraisals.

## *Major Programs*

### *Kinesiology and Physical Education*

The major programs are varied and include undergraduate and graduate student preparation for careers as professional physical and health educators, specialists in kinesiology options, and health fitness instructors in agencies, schools, industries, hospitals and health care facilities. Students are expected to perform community service in all programs. The concentrations offered include the following:

- Teacher Education P-12 Physical Education and Health
- Kinesiology
  - Movement Studies
  - Health and Fitness Specialist
  - Pre-Healthcare Professions
  - Pre-Physical Therapy
  - Sport Psychology

### *Kinesiology and Physical Education Mid-Program Checkpoint*

Students seeking to complete a BAE degree in teacher education P-12 physical education and health or a BS in kinesiology within a four-year time span should have completed the following courses by the start of their junior year:

- All General University Requirements (GURs)
- BIOL 101 or BIOL 205; and BIOL 348 preferred

Major omissions from this list will make it difficult or impossible to complete this degree within two additional years.

**NOTE:** The *teacher education P-12* option requires a 4½-year commitment, which includes a one-semester student teaching internship. Students must meet the minimum entry requirements of the Woodring College of Education before

being considered for admission to the P-12 physical education and health program. Students should first declare a pre-major in this specialization in order to register for required pre-major classes and then apply for entry into the P-12 physical education and health program during the fall quarter of their junior year while they are enrolled in pre-major courses. Students who do not meet the minimum qualifications of the Woodring College of Education cannot apply to be considered for entry into the P-12 physical education and health program.

**NOTE:** The *pre-physical therapy* specialization of the kinesiology option requires careful planning if students are to complete the degree in a four-year period. It is suggested that students who are interested in this specialization consult with Dr. Gordon Chalmers, Dr. Brandi Row, or Dr. Dave Suprak (PEHR faculty) during their freshman or sophomore year in order to establish a reasonable plan of study for the completion of this degree.

**NOTE:** The *health and fitness specialist* option requires that all courses under the specialty area be taken which include specific additional courses in the core options. The American College of Sports Medicine University Connection Endorsement Program was designed to recognize academic institutions with educational programs that cover all of the knowledge, skills, and abilities (KSAs) specified by the ACSM Committee on Certification and Registry Boards to prepare students for successful careers in the health and fitness and clinical exercise programming fields. The health and fitness specialist option curriculum was approved by the ACSM University Connection program (UCP) from its inception in 2004 until the termination of the UCP.

#### **NOTE: Development Skills/Fitness Leadership - PE Courses**

*Activities courses, with the exception of varsity sports and those so noted, may not be repeated for credit. Courses offered depend on instructor availability.* All 100-level classes are S/U graded. Participants may not accumulate more than three absences to receive a satisfactory grade. Should a student register late and miss the first and/or second class, all missed classes will be counted as absences.

Some courses require an additional VARIABLE fee (see specific course sections). Attendance and participation in the University assigned final exam time period, as listed in the timetable, is MANDATORY. A written and/or skills test will be given during the final exam class period.

Beginning courses, or equivalent, are pre-requisite to intermediate courses, which are in turn pre-requisite to advanced course in any given activity.

#### *Health Education*

**Health education** is a discipline with roots in the behavioral sciences of psychology, sociology, social psychology, and anthropology; the biological sciences; education; and public health. Health educators use multidisciplinary theories and behavioral and organizational change principles to plan, implement, and evaluate interventions that enable individuals, groups, and communities to achieve personal, social, and environmental health. To this end, health educators apply many different methods and strategies to achieve goals: group process, teaching, training, mass media, communication, community organization, organization development, strategic planning, skills training, legislation, policy development, and advocacy. Health educators practice in schools, colleges, work places, medical care settings, public health settings, and community-based agencies and organizations. (Adapted from the Joint Committee on Health Education and Promotion Terminology.)

**Health educators** are defined by the *U.S. Federal Register* as individuals who promote, maintain, and improve individual and community health by assisting individuals and communities to adopt healthy behaviors. They collect and analyze data to identify community needs prior to planning, implementing, monitoring and evaluating programs designed to encourage healthy lifestyles, policies, and environments. They may also serve as a resource to assist individuals, other professionals, or the community, and may administer fiscal resources for health education programs.

**Certified Health Education Specialists** (CHES) are individuals who have met required health education training qualifications, successfully passed a competency-based examination administered by the National Commission for Health Education Credentialing, Inc. The WWU Community Health major prepares students to meet the eligibility requirements for becoming a Certified Health Education Specialist.

**NOTE:** Students interested in teaching health education in P-12 schools are referred to the Physical Education and Health major to meet state requirements for teaching Health and Fitness in the state of Washington.

#### *Health Education Mid-Program Checkpoint*

Students seeking to complete a BS degree in Community Health within a four-year time span should make normal progress toward the GUR requirements and should apply for pre-major admission to the program during their freshman or sophomore year. Admission is competitive and the number of majors accepted is limited. It is suggested that students interested in Community Health consult the program coordinator (Dr. Billie J. Lindsey) to establish a reasonable plan of study and be assigned an advisor. The following courses should be completed during the sophomore and junior years and prior to the start of the senior year. Major omissions from this list make it difficult or impossible to complete the degree within the four-year time span.

- HLED 150, HLED 151, HLED 152, HLED 345, HLED 350
- BIOL 348, BIOL 349
- CHEM 121; CHEM 251 or CHEM 351

#### *Recreation*

The curriculum in recreation offers generalist preparation for a wide range of career entry-level positions including:

- Community Recreation
- Therapeutic Recreation
- Outdoor Recreation
- Tourism

Students seeking to complete a BA degree in recreation within a four-year time span should have made normal progress toward the GUR requirements and should apply for admission to the program during fall quarter of their sophomore year. For more information regarding admission and normal progress toward completion of a degree, interested students are strongly urged to contact the Recreation Program well before applying.

In response to the leisure needs of society, career opportunities in recreation and leisure services are numerous and diverse. Recognizing the importance of recreation in the lives of individuals, families and communities, the curriculum prepares students to plan, develop and administer programs and resources in a variety of settings. The curriculum adapts the quarter system of scheduling classes to a sequential series of four phases. Students enter Phase I of the program during spring quarter of their sophomore year, although juniors and seniors are welcome to apply. They continue through the curriculum as a group, as indicated in the following schedule:

	Fall	Winter	Spring	Summer
Freshman				
Sophomore			I	
Junior		II	III	Or III
Senior	IV			

The Recreation Program emphasizes preparation in the broad areas of outdoor recreation, community recreation, therapeutic recreation, and tourism. Community and outdoor recreation graduates find employment in federal and state recreation and park agencies, county and community recreation departments, and non-profit agencies serving people from all walks of life. Therapeutic recreation graduates find employment in hospitals, senior centers, nursing homes, mental health agencies, community recreation departments, and federal, state and private agencies serving persons with disabilities or other adapted recreation needs. Graduates prepared in tourism plan and lead trips worldwide or work in destination planning.

The Recreation Program is nationally accredited by the Council on Accreditation. Students should inquire directly to the Recreation Program office in Old Carver 6 for current information on admission procedures.

## **Faculty**

**CHARLES D. SYLVESTER** (1984) Chair and Professor. BS, MA, University of Maryland; PhD, University of Oregon.

**LORRAINE BRILLA** (1985) Professor. BS, Pennsylvania State University; MS, Pennsylvania State University; PhD, University of Oregon.

**RANDALL T. BURTZ** (2003) Assistant Professor. BA, MA, Washington State University; PhD, Colorado State University.

**GORDON CHALMERS** (1996) Professor. BS, Simon Fraser University; MS, PhD, University of California-Los Angeles.

**JEANNE FREEMAN** (2007) Assistant Professor. BS, LaSierra University; MS, University of Nevada; PhD, University of Arkansas.

**JILL HECKATHORN** (1980) Instructor. BS, MA, Michigan State University.

**YING LI** (2006) Assistant Professor. BMed, Zhejiang College; MS, Zhejiang University; MEd, University of Cincinnati; PhD, University of Florida.

**BILLIE J. LINDSEY** (2002) Associate Professor. BS, University of Texas; MA, EdD, University of Northern Colorado.

**LEAANN MARTIN** (1991) Professor. BS, Southwest Missouri State University; MS, University of Arizona; PhD, University of Texas.

**DERRICK MEARS** (2005) Assistant Professor. BS, MS, Central Missouri State University; PhD, University of Arkansas.

**BRANDI ROW** (2006) Assistant Professor. BA, Willamette University; MS, University of Oregon; PhD, Pennsylvania State University.

**KEITH C. RUSSELL** (2008) Associate Professor. BS, Lewis and Clark College; MS, PhD, University of Idaho.

**DAVID N. SUPRAK** (2008) Assistant Professor. BS, Eastern Washington University; MS, Western Washington University; PhD, University of Oregon.

**RALPH A. VERNACCHIA** (1973) Professor. BA, Montclair State University; MS, Ohio University; PhD, University of Utah.

## **Affiliated Teaching Faculty**

**JEFF DAVIS** (1987) Certified Water Sports Instructor. U.S. Sailing Association, Levels I and II Instructor Trainer; Windsurfing Instructor Trainer.

**LORI DEKUBBER** (1991) Rehabilitation Athletic Trainer. BS, MEd, Western Washington University.

**KELVEN HALSELL** (1987) Head Coach, Track and Cross Country. BS, MEd, Wayland Baptist University.

**DEBORAH HENRICHES** (2000) Instructor. BA, MS, Western Washington University.

**BRAD JACKSON** (1985) Head Coach, Men's Basketball. BA, Washington State University; MA, Seattle Pacific University.

**MARTIN MULHOLLAND** (1993) Instructor. Student Teacher Supervisor. BEd, Exeter University; MSc, University of Oregon.

**REBECCA SCHINDLER** (2001) Instructor. BS, Northern Illinois University; MEd, Western Washington University.

## **Undergraduate Degrees and Programs**

Community Health, BS  
Kinesiology - Health and Fitness Specialist, BS  
Kinesiology - Movement Studies, BS  
Kinesiology - Pre-Healthcare Professions, BS  
Kinesiology - Pre-Physical Therapy, BS  
Kinesiology - Sport Psychology, BS  
Physical Education and Health P-12, BAE  
Recreation, BA  
Sport Psychology Minor

## **Graduate Degrees and Programs**

Human Movement and Performance, Exercise Science, Thesis, MS  
Human Movement and Performance, Sport Psychology, Thesis, MS

# **Community Health, BS**

**102 credits**

## **Introduction**

The Community Health degree prepares students to plan, implement, and evaluate health education and health promotion programs and services for individuals, groups, and communities. With a strong service orientation, students learn to apply a variety of methods, health behavior theories, and planning models to address health needs. The curriculum prepares students to meet the eligibility requirements for becoming a Certified Health Education Specialist (CHES) through the National Commission of Health Education Credentialing, Inc.

## **Admission and Declaration Process**

Admission to the Community Health major is selective and the number of majors is limited. Interested students meet with program faculty to pre-major in Community Health. This allows students access to entry-level courses. Pre-majors are strongly advised to complete biology prerequisites for BIOL 348 and 349 and chemistry prerequisites for CHEM 251 or 351 by the end of the sophomore year. A 2.5 GPA is required to pre-major.

Application to the major is due by October 15 of the year prior to the senior 400-level courses. The application includes an essay; current résumé; a letter of reference; and transcripts. Program faculty will provide information on application specifics. Fulfillment of the requirement does not automatically secure admission to the major. Pre-majors are notified regarding acceptance before winter quarter registration. Majors must maintain the 2.5 GPA in all major courses to enroll in the required full-time internship at the end of the program of study.

## **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

## **Requirements**

### **Program of Study**

#### *Health Education Core*

67 credits

- HLED 150 - Consumer and Environmental Health
- HLED 151 - Society and Drugs
- HLED 152 - Society and Sex
- HLED 345 - Health Promotion/Disease Prevention
- HLED 350 - Nutrition
- HLED 407 - Principles and Foundations of Health Education
- HLED 410 - Health Communication and Social Marketing
- HLED 420 - Epidemiology and Biostatistics
- HLED 432 - Organization and Administration of Community Health Programs
- HLED 447 - Community Health
- HLED 450 - Methods and Materials in Health Education
- HLED 460 - Program Planning and Implementation of Health Programs
- HLED 465 - Program Evaluation and Research Design
- HLED 471 - Internship I
  - One course from:
- HLED 472 - Internship II

- HLED 473 - Internship III  
*Supporting Required Courses*  
 25 credits
  - CHEM 121 - General Chemistry I
  - One course from:
    - CHEM 251 - Elementary Organic Chemistry
    - CHEM 351 - Organic Chemistry
  - BIOL 348 - Human Anatomy and Physiology
  - BIOL 349 - Human Physiology
  - KIN 413 - Physiology of Exercise

*Electives Under Advisement*

10 credits

Students interested in becoming lifestyle advisors in the Peer Health Education Program may include HLED 250 as one of their electives.

- SOC 260 - The Family in Society
- SOC 333 - Aging in America
- SOC 338 - Sociology of Sexual Behavior
- SOC 340 - Sociology of Organizations
- SOC 380 - Sociology of Youth
- ANTH 353 - Sex and Gender in Culture
- ANTH 424 - Medical Anthropology
- COMM 224 - Small Group Processes
- HLED 210 - Introduction to Public Health
- HLED 435 - Worksite Health Promotion
- JOUR 330 - Principles of Public Relations
- PSY 230 - Lifespan Developmental Psychology
- PSY 240 - Social Psychology
- KIN 414 - Physical Activity and Nutrition
- KIN 415 - Physical Fitness Assessment and Exercise Prescription
- ENG 302 - Introduction to Technical and Professional Writing

Substitutions may be made with approval of the student's advisor.

Exit Requirement: Standard First Aid/CPR certification

## Kinesiology - Health and Fitness Specialist, BS

**85-105 credits**

### Introduction

This major provides a concentrated study of human movement from mechanical, physiological and pathological perspectives. The program is appropriate for students who plan to work in the fitness/exercise industry or any other field such as coaching or rehabilitation, where human movement and exercise prescription are the focus. Additionally, this degree can serve as the gateway degree to the allied health professions (i.e., physical therapy, occupational therapy, physician assistant) or preparation for post-baccalaureate study in other areas such as exercise physiology, health/ fitness, biomechanics, physical therapy, sport psychology, nutrition, and human growth and motor development. Supporting

courses from biology, chemistry, computer science, communications, health education and physics are included to provide more in-depth analysis of principles associated with human structure and function.

Students are encouraged to work closely with their advisor to ensure that prerequisites for all required classes are met.

Health and fitness specialist professionals work in the health and fitness industry. The program prepares professionals who are skilled in evaluating health behaviors and risk factors, conducting fitness assessments, writing appropriate exercise prescriptions, and motivating individuals to modify negative health habits and maintain positive lifestyle behaviors for optimal health. Health and fitness specialists conduct these activities in the university, clinical, corporate, and commercial or community settings where their clients participate in health promotion and fitness-related activities. This specialization is appropriate preparation for graduate study in exercise physiology and cardiac or pulmonary rehabilitation.

### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

### **Requirements**

- Core Foundation Courses: 11 credits
  - BIOL 348 - Human Anatomy and Physiology
  - KIN 301 - Survey of Kinesiology, Physical Education and Health
  - KIN 422 - Professional Issues in Health and Exercise Settings
- Select 4 credits from:
  - KIN 316 - Group Fitness Instructor Training
  - PE 101 - Beginning Conditioning
  - PE 102 - Beginning Group Fitness
  - PE 103 - Beginning Jogging
  - PE 104 - Beginning Yoga
  - PE 108 - Beginning Weight Training
  - PE 112 - Beginning Swimming
  - PE 113 - Intermediate Swimming
  - PE 120 - Beginning Social Dance
  - PE 122 - Beginning Folk and Country Dance
  - PE 123 - Beginning Scottish Country Dancing
  - PE 132 - Beginning Badminton
  - PE 134 - Beginning Pickleball
  - PE 136 - Beginning Tennis
  - PE 139 - Beginning Racquetball
  - PE 144 - Beginning Soccer
  - PE 145 - Beginning Volleyball
  - PE 148 - Beginning Lacrosse
  - PE 149 - Beginning Ultimate Disc
  - PE 157 - Beginning Skiing
  - PE 165 - Beginning Handball
  - PE 167 - Beginning Mountain Bicycling
  - PE 168 - Beginning Martial Arts
  - PE 169 - Beginning Self-Defense
  - PE 170 - Sailing
  - PE 175 - Windsurfing

- PE 177 - Kayak Touring
- KIN 306 - Measurement and Evaluation in Kinesiology
- KIN 311 - Biomechanics
- KIN 312 - Functional Anatomy
- KIN 410 - Motor Control and Learning
- KIN 413 - Physiology of Exercise
- KIN 416 - Strength and Conditioning Program Design
- One course from:
  - KIN 308 - Human Growth and Motor Development
  - KIN 309 - Physical Dimensions of Aging
    - Select 3 credits from:
      - KIN 320 - Psychology of Sport
      - KIN 321 - Sociology of Sport
      - KIN 323 - Olympism and the Modern Olympic Games
    - Choose either:
      - KIN 491 - Field Experience (6 credits)
        - or
        - KIN 491 - (3 credits) and
      - KIN 493 - Exercise And Sport Science Research (3 credits)
        - or
        - KIN 491 - (3 credits) and
      - KIN 494 - Instructional Assistant
        - or
      - KIN 471 - Internship I (3 credits) and
      - KIN 472 - Internship II (12 credits)
- Required Courses:
  - KIN 304 - Prevention and Care of Athletic Injuries
  - KIN 308 - Human Growth and Motor Development \*
  - KIN 309 - Physical Dimensions of Aging
  - KIN 316 - Group Fitness Instructor Training \*
  - KIN 320 - Psychology of Sport \*
- KIN 414 - Physical Activity and Nutrition
- KIN 415 - Physical Fitness Assessment and Exercise Prescription
  - \* *Must be taken in the core course set*
- Elective courses: Select 21 credits from the Movement Studies option (see advisor for selection of courses)

## Kinesiology - Movement Studies, BS

**85-105 credits**

### Introduction

This major provides a concentrated study of human movement from mechanical, physiological and pathological perspectives. The program is appropriate for students who plan to work in the fitness/exercise industry or any other field such as coaching or rehabilitation, where human movement and exercise prescription are the focus. Additionally, this degree can serve as the gateway degree to the allied health professions (i.e., physical therapy, occupational therapy, physician assistant) or preparation for post-baccalaureate study in other areas such as exercise physiology, health/ fitness, biomechanics, physical therapy, sport psychology, nutrition, and human growth and motor development. Supporting courses from biology, chemistry, computer science, communications, health education and physics are included to provide more in-depth analysis of principles associated with human structure and function.

Students are encouraged to work closely with their advisor to ensure that prerequisites for all required classes are met.

The movement studies specialization is recommended for students who wish to pursue career opportunities in the fitness environment or who have plans for post-baccalaureate study in the exercise science area. This specialization is appropriate preparation for (a) employment in a health club, fitness setting or workplace fitness setting; (b) graduate study in exercise physiology/fitness; or (c) graduate study in biomechanics. Students should seek advising to determine the appropriate set of courses leading to a specialized emphasis. (See advisor for selection of courses.)

### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

### **Requirements**

- Core Foundation Courses: 11 credits
  - BIOL 348 - Human Anatomy and Physiology
  - KIN 301 - Survey of Kinesiology, Physical Education and Health
  - KIN 422 - Professional Issues in Health and Exercise Settings
- Select 4 credits from:
  - KIN 316 - Group Fitness Instructor Training
  - PE 101 - Beginning Conditioning
  - PE 102 - Beginning Group Fitness
  - PE 103 - Beginning Jogging
  - PE 104 - Beginning Yoga
  - PE 108 - Beginning Weight Training
  - PE 112 - Beginning Swimming
  - PE 113 - Intermediate Swimming
  - PE 120 - Beginning Social Dance
  - PE 122 - Beginning Folk and Country Dance
  - PE 123 - Beginning Scottish Country Dancing
  - PE 132 - Beginning Badminton
  - PE 134 - Beginning Pickleball
  - PE 136 - Beginning Tennis
  - PE 139 - Beginning Racquetball
  - PE 144 - Beginning Soccer
  - PE 145 - Beginning Volleyball
  - PE 148 - Beginning Lacrosse
  - PE 149 - Beginning Ultimate Disc
  - PE 157 - Beginning Skiing
  - PE 165 - Beginning Handball
  - PE 167 - Beginning Mountain Bicycling
  - PE 168 - Beginning Martial Arts
  - PE 169 - Beginning Self-Defense
  - PE 170 - Sailing
  - PE 175 - Windsurfing
  - PE 177 - Kayak Touring
- KIN 306 - Measurement and Evaluation in Kinesiology
- KIN 311 - Biomechanics
- KIN 312 - Functional Anatomy

- KIN 410 - Motor Control and Learning
- KIN 413 - Physiology of Exercise
- KIN 416 - Strength and Conditioning Program Design
- One course from:
  - KIN 308 - Human Growth and Motor Development
  - KIN 309 - Physical Dimensions of Aging
  - 3 credits from:
    - KIN 320 - Psychology of Sport
    - KIN 321 - Sociology of Sport
    - KIN 323 - Olympism and the Modern Olympic Games
  - Choose either:
    - KIN 491 - Field Experience (6 credits)  
or  
KIN 491 - (3 credits) and
    - KIN 493 - Exercise And Sport Science Research (3 credits)  
or  
KIN 491 - (3 credits) and
    - KIN 494 - Instructional Assistant (3 credits)  
or
    - KIN 471 - Internship I (3 credits)
    - KIN 472 - Internship II (12 credits)
- Select at least 20 credits from:
  - BIOL 349 - Human Physiology
  - HLED 345 - Health Promotion/Disease Prevention
  - HLED 350 - Nutrition
  - HLED 435 - Worksite Health Promotion
  - KIN 304 - Prevention and Care of Athletic Injuries  
KIN 315 – Fitness Instruction and Leadership
  - KIN 409 - Functional Assessment of Older Adults
  - KIN 414 - Physical Activity and Nutrition
  - KIN 415 - Physical Fitness Assessment and Exercise Prescription

One course from:

  - KIN 307 - Statistics in Exercise & Sport Science
  - MATH 240 - Introduction to Statistics

One course from:

  - KIN 308 - Human Growth and Motor Development
  - KIN 309 - Physical Dimensions of Aging

One course from:

  - KIN 320 - Psychology of Sport
  - KIN 321 - Sociology of Sport
- A maximum of 15 credits may be selected from:
  - CHEM 121 - General Chemistry I
  - CHEM 122 - General Chemistry II
  - CHEM 123 - General Chemistry III
  - CHEM 251 - Elementary Organic Chemistry
  - CHEM 375 - Elements of Biochemistry
  - PHYS 114 - Principles of Physics I
  - PHYS 115 - Principles of Physics II
  - PHYS 116 - Principles of Physics III

- CSCI 101 - Computers and Applications
- CSCI 140 - Programming Fundamentals in C++
- COMM 244 - Advocacy Through Media
- COMM 318 - Professional Communication
- COMM 325 - Introduction to Intercultural Communication
- COMM 327 - Interpersonal Communication
- COMM 416 - Topics in Communication
- ENG 302 - Introduction to Technical and Professional Writing
- PSY 220 - Introduction to Behavioral Neuroscience
- PSY 230 - Lifespan Developmental Psychology
- PSY 250 - Introduction to Personality and Abnormal Psychology

## **Kinesiology - Pre-Healthcare Professions, BS**

**85-105 credits**

### **Introduction**

This major provides a concentrated study of human movement from mechanical, physiological and pathological perspectives. The program is appropriate for students who plan to work in the fitness/exercise industry or any other field such as coaching or rehabilitation, where human movement and exercise prescription are the focus. Additionally, this degree can serve as the gateway degree to the allied health professions (i.e., physical therapy, occupational therapy, physician assistant) or preparation for post-baccalaureate study in other areas such as exercise physiology, health/ fitness, biomechanics, physical therapy, sport psychology, nutrition, and human growth and motor development. Supporting courses from biology, chemistry, computer science, communications, health education and physics are included to provide more in-depth analysis of principles associated with human structure and function.

Students are encouraged to work closely with their advisor to ensure that prerequisites for all required classes are met.

The pre-healthcare professions option is available for students who wish to pursue post-baccalaureate study in a healthcare profession such as occupational therapy, physician assistant, nursing, naturopathy or chiropractic. Students meet with an advisor to select a set of courses that will meet the admission requirements of their program(s) of choice. This option also can serve as a foundation for graduate study in exercise science. Students should select 53 credits or 45 credits if they complete the internship option.

### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

### **Requirements**

- ❑ Core Foundation Courses: 11 credits
- BIOL 348 - Human Anatomy and Physiology
- KIN 301 - Survey of Kinesiology, Physical Education and Health
- KIN 422 - Professional Issues in Health and Exercise Settings
- ❑ Select 4 credits from:
  - KIN 316 - Group Fitness Instructor Training
  - PE 101 - Beginning Conditioning

- PE 102 - Beginning Group Fitness
- PE 103 - Beginning Jogging
- PE 104 - Beginning Yoga
- PE 108 - Beginning Weight Training
- PE 112 - Beginning Swimming
- PE 113 - Intermediate Swimming
- PE 120 - Beginning Social Dance
- PE 122 - Beginning Folk and Country Dance
- PE 123 - Beginning Scottish Country Dancing
- PE 132 - Beginning Badminton
- PE 134 - Beginning Pickleball
- PE 136 - Beginning Tennis
- PE 139 - Beginning Racquetball
- PE 144 - Beginning Soccer
- PE 145 - Beginning Volleyball
- PE 148 - Beginning Lacrosse
- PE 149 - Beginning Ultimate Disc
- PE 157 - Beginning Skiing
- PE 165 - Beginning Handball
- PE 167 - Beginning Mountain Bicycling
- PE 168 - Beginning Martial Arts
- PE 169 - Beginning Self-Defense
- PE 170 - Sailing
- PE 175 - Windsurfing
- PE 177 - Kayak Touring
- KIN 306 - Measurement and Evaluation in Kinesiology
- One course from:
  - KIN 308 - Human Growth and Motor Development
  - KIN 309 - Physical Dimensions of Aging
  - KIN 311 - Biomechanics
  - KIN 312 - Functional Anatomy
  - KIN 410 - Motor Control and Learning
  - KIN 413 - Physiology of Exercise
  - KIN 416 - Strength and Conditioning Program Design
- 3 credits from:
  - KIN 320 - Psychology of Sport
  - KIN 321 - Sociology of Sport
  - KIN 323 - Olympism and the Modern Olympic Games
- Choose either:
  - KIN 491 - Field Experience (6 credits)  
or  
KIN 491 - (3 credits) and
  - KIN 493 - Exercise And Sport Science Research (3 credits)  
or  
KIN 491 - (3 credits) and
  - KIN 494 - Instructional Assistant (3 credits)  
or
  - KIN 471 - Internship I (3 credits) and

- KIN 472 - Internship II (12 credits)
    - Students should select 53 credits or 45 credits if they complete the internship option.
  - ANTH 201 - Introduction to Cultural Anthropology
  - ANTH 215 - Introductory Biological Anthropology
  - BIOL 204 - Introduction to Evolution, Ecology and Biodiversity
  - BIOL 205 - Introduction to Cellular and Molecular Biology
  - BIOL 206 - Introduction to Organismal Biology
  - BIOL 245 - Microbiology for Health Sciences
  - BIOL 349 - Human Physiology
  - CHEM 121 - General Chemistry I
  - CHEM 122 - General Chemistry II
  - CHEM 123 - General Chemistry III
  - CHEM 251 - Elementary Organic Chemistry
  - CHEM 351 - Organic Chemistry
  - CHEM 352 - Organic Chemistry
  - CHEM 353 - Organic Chemistry
  - CHEM 354 - Organic Chemistry Laboratory I
  - CHEM 355 - Organic Chemistry Laboratory II
  - CHEM 375 - Elements of Biochemistry
  - CSCI 101 - Computers and Applications
  - ENG 302 - Introduction to Technical and Professional Writing
  - HLED 345 - Health Promotion/Disease Prevention
  - HLED 435 - Worksite Health Promotion
  - KIN 309 - Physical Dimensions of Aging
  - KIN 409 - Functional Assessment of Older Adults
  - PHYS 101 - Physics Analysis
  - PHYS 114 - Principles of Physics I
  - PHYS 115 - Principles of Physics II
  - PHYS 116 - Principles of Physics III
  - PSY 101 - Introduction to Psychology
  - PSY 230 - Lifespan Developmental Psychology
  - PSY 250 - Introduction to Personality and Abnormal Psychology
- One course from:
- KIN 307 - Statistics in Exercise & Sport Science
  - MATH 240 - Introduction to Statistics
- One course from:
- KIN 414 - Physical Activity and Nutrition
  - HLED 350 - Nutrition

## Kinesiology - Pre-Physical Therapy, BS

**85-105 credits**

### Introduction

This major provides a concentrated study of human movement from mechanical, physiological and pathological perspectives. The program is appropriate for students who plan to work in the fitness/exercise industry or any other field such as coaching or rehabilitation, where human movement and exercise prescription are the focus. Additionally, this degree can serve as the gateway degree to the allied health professions (i.e., physical therapy, occupational therapy,

physician assistant) or preparation for post-baccalaureate study in other areas such as exercise physiology, health/ fitness, biomechanics, physical therapy, sport psychology, nutrition, and human growth and motor development. Supporting courses from biology, chemistry, computer science, communications, health education and physics are included to provide more in-depth analysis of principles associated with human structure and function.

Students are encouraged to work closely with their advisor to ensure that prerequisites for all required classes are met.

The pre-physical therapy option is available for students who wish to pursue graduate study in a physical therapy program. Students meet with an advisor to select a set of courses that will meet the admission requirements of their program(s) of choice. This option also can serve as a foundation for graduate study in exercise science, biomechanics, or exercise physiology. Students should select 53 credits or 45 credits if they complete the internship option.

### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

### **Requirements**

- Core Foundation Courses: 11 credits
  - BIOL 348 - Human Anatomy and Physiology
  - KIN 301 - Survey of Kinesiology, Physical Education and Health
  - KIN 422 - Professional Issues in Health and Exercise Settings
- Select 4 credits from:
  - KIN 316 - Group Fitness Instructor Training
  - PE 101 - Beginning Conditioning
  - PE 102 - Beginning Group Fitness
  - PE 103 - Beginning Jogging
  - PE 104 - Beginning Yoga
  - PE 108 - Beginning Weight Training
  - PE 112 - Beginning Swimming
  - PE 113 - Intermediate Swimming
  - PE 120 - Beginning Social Dance
  - PE 122 - Beginning Folk and Country Dance
  - PE 123 - Beginning Scottish Country Dancing
  - PE 132 - Beginning Badminton
  - PE 134 - Beginning Pickleball
  - PE 136 - Beginning Tennis
  - PE 139 - Beginning Racquetball
  - PE 144 - Beginning Soccer
  - PE 145 - Beginning Volleyball
  - PE 148 - Beginning Lacrosse
  - PE 149 - Beginning Ultimate Disc
  - PE 157 - Beginning Skiing
  - PE 165 - Beginning Handball
  - PE 167 - Beginning Mountain Bicycling
  - PE 168 - Beginning Martial Arts
  - PE 169 - Beginning Self-Defense
  - PE 170 - Sailing
  - PE 175 - Windsurfing
  - PE 177 - Kayak Touring

- KIN 306 - Measurement and Evaluation in Kinesiology
  - KIN 311 - Biomechanics
  - KIN 312 - Functional Anatomy
  - KIN 410 - Motor Control and Learning
  - KIN 413 - Physiology of Exercise
  - KIN 416 - Strength and Conditioning Program Design
  - One course from:
    - KIN 308 - Human Growth and Motor Development
    - KIN 309 - Physical Dimensions of Aging
    - 3 credits from:
      - KIN 320 - Psychology of Sport
      - KIN 321 - Sociology of Sport
      - KIN 323 - Olympism and the Modern Olympic Games
    - Choose either:
      - KIN 491 - Field Experience (6 credits)  
or  
KIN 491 (3 credits) and
      - KIN 493 - Exercise And Sport Science Research (3 credits)  
or  
KIN 491 - (3 credits) and
      - KIN 494 - Instructional Assistant (3 credits)  
or
      - KIN 471 - Internship I and (3 credits)
      - KIN 472 - Internship II (12 credits)
    - Students should select 53 credits or 45 credits if they complete the internship option.
  - BIOL 204 - Introduction to Evolution, Ecology and Biodiversity
  - BIOL 205 - Introduction to Cellular and Molecular Biology
  - BIOL 206 - Introduction to Organismal Biology
  - BIOL 245 - Microbiology for Health Sciences
  - BIOL 349 - Human Physiology
  - CHEM 121 - General Chemistry I
  - CHEM 122 - General Chemistry II
  - CHEM 123 - General Chemistry III
  - CHEM 251 - Elementary Organic Chemistry
  - CSCI 101 - Computers and Applications
  - CSCI 140 - Programming Fundamentals in C++
  - ENG 302 - Introduction to Technical and Professional Writing
  - HLED 345 - Health Promotion/Disease Prevention
  - HLED 435 - Worksite Health Promotion
  - KIN 409 - Functional Assessment of Older Adults
  - PHYS 114 - Principles of Physics I
  - PHYS 115 - Principles of Physics II
  - PHYS 116 - Principles of Physics III
  - PSY 101 - Introduction to Psychology
  - PSY 230 - Lifespan Developmental Psychology
  - PSY 250 - Introduction to Personality and Abnormal Psychology
- One course from:
- KIN 307 - Statistics in Exercise & Sport Science

- MATH 240 - Introduction to Statistics  
One course from:  
KIN 414 - Physical Activity and Nutrition
- HLED 350 - Nutrition

## Kinesiology - Sport Psychology, BS

**85-105 credits**

### Introduction

This major provides a concentrated study of human movement from mechanical, physiological and pathological perspectives. The program is appropriate for students who plan to work in the fitness/exercise industry or any other field such as coaching or rehabilitation, where human movement and exercise prescription are the focus. Additionally, this degree can serve as the gateway degree to the allied health professions (i.e., physical therapy, occupational therapy, physician assistant) or preparation for post-baccalaureate study in other areas such as exercise physiology, health/ fitness, biomechanics, physical therapy, sport psychology, nutrition, and human growth and motor development. Supporting courses from biology, chemistry, computer science, communications, health education and physics are included to provide more in-depth analysis of principles associated with human structure and function.

Students are encouraged to work closely with their advisor to ensure that prerequisites for all required classes are met.

The sport psychology option provides students with the behavioral knowledge and educational techniques to enhance performance in recreational, exercise, and athletic settings. This option provides an emphasis in psychology and exercise science that will serve as an adequate set of prerequisites for post-baccalaureate study in sport and/or exercise psychology.

### Grade Requirements

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

### Requirements

- Core Foundation Courses: 11 credits
  - BIOL 348 - Human Anatomy and Physiology
  - KIN 301 - Survey of Kinesiology, Physical Education and Health
  - KIN 422 - Professional Issues in Health and Exercise Settings
- Select 4 credits from:
  - KIN 316 - Group Fitness Instructor Training
  - PE 101 - Beginning Conditioning
  - PE 102 - Beginning Group Fitness
  - PE 103 - Beginning Jogging
  - PE 104 - Beginning Yoga
  - PE 108 - Beginning Weight Training
  - PE 112 - Beginning Swimming
  - PE 113 - Intermediate Swimming
  - PE 120 - Beginning Social Dance
  - PE 122 - Beginning Folk and Country Dance
  - PE 123 - Beginning Scottish Country Dancing
  - PE 132 - Beginning Badminton

- PE 134 - Beginning Pickleball
  - PE 136 - Beginning Tennis
  - PE 139 - Beginning Racquetball
  - PE 144 - Beginning Soccer
  - PE 145 - Beginning Volleyball
  - PE 148 - Beginning Lacrosse
  - PE 149 - Beginning Ultimate Disc
  - PE 157 - Beginning Skiing
  - PE 165 - Beginning Handball
  - PE 167 - Beginning Mountain Bicycling
  - PE 168 - Beginning Martial Arts
  - PE 169 - Beginning Self-Defense
  - PE 170 - Sailing
  - PE 175 - Windsurfing
  - PE 177 - Kayak Touring
  - KIN 306 - Measurement and Evaluation in Kinesiology
  - KIN 311 - Biomechanics
  - KIN 312 - Functional Anatomy
  - KIN 410 - Motor Control and Learning
  - KIN 413 - Physiology of Exercise
  - KIN 416 - Strength and Conditioning Program Design
  - One course from:
    - KIN 308 - Human Growth and Motor Development
    - KIN 309 - Physical Dimensions of Aging
  - Select 3 credits from:
    - KIN 320 - Psychology of Sport
    - KIN 321 - Sociology of Sport
    - KIN 323 - Olympism and the Modern Olympic Games \*
- \* Students majoring in the Sport Psychology specialization must select KIN 323
- Choose either:
    - KIN 491 - Field Experience (6 credits)  
or  
KIN 491 - (3 credits) and
    - KIN 493 - Exercise And Sport Science Research (3 credits)  
or  
KIN 491 - (3 credits) and
    - KIN 494 - Instructional Assistant (3 credits)  
or
    - KIN 471 - Internship I (3 credits)
    - KIN 472 - Internship II (12 credits)
  - Required Courses
    - KIN 320 - Psychology of Sport
    - KIN 321 - Sociology of Sport
    - KIN 420 - Seminar in Sport Psychology
    - PSY 101 - Introduction to Psychology
    - PSY 210 - Cognition
    - PSY 230 - Lifespan Developmental Psychology
    - PSY 240 - Social Psychology
    - PSY 250 - Introduction to Personality and Abnormal Psychology

- Select one course under advisement from:
- PSY 119 - Psychology of Gender
  - PSY 220 - Introduction to Behavioral Neuroscience
  - KIN 304 - Prevention and Care of Athletic Injuries
  - KIN 307 - Statistics in Exercise & Sport Science
  - KIN 315 - Fitness Instruction and Leadership
  - KIN 414 - Physical Activity and Nutrition
  - KIN 415 - Physical Fitness Assessment and Exercise Prescription
  - HLED 345 - Health Promotion/Disease Prevention

## Physical Education and Health P-12, BAE

**144 credits\***

### Introduction

\*90 credits in Physical Education and Health content area; 54 credits from the Secondary Education program including the student teaching internship.

This major leads to an endorsement in health and fitness for grades PK-12. See the Secondary Education section of this catalog for program admission, completion, and teacher certification requirements.

This major provides concentrated study of physical education and health. The program is unique in that it consists of four sequential five-credit blocks in physical education pedagogy with practicum experiences at the elementary, middle, high school and college levels, allowing students concentrated time to develop teaching techniques while working with children and young people in educational settings. Ongoing analysis of teaching effectiveness is incorporated throughout the program. The health component requires a series of 17 credits of coursework and practica in a health education setting which is integrated into PE 441p. *The number of students admitted into the program is limited.*

### Admission and Declaration Process:

Students desiring entry into the program should follow the process outlined below:

- Meet the minimum qualifications of the Woodring College of Education admissions process. This can be initiated and completed as early as the winter or spring quarters before applying to the physical education and health program the following fall. It is imperative that students begin this process as soon as they are interested in the program. Students who do not meet the minimum qualifications of Woodring College of Education cannot apply for entry into the P-12 physical education and health program.
- Meet with a department advisor to declare the pre-major and outline a plan of study.
- Enroll in KIN 301, 308, PE 340 and BIOL 348 fall quarter.

**NOTE:** KIN 301 and BIOL 348 may be taken prior to fall quarter.

- Submit a completed application packet for the P-12 physical education and health program early in October. See advisor for exact application date. Students are encouraged to submit applications as soon as they meet the minimum qualifications of Woodring College of Education. This can be done as early as spring quarter before applying to the P-12 physical education and health program the following fall (applications are available in Carver 102, the main office of the PEHR department).

- Successful completion (grade C or better) of BIOL 348, KIN 301, KIN 308, PE 340
- Applications for the P-12 physical education and health program will be reviewed by faculty, and a limited number of candidates will be accepted into the program and notified prior to winter quarter. Criteria for acceptance are established by physical education faculty, and applications will be evaluated accordingly. Application procedures include an oral presentation and interview.

### **Grade Requirements**

Students must earn a grade of C (2.0) or better in the secondary education professional program and in all courses required for the endorsement and the academic major.

### **Program of Study**

- BIOL 348 - Human Anatomy and Physiology
- EDUC 301 - Educational Psychology I: Development and Individual Differences
- EDUC 302 - Educational Psychology II: Motivation, Learning and Assessment
- EDUC 310 - The Teacher and the Social Order
- HLED 150 - Consumer and Environmental Health
- HLED 151 - Society and Drugs
- HLED 152 - Society and Sex
- HLED 345 - Health Promotion/Disease Prevention
- HLED 455 - Health Education Grades K-8
- IT 344 - Basic Instructional Technology Skills
- IT 444 - Classroom Use of Instructional Technology (Secondary)
- KIN 301 - Survey of Kinesiology, Physical Education and Health
- KIN 308 - Human Growth and Motor Development
- KIN 311 - Biomechanics
- KIN 312 - Functional Anatomy
- KIN 320 - Psychology of Sport
- KIN 410 - Motor Control and Learning
- KIN 413 - Physiology of Exercise
- KIN 422 - Professional Issues in Health and Exercise Settings
- PE 340 - Block I: Elementary Physical Education Methods
- PE 341 - Block II: Elementary Physical Education Methods
- PE 341P - Elementary Physical Education Practicum
- PE 440 - Block III: Middle School Physical Education Methods
- PE 440P - Middle School Physical Education Practicum
- PE 441 - Block IV: High School Physical Education Methods
- PE 441P - High School Health and Physical Education Practicum
- PE 442P - Practicum in Physical Education
- PE 443 - Adapted Physical Education Methods & Practicum
- SEC 410 - Dynamics of Teaching
- SEC 411 - Philosophical Foundations of Education
- SEC 425 - Developmental Reading, Writing and Learning in Secondary Schools
- SEC 432 - Secondary School Methods III - Management, Motivation and Discipline
- SEC 495 - Internship - Secondary
- One course from:

- KIN 414 - Physical Activity and Nutrition
- HLED 350 - Nutrition
  - One course from:
- KIN 321 - Sociology of Sport
- KIN 323 - Olympism and the Modern Olympic Games

## Recreation, BA

**66 credits**

### Introduction

The recreation program emphasizes preparation in the broad areas of outdoor recreation, community recreation, therapeutic recreation, and tourism. Community and outdoor recreation graduates find employment in federal and state recreation and park agencies, county and community recreation departments, and commercial recreation settings. Therapeutic recreation graduates find employment in hospitals, senior centers, nursing homes, mental health agencies, community recreation departments, and federal, state and private agencies serving persons with special needs. Graduates prepared in tourism plan and lead trips worldwide or work in destination planning.

The recreation program is nationally accredited by the Council on Accreditation. Students should inquire directly to the recreation program office for current information on admission procedures.

### Admission and Declaration Process

The deadline for completing the application process is the first Friday in November. The program is popular and the number of majors admitted is limited, so students are encouraged to apply by the deadline. Applications received after the deadline will be considered if space is available. Students must have completed 45 quarter unit credits, including approved transfer credits, before starting Phase I. The deadline also applies to transfer students. Transfer students are urged to contact the recreation program for guidance and further information. A minor in recreation is not offered presently.

### Grade Requirements

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

### Requirements

RECR 380 is required for the therapeutic recreation option and is offered fall quarter each year.

- Prereq:
- RECR 201 - Foundations of Recreation and Leisure
  - Phase I:
    - RECR 271 - Introduction to Community Recreation and Leisure Services
    - RECR 272 - Introduction to Outdoor Recreation
    - RECR 274 - Introduction to Therapeutic Recreation
    - RECR 275 - Professional Practicum and Seminar
    - RECR 276 - Introduction to Program Leadership
    - RECR 279 - Introduction to Tourism
    -
  - Phase II:

- RECR 372 - Management of Recreation and Leisure Services
  - RECR 373 - Recreation Programming
  - RECR 378 - Human Relations: Concepts & Skills
- One course from:
- RECR 370 - Outdoor Program Development
  - RECR 376 - Therapeutic Recreation Program Design
  - RECR 379 - Tourism Planning and Development
  - RECR 385 - Leisure and Aging
- Phase III:
- RECR 471 - Internship I and
  - RECR 472 - Internship II
- or
- RECR 473 - Internship III
- Phase IV:
- RECR 444 - Recreation Budgeting and Finance
  - RECR 450 - Recreation Program Evaluation
  - RECR 480 - Leisure and Society
- One course from:
- RECR 421 - Therapeutic Recreation Trends and Issues
  - RECR 470 - Adventure-Based Programming
  - RECR 475 - Community Development and Leisure Services
  - RECR 479 - Ecotourism: Principles and Practices

### Support Area

Recreation majors must develop a 25-credit support area. Support areas may range from traditional minors (e.g., sociology, environmental studies, business, and other fields) to interdisciplinary studies incorporating courses from a broader spectrum of University course offerings. The interdisciplinary support area is designed under the guidance of the student's faculty advisor and must have the advisor's final approval.

### Additional Requirements

In response to the leisure needs of society, career opportunities in recreation and leisure services are numerous and diverse. The recreation curriculum prepares students to plan, develop and administer programs and resources in a variety of settings.

The curriculum adapts the quarter system of scheduling classes to a sequential series of four phases. Students enter Phase I of the program during spring quarter. They continue through the curriculum as a group, as indicated in the following schedule.

	Fall	Winter	Spring	Summer
<b>Fresh</b>	-	-	-	-
<b>Sophomore</b>	-	-	I	-
<b>Junior</b>	-	II	III	or III
<b>Senior</b>	IV	-	-	-

The phase system allows maximum flexibility in scheduling workshops, field experiences, conferences and seminars both on and off campus. By making use of other departments at Western, statewide recreation resources, and recreation professionals, a wide range of educational experiences is available to the student.

## Sport Psychology Minor

Jointly offered by the Department of Psychology, College of Humanities and Social Sciences and the Department of Physical Education, Health and Recreation

### 30 credits

#### Introduction

Advisor: Dr. Ralph Vernacchia

This interdisciplinary program is designed to introduce the student to the discipline of sport psychology. More specifically, it emphasizes the educational and behavioral approaches to sport psychology that can be applied in recreational, exercise, and athletic settings.

#### Grade Requirements

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

#### Requirements

- KIN 320 - Psychology of Sport
- KIN 321 - Sociology of Sport
- KIN 420 - Seminar in Sport Psychology
- PSY 101 - Introduction to Psychology
- Select 16 elective credits under advisement from:
  - PSY 119 - Psychology of Gender
  - PSY 210 - Cognition
  - PSY 220 - Introduction to Behavioral Neuroscience
  - PSY 230 - Lifespan Developmental Psychology
  - PSY 240 - Social Psychology
  - PSY 250 - Introduction to Personality and Abnormal Psychology
  - PSY 332 - Adolescent Development

NOTE: Kinesiology majors cannot use KIN 320 and 321 for both major and minor requirements and must select replacement courses from Kinesiology (KIN 323) or psychology electives (PSY 119, 210, 220, 230, 240, 250, 332). Kinesiology and physical education majors cannot use PSY 119, 210-250 for both major and minor requirements.

NOTE: Psychology majors cannot use PSY 210-250 for both major and minor requirements and should choose other courses under advisement.

## **Human Movement and Performance, Exercise Science, Thesis, MS**

### **Graduate Faculty**

**Brilla, Lorraine**, PhD, exercise physiology/nutrition.  
**Chalmers, Gordon**, PhD, motor control/learning.  
**Knutzen, Kathleen**, PhD, biomechanics/kinesiology.  
**Martin, LeaAnn**, PhD, pedagogy/elementary physical education/curriculum.  
**Mears, Derrick**, PhD, pedagogy/secondary physical education/curriculum.  
**Row, Brandi**, PhD, biomechanics, kinesiology, exercise physiology.  
**Suprak, David**, PhD, motor development, biomechanics.  
**Vernacchia, Ralph**, PhD, applied sport psychology.

Program Advisor: Dr. Kathleen Knutzen, CV 105 360-650-3055

### **Program Description**

Graduate study leading to a Master of Science degree is offered in two areas: exercise science and sport psychology. The purpose of the program is to provide students with the technical and professional knowledge necessary for the assessment and improvement of human movement and performance. Students will be provided with information that will assist them in the design and implementation of programs that enhance human movement and performance. Through independent research and inquiry, students will solve problems associated with human movement and performance.

### **Goals**

The educational mission of the program is to develop individuals who make informed decisions about exercise, human movement, and performance, that foster health and physically active lifestyles. To this end faculty are dedicated to quality teaching, scholarship and service.

### **Prerequisites**

Kinesiology major/minor or equivalent courses from the exercise science, behavioral and cultural and professional activity areas are required prerequisites for the graduate program. An applicant to the **exercise science program** who does not have a major or minor must take the following equivalency courses: three courses from the exercise science area (KIN 306, 308, 309, 311, 312, 410, 413, 416), one behavioral and cultural foundations course (KIN 320, 321, 323), and two credits from the PE 100-level activity courses. An applicant to the **sport psychology** program who does not have a major or minor must take the following equivalency courses: two courses from the exercise science area (KIN 306, 308, 309, 311, 312, 410, 413, 416), two behavioral and cultural foundations courses (KIN 320, 321, 323), and two credits from the PE 100-level activity courses. Students applying to the sport psychology program must have a minimum of 15 credits in undergraduate psychology courses.

All applicants must have taken an introductory statistics course. These courses may be taken concurrently with graduate courses but must be completed before submitting a thesis proposal. Equivalent courses taken at other institutions may be applied.

## **Application Information**

**Admission:** Program faculty will begin reviewing application materials after February 1 and will continue to review materials until the enrollment is reached or June 1, whichever comes first. Because maximum student enrollment in the exercise science and sport psychology programs is limited, all applicants are strongly encouraged to submit application materials by February 1. The exercise science area accepts students every year. For sport psychology, 3-5 applicants are accepted in the fall quarter of odd-numbered years.

Applicants to the sport psychology program are admitted based on specific qualifications that can be found on the department's website.

**Specific Test Requirements:** Graduate Record Exam, General Test; applicants with advanced degrees are not required to submit GRE scores.

**Deadlines:** Please see Graduate School deadlines.

**TA Deadlines:** To receive full consideration for a graduate teaching assistantship, applicants should have their application materials submitted by February 1.

### **Supporting Materials:**

- Students must submit a written statement of purpose outlining areas of interest, goals for graduate study and future career plans relating to the degree.

### **Program Requirements (45-50 credits)**

- Basic requirements: (13-16)
    - KIN 506 - Research Design in Human Movement and Performance
    - KIN 520 - Readings in Human Movement and Performance
    - KIN 690 - Thesis
  - Required courses: (20)
    - KIN 510 - Laboratory Techniques in Exercise Science
    - KIN 513 - Exercise Prescription and Programming
    - KIN 540 - Applied Exercise Physiology
    - KIN 543 - Biomechanical Analysis of Human Movement
    - KIN 544 - Biomechanics of the Musculoskeletal System
  - Electives: — Select 14 credits from:
    - KIN 502 - Research Topics in Human Movement and Performance
    - KIN 507 - Motor Control
    - KIN 511 - Physical Activity and Hypokinetic Diseases
    - KIN 512 - Data Processing Methods
    - KIN 516 - Advanced Conditioning Principles and Practice
    - KIN 533 - Cardiovascular Physiology
    - KIN 541 - Foundations and Ethics of Sport Psychology
    - KIN 592 - Internship
    - PSY 512 - Correlation Methods and Data Analysis
    - PSY 513 - Experimental Methods and Data Analysis
- 400 level courses selected under departmental advisement

# **Human Movement and Performance, Sport Psychology, Thesis, MS**

## **Graduate Faculty**

**Brilla, Lorraine**, PhD, exercise physiology/nutrition.  
**Chalmers, Gordon**, PhD, motor control/learning.  
**Knutzen, Kathleen**, PhD, biomechanics/kinesiology.  
**Martin, LeaAnn**, PhD, pedagogy/elementary physical education/curriculum.  
**Mears, Derrick**, PhD, pedagogy/secondary physical education/curriculum.  
**Row, Brandi**, PhD, biomechanics, kinesiology, exercise physiology.  
**Suprak, David**, PhD, motor development, biomechanics.  
**Vernacchia, Ralph**, PhD, applied sport psychology.

Program Advisor: Dr. Kathleen Knutzen, CV 105 360-650-3055

## **Program Description**

Graduate study leading to a Master of Science degree is offered in two areas: exercise science and sport psychology. The purpose of the program is to provide students with the technical and professional knowledge necessary for the assessment and improvement of human movement and performance. Students will be provided with information that will assist them in the design and implementation of programs that enhance human movement and performance. Through independent research and inquiry, students will solve problems associated with human movement and performance.

## **Goals**

The educational mission of the program is to develop individuals who make informed decisions about exercise, human movement, and performance, that foster health and physically active lifestyles. To this end faculty are dedicated to quality teaching, scholarship and service.

## **Prerequisites**

Kinesiology major/minor or equivalent courses from the exercise science, behavioral and cultural and professional activity areas are required prerequisites for the graduate program. An applicant to the **exercise science program** who does not have a major or minor must take the following equivalency courses: three courses from the exercise science area (KIN 306, 308, 309, 311, 312, 410, 413, 416), one behavioral and cultural foundations course (KIN 320, 321, 323), and two credits from the PE 100-level activity courses. An applicant to the **sport psychology** program who does not have a major or minor must take the following equivalency courses: two courses from the exercise science area (KIN 306, 308, 309, 311, 312, 410, 413, 416), two behavioral and cultural foundations courses (KIN 320, 321, 323), and two credits from the PE 100-level activity courses. Students applying to the sport psychology program must have a minimum of 15 credits in undergraduate psychology courses.

All applicants must have taken an introductory statistics course. These courses may be taken concurrently with graduate courses but must be completed before submitting a thesis proposal. Equivalent courses taken at other institutions may be applied.

## **Application Information**

**Admission:** Program faculty will begin reviewing application materials after February 1 and will continue to review materials until the enrollment is reached or June 1, which ever comes first. Because maximum student enrollment in the exercise science and sport psychology programs is limited, all applicants are strongly encouraged to submit application

materials by February 1. The exercise science area accepts students every year. For sport psychology, 3-5 applicants are accepted in the fall quarter of odd-numbered years.

Applicants to the sport psychology program are admitted based on specific qualifications that can be found on the department's website.

**Specific Test Requirements:** Graduate Record Exam, General Test; applicants with advanced degrees are not required to submit GRE scores.

**Deadlines:** Please see Graduate School deadlines.

**TA Deadlines:** To receive full consideration for a graduate teaching assistantship, applicants should have their application materials submitted by February 1.

**Supporting Materials:**

- Students must submit a written statement of purpose outlining areas of interest, goals for graduate study and future career plans relating to the degree.

**Program Requirements (45-48 credits)**

- Basic Requirements:** (13-16)
    - KIN 506 - Research Design in Human Movement and Performance
    - KIN 520 - Readings in Human Movement and Performance
    - KIN 690 - Thesis
  - Required Courses:** (16)
    - KIN 541 - Foundations and Ethics of Sport Psychology
    - KIN 542 - Seminar in Sport Sociology
    - KIN 551 - Applied Sport and Exercise Psychology
    - KIN 592 - Internship
  - Electives:** 16 credits (at least 6 credits required from psychology)
    - KIN 502 - Research Topics in Human Movement and Performance
    - KIN 507 - Motor Control
    - KIN 511 - Physical Activity and Hypokinetic Diseases
    - KIN 513 - Exercise Prescription and Programming
    - KIN 533 - Cardiovascular Physiology
    - KIN 540 - Applied Exercise Physiology
    - KIN 543 - Biomechanical Analysis of Human Movement
    - KIN 544 - Biomechanics of the Musculoskeletal System
    - PSY 502 - Personality and Psychopathology
    - PSY 503 - Cognition
    - PSY 504 - Lifespan Psychological Development
    - PSY 505 - Social Psychology
    - PSY 512 - Correlation Methods and Data Analysis
    - PSY 543 - Seminar in Cognition
    - PSY 544 - Seminar in Developmental Psychology
    - PSY 546 - Seminar in Social Psychology
    - PSY 554 - Standardized Tests
- 400 level courses selected under departmental advisement (maximum 10 credits).

## **Political Science**

### **Introduction**

Politics and government affect the lives of all of us. What we do, and what we think, is affected by the decisions and actions of state, local and national governmental institutions and political leaders. The objectives and policies of foreign countries also can affect our daily lives, particularly during periods of international tension and war.

Political science is one of the oldest fields of academic inquiry. Social ideals and their realization through law were systematically studied in ancient Greece. In an increasingly interdependent world, the study of politics and government has flourished as the relations between persons, groups and nations have become more complex, and questions of freedom and authority have challenged every citizen. Modern political science is equally concerned with questions of political philosophy and with the pursuit of social scientific research. These concerns are reflected in a broad and diverse curriculum.

The political science faculty is committed to the belief that understanding politics and government is essential to a well-educated person, vital to democratic citizenship, indispensable to effective public service, and critical to the maintenance and ethical progress of a free society.

The political science curriculum prepares students for careers in public service-related occupations in both government and business. Many students majoring in political science go on to law school, graduate school and into the professions; many others who are not majors take political science courses as an essential part of their liberal arts education.

### **Faculty**

**SARA J. WEIR** (1989) Chair. Associate Professor. BA, MA, Ball State University; PhD, University of Washington.

**AMIR ABEDI** (2003) Associate Professor. BA, University of Hanover, Germany; MA, PhD, University of British Columbia.

**DONALD K. ALPER** (1971) Professor. BA, MA, California State University- Long Beach; PhD, University of British Columbia.

**BIDISHA BISWAS** (2006) Associate Professor. BA, Hindu College, University of New Delhi; MA, PhD, University of Maryland.

**PAUL CHEN** (2002) Associate Professor. BA, University of California-Berkeley; JD, Southwestern University School of Law; MA, Biola University; MA, PhD, University of Southern California.

**SHIRIN DEYLAMI** (2008) Assistant Professor BA University of California, Santa Cruz; MA University of North Carolina; PhD University of Minnesota

**TODD A. DONOVAN** (1991) Professor. BA, California State University, Sacramento; MA, PhD, University of California-Riverside.

**CYNTHIA HORNE** (2006) Associate Professor. BA, Dartmouth College; MS, Georgetown University; PhD, University of Washington.

**VICKI HSUEH** (2003) Associate Professor. BA, Williams College; MA, PhD, Johns Hopkins University.

**VERNON D. JOHNSON** (1986) Professor. BA, Akron University; MA, PhD, Washington State University.

**KRISTEN D. PARRIS** (1991) Associate Professor. BA, MA, PhD, Indiana University.

**DEBRA J. SALAZAR** (1990) Professor. BS, University of California-Berkeley; MS, PhD, University of Washington.

**SARA SINGLETON** (2001) Associate Professor. BA, MA, PhD, University of Washington.

The department's faculty and staff invite questions about the program and its career potential. Persons seeking more information should visit the department in Arntzen Hall or call 360-650-3469. Written inquiries should be directed to the Department of Political Science, Western Washington University, Bellingham, Washington 98225-9082.

### **Declaration Process**

Students are eligible to declare the political science major and any of the majors combined with political science if they have completed any three of the following core courses with an average grade of 2.7 or above: PLSC 250, 261, 271,

291, or the equivalent course(s) at another college or university. Due to high student demand and limited capacity, immediate access to specific courses cannot be guaranteed. Priority is given to seniors and juniors who need courses to graduate. Students who have no transfer credits for political science course work, stop by the political science department office, Arntzen Hall 415, with an unofficial Western Washington University transcript showing the three completed courses from the list above. If you have transfer credits for political science coursework from another institution, also bring an unofficial transcript from that institution showing the political science courses completed.

## **Other Departmental Information**

### *The Curricula*

The political science department offers several curricula leading to the Bachelor of Arts, the Master of Arts, and the Master of Arts option in political science/environmental studies. These curricula are listed below, and their details are set forth following the list of the department faculty.

- Bachelor of Arts
  - *Majors:* political science, political science/economics, politics/philosophy/economics, political science/social studies.
  - *Minors:* political science, Canadian-American studies, East Asian studies
- Master of Arts in Political Science
- Master of Arts in Political Science (Environmental Studies)

### *Mid-Program Checkpoint*

To finish the political science major in a timely fashion, students should try, by the end of their sophomore year, to complete the core courses (and necessary prerequisites) needed for the advanced courses in the three fields within the major. The core courses for the three fields are:

- *American Politics and Public Policy:* PLSC 250
- *Political Theory:* PLSC 261
- *International and Comparative Politics:* PLSC 271 or PLSC 291

### *Internships*

Students are encouraged to obtain internships in state, local or national government agencies, political parties and interest groups. Initial contact with the intern coordinator should usually be at least one quarter in advance of registration if the student is interested in a local internship. In the case of state and federal agencies, longer lead times are necessary, and contact with the intern coordinator should be at least two quarters in advance of registration. Credit may be divided over two quarters where the internship placement requires a commitment of more than 10 weeks. No more than 10 credits of internship and independent study, combined, may be counted toward the major.

To qualify for an internship, requirements are:

- Completion of the core field requirements for the political science major (PLSC 250, PLSC 261, PLSC 271 or PLSC 291)
- Completion of at least one advanced course in the field of study to which the internship most closely relates
- Acceptability to the agency

### *Independent Study*

Students wishing to pursue research and directed reading in areas of the discipline where they have had prior course work may apply to do independent study projects. Enrollment is with the consent of the instructor and the chair. No more than 10 credits of independent study and internship, combined, may be counted toward the major.

## **Undergraduate Degrees and Programs**

Political Science, BA  
Political Science/Social Studies, BA  
Politics/Philosophy/Economics, BA  
Economics/Political Science, BA  
Political Science Minor

## **Graduate Degrees and Programs**

Political Science, Environmental Studies, Thesis, MA  
Political Science, Thesis, MA

## **Economics/Political Science, BA (also see Economics Department)**

**94-96 credits**

### **Introduction**

This major is available for students who have a strong interest in both of these disciplines and whose career interests lie, for example, in government or the legal profession.

### **Admission and Declaration Process**

Admission and Major Declaration (see Political Science department page)

### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

### **Requirements**

- DSCI 205 - Business Statistics or equivalent
- ECON 206 - Introduction to Microeconomics
- ECON 207 - Introduction to Macroeconomics
- ECON 303 - The History of Economic Thought
- ECON 306 - Intermediate Microeconomics
- ECON 307 - Intermediate Macroeconomics
- ECON 310 - Public Finance
- PLSC 250 - The American Political System
- PLSC 261 - Introduction to Political Theory
- PLSC 372 - International Political Economy
- PLSC 462 - The Rise of Modern Political Economy
- One course from:
  - MATH 124 - Calculus and Analytic Geometry I
  - MATH 157 - Calculus With Applications to Business and Economics or equivalent
- One course from:

- PLSC 271 - Introduction to International Relations
- PLSC 291 - Introduction to Comparative Politics
  - One Course from:
- ECON 491 - Issues in Political Economy (or approved alternative)
- PLSC 491 - Issues in Political Economy
  - 12 additional credits in upper-division economics courses, under departmental advisement
  - 9 additional credits from the American Politics and Public Policy field
  - 4 additional credits from the Political Theory field
  - 8-9 additional credits in upper-division political science electives, to complete the program
  - Take one Communication Focus (CF) course and a minimum of three writing proficiency points in approved upper-division writing proficiency courses (WP-3 points) at WWU with a minimum grade of C-. The CF course must be taken within the College of Business and Economics, while the WP requirement can be met with courses from any of the combined major departments. These requirements can be completed as part of the above required and elective credits. Consult the Timetable of Classes for the specific course sections that fulfill the CF and WP requirements.

## Political Science Minor

**25 credits in political science courses**

### Admission and Declaration Process

Declaration of Major ([see Political Science department page](#))

### Grade Requirements

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

### Requirements

Note: PLSC 101 does not count toward minor.

- Two courses from:
  - PLSC 250 - The American Political System
  - PLSC 261 - Introduction to Political Theory
  - PLSC 271 - Introduction to International Relations
  - PLSC 291 - Introduction to Comparative Politics
- At least 10 credits of upper-division courses in political science
- No more than 12 transfer credits in political science courses will be accepted toward the minor

## Political Science, BA

**60 credits**

### Admission and Declaration Process

Declaration of Major ([see Political Science department page](#))

## **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

## **Requirements**

PLSC 101, 366, 417e, 443, 444, 445, 447, 448, and 491 credits apply toward the major but do not count in any field. No more than 10 credits of internship or independent study may be counted toward the major.

- Students select a first, second and third field of study from the three fields listed below
  - American Politics and Public Policy
  - Political Theory
  - International and Comparative Politics
- Core courses in each of the three fields are required. They are:
  - PLSC 250 for American Politics and Public Policy
  - PLSC 261 for Political Theory
  - PLSC 271 or PLSC 291 for International and Comparative Politics
- In the three fields, the students must complete:
  - 15 credits in the first field plus required core course
  - 10 credits in the second field plus required core course
  - 4 credits in the third field plus required core course
  - 3 credits of senior seminar, PLSC 417

Courses in the three fields are organized as follows:

- American Politics and Public Policy:*
  - PLSC 250 - The American Political System
  - PLSC 311 - Introduction to Law and Judicial Process
  - PLSC 313 - Law and Society
  - PLSC 314 - U.S. Supreme Court
  - PLSC 345 - Women and Politics
  - PLSC 346 - Politics of Inequality
  - PLSC 347 - Race, Politics and Public Policy
  - PLSC 353 - State and Local Politics
  - PLSC 414 - Constitutional Law I: National Powers
  - PLSC 415 - Constitutional Law II: Individual Rights
  - PLSC 417c
  - PLSC 420 - Environmental Politics
  - PLSC 421 - Lesbian, Gay, Bisexual, Transgendered Politics
  - PLSC 423 - The American Presidency
  - PLSC 427 - Policy-Making and Policy Analysis
  - PLSC 449 - Politics and Social Change
  - PLSC 450 - Parties, Campaigns and Elections
  - PLSC 467 - Philosophical and Ethical Issues in Law
  - PLSC 489 - Managing an International Ecosystem
- Political Theory:*
  - PLSC 261 - Introduction to Political Theory
  - PLSC 361 - Classical Political Thought
  - PLSC 362 - Political Theory: Renaissance and Modern
  - PLSC 417d

- PLSC 462 - The Rise of Modern Political Economy
- PLSC 463 - American Political Thought
- PLSC 464 - Contemporary Political Theory
- PLSC 469 - Feminist Political Theory
- PLSC 480 - Politics, Government and Religion
- PLSC 493 - Issues in Political Theory
- International and Comparative Politics:*
- PLSC 271 - Introduction to International Relations
- PLSC 291 - Introduction to Comparative Politics
- PLSC 301 - The British Parliamentary System
- PLSC 302 - Western Europe
- PLSC 307 - East Asia
- PLSC 308 - African Political Systems
- PLSC 310 - The International Relations of East Asia
- PLSC 370 - Global Issues in International Politics
- PLSC 372 - International Political Economy
- PLSC 376 - American Foreign Policy
- PLSC 390 - The Politics of Development
- PLSC 399 - The Politics of Democratization
- PLSC 402 - Regional European Society and Politics
- PLSC 403 - The European Union and the Process of European Integration
- PLSC 406 - Canadian Government and Politics
- PLSC 417a
- PLSC 417b
- PLSC 430 - Modern Chinese Politics
- PLSC 436 - Managing Environmental Commons
- PLSC 453 - Comparative Electoral Systems

## Departmental Honors

### *Entrance requirements*

Students must satisfy the following eligibility requirements **prior** to registration for PLSC 496 Honors Tutorial. The student must:

- Be a declared political science major with senior standing
- Have a 3.50 GPA in all upper-division political science courses
- Have completed **both** of the following:
  - Core requirements for the major (PLSC 250, PLSC 261, and PLSC 271 or 291)
  - Credit requirements in the area most closely related to the thesis topic
- Have completed **one** of the following:
  - Two years of foreign language with a B (3.0) or better GPA; the Honors advisor, at his or her discretion, may choose to waive this requirement for students who demonstrate a satisfactory reading knowledge of the language
  - PLSC 366 Research in Politics, or an equivalent class in social statistics under advisement, and earn a grade of B (3.0) or better
  - Submit the completed Honors Contract to the political science department office with proper faculty signatures

### *Completion Requirements*

To graduate with honors in political science the student must:

- Maintain a 3.50 grade point average in all upper-division political science courses
- Complete 4-10 credits of PLSC 496 Honors Tutorial over two quarters under the supervision of a faculty thesis advisor
- Give an oral presentation of the thesis in arrangement with the faculty thesis advisor
- Submit a copy of the honors thesis to the political science department office before the final grade is assigned

## **Political Science/Social Studies, BA**

**92-94 credits**

Program Advisor: Dr. Sara Weir

### **Introduction**

To receive a recommendation for state of Washington certification, students must complete the "teacher certification" program, including the contents method course SEC 426, which is offered by the Department of Secondary Education as 1) part of the undergraduate Bachelor of Arts degree, or 2) as a post-baccalaureate program, or 3) as a part of the Master's in Teaching degree. See the Secondary Education section of this catalog for program admission, completion, and teacher certification requirements. Completion of this combined major leads to endorsement in social studies.

### **Admission and Declaration Process**

Declaration of Major ([see Political Science department page](#))

### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors. Courses required for a state teaching endorsement must be completed with a grade of C (2.0) or better

### **Requirements**

- EGEO 201 - Human Geography
- HIST 103 - Introduction to American Civilization: American History to 1865
- HIST 104 - Introduction to American Civilization: American History Since 1865
- HIST 391 - History of the Pacific Northwest
- PLSC 250 - The American Political System
- One course from:
  - ANTH 201 - Introduction to Cultural Anthropology
  - SOC 221 - Introduction to Population Issues
  - SOC 251 - Sociology of Deviant Behavior
  - SOC 255 - Social Organization of Criminal Justice
  - SOC 260 - The Family in Society
  - SOC 268 - Gender and Society
- One course from:
  - ECON 206 - Introduction to Microeconomics
  - ECON 446 - Economics for the Teacher (preferred)
- One course from:
  - ECON 207 - Introduction to Macroeconomics
  - ECON 447 - Methods for Teaching About the National Economy in the Public Schools (preferred)

- One course from:
  - EGEO 250 - Geographic Information Systems Survey or 2 additional geography credits
- 18 additional credits from:
  - PLSC 250 - The American Political System
  - PLSC 311 - Introduction to Law and Judicial Process
  - PLSC 313 - Law and Society
  - PLSC 314 - U.S. Supreme Court
  - PLSC 345 - Women and Politics
  - PLSC 346 - Politics of Inequality
  - PLSC 347 - Race, Politics and Public Policy
  - PLSC 353 - State and Local Politics
  - PLSC 414 - Constitutional Law I: National Powers
  - PLSC 415 - Constitutional Law II: Individual Rights
  - PLSC 417c
  - PLSC 420 - Environmental Politics
  - PLSC 421 - Lesbian, Gay, Bisexual, Transgendered Politics
  - PLSC 423 - The American Presidency
  - PLSC 427 - Policy-Making and Policy Analysis
  - PLSC 449 - Politics and Social Change
  - PLSC 450 - Parties, Campaigns and Elections
  - PLSC 467 - Philosophical and Ethical Issues in Law
  - PLSC 489 - Managing an International Ecosystem
- 8 credits from:
  - PLSC 261 - Introduction to Political Theory
  - PLSC 361 - Classical Political Thought
  - PLSC 362 - Political Theory: Renaissance and Modern
  - PLSC 417d
  - PLSC 462 - The Rise of Modern Political Economy
  - PLSC 463 - American Political Thought
  - PLSC 464 - Contemporary Political Theory
  - PLSC 469 - Feminist Political Theory
  - PLSC 480 - Politics, Government and Religion
  - PLSC 493 - Issues in Political Theory
- 8 credits from:
  - PLSC 271 - Introduction to International Relations
  - PLSC 291 - Introduction to Comparative Politics
  - PLSC 301 - The British Parliamentary System
  - PLSC 302 - Western Europe
  - PLSC 307 - East Asia
  - PLSC 308 - African Political Systems
  - PLSC 310 - The International Relations of East Asia
  - PLSC 370 - Global Issues in International Politics
  - PLSC 372 - International Political Economy
  - PLSC 376 - American Foreign Policy
  - PLSC 390 - The Politics of Development
  - PLSC 399 - The Politics of Democratization
  - PLSC 402 - Regional European Society and Politics

- PLSC 403 - The European Union and the Process of European Integration
- PLSC 406 - Canadian Government and Politics
- PLSC 417a
- PLSC 417b
- PLSC 430 - Modern Chinese Politics
- PLSC 436 - Managing Environmental Commons
- PLSC 453 - Comparative Electoral Systems
  - Balance of credits in political science electives
  - Three additional history courses (minimum 12 credits) distributed as follows:
    - One course in Ancient
    - One course from two of the following areas:
      - Europe
      - East and South Asia
      - Africa and Middle East
      - Western Hemisphere (outside U.S.)

## Departmental Honors

### *Entrance requirements*

Students must satisfy the following eligibility requirements **prior** to registration for PLSC 496 Honors Tutorial. The student must:

- Be a declared political science major with senior standing
- Have a 3.50 GPA in all upper-division political science courses
- Have completed **both** of the following:
  - Core requirements for the major (PLSC 250, PLSC 261, and PLSC 271 or 291)
  - Credit requirements in the area most closely related to the thesis topic
- Have completed **one** of the following:
  - Two years of foreign language with a B (3.0) or better GPA; the Honors advisor, at his or her discretion, may choose to waive this requirement for students who demonstrate a satisfactory reading knowledge of the language
  - PLSC 366 Research in Politics, or an equivalent class in social statistics under advisement, and earn a grade of B (3.0) or better
- Submit the completed Honors Contract to the political science department office with proper faculty signatures

### *Completion Requirements*

To graduate with honors in political science the student must:

- Maintain a 3.50 grade point average in all upper-division political science courses
- Complete 4-10 credits of PLSC 496 Honors Tutorial over two quarters under the supervision of a faculty thesis advisor
- Give an oral presentation of the thesis in arrangement with the faculty thesis advisor
- Submit a copy of the honors thesis to the political science department office before the final grade is assigned

# **Politics/Philosophy/Economics, BA (also see Economics Department)**

**83 credits**

## **Introduction**

A multidisciplinary major designed to provide a solid grounding in disciplines that are critical to decision making and leadership in economic, political and social service institutions.

## **Admission and Declaration Process**

Admission and Major Declaration ([see Political Science department page](#))

## **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

## **Requirements**

- ECON 206 - Introduction to Microeconomics
- ECON 207 - Introduction to Macroeconomics
- ECON 303 - The History of Economic Thought
- ECON 310 - Public Finance
- PHIL 102 - Introduction to Logic
- PHIL 112 - Introduction to Philosophy: Moral Issues
- PHIL 114 - Introduction to Philosophy: Knowledge and Reality
- PHIL 310 - Theory of Knowledge
- PHIL 320 - Ethical Theory I
- PHIL 350 - Political Philosophy
- PHIL 360 - Society, Law and Morality
- PHIL 364 - History of Philosophy: Ancient Philosophy
- PHIL 420 - Ethical Theory II
- PLSC 250 - The American Political System
- PLSC 261 - Introduction to Political Theory
- One course from:
  - PLSC 271 - Introduction to International Relations
  - PLSC 291 - Introduction to Comparative Politics
    - 12 additional upper-division economics credits
    - 9 additional credits from the American Politics and Public Policy field
    - 4 additional credits from the Political Theory field
  - Take one Communication Focus (CF) course and a minimum of three writing proficiency points in approved upper-division writing proficiency courses (WP-3 points) at WWU with a minimum grade of C-. The CF course must be taken within the College of Business and Economics, while the WP requirement can be met with courses from any of the combined major departments. These requirements can be completed as part of the above required and elective credits. Consult the Timetable of Classes for the specific course sections that fulfill the CF and WP requirements.

## **Political Science, Environmental Studies, Thesis, MA**

### **Graduate Faculty**

**Abedi, Amir**, PhD, comparative politics, European politics, parties and party systems.

**Alper, Donald K.**, PhD, Canadian-politics, Canada-U.S. relations, American politics.

**Biswas, Bidisha**, PhD, international relations, ethnic and civic conflicts, terrorism, diaspora politics.

**Chen, Paul**, PhD, law, courts, politics and society, U.S. constitutional law, the Supreme Court.

**Deylami, Shirin**, PhD. Islamic thought, theories of globalization, religion and politics, contemporary political thought

**Donovan, Todd A.**, PhD, American, state and local, elections and representation.

**Horne, Cynthia**, PhD, international political economy, comparative political economy, international relations, comparative politics, post-Soviet politics and economics.

**Hsueh, Vicki**, PhD, political theory, history of political thought, race and ethnicity, colonialism and post-colonialism.

**Johnson, Vernon D.**, PhD, Politics of development, African politics, race and public policy.

**Parris, Kristen D.**, PhD, comparative politics, East Asian politics, development.

**Salazar, Debra J.**, PhD, environmental politics, social movements, statistics.

**Singleton, Sara**, PhD, American politics, environmental politics, public policy.

**Weir, Sara J.**, PhD, American politics, public policy, gender issues.

Curriculum Coordinator: Dr. Sara Singleton, Political Science, Arntzen Hall 420.

### **Program Description**

The political science/environmental studies curriculum is a joint offering of the Political Science Department and Huxley College of the Environment. The program emphasizes environmental policy and especially the political, economic and social factors which affect environmental policy-making processes.

### **Admission and prerequisites**

Admission requirements and prerequisites are the same as for the MA in Political Science program with additional consideration given to applicants who have a background in environmental studies, natural science, or a related field.

### **Application Information**

**Admit Quarter:** New students will be admitted to this program fall quarter only. Admission decisions normally will be made no later than March 15. Students should specify their potential thesis topics, and up to two prospective faculty advisors.

**Deadlines:** To ensure consideration for fall quarter, complete applications must be received by February 1.

**Materials supporting graduate applications:** All applicants must include a two-page statement of purpose. This statement should explain why the applicant wishes to pursue graduate work in political science. It should also indicate which track and/or field of concentration the applicant intends to pursue. Students should specify their potential theses topics and list up to two prospective faculty advisors. Students are admitted into the program upon agreement of a faculty advisor. See Political Science Faculty research profiles at [http://www.wwu.edu/depts/polsci/pdfs/Graduate\\_Faculty\\_Research\\_Profiles.pdf](http://www.wwu.edu/depts/polsci/pdfs/Graduate_Faculty_Research_Profiles.pdf)

**Writing Sample.** Applicants must submit a writing sample, such as a research paper, or a similar paper demonstrating writing ability.

**TA deadline:** Preferred consideration will be given to applications completed by February 1.

**Specific Test Requirements:** Graduate Record Examination, General Test. Applicants with advanced degrees are not required to submit GRE scores.

### Program Requirements (45 credits)

- PLSC 501 - Political Science as a Discipline
- PLSC 502 - Research Techniques in Political Science (a graduate course in another department, as determined by the political science department, may be substituted for 502),
- PLSC 524 - Environmental Politics and Policy
  - The core course from one of the fields of concentration:
    - American Politics and Policy:
- PLSC 503 - Public Policy and Administration
- PLSC 540 - Seminar in the Political Process
  - Comparative Politics:
- PLSC 505 - Seminar in Comparative Government and Politics
  - Political Theory:
- PLSC 560 - Seminar in Political Theory
  - At least one other 500-level course in the same field of concentration
  - Interdisciplinary environmental studies field to be constructed by the student in consultation with environmental studies curriculum coordinator; must include three environmental studies courses
- PLSC 690 - Thesis/Thesis Research or ESTU 690 - Thesis Research
  - Oral defense of the thesis proposal and of the completed thesis
  - Electives: Courses selected under advisement from 400- and 500-level courses in political science and supporting disciplines; no more than 10 credits may come from 400-level courses, and no more than 10 credits of PLSC 500 (directed independent study) are allowed; all elective courses must be approved by the student's program committee.

## Political Science, Thesis, MA

### Graduate Faculty

**Abedi, Amir**, PhD, comparative politics, European politics, parties and party systems.

**Alper, Donald K.**, PhD, Canadian-politics, Canada-U.S. relations, American politics.

**Biswas, Bidisha**, PhD, international relations, ethnic and civic conflicts, terrorism, diaspora politics.

**Chen, Paul**, PhD, law, courts, politics and society, U.S. constitutional law, the Supreme Court.

**Deylami, Shirin**, PhD, Islamic thought, theories of globalization, religion and politics, contemporary political thought

**Donovan, Todd A.**, PhD, American, state and local, elections and representation.

**Horne, Cynthia**, PhD, international political economy, comparative political economy, international relations, comparative politics, post-Soviet politics and economics.

**Hsueh, Vicki**, PhD, political theory, history of political thought, race and ethnicity, colonialism and post-colonialism.

**Johnson, Vernon D.**, PhD, Politics of development, African politics, race and public policy.

**Parris, Kristen D.**, PhD, comparative politics, East Asian politics, development.

**Salazar, Debra J.**, PhD, environmental politics, social movements, statistics.

**Singleton, Sara**, PhD, American politics, environmental politics, public policy.

**Weir, Sara J.**, PhD, American politics, public policy, gender issues.

Program Advisor: Dr. Amir Abedi, Arntzen Hall 407

## **Goals**

The program prepares students for:

- Employment in management positions in government, nonprofits and the private sector
- Admission to PhD programs in political science or other social sciences
- Positions in public policy institutes and think tanks

The Master of Arts program offers three fields of concentration: American politics and policy, comparative politics, and political theory. Students choose a major and minor field of concentration for their program.

Students also may specialize in the environmental policy program, which is jointly offered with Huxley College of the Environment. This specialization is intended for students interested in developing a cognate program involving one field of study (of the three offered) in political science and a field in environmental policy-making studies.

## **Admissions and Prerequisites**

Students who meet the requirements of the Graduate School and who show evidence of strong academic performance and scholarly potential are invited to apply. Admission preference is given to students with course work in political science or related social sciences. Entering students should have completed undergraduate course work in American political processes, as well as course work in social science methodology equivalent to PLSC 366, Research in Politics. Any deficiencies must be satisfied during the student's first quarter if possible.

## **Application Information**

**Admit Quarter:** New students will be admitted to this program fall quarter only. Admission decisions normally will be made no later than March 15. Students should specify their potential thesis topics, and up to two prospective faculty advisors.

**Deadlines:** To ensure consideration for fall quarter, complete applications must be received by February 1.

**Materials supporting graduate applications:** All applicants must include a two-page statement of purpose. This statement should explain why the applicant wishes to pursue graduate work in political science. It should also indicate which track and/or field of concentration the applicant intends to pursue. Students should specify their potential theses topics and list up to two prospective faculty advisors. Students are admitted into the program upon agreement of a faculty advisor. See Political Science Faculty research profiles at  
[http://www.wwu.edu/depts/polsci/pdfs/Graduate\\_Faculty\\_Research\\_Profiles.pdf](http://www.wwu.edu/depts/polsci/pdfs/Graduate_Faculty_Research_Profiles.pdf)

**Writing Sample.** Applicants must submit a writing sample, such as a research paper, or a similar paper demonstrating writing ability.

**TA deadline:** Preferred consideration will be given to applications completed by February 1.

**Specific Test Requirements:** Graduate Record Examination, General Test. Applicants with advanced degrees are not required to submit GRE scores.

## **Program Requirements: (45 credits)**

All students are required to declare a major field and a minor field of concentration and take the core course in each. The student must then complete at least two additional 500-level courses in the major field and one more 500-level course in the minor field, as outlined below:

- PLSC 501 - Political Science as a Discipline
- PLSC 502 - Research Techniques in Political Science (a graduate course in another department, as determined by the political science department, may be substituted for 502)

- Two of the following courses, one from the major field and one from the minor field of concentration:
  - American Politics and Policy:
    - PLSC 503 - Public Policy and Administration
    - PLSC 540 - Seminar in the Political Process
  - Comparative Politics:
    - PLSC 505 - Seminar in Comparative Government and Politics
    - Political Theory
      - PLSC 560 - Seminar in Political Theory
      - At least two additional 500-level political science courses in the major field of concentration
      - At least one 500-level political science course in the minor field
  - PLSC 690 - Thesis/Thesis Research (1-9 credits)
    - Oral defense of the thesis proposal and of the completed thesis
    - Electives: Courses selected under advisement from 400- and 500-level courses in political science and supporting disciplines; no more than 10 credits may come from 400-level courses, and no more than 10 credits of PLSC 500 (directed independent study) are allowed; all elective courses must be approved by the student's program committee

# **Psychology**

## **Introduction**

Most of the major problems facing the people of the world today — hunger, overpopulation, the continuing threat of war, prejudice, pollution, drug addiction — are people problems; people have created them, and it will be people who must and will find solutions to them. Psychology, as the scientific study of mind and behavior, will help provide the answers to many of these pressing problems.

Psychology's attempt to understand the human condition takes many approaches. Some psychologists study brain chemistry and its relation to behavior, while others study the behavior of individuals in groups (for example, in a religious cult). Still others are engaged in providing counseling or psychotherapy to people who are mentally ill or who are having difficulty in coping with the demands of life. With a faculty of 30 men and women, all of whom hold doctoral degrees, the department is able to offer a program of study which provides a solid foundation in the general concepts and methods of psychology, as well as courses and programs for students in many of the more specialized areas of this large and exciting field.

The Department of Psychology has limited the number of credits required for a major in psychology so that students may develop minors or a second major in another department. The core program in general psychology is designed to ensure that all majors will develop a sound basic background in psychology which will provide effective preparation for advanced study as well as contribute significantly to a liberal education.

A very important kind of learning takes place when students become personally involved in psychological research. Students are encouraged to become active participants in their own research projects or to cooperate with a faculty member in his or her ongoing research. It also is recommended that students seek participation in one of the off-campus field experiences which are available.

In addition to its undergraduate offerings, the department also offers three graduate programs, an MS in experimental psychology with an optional specialization in measurement, evaluation, and statistical analysis (MESA); an MS in mental health counseling; and an MEd in school counseling. Complete descriptions of these programs may be found in the Graduate School section of this catalog.

## **Faculty**

**LAWRENCE A. SYMONS** (2000) Chair and Associate Professor. BA, MA, University of British Columbia; PhD, University of Western Ontario.

**ROBINDER P. BEDI** (2008) Assistant Professor BA, MA, Simon Fraser University, PhD, University of British Columbia

**CHRISTINA A. BYRNE** (1997) Associate Professor. BS, Virginia Commonwealth University; MS, PhD, University of Georgia.

**ALEXANDER M. CZOPP** (2008) Assistant Professor BA, St. Mary's College of Maryland, MS, PhD, University of Kentucky

**JENNIFER DEVENPORT** (2003) Associate Professor. BA, Boise State University; MS, PhD, Florida International University; MLS, University of Nebraska.

**DALE L. DINNEL** (1986) Professor. BS, MAT, MA, PhD, University of Nebraska.

**JANET M. FINLAY** (1999) Associate Professor. BS, University of Victoria; PhD, University of British Columbia.

**DEBORAH C. FORGAYS** (1994) Professor. BA, MEd, PhD, University of Vermont.

**JAMES GRAHAM** (2006) Associate Professor. BA, Purdue University; MA, Pepperdine University; PhD, Texas A&M University.

**REBECCA GOODVIN** (2007) Assistant Professor. BA, Gonzaga University; MA, PhD, University of Nebraska.

**JEFFREY W. GRIMM** (2001) Professor. BA, Whitman College; MS, PhD, Washington State University.

**DIANA GRUMAN** (2003) Associate Professor. BA, Whitman College; MEd, Western Washington University; PhD, University of Washington.

**TODD HASKELL** (2006) Assistant Professor. BA, Dartmouth College; PhD, University of Southern California.

**IRA E. HYMAN, JR.** (1991) Professor. BA, Duke University; MA, PhD, Emory University.

**KELLY J. JANTZEN** (2007) Assistant Professor. BA, PhD, Simon Fraser University.

**MCNEEL GORDON JANTZEN** (2009) Assistant Professor. BA, MA, PhD, Florida Atlantic University.

**JEFF KING** (2007) Associate Professor. BA, University of Oklahoma; MS, PhD, Pennsylvania State University.

**BARBARA J. LEHMAN** (2005) Assistant Professor. BA, Drew University; MA, PhD, Claremont Graduate University.

**KRISTI M. LEMM** (2000) Associate Professor. BA, Columbia University; MS, PhD, Yale University.

**ARLEEN C. LEWIS** (1987) Professor. BA, Utah State University; PhD, University of Nebraska.

**MICHAEL J. MANA** (1999) Associate Professor. BS, Washington State University; MA, PhD, University of British Columbia.

**LESLIE C. McDONALD-MISZCZAK** (1997) Associate Professor. BA, University of Alberta; MA, PhD, University of Victoria.

**KATE C. MCLEAN** (2007) Associate Professor. BA, Mills College; PhD, University of California-Santa Cruz.

**MERLE M. PRIM** (1969) Professor. BA, University of Washington; MS, San Diego State College; PhD, Washington State University.

**ETHAN R. REMMEL** (2002) Associate Professor. BS, Yale University; MA, San Francisco State University; PhD, Stanford University.

**JACQUELINE ROSE** (2008) Assistant Professor. BS, University of Calgary; MA, Queen's University; PhD, University of British Columbia

**TINA DU ROCHER SCHUDLICH** (2006) Assistant Professor. BA, University of Michigan; MA, PhD, University of Notre Dame.

**CRISTINA SAMPAIO** (2006) Assistant Professor. PhD, University of Illinois at Urbana-Champaign.

**DAVID N. SATTLER** (2000) Professor. BA, San Diego State University; MA, PhD, Michigan State University.

**JOSEPH E. TRIMBLE** (1978) Professor. BA, Waynesburg College; MA, University of New Hampshire; PhD, University of Oklahoma; RF, Radcliffe Institute, Harvard University.

### **Declaration Process**

Students wishing to declare a major in psychology must have:

1. completed at least 75 credits;
2. successfully completed or be currently enrolled in Psy 301;
3. achieved a Western GPA (based on at least 12 credits) of 2.70 or higher. A GPA of 3.0 in all psychology courses taken at Western, including PSY 301, may substitute for the overall 2.70 GPA.

### **Other Departmental Information**

#### *Mid-Program Checkpoint*

Students seeking to complete a BA in psychology within four years should have completed an introductory psychology class (e.g., PSY 101 or a comparable course at another school) and 15 other credits in psychology by the start of their junior year.

### **Undergraduate Degrees and Programs**

Behavioral Neuroscience, BA  
Psychology, BA  
Psychology: Human Development — Elementary, BAE  
Psychology Minor  
Sport Psychology Minor

### **Graduate Degrees and Programs**

Mental Health Counseling, Thesis, MS  
Mental Health Counseling, Non-Thesis, MS  
Psychology - Experimental, Thesis, MS

School Counselor, Thesis, MEd  
School Counselor, Non-Thesis, MEd

## Behavioral Neuroscience, BA

**108-109 credits**

### Introduction

This interdisciplinary program provides students with the specialized preparation and technological sophistication critical for success in a variety of graduate-training programs, including neurosciences, psychology, pharmacology, mental health, and neurobiology; and health care, including medicine and dentistry. For those students who do not anticipate pursuing post-graduate education, the degree program provides an excellent platform for entry-level positions in such areas as biomedical research and the pharmaceutical industry.

### Grade Requirements

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

### Requirements

#### *Required Supporting Courses 24 credits*

- MATH 114 - Precalculus I
- CHEM 121 - General Chemistry I
- CHEM 122 - General Chemistry II
- CHEM 123 - General Chemistry III
- CHEM 251 - Elementary Organic Chemistry or equivalent

#### *Required Biology Courses 26 credits*

- BIOL 204 - Introduction to Evolution, Ecology and Biodiversity
- BIOL 205 - Introduction to Cellular and Molecular Biology
- BIOL 206 - Introduction to Organismal Biology
- BIOL 321 - Genetics
- BIOL 323 - Cell and Molecular Biology
- BIOL 432 - Evolutionary Biology

#### *Required Psychology Courses 39 credits*

- PSY 101 - Introduction to Psychology
- PSY 220 - Introduction to Behavioral Neuroscience
- PSY 301 - Overview of Research Methods
- PSY 303 - Research Methods and Statistical Analysis: Experimental Approaches
- PSY 319 - Cognitive Neuroscience
- PSY 320 - Topics in Behavioral Neuroscience
- PSY 323 - Psychopharmacology
- PSY 328 - Techniques in Behavioral Neuroscience

#### *Required Biology or Psychology Courses 4-5 credits*

One course from:

- BIOL 410 - Animal Behavior
- PSY 321 - Learning
- PSY 324 - Comparative Psychology

*Electives under advisement* 15 credits

- BIOL 322 - Genetics Lab
- BIOL 324 - Methods in Molecular Biology
- BIOL 325 - Ecology
- BIOL 410
- BIOL 434 - Population Genetics
- BIOL 445
- BIOL 445
- BIOL 467 - Comparative Vertebrate Physiology
- BIOL 468 - Comparative Vertebrate Physiology Laboratory
- BIOL 471 - Biochemistry I
- BIOL 472 - Biochemistry II
- BIOL 476 - The Structural Basis of Membrane Transport Proteins
- BIOL 482 - Developmental Biology of Animals
- BIOL 484 - Cell and Developmental Biology Laboratory
- BIOL 497
- One course from:
  - BIOL 300
- BIOL 395 - Biology Research Participation
- BIOL 400
- BIOL 494 - Biology Research
- BIOL 495 - Research Communication
- CHEM 375 - Elements of Biochemistry
- PSY 210 - Cognition
- PSY 302 - Research Methods and Statistical Analysis: Correlational Approaches
- PSY 310 - Sensation and Perception
- PSY 322 - Motivation
- PSY 327 - Cognitive Neuroscience Lab
- PSY 410 - Seminar in Cognitive Neuroscience
- PSY 420 - Seminar in Behavioral Neuroscience
- PSY 421 - Seminar in Learning
- PSY 422 - Seminar in Motivation
- PSY 424 - Seminar in Comparative Psychology
- PSY 428 - Advanced Techniques in Behavioral Neuroscience
- One course from:
  - PSY 300
  - PSY 400

**Additional Information**

A maximum combined total of 10 credits in PSY 300, 400 or BIOL 300, 395, 400, 494, 495 can be applied to the major.

Faculty Advisors: Biology: Roger Anderson, Heather Van Epps, Jose Serrano-Moreno; Psychology: Janet Finlay, Jeffrey Grimm, Kelly Jantzen, Mike Mana, Jacqueline Rose

## **Psychology Minor**

**24 credits**

### **Admission and Declaration Process**

Declaration of Major (see Psychology department page)

### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

### **Requirements**

- PSY 101 - Introduction to Psychology
- One course from:
- PSY 210 - Cognition
- PSY 220 - Introduction to Behavioral Neuroscience
- One course from:
- PSY 230 - Lifespan Developmental Psychology
- PSY 240 - Social Psychology
- PSY 250 - Introduction to Personality and Abnormal Psychology
- Electives under advisement

## **Psychology, BA**

**69 credits**

### **Admission and Declaration Process**

Declaration of Major (see Psychology department page)

### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

### **Requirements**

- PSY 101 - Introduction to Psychology
- PSY 210 - Cognition
- PSY 220 - Introduction to Behavioral Neuroscience
- PSY 230 - Lifespan Developmental Psychology
- PSY 240 - Social Psychology
- PSY 250 - Introduction to Personality and Abnormal Psychology
- PSY 301 - Overview of Research Methods
- PSY 302 - Research Methods and Statistical Analysis: Correlational Approaches
- PSY 303 - Research Methods and Statistical Analysis: Experimental Approaches
- One course from:

- PSY 310 - Sensation and Perception
- PSY 311 - Human Memory
- PSY 318 - Psychology of Language
- PSY 319 - Cognitive Neuroscience
- PSY 320 - Topics in Behavioral Neuroscience
- PSY 321 - Learning
- PSY 322 - Motivation
- PSY 323 - Psychopharmacology
- PSY 324 - Comparative Psychology
- One course from:
  - PSY 330 - Children Development
  - PSY 331 - Adult Development and Aging
  - PSY 332 - Adolescent Development
  - PSY 333 - Infant Development
  - PSY 340 - Environmental Psychology
  - PSY 341 - Psychology and Culture
  - PSY 342 - Social Cognition
  - PSY 343 - Social Processes
  - PSY 344 - Psychology and the Law
  - PSY 345 - Evolutionary Psychology
  - PSY 346 - Stereotyping, Prejudice, & Discrimination
  - PSY 351 - Abnormal Psychology
- One course from:
  - PSY 410 - Seminar in Cognitive Neuroscience
  - PSY 411 - Seminar in Cognition
  - PSY 420 - Seminar in Behavioral Neuroscience
  - PSY 421 - Seminar in Learning
  - PSY 422 - Seminar in Motivation
  - PSY 424 - Seminar in Comparative Psychology
- One course from:
  - PSY 430 - Seminar in Developmental Psychology
  - PSY 431 - Seminar in Adult Development and Aging
  - PSY 440 - Seminar in Environmental Psychology
  - PSY 441 - Seminar in Cross-Cultural Psychology
  - PSY 442 - Seminar in Social Psychology
  - PSY 451 - Seminar in Abnormal Psychology
- One course from:
  - PSY 481 - Seminar in History and Systems of Psychology
  - PSY 482 - Seminar in Psychological Theory

# **Psychology: Human Development — Elementary, BAE**

**49-54 credits**

## **Introduction**

Advisor: Dr. Tina Du Rocher Schudlich, Dr. Rebecca Goodvin

For students combining a psychology major with the elementary education program. This major satisfies the academic major requirement for teacher certification with an endorsement in elementary education and must be accompanied by the professional preparation program in elementary education. See the Elementary Education section of this catalog for program admission, completion, and teacher certification requirements.

## **Admission and Declaration Process**

Declaration of Major (see Psychology department page)

## **Grade Requirements**

A grade of C (2.0) or better is required for courses in the elementary education professional program and all courses required for the endorsement.

## **Requirements**

- PSY 101 - Introduction to Psychology
- One course from:
- PSY 210 - Cognition
- PSY 220 - Introduction to Behavioral Neuroscience
- One course from:
- PSY 240 - Social Psychology
- PSY 250 - Introduction to Personality and Abnormal Psychology
- EDUC 301 - Educational Psychology I: Development and Individual Differences
- EDUC 302 - Educational Psychology II: Motivation, Learning and Assessment
- PSY 301 - Overview of Research Methods
- Three courses from:
- PSY 302 - Research Methods and Statistical Analysis: Correlational Approaches
- PSY 303 - Research Methods and Statistical Analysis: Experimental Approaches
- PSY 305 - Psychological Tests and Measurement
- PSY 310 - Sensation and Perception
- PSY 311 - Human Memory
- PSY 318 - Psychology of Language
- PSY 319 - Cognitive Neuroscience
- PSY 320 - Topics in Behavioral Neuroscience
- PSY 322 - Motivation
- PSY 323 - Psychopharmacology
- PSY 324 - Comparative Psychology
- PSY 331 - Adult Development and Aging
- PSY 340 - Environmental Psychology
- PSY 341 - Psychology and Culture

- PSY 342 - Social Cognition
- PSY 343 - Social Processes
- PSY 344 - Psychology and the Law
- PSY 345 - Evolutionary Psychology
- PSY 351 - Abnormal Psychology
- PSY 359 - Introduction to School and Community Counseling
- PSY 375 - Health Psychology
- PSY 410 - Seminar in Cognitive Neuroscience
- PSY 411 - Seminar in Cognition
- PSY 420 - Seminar in Behavioral Neuroscience
- PSY 421 - Seminar in Learning
- PSY 422 - Seminar in Motivation
- PSY 424 - Seminar in Comparative Psychology
- PSY 430 - Seminar in Developmental Psychology
- PSY 431 - Seminar in Adult Development and Aging
- PSY 440 - Seminar in Environmental Psychology
- PSY 441 - Seminar in Cross-Cultural Psychology
- PSY 451 - Seminar in Abnormal Psychology
- Two courses from:
- PSY 274 - Psychology of Child Rearing
- PSY 330 - Children Development
- PSY 332 - Adolescent Development
- PSY 333 - Infant Development

#### **Additional Requirements**

#### **Link to Woodring College of Education Elementary Teacher Education Program**

#### ***Elementary Education Professional Program Requirements (106 credits)***

##### **Professional Studies Core (25 credits)**

- EDUC 301 - Educational Psychology I: Development and Individual Differences
- EDUC 302 - Educational Psychology II: Motivation, Learning and Assessment
- EDUC 310 - The Teacher and the Social Order
- ELED 370 - Introduction to Teaching
- IT 344 - Basic Instructional Technology Skills
- IT 442 - Classroom Use of Instructional Technology (Elementary)
- SPED 364 - Teaching All Students

Elementary Program — Methods, Curriculum Content, and Field Experiences (81 credits)

- ART 380 - Art Educating the Child
- ELED 425 - Social Studies for the Elementary School
- ELED 470 - Developing Teaching
- ELED 471 - Documenting Teaching
- ELED 480 - Literacy: Beginning Communicators
- ELED 481 - Literacy: Fluent Communicators
- ELED 491 - September Experience
- ELED 492 - Practicum: Experience in Literacy Methods
- ELED 494 - Internship - Elementary

- HLED 455 - Health Education Grades K-8
- MATH 381 - Teaching K-8 Mathematics I
- MATH 382 - Teaching K-8 Mathematics II
- MATH 383 - Teaching K-8 Mathematics III
- MATH 491 - Internship Seminar - Teaching K-8 Mathematics
- MUS 361 - Music for Elementary Teachers
- PE 345 - Physical Education for Elementary School
- SCED 480 - Science Methods and Curriculum for the Elementary School
- SCED 490 - Laboratory/Field Experience in Elementary Science
- SPED 430 - Problem Solving for Diverse Needs

## **Mental Health Counseling, Non-Thesis, MS**

### **Graduate Faculty**

**Bedi, Robinder P.**, PhD, counseling relationships/process/outcomes, substance abuse and dependence, depression.

**Byrne, Christina**, PhD, psychological trauma and intimate partner violence.

**Czopp, Alexander M.**, PhD, negative implications for intergroup relations of “positive” stereotypes of groups, prejudice reduction through interpersonal confrontation.

**Devenport, Jennifer**, PhD, legal psychology, jury decision-making, factors influencing erroneous eyewitness identifications.

**Dinnel, Dale L.**, PhD, school and home environment and achievement motivation, personality correlates of happiness and well-being.

**Du Rocher Schudlich, Tina**, PhD, developmental psychopathology, marital conflict and children, parent-child emotion regulation.

**Finlay, Janet M.**, PhD, physiological psychology, biological basis of psychiatric illness.

**Forgays, Deborah K.**, PhD, adolescent development, women’s health issues, women and anger across development.

**Goodvin, Rebecca**, PhD, early socioemotional development, self-concept, parent-child attachment and communication.

**Graham, James**, PhD, adaptive processes in romantic relationships, romantic love, measurement, multivariate statistics.

**Grimm, Jeffrey W.**, PhD, animal models of drug taking and drug seeking, neurobiology of drug taking and drug seeking.

**Gruman, Diana**, PhD, school counseling, child and adolescent development, educational psychology.

**Haskell, Todd**, PhD, language, visual and auditory perception, cognition.

**Hyman, Ira**, PhD, memory, cognitive psychology, social cognition.

**Jantzen, Kelly J.**, PhD, behavioral and cognitive neuroscience, human environment interactions.

**Jantzen, McNeel Gordon**, PhD, speech perception, speech production, phonological learning, neural reorganization of language.

**King, Jeff**, PhD, cross-cultural psychology, healing processes, ethnic identity.

**Lehman, Barbara**, PhD, childhood family environment and social/psychological health, research methods and statistics.

**Lemm, Kristi**, PhD, implicit attitudes.

**Lewis, Arleen C.**, PhD, school counseling, sexual orientation and mental health issues.

**Mana, Michael**, PhD, physiological psychology, electrophysiological activity in the locus coeruleus, effects of chronic stress on the central nervous system, development of tolerance to drugs.

**McDonald-Miszczak, Leslie**, PhD, adult development and aging, successful aging.

**McLean, Kate**, PhD, adolescent identity development.

**Prim, Merle M.**, PhD, subhuman primate behavior, physiological psychology, sensory, comparative.

**Remmel, Ethan**, PhD, cognitive development, theory of mind development in preschool children, child development and social policy.

**Rose, Jacqueline K.**, PhD, molecular mechanisms of learning, memory, and plasticity.

**Sampaio, Cristina**, PhD, mechanisms and processes of memory, representations, memory errors, metacognition.

**Sattler, David**, PhD, natural disasters, social dilemmas, small group research.

**Symons, Lawrence**, PhD, perception

**Trimble, Joseph E.**, PhD, social, cross-cultural

Program Advisor: Dr. Christina Byrne, Academic Instructional Center 474

### **Program Description**

The MS Mental Health Counseling program prepares students for careers in the field of mental health and is accredited by CACREP. The program provides a general foundation in theoretical and applied perspectives which are used by mental health professionals. Special emphasis is placed on skill development, supervised practica with adults, children, and families, and on-site internships in various community and mental health clinics. Exposure to crosscultural counseling strategies is an important component of the curriculum.

### **Goals**

The program prepares knowledgeable, skilled, culturally sensitive, and ethical professional counselors who meet the relevant licensing or credentialing standards for practice in mental health and public and private educational settings in the State of Washington.

### **Prerequisites**

General psychology, statistics through inference and a laboratory course in psychology are required. Students deficient in prerequisites must satisfy them by the end of their first quarter of study. The following courses are strongly recommended: one course in abnormal or personality; one course in social or developmental; two courses from learning, sensation, perception, motivation and physiological/behavioral neuroscience. A course in the history and systems of psychology or in philosophy of science is also recommended.

### **Application Information**

**Deadlines:** Program faculty will begin reviewing application materials after February 1 and will continue to review materials until the enrollment limit is reached or June 1, whichever comes first. Because maximum student enrollment in the program is limited, all applicants are strongly encouraged to submit application materials by February 1. Documentation of personal suitability of applications for counseling is required through a statement of purpose with specific questions and letters of reference. Top-ranked applicants will be invited to interview.

**TA Deadline:** To be considered for a graduate teaching assistantship, applicants must submit their application materials by February 1.

**Specific Test Requirements:** Graduate Record Examination, General required; subject in psychology recommended; no test scores are required if an applicant holds an advanced degree.

### **Program Requirements (91 credits)**

#### Required Courses:

- PSY 502 - Personality and Psychopathology
- PSY 504 - Lifespan Psychological Development
- PSY 512 - Correlation Methods and Data Analysis
- PSY 532 - Cross-Cultural Counseling
- PSY 542 - Developmental Psychopathology
- PSY 550 - Research Methods in Counseling (3 credits)

- PSY 553 - Theories of Counseling and Psychotherapy
- PSY 554 - Standardized Tests
- PSY 555 - Occupations and Career Development
- PSY 557 - Testing and Appraisal in Counseling
- PSY 558 - Family and Couple Counseling
- PSY 560 - Family Counseling Lab (3 credits)
- PSY 561 - Seminar: Professional, Legal and Cultural Issues
- PSY 564 - Individual Counseling Techniques
- PSY 565 - Group Processes in Counseling
- PSY 567 - Professional Practice of Counseling
- PSY 570 - Practicum (4-15 credits)
- PSY 670 - Internship (24-30 credits)
  - All students must complete either:
- PSY 503 - Cognition or
- PSY 505 - Social Psychology

**Written Examination:** Each student choosing the non-thesis option is required to satisfactorily write an area comprehensive exam. For information, contact the program advisor.

#### Retention Requirements

The department has requirements affecting retention in the Mental Health Counseling Program which are in addition to the Graduate School scholarship standards. Full, continuing enrollment in the required courses must be maintained. Grades lower than C- are unacceptable. More than 10 credits of C+ or lower grades removes a student from the master's program. Any course in which an unacceptable grade is earned may be retaken only with permission of the admission/retention subcommittee, following consultation with the program advisor. It is necessary to maintain at least a 3.00 (B) grade point average for all graded work in order to be retained in the program. Retention in the mental health counseling curriculum is also dependent upon the development of professional competence in interaction with clients and other professionals. Development of professional counseling competencies is monitored and evaluated on a quarterly basis by the Counseling Program Committee of the Department of Psychology.

### Mental Health Counseling, Thesis, MS

#### Graduate Faculty

**Bedi, Robinder P.**, PhD, counseling relationships/process/outcomes, substance abuse and dependence, depression.

**Byrne, Christina**, PhD, psychological trauma and intimate partner violence.

**Czopp, Alexander M.**, PhD, negative implications for intergroup relations of "positive" stereotypes of groups, prejudice reduction through interpersonal confrontation.

**Devenport, Jennifer**, PhD, legal psychology, jury decision-making, factors influencing erroneous eyewitness identifications.

**Dinnel, Dale L.**, PhD, school and home environment and achievement motivation, personality correlates of happiness and well-being.

**Du Rocher Schudlich, Tina**, PhD, developmental psychopathology, marital conflict and children, parent-child emotion regulation.

**Finlay, Janet M.**, PhD, physiological psychology, biological basis of psychiatric illness.

**Forgays, Deborah K.**, PhD, adolescent development, women's health issues, women and anger across development.

**Goodvin, Rebecca**, PhD, early socioemotional development, self-concept, parent-child attachment and communication.

**Graham, James**, PhD, adaptive processes in romantic relationships, romantic love, measurement, multivariate statistics.

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**Gruman, Diana**, PhD, school counseling, child and adolescent development, educational psychology.

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**Hyman, Ira**, PhD, memory, cognitive psychology, social cognition.

**Jantzen, Kelly J.**, PhD, behavioral and cognitive neuroscience, human environment interactions.

**Jantzen, McNeel Gordon**, PhD, speech perception, speech production, phonological learning, neural reorganization of language.

**King, Jeff**, PhD, cross-cultural psychology, healing processes, ethnic identity.

**Lehman, Barbara**, PhD, childhood family environment and social/psychological health, research methods and statistics.

**Lemm, Kristi**, PhD, implicit attitudes.

**Lewis, Arleen C.**, PhD, school counseling, sexual orientation and mental health issues.

**Mana, Michael**, PhD, physiological psychology, electrophysiological activity in the locus coeruleus, effects of chronic stress on the central nervous system, development of tolerance to drugs.

**McDonald-Miszczak, Leslie**, PhD, adult development and aging, successful aging.

**McLean, Kate**, PhD, adolescent identity development.

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**Remmel, Ethan**, PhD, cognitive development, theory of mind development in preschool children, child development and social policy.

**Rose, Jacqueline K.**, PhD, molecular mechanisms of learning, memory, and plasticity.

**Sampaio, Cristina**, PhD, mechanisms and processes of memory, representations, memory errors, metacognition.

**Sattler, David**, PhD, natural disasters, social dilemmas, small group research.

**Symons, Lawrence**, PhD, perception

**Trimble, Joseph, E.**, PhD, social cross-cultural

Program Advisor: Dr. Christina Byrne, Academic Instructional Center 474

### **Program Description**

The MS Mental Health Counseling program prepares students for careers in the field of mental health and is accredited by CACREP. The program provides a general foundation in theoretical and applied perspectives which are used by mental health professionals. Special emphasis is placed on skill development, supervised practica with adults, children, and families, and on-site internships in various community and mental health clinics. Exposure to crosscultural counseling strategies is an important component of the curriculum.

### **Goals**

The program prepares knowledgeable, skilled, culturally sensitive, and ethical professional counselors who meet the relevant licensing or credentialing standards for practice in mental health and public and private educational settings in the State of Washington.

### **Prerequisites**

General psychology, statistics through inference and a laboratory course in psychology are required. Students deficient in prerequisites must satisfy them by the end of their first quarter of study. The following courses are strongly recommended: one course in abnormal or personality; one course in social or developmental; two courses from learning, sensation, perception, motivation and physiological/behavioral neuroscience. A course in the history and systems of psychology or in philosophy of science is also recommended.

### **Application Information**

**Deadlines:** Program faculty will begin reviewing application materials after February 1 and will continue to review materials until the enrollment limit is reached or June 1, whichever comes first. Because maximum student enrollment in the program is limited, all applicants are strongly encouraged to submit application materials by February 1.

Documentation of personal suitability of applications for counseling is required through a statement of purpose with specific questions and letters of reference. Top-ranked applicants will be invited to interview.

**TA Deadline:** To be considered for a graduate teaching assistantship, applicants must submit their application materials by February 1.

**Specific Test Requirements:** Graduate Record Examination, General required; subject in psychology recommended; no test scores are required if an applicant holds an advanced degree.

### Program Requirements (97 credits)

Required Courses:

- PSY 502 - Personality and Psychopathology
- PSY 504 - Lifespan Psychological Development
- PSY 512 - Correlation Methods and Data Analysis
- PSY 532 - Cross-Cultural Counseling
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- PSY 550 - Research Methods in Counseling (3 credits)
- PSY 553 - Theories of Counseling and Psychotherapy
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- PSY 558 - Family and Couple Counseling
- PSY 560 - Family Counseling Lab (3 credits)
- PSY 561 - Seminar: Professional, Legal and Cultural Issues
- PSY 564 - Individual Counseling Techniques
- PSY 565 - Group Processes in Counseling
- PSY 567 - Professional Practice of Counseling
- PSY 570 - Practicum (4-15 credits)
- PSY 670 - Internship (24-30 credits)

All students must complete either:

- PSY 503 - Cognition  
or
- PSY 505 - Social Psychology

Thesis students must complete 690 (minimum 6 credits).

### Retention Requirements

The department has requirements affecting retention in the Mental Health Counseling Program which are in addition to the Graduate School scholarship standards. Full, continuing enrollment in the required courses must be maintained. Grades lower than C- are unacceptable. More than 10 credits of C+ or lower grades removes a student from the master's program. Any course in which an unacceptable grade is earned may be retaken only with permission of the admission/retention subcommittee, following consultation with the program advisor. It is necessary to maintain at least a 3.00 (B) grade point average for all graded work in order to be retained in the program. Retention in the mental health counseling curriculum is also dependent upon the development of professional competence in interaction with clients and other professionals. Development of professional counseling competencies is monitored and evaluated on a quarterly basis by the Counseling Program Committee of the Department of Psychology.

## **Psychology - Experimental, Thesis, MS**

### **Graduate Faculty**

**Bedi, Robinder P.**, PhD, counseling relationships/process/outcomes, substance abuse and dependence, depression.

**Byrne, Christina**, PhD, psychological trauma and intimate partner violence.

**Czopp, Alexander M.**, PhD, negative implications for intergroup relations of “positive” stereotypes of groups, prejudice reduction through interpersonal confrontation.

**Devenport, Jennifer**, PhD, legal psychology, jury decision-making, factors influencing erroneous eyewitness identifications.

**Dinnel, Dale L.**, PhD, school and home environment and achievement motivation, personality correlates of happiness and well-being.

**Du Rocher Schudlich, Tina**, PhD, developmental psychopathology, marital conflict and children, parent-child emotion regulation.

**Finlay, Janet M.**, PhD, physiological psychology, biological basis of psychiatric illness.

**Forgays, Deborah K.**, PhD, adolescent development, women’s health issues, women and anger across development.

**Goodvin, Rebecca**, PhD, early socioemotional development, self-concept, parent-child attachment and communication.

**Graham, James**, PhD, adaptive processes in romantic relationships, romantic love, measurement, multivariate statistics.

**Grimm, Jeffrey W.**, PhD, animal models of drug taking and drug seeking, neurobiology of drug taking and drug seeking.

**Gruman, Diana**, PhD, school counseling, child and adolescent development, educational psychology.

**Haskell, Todd**, PhD, language, visual and auditory perception, cognition.

**Hyman, Ira**, PhD, memory, cognitive psychology, social cognition.

**Jantzen, Kelly J.**, PhD, behavioral and cognitive neuroscience, human environment interactions.

**Jantzen, McNeel Gordon**, PhD, speech perception, speech production, phonological learning, neural reorganization of language.

**King, Jeff**, PhD, cross-cultural psychology, healing processes, ethnic identity.

**Lehman, Barbara**, PhD, childhood family environment and social/psychological health, research methods and statistics.

**Lemm, Kristi**, PhD, implicit attitudes.

**Lewis, Arleen C.**, PhD, school counseling, sexual orientation and mental health issues.

**Mana, Michael**, PhD, physiological psychology, electrophysiological activity in the locus coeruleus, effects of chronic stress on the central nervous system, development of tolerance to drugs.

**McDonald-Miszczak, Leslie**, PhD, adult development and aging, successful aging.

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**Prim, Merle M.**, PhD, subhuman primate behavior, physiological psychology, sensory, comparative.

**Remmel, Ethan**, PhD, cognitive development, theory of mind development in preschool children, child development and social policy.

**Rose, Jacqueline K.**, PhD, molecular mechanisms of learning, memory, and plasticity.

**Sampaio, Cristina**, PhD, mechanisms and processes of memory, representations, memory errors, metacognition.

**Sattler, David**, PhD, natural disasters, social dilemmas, small group research.

**Symons, Lawrence**, PhD, perception.

**Trimble, Joseph E.**, PhD, social, cross-cultural.

Program Advisor: Dr. Ethan Remmel, Academic Instructional Center 492

### **Program Description**

The Experimental Psychology program provides a solid preparation and foundation for students wishing to enter a psychology Ph.D. program. Students who obtain a terminal Masters degree in Experimental Psychology may use their graduate training to become community college instructors, statisticians, research assistants, or use the degree in other settings.

## **Goals**

The graduate curriculum leading to an MS degree in experimental psychology is designed to provide in-depth research experience within specific domains of psychology: cognitive, social, developmental, and neuroscience. This goal is accomplished through a balance of required content and research courses.

## **Prerequisites**

Introductory psychology, statistics, and a minimum of one course in each of three of the following concentration areas: social, cognitive, abnormal, developmental, and physiological/behavioral neuroscience. Research experience is strongly recommended.

## **Application Information**

**Deadlines:** Program faculty will begin reviewing application materials after February 1 and will continue to review materials until the enrollment limit is reached or June 1, whichever comes first. Because maximum student enrollment in the program is limited, all applicants are strongly encouraged to submit application materials by February 1.

**TA Deadline:** To be considered for a graduate teaching assistantship, applicants must submit their application materials by February 1.

**Specific Test Requirements:** Graduate Record Examination, General required; subject test in psychology recommended; no test scores are required if an applicant holds an advanced degree.

## **Program Requirements: (48 credit minimum)**

- All students must complete the following courses:
  - PSY 509 - Proseminar
  - PSY 512 - Correlation Methods and Data Analysis
  - PSY 513 - Experimental Methods and Data Analysis
- Three courses from:
  - PSY 501 - Behavioral Neuroscience
  - PSY 503 - Cognition
  - PSY 504 - Lifespan Psychological Development
  - PSY 505 - Social Psychology
- Three seminars from 532-546 (students must take seminars with at least two different numbers; seminars 541 and 543-546 are repeatable under different topics, with permission);
  - PSY 582 - Practicum in Research in Psychology (2 to 12 credits across two quarters)
  - PSY 690 - Thesis (6 to 12 credits)
- Elective courses under advisement
- A minimum of one research presentation at Psychfest or a public colloquium as part of the thesis defense is required.

An optional concentration offered to all experimental psychology graduate students is Measurement, Evaluation and Statistical Analysis (MESA). In addition to the above requirements, students take the following: PSY 515, 516, and 554.

## Retention Requirements

The department has requirements affecting retention in the MS Experimental Psychology Program which are in addition to the Graduate School scholarship standards. Students in the Experimental Psychology program must be making satisfactory progress in their research to remain in the program. Satisfactory progress in research is defined as being actively engaged in research activities that are moving the student closer to completing his or her thesis and is determined by the student's advisor and the Experimental Psychology program advisor (or the Experimental Psychology program advisor and the general graduate program advisor, if the student does not have an advisor). One quarter of unsatisfactory progress will result in the student being notified as to what he or she needs to do to bring his or her research progress up to satisfactory standards. Two quarters of unsatisfactory progress in research are grounds for dismissal from the Experimental Psychology program. Students may appeal any decision through the formal appeal process outlined in the WWU Catalog (Appendix F).

## School Counselor, Non-Thesis, MEd

### Graduate Faculty

**Bedi, Robinder P.**, PhD, counseling relationships/process/outcomes, substance abuse and dependence, depression.

**Byrne, Christina**, PhD, psychological trauma and intimate partner violence.

**Czopp, Alexander M.**, PhD, negative implications for intergroup relations of "positive" stereotypes of groups, prejudice reduction through interpersonal confrontation.

**Devenport, Jennifer**, PhD, legal psychology, jury decision-making, factors influencing erroneous eyewitness identifications.

**Dinnel, Dale L.**, PhD, school and home environment and achievement motivation, personality correlates of happiness and well-being.

**Du Rocher Schudlich, Tina**, PhD, developmental psychopathology, marital conflict and children, parent-child emotion regulation.

**Finlay, Janet M.**, PhD, physiological psychology, biological basis of psychiatric illness.

**Forgays, Deborah K.**, PhD, adolescent development, women's health issues, women and anger across development.

**Goodvin, Rebecca**, PhD, early socioemotional development, self-concept, parent-child attachment and communication.

**Graham, James**, PhD, adaptive processes in romantic relationships, romantic love, measurement, multivariate statistics.

**Grimm, Jeffrey W.**, PhD, animal models of drug taking and drug seeking, neurobiology of drug taking and drug seeking.

**Gruman, Diana**, PhD, school counseling, child and adolescent development, educational psychology.

**Haskell, Todd**, PhD, language, visual and auditory perception, cognition.

**Hyman, Ira**, PhD, memory, cognitive psychology, social cognition.

**Jantzen, Kelly J.**, PhD, behavioral and cognitive neuroscience, human environment interactions.

**Jantzen, McNeel Gordon**, PhD, speech perception, speech production, phonological learning, neural reorganization of language.

**King, Jeff**, PhD, cross-cultural psychology, healing processes, ethnic identity.

**Lehman, Barbara**, PhD, childhood family environment and social/psychological health, research methods and statistics.

**Lemm, Kristi**, PhD, implicit attitudes.

**Lewis, Arleen C.**, PhD, school counseling, sexual orientation and mental health issues.

**Mana, Michael**, PhD, physiological psychology, electrophysiological activity in the locus coeruleus, effects of chronic stress on the central nervous system, development of tolerance to drugs.

**McDonald-Miszczak, Leslie**, PhD, adult development and aging, successful aging.

**McLean, Kate**, PhD, adolescent identity development.

**Prim, Merle M.**, PhD, subhuman primate behavior, physiological psychology, sensory, comparative.

**Remmel, Ethan**, PhD, cognitive development, theory of mind development in preschool children, child development and social policy.

**Rose, Jacqueline K.**, PhD, molecular mechanisms of learning, memory, and plasticity.

**Sampaio, Cristina**, PhD, mechanisms and processes of memory, representations, memory errors, metacognition.

**Sattler, David**, PhD, natural disasters, social dilemmas, small group research.

**Symons, Lawrence**, PhD, perception.  
**Trimble, Joseph E.**, PhD, social, cross-cultural.

Program Advisor: Dr. Diana Gruman, Academic Instructional Center 596

### **Program Description**

The MEd school counseling program prepares professional counselors for employment in educational settings and is designed for those students intending to apply for the state educational staff associate certificate endorsed in school counseling at the elementary and secondary levels. Certification as a public school teacher is not required for admission to the program. The school counseling program is accredited by the Council for Accreditation of Counseling and Related Educational Programs (CACREP), and the National Council for Accreditation of Teacher Education (NCATE).

The program contains a thesis option for those students interested in pursuing a research project related to the degree program.

### **Goals**

The program prepares knowledgeable, skilled, culturally sensitive, and ethical professional counselors who meet the relevant licensing or credentialing standards for practice in mental health and public and private educational settings in the State of Washington.

### **Prerequisites**

Courses in general psychology, research methods in psychology or education, and psychology of learning, or a background in professional education.

### **Application Information**

**Deadlines:** Program faculty will begin reviewing application materials after February 1 and will continue to review materials until the enrollment limit is reached or June 1, whichever comes first. Because maximum student enrollment in the program is limited, all applicants are strongly encouraged to submit application materials by February 1. All prerequisites must be completed prior to fall quarter enrollment. Documentation of personal suitability of applicants for counseling is required through a statement of purpose with specific questions, letters of reference and interviews where possible.

**TA Deadline:** To be considered for a graduate teaching assistantship, applicants must have their application materials submitted by February 1.

**Specific Test Requirements:** Graduate Record Exam, General Test required; subject in psychology recommended; test scores are not required if an applicant holds an advanced degree

### **Program Requirements (83 credit minimum)**

All students in the school counseling program must complete the following courses:

- PSY 502 - Personality and Psychopathology
- PSY 504 - Lifespan Psychological Development
- PSY 532 - Cross-Cultural Counseling
- PSY 542 - Developmental Psychopathology
- PSY 550 - Research Methods in Counseling
- PSY 551 - Developmental School Counseling

- PSY 553 - Theories of Counseling and Psychotherapy
- PSY 554 - Standardized Tests
- PSY 555 - Occupations and Career Development
- PSY 556 - The Role of the School Counselor
- PSY 557 - Testing and Appraisal in Counseling
- PSY 558 - Family and Couple Counseling
- PSY 560 - Family Counseling Lab
- PSY 561 - Seminar: Professional, Legal and Cultural Issues
- PSY 564 - Individual Counseling Techniques
- PSY 565 - Group Processes in Counseling
- PSY 570 - Practicum (4-15 credits)
- PSY 670 - Internship (18-30 credits)
- Electives: 4 elective credits from 400- and 500-level courses in psychology and/or education, to be selected with permission of advisor and instructor
- Written Examinations: Each student is required to satisfactorily write an area comprehensive exam; for information contact the program advisor.

#### Additional Information

##### *Retention*

In addition to the Graduate School retention requirements, retention in the School Counseling Program is dependent upon the development of professional competencies in interaction with clients and other professionals, especially as related to practicum assignments. Development of professional counseling competencies is monitored and evaluated on a quarterly basis by the Counseling Program Committee of the Department of Psychology.

### School Counselor, Thesis, MEd

#### Graduate Faculty

**Bedi, Robinder P.**, PhD, counseling relationships/process/outcomes, substance abuse and dependence, depression.

**Byrne, Christina**, PhD, psychological trauma and intimate partner violence.

**Czopp, Alexander M.**, PhD, negative implications for intergroup relations of “positive” stereotypes of groups, prejudice reduction through interpersonal confrontation.

**Devenport, Jennifer**, PhD, legal psychology, jury decision-making, factors influencing erroneous eyewitness identifications.

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**Du Rocher Schudlich, Tina**, PhD, developmental psychopathology, marital conflict and children, parent-child emotion regulation.

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**Hyman, Ira**, PhD, memory, cognitive psychology, social cognition.

**Jantzen, Kelly J.**, PhD, behavioral and cognitive neuroscience, human environment interactions.

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**Lemm, Kristi**, PhD, implicit attitudes.

**Lewis, Arleen C.**, PhD, school counseling, sexual orientation and mental health issues.

**Mana, Michael**, PhD, physiological psychology, electrophysiological activity in the locus coeruleus, effects of chronic stress on the central nervous system, development of tolerance to drugs.

**McDonald-Miszczak, Leslie**, PhD, adult development and aging, successful aging.

**McLean, Kate**, PhD, adolescent identity development.

**Prim, Merle M.**, PhD, subhuman primate behavior, physiological psychology, sensory, comparative.

**Remmel, Ethan**, PhD, cognitive development, theory of mind development in preschool children, child development and social policy.

**Rose, Jacqueline K.**, PhD, molecular mechanisms of learning, memory, and plasticity.

**Sampaio, Cristina**, PhD, mechanisms and processes of memory, representations, memory errors, metacognition.

**Sattler, David**, PhD, natural disasters, social dilemmas, small group research.

**Symons, Lawrence**, PhD, perception.

**Trimble, Joseph E.**, PhD, social, cross-cultural.

Program Advisor: Dr. Diana Gruman, Academic Instructional Center 596

### **Program Description**

The MEd school counseling program prepares professional counselors for employment in educational settings and is designed for those students intending to apply for the state educational staff associate certificate endorsed in school counseling at the elementary and secondary levels. Certification as a public school teacher is not required for admission to the program. The school counseling program is accredited by the Council for Accreditation of Counseling and Related Educational Programs (CACREP), and the National Council for Accreditation of Teacher Education (NCATE).

The program contains a thesis option for those students interested in pursuing a research project related to the degree program.

### **Goals**

The program prepares knowledgeable, skilled, culturally sensitive, and ethical professional counselors who meet the relevant licensing or credentialing standards for practice in mental health and public and private educational settings in the State of Washington.

### **Prerequisites**

Courses in general psychology, research methods in psychology or education, and psychology of learning, or a background in professional education.

### **Application Information**

**Deadlines:** Program faculty will begin reviewing application materials after February 1 and will continue to review materials until the enrollment limit is reached or June 1, whichever comes first. Because maximum student enrollment in the program is limited, all applicants are strongly encouraged to submit application materials by February 1. All prerequisites must be completed prior to fall quarter enrollment. Documentation of personal suitability of applicants for counseling is required through a statement of purpose with specific questions, letters of reference and interviews where possible.

**TA Deadline:** To be considered for a graduate teaching assistantship, applicants must have their application materials submitted by February 1.

**Specific Test Requirements:** Graduate Record Exam, General Test required; subject in psychology recommended; test scores are not required if an applicant holds an advanced degree

### **Program Requirements (83 credit minimum)**

All students in the school counseling program must complete the following courses:

- PSY 502 - Personality and Psychopathology
  - PSY 504 - Lifespan Psychological Development
  - PSY 532 - Cross-Cultural Counseling
  - PSY 542 - Developmental Psychopathology
  - PSY 550 - Research Methods in Counseling
  - PSY 551 - Developmental School Counseling
  - PSY 553 - Theories of Counseling and Psychotherapy
  - PSY 554 - Standardized Tests
  - PSY 555 - Occupations and Career Development
  - PSY 556 - The Role of the School Counselor
  - PSY 557 - Testing and Appraisal in Counseling
  - PSY 558 - Family and Couple Counseling
  - PSY 560 - Family Counseling Lab
  - PSY 561 - Seminar: Professional, Legal and Cultural Issues
  - PSY 564 - Individual Counseling Techniques
  - PSY 565 - Group Processes in Counseling
  - PSY 570 - Practicum [4-15 credits]
  - PSY 670 - Internship [18-30 credits]
- Electives: 4 elective credits from 400- and 500-level courses in psychology and/or education, to be selected with permission of advisor and instructor.
- Thesis students must also complete:
- PSY 690 - Thesis

**Written Examinations:** Each student is required to satisfactorily write an area comprehensive exam; for information contact the program advisor.

### Additional Information

#### **Retention**

In addition to the Graduate School retention requirements, retention in the School Counseling Program is dependent upon the development of professional competencies in interaction with clients and other professionals, especially as related to practicum assignments. Development of professional counseling competencies is monitored and evaluated on a quarterly basis by the Counseling Program Committee of the Department of Psychology.

# Social Studies Education

## Introduction

Social Studies Education is guided by the definition of social studies adopted by the National Council for Social Studies:

"Social Studies is the integrated study of the social sciences and humanities to promote civic competence. Within the school program, social studies provides coordinated, systematic study drawing upon such disciplines as anthropology, archaeology, economics, geography, history, law, philosophy, political science, psychology, religion, and sociology, as well as appropriate content from the humanities, mathematics, and natural sciences. The primary purpose of social studies is to help young people develop the ability to make informed and reasoned decisions for the public good as citizens of a culturally diverse, democratic society in an interdependent world."

## Undergraduate Degrees

Social Studies — Elementary, BAE

## Teaching Endorsement Secondary Education

Students interested in a teaching endorsement in social studies must complete the following:

An approved academic Bachelor of Arts degree program in:

- Anthropology/Social Studies  
Advisor: Dr. James P. Loucky
- Economics/Social Studies  
Advisor: Pamela Whalley\
- Geography/Social Studies  
Advisors: Dr. Thomas Terich, Dr. Patrick Buckley
- History/Social Studies  
Advisors: Dr. Kathleen Kennedy, Dr. Chris Friday, Dr. Cecilia Danysk, Dr. Roger Thompson, Dr. Steven Garfinkle, Dr. Kevin Leonard, Dr. George Mariz, Dr. Louis W. Truschel
- Political Science/Social Studies  
Advisor: Dr. Kristen Parris
- Sociology/Social Studies  
Advisor: Linda Clark

Maintain a 2.75 GPA for all social science and history courses

Certification requirements of the Secondary Education Department

To receive a recommendation for state of Washington certification, students must complete the "teacher certification" program, including the content methods course, SEC 426 which is offered by the Department of Secondary Education as: 1) part of the undergraduate Bachelor of Arts degree, or 2) as a post-baccalaureate program, or 3) as part of the Master in Teaching degree. See the Secondary Education section of this catalog for program admission, completion, and teacher certification requirements.

The state of Washington requires a minimum grade of C (2.0) or better for courses used to meet endorsement requirements.

## **Social Studies — Elementary, BAE**

**51-57 credits**

### **Introduction**

The elementary social studies major is designed for students enrolled in the Elementary Education Professional program.

This major satisfies the academic major requirement for teacher certification with an endorsement in elementary education and must be accompanied by the professional preparation program in elementary education. See the Elementary Education section of this catalog for program admission, completion, and teacher certification requirements.

Advisor: Dr. Bruce Larson

### **Grade Requirements**

Students must earn a grade of C (2.0) or better in the elementary education professional program and in all courses required for the endorsement.

A cumulative 2.75 GPA is required for all courses taken to satisfy this major.

### **Requirements**

- ANTH 201 - Introduction to Cultural Anthropology
- EGEO 201 - Human Geography
- EGEO 320 - The United States: Society & Environment
- HIST 103 - Introduction to American Civilization: American History to 1865
- HIST 104 - Introduction to American Civilization: American History Since 1865
- HIST 391 - History of the Pacific Northwest
- PLSC 250 - The American Political System
  - One course from:
- ECON 446 - Economics for the Teacher (preferred)
- ECON 206 - Introduction to Microeconomics
  - One course from:
    - EGEO 250 - Geographic Information Systems Survey (preferred)
    - EGEO 209 - Geography and World Affairs
    - EGEO 310 - Developing World
    - EGEO 312 - Geography of the World Economy
    - EGEO 327 - The Pacific Northwest: Society and Environment
    - EGEO 328 - Canada: Society and Environment
      - One course from:
        - ECON 447 - Methods for Teaching About the National Economy in the Public Schools
        - C/AM 410 - Study Canada Summer Institute
          - or upper-division EGEO under advisement
  - 3-5 credits upper-division social science
  - 10 credits in history including one course in world, Western or Pacific Rim history or civilization

## **Additional Requirements**

### **Link to Woodring College of Education Elementary Teacher Education Program**

#### ***Elementary Education Professional Program Requirements (106 credits)***

##### **Professional Studies Core (25 credits)**

- EDUC 301 - Educational Psychology I: Development and Individual Differences
  - EDUC 302 - Educational Psychology II: Motivation, Learning and Assessment
  - EDUC 310 - The Teacher and the Social Order
  - ELED 370 - Introduction to Teaching
  - IT 344 - Basic Instructional Technology Skills
  - IT 442 - Classroom Use of Instructional Technology (Elementary)
  - SPED 364 - Teaching All Students
- Elementary Program — Methods, Curriculum Content, and Field Experiences (81 credits)
- ART 380 - Art Educating the Child
  - ELED 425 - Social Studies for the Elementary School
  - ELED 470 - Developing Teaching
  - ELED 471 - Documenting Teaching
  - ELED 480 - Literacy: Beginning Communicators
  - ELED 481 - Literacy: Fluent Communicators
  - ELED 491 - September Experience
  - ELED 492 - Practicum: Experience in Literacy Methods
  - ELED 494 - Internship - Elementary
  - HLED 455 - Health Education Grades K-8
  - MATH 381 - Teaching K-8 Mathematics I
  - MATH 382 - Teaching K-8 Mathematics II
  - MATH 383 - Teaching K-8 Mathematics III
  - MATH 491 - Internship Seminar - Teaching K-8 Mathematics
  - MUS 361 - Music for Elementary Teachers
  - PE 345 - Physical Education for Elementary School
  - SCED 480 - Science Methods and Curriculum for the Elementary School
  - SCED 490 - Laboratory/Field Experience in Elementary Science
  - SPED 430 - Problem Solving for Diverse Needs

# Sociology

## Introduction

The topics that sociologists examine are common to many disciplines in the social sciences and the humanities: crime and punishment, the formation and dissolution of families, bureaucratic organizations, conflicts between classes, generations, nations. Sociology is distinctive in its focus on social organization rather than individuals as the unit of study and also in its methods of understanding that combine elements of both the humanities and the sciences. Sociologists utilize many different kinds of information sources in their work, including census data, historical documents, transcripts from interviews, survey results, and observations of group behavior.

The Department of Sociology at Western has designed a program of course work that provides majors opportunities to gain both a wide range of understanding of sociology as an academic discipline and more in-depth knowledge of particular subareas. Regardless of the particular plan of course work that is chosen, sociology students will develop critical thinking, oral and written communication skills, and a familiarity with technology that will significantly enhance their future career options. Recent sociology graduates have obtained positions in a variety of fields, including criminal justice, corrections, education, social services, and business management, among many others. Many graduates have found that the skills acquired in our program have prepared them for further academic studies in sociology, demography, law, social work, and education.

The department has a number of facilities and resources that undergraduate students may use to enhance their educational experience. The Center for Social Science Instruction contains U.S. Census Bureau publications and data, a collection of census maps for the local area, and several computer work stations. The director of the center is also available to assist students in utilizing several large databases that are available in the center. The Office of Survey Research has involved many undergraduate students in the construction and administration of surveys of Western students and alumni. The department also has a 30-station computer laboratory for student use. Faculty are engaged in a variety of research activities, and have often involved undergraduate students in their work.

Students who are interested in becoming sociology majors should carefully read the *Declaration of Major* section that follows, and are encouraged to meet with the departmental advisor to establish a study plan as soon as possible.

## Faculty

**KAREN BRADLEY** (1992) Chair and Professor. BA, Providence College; MA, Boston College, Stanford University; PhD, Stanford University.

**KRISTIN ANDERSON** (2001) Professor. BA, University of Northern Iowa; PhD, University of Texas-Austin.

**RICHARD BULCROFT** (1999) Associate Professor. BA, University of New Hampshire; PhD, University of Minnesota.

**MICK CUNNINGHAM** (2000) Professor. BA, Pacific Lutheran University; PhD, University of Michigan.

**SETH FEINBERG** (2005) Associate Professor. BA, Tufts University; PhD, Ohio State University.

**RONALD HELMS** (2000) Professor. BA, California State University- Chico; PhD, University of Oregon.

**JAMES INVERARITY** (1985) Professor. BA, University of Michigan; PhD, Stanford University.

**JENNIFER LOIS** (2000) Associate Professor. BA, Dartmouth College; PhD, University of Colorado.

**LIZ MOGFORD** (2007) Assistant Professor. BA, St. John's College, MA, MPH, PhD, University of Washington.

**JAY D. TEACHMAN** (1998) Professor. BA, Western Washington University; MA, PhD, University of Chicago.

**GLENN TSUNOKAI** (2003) Associate Professor. BA, PhD, University of California-Riverside.

## Declaration Process

The number of students admitted to the major is limited as a result of the structure of the sociology curriculum and departmental staffing capabilities. Students wishing to major in sociology must submit an application to the Department on or before Friday of the 2nd week of fall, winter, spring, or summer quarter. Applications are available from the Sociology advisor (AH 513) or the Sociology Office (AH 510). Students will receive notification regarding their admission status during the week following the application deadline.

Admission to the major is contingent on space available on a quarterly basis. Applications require the following minimum qualifications:

- Successful completion of at least 45 college-level credits
- Successful completion or current enrollment in SOC 210
- Successful completion of at least 10 credits in Sociology at Western
- A minimum (cumulative) Western GPA of 2.7 (based on at least 12 credits); OR a minimum (average) GPA of 3.0 earned in Sociology courses taken at Western.
- A student who has met the first three criteria, but has not attained the minimum GPA requirements may petition for admission to the Department in any quarter. The petitioning student's admission will be based on a combination of overall GPA, sociology GPA, and available space.

### **Other Departmental Information**

#### *Mid-Program Checkpoint*

Students seeking to complete a BA degree in sociology within a four-year time span should have completed the following courses by the end of his/her junior year. Major omissions from this list will make it difficult or impossible to complete this degree within the additional year.

- Any one: SOC 221, SOC 251, SOC 255, SOC 268, SOC 260, SOC 269
- SOC 210, SOC 215, SOC 310

#### *Minors*

Access to courses for minors is limited as a result of space limitations. See registration policy for additional information.

#### *Registration Policy*

Due to high demand, registration for most 300-level courses is restricted to declared sociology majors for the first five class days of Phase I registration (see online *Timetable of Classes* for courses designated as major restricted). Registration for all 200-level courses, including SOC 210 and 215, is open to all students. Restrictions for most courses will be removed starting on the sixth class day of Phase I registration. If space is available, non-majors will be able to register for 300-level courses at that time. See the sociology website for instructions on wait lists for filled classes (override requests) at <http://www.wwu.edu/socad/registration.shtml>.

### **Undergraduate Degrees and Programs**

Sociology, BA  
Sociology, BS  
Sociology - Elementary, BAE  
Sociology/Social Studies, BA  
Criminology/Sociology of Law Minor  
Sociology Minor  
Population Studies Minor

### **Graduate Degrees and Programs**

Sociology, MA

## **Criminology/Sociology of Law Minor**

**24 credits**

### **Admission and Declaration Process**

Declaration of Major (see Sociology department page)

### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

### **Requirements**

- One course from:
  - SOC 251 - Sociology of Deviant Behavior
  - SOC 255 - Social Organization of Criminal Justice
- One course from:
  - SOC 352 - Criminology
  - SOC 355 - Criminal Justice System
- Electives under departmental advisement from:
  - SOC 320 - Computer Applications for Social Science Data
  - SOC 352 - Criminology
  - SOC 354 - Domestic Violence and the Criminal Justice System
  - SOC 355 - Criminal Justice System
  - SOC 356 - Law Enforcement and Society
  - SOC 359 - Women and Deviance
  - SOC 363 - Law and Social Stratification
  - SOC 376 - Research and Policy in Criminal Justice Organizations
  - SOC 387 - Sociology of Correctional Institutions

## **Population Studies Minor**

**24 credits**

### **Admission and Declaration Process**

Declaration of Major (see Sociology department page)

### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

### **Requirements**

- SOC 221 - Introduction to Population Issues
- SOC 321 - Demography
- One course from:
  - SOC 326 - American Family and Household Demography

- SOC 375 - Community and Urban Society  
 Electives under departmental advisement from:
- SOC 320 - Computer Applications for Social Science Data  
 SOC 326 - American Family and Household Demography
- SOC 333 - Aging in America
- SOC 348 - Global Health  
 SOC 375 - Community and Urban Society
- SOC 421 - Demographic Analysis

## **Sociology Minor**

**24 credits**

### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

### **Admission and Declaration Process**

Declaration of Major (see Sociology department page)

### **Requirements**

- One or two from:
  - SOC 221 - Introduction to Population Issues
  - SOC 251 - Sociology of Deviant Behavior
  - SOC 255 - Social Organization of Criminal Justice
  - SOC 260 - The Family in Society
  - SOC 268 - Gender and Society
  - SOC 269 - Race and Ethnic Relations
- Electives under departmental advisement (from 300- or 400-level sociology courses *with* prerequisites completed; not to include Soc 400, 471, 480 or 492)

## **Sociology — Elementary, BAE**

**50 credits**

### **Introduction**

This major satisfies the academic major requirement for teacher certification with an endorsement in elementary education and must be accompanied by the professional preparation program in elementary education. See the Elementary Education section of this catalog for program admission, completion, and teacher certification requirements.

### **Admission and Declaration Process**

Declaration of Major (see Sociology department page)

## **Grade Requirements**

A grade of C (2.0) or better is required for courses in the elementary education professional program and all courses required for the endorsement.

## **Requirements**

- SOC 210 - Introduction to Research Methods
- SOC 215 - Social Statistics
- SOC 310 - Methodological Applications in Social Research
- SOC 302 - Classical Sociological Theory
  - One course from (no more than two may be applied to the major):
  - SOC 221 - Introduction to Population Issues
  - SOC 251 - Sociology of Deviant Behavior
  - SOC 255 - Social Organization of Criminal Justice
  - SOC 260 - The Family in Society
  - SOC 268 - Gender and Society
  - SOC 269 - Race and Ethnic Relations
- One course from:
- SOC 361 - Sociology of Education
- SOC 368 - Gender and Education
- One course from:
- SOC 461 - Advanced Sociology of Education (preferred)
- SOC 492 - Senior Thesis
  - or other 400-level capstone seminar
- Two courses from:
- SOC 340 - Sociology of Organizations
  - SOC 361 - Sociology of Education
- SOC 364 - Social Stratification
  - SOC 368 - Gender and Education
- SOC 369 - Sociology of Race and Ethnicity
- SOC 380 - Sociology of Youth
- Electives under departmental advisement to bring the total to a minimum of 50 credits in sociology

## **Additional Requirements**

### **Link to Woodring College of Education Elementary Teacher Education Program**

#### ***Elementary Education Professional Program Requirements (106 credits)***

##### **Professional Studies Core (25 credits)**

- EDUC 301 - Educational Psychology I: Development and Individual Differences
- EDUC 302 - Educational Psychology II: Motivation, Learning and Assessment
- EDUC 310 - The Teacher and the Social Order
- ELED 370 - Introduction to Teaching
- IT 344 - Basic Instructional Technology Skills
- IT 442 - Classroom Use of Instructional Technology (Elementary)
- SPED 364 - Teaching All Students

**Elementary Program — Methods, Curriculum Content, and Field Experiences (81 credits)**

- ART 380 - Art Educating the Child
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- PE 345 - Physical Education for Elementary School
- SCED 480 - Science Methods and Curriculum for the Elementary School
- SCED 490 - Laboratory/Field Experience in Elementary Science
- SPED 430 - Problem Solving for Diverse Needs

**Sociology, BA**

**65 credits**

**Introduction**

The sociology major consists of a 25-credit core, 30 credits of area requirements, a capstone seminar, and electives to bring the total to a minimum of 65 credits.

**Admission and Declaration Process**

Declaration of Major (see Sociology department page)

**Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

**Requirements**

- SOC 210 - Introduction to Research Methods
- SOC 215 - Social Statistics
- SOC 310 - Methodological Applications in Social Research
- SOC 302 - Classical Sociological Theory
- Any one of the following introductory courses:
  - SOC 221 - Introduction to Population Issues
  - SOC 251 - Sociology of Deviant Behavior
  - SOC 255 - Social Organization of Criminal Justice

- SOC 260 - The Family in Society
  - SOC 268 - Gender and Society
  - SOC 269 - Race and Ethnic Relations
  - At least three courses from two of the following areas, for a total of six courses: Note that certain courses are listed as options in more than one area; however, each of these can be applied to only one area New course offerings may be added to the curriculum, and may be accepted as area requirements under departmental advisement
    - Family/Life Course
    - SOC 326 - American Family and Household Demography
    - SOC 332 - The Sociology of Human Relationships
    - SOC 333 - Aging in America
    - SOC 338 - Sociology of Sexual Behavior
    - SOC 354 - Domestic Violence and the Criminal Justice System
    - SOC 360 - Marital and Family Interaction
    - SOC 368 - Gender and Education
    - SOC 380 - Sociology of Youth
    - SOC 390 - Global Families
    - Law/Crime Deviance
    - SOC 352 - Criminology
    - SOC 354 - Domestic Violence and the Criminal Justice System
    - SOC 355 - Criminal Justice System
    - SOC 356 - Law Enforcement and Society
    - SOC 359 - Women and Deviance
    - SOC 363 - Law and Social Stratification
    - SOC 376 - Research and Policy in Criminal Justice Organizations
    - SOC 387 - Sociology of Correctional Institutions
    - Population Studies
    - SOC 321 - Demography
    - SOC 326 - American Family and Household Demography
    - SOC 333 - Aging in America
    - SOC 348 - Global Health
    - SOC 375 - Community and Urban Society
    - SOC 421 - Demographic Analysis
    - Social Organization/Social Inequality
    - SOC 303 - Contemporary Sociological Theory
    - SOC 330 - Introduction to Social Psychology
    - SOC 340 - Sociology of Organizations
    - SOC 348 - Global Health
    - SOC 361 - Sociology of Education
    - SOC 363 - Law and Social Stratification
    - SOC 364 - Social Stratification
    - SOC 367 - Sociology of Work and Occupations
    - SOC 368 - Gender and Education
    - SOC 369 - Sociology of Race and Ethnicity
    - SOC 370 - Historical Sociology
    - SOC 375 - Community and Urban Society
    - SOC 390 - Global Families
  - At least one course from one of the following areas:
- Family/Life Course

- SOC 430 - Field Research Methods
- SOC 460 - Advanced Topics in Family Law/Crime Deviance
  - SOC 430 - Field Research Methods
- SOC 450 - Sociology of Law
- SOC 452 - Advanced Criminology
- SOC 456 - Seminar in Policing
  - Population Studies
- SOC 426 - Advanced Topics in Demography
  - Social Organization/Inequality
    - SOC 430 - Field Research Methods
  - SOC 440 - Globalization
  - SOC 461 - Advanced Sociology of Education
- SOC 492 - Senior Thesis may be selected as the capstone course for any of the areas.
  - Electives under department advisement to bring the total to a minimum of 65 credits; select from any 200-level introductory course or from any 300/400-level courses in sociology

## **Sociology, BS**

**67 credits**

### **Introduction**

The Bachelor of Science degree consists of a 39-credit core, 24 credits minimum of area requirements, and 5 credits of senior thesis as the capstone experience.

### **Admission and Declaration Process**

Declaration of Major (see Sociology department page)

### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

### **Requirements**

Note that certain courses are listed as options in more than one area; however, each of these can be applied to only one area. New course offerings may be added to the curriculum, and may be accepted as area requirements under departmental advisement.

- MATH 124 - Calculus and Analytic Geometry I
- MATH 125 - Calculus and Analytic Geometry II
- MATH 204 - Elementary Linear Algebra
- SOC 210 - Introduction to Research Methods
- SOC 215 - Social Statistics
- SOC 310 - Methodological Applications in Social Research
- SOC 302 - Classical Sociological Theory
- SOC 320 - Computer Applications for Social Science Data
- SOC 421 - Demographic Analysis

- SOC 492 - Senior Thesis
  - Any one of the following introductory courses:
    - SOC 221 - Introduction to Population Issues
    - SOC 251 - Sociology of Deviant Behavior
    - SOC 255 - Social Organization of Criminal Justice
    - SOC 260 - The Family in Society
    - SOC 268 - Gender and Society
    - SOC 269 - Race and Ethnic Relations
  - At least three courses in one of the following areas for a minimum of 15 credits:
- Family/Life Course*
- SOC 326 - American Family and Household Demography
  - SOC 332 - The Sociology of Human Relationships
  - SOC 333 - Aging in America
  - SOC 338 - Sociology of Sexual Behavior
  - SOC 354 - Domestic Violence and the Criminal Justice System
  - SOC 360 - Marital and Family Interaction
  - SOC 368 - Gender and Education
  - SOC 380 - Sociology of Youth
  - SOC 390 - Global Families
- Law/Crime/Deviance*
- SOC 352 - Criminology
  - SOC 354 - Domestic Violence and the Criminal Justice System
  - SOC 355 - Criminal Justice System
  - SOC 356 - Law Enforcement and Society
  - SOC 359 - Women and Deviance
  - SOC 363 - Law and Social Stratification
  - SOC 376 - Research and Policy in Criminal Justice Organizations
  - SOC 387 - Sociology of Correctional Institutions
- Population Studies*
- SOC 321 - Demography
  - SOC 326 - American Family and Household Demography
  - SOC 333 - Aging in America
  - SOC 348 - Global Health
  - SOC 375 - Community and Urban Society
  - SOC 390 - Global Families
- Social Organization/Social Inequality*
- SOC 303 - Contemporary Sociological Theory
  - SOC 330 - Introduction to Social Psychology
  - SOC 340 - Sociology of Organizations
  - SOC 348 - Global Health
  - SOC 361 - Sociology of Education
  - SOC 363 - Law and Social Stratification
  - SOC 364 - Social Stratification
  - SOC 367 - Sociology of Work and Occupations
  - SOC 368 - Gender and Education
  - SOC 369 - Sociology of Race and Ethnicity
  - SOC 370 - Historical Sociology
  - SOC 375 - Community and Urban Society
  - SOC 390 - Global Families

# Sociology/Social Studies, BA

**86-88 credits**

## Introduction

The Sociology-Social Studies major consists of a 44-45-credit core in sociology and 42-44 credits in social studies, to bring the total to a minimum of 85 credits. **NOTE:** Secondary education students also must complete the “teacher certification” program.

To receive a recommendation for state of Washington certification for secondary education, students must complete the “teacher certification” program, including the content methods course Sec 426, which is offered by the Department of Secondary Education as 1) a part of the undergraduate BA degree, or 2) as a post-baccalaureate program, or 3) as a part of the Master’s in Teaching degree. See the Secondary Education section of this catalog for program admission, completion, and teacher certification requirements.

Completion of this combination major leads to an endorsement in social studies.

## Grade Requirements

Courses required for a state teaching endorsement must be completed with a grade of C (2.0) or better.

## Requirements

- EGEO 201 - Human Geography
- HIST 103 - Introduction to American Civilization: American History to 1865
- HIST 104 - Introduction to American Civilization: American History Since 1865
- HIST 391 - History of the Pacific Northwest
- PLSC 250 - The American Political System
- SOC 210 - Introduction to Research Methods
- SOC 215 - Social Statistics
- SOC 302 - Classical Sociological Theory
- SOC 310 - Methodological Applications in Social Research
- SOC 361 - Sociology of Education
  - One course from:
    - SOC 221 - Introduction to Population Issues
    - SOC 251 - Sociology of Deviant Behavior
    - SOC 255 - Social Organization of Criminal Justice
    - SOC 260 - The Family in Society
    - SOC 268 - Gender and Society
    - SOC 269 - Race and Ethnic Relations
  - Two courses from:
    - SOC 340 - Sociology of Organizations
    - SOC 364 - Social Stratification
    - SOC 368 - Gender and Education
    - SOC 369 - Sociology of Race and Ethnicity
    - SOC 380 - Sociology of Youth
  - One course from:
    - SOC 461 - Advanced Sociology of Education (preferred)

- SOC 492 - Senior Thesis  
or other Soc 400-level capstone seminar
  - One course from:
    - ECON 206 - Introduction to Microeconomics
    - ECON 446 - Economics for the Teacher (preferred)
- One course from:
  - ECON 207 - Introduction to Macroeconomics
  - ECON 447 - Methods for Teaching About the National Economy in the Public Schools (preferred)
- One of:
  - EGEO 250 - Geographic Information Systems Survey  
or two additional geography credits
  - Three additional history courses (minimum 12 credits) distributed as follows:
    - One course in Ancient,
    - One course from two of the following areas:
      - Europe
      - East and South Asia
      - East and South Asia
      - Western Hemisphere (outside U.S.)

## Sociology, MA

This program is not currently accepting new students. For further information contact the Graduate School, Western Washington University, 516 High St., Bellingham, WA 98225-9037, 360-650-3170, [gradschool@wwu.edu](mailto:gradschool@wwu.edu).

# Huxley College of the Environment

## Introduction

*Dr. Bradley F. Smith, Dean*

Huxley College is one of seven colleges constituting Western Washington University, consistently recognized as one of the outstanding public institutions of higher education in the West.

Huxley College offers a gathering place for individuals genuinely concerned with the environmental well-being of the earth. Our approach is holistic and deliberately innovative, designed to prepare students for creative, fulfilling professional careers in a changing world. Since its establishment in 1968, Huxley College has won national and international recognition, thanks to its comprehensive upper-division and graduate programs — continually refined and enriched to enhance practical, interdisciplinary approaches to environmental problem-solving.

Students, now numbering more than 450, pursue specialization in their chosen fields, plus breadth to guard against narrowness. Students enter Huxley with a foundation in science and social science. A unique component of Huxley College is the interdisciplinary requirement that Environmental Science students take courses in Environmental Studies and Environmental Studies students take courses in Environmental Sciences. In addition they are encouraged to design independent programs within Huxley and cooperative programs with other departments of the University. Faculty and staff are readily available to collaborate with student initiatives in learning. In addition to their classroom work, students participate in internships and may serve with faculty and staff on college committees. Students publish the quarterly *Planet* magazine.

Faculty specialties include science, social science, journalism, engineering, planning, geography and humanities. Thus, courses embrace natural and physical sciences, human ecology and ethics, history and resource policy, writing and photography, utilizing new technologies and computers.

Most Huxley courses are conducted in the Environmental Studies building and adjacent Arntzen Hall, housing classrooms and laboratories, the Institute of Environmental Toxicology and Chemistry (for research on risk assessment and effects of toxic substances) and the Institute for Watershed Studies (with specialized equipment for freshwater and limnological studies). The Shannon Point Marine Center, within easy driving distance on Fidalgo Island, provides facilities for marine studies. Huxley's resources also include a spatial analysis computer lab for Geographic Information Systems (GIS) and remote sensing and a map library which houses in excess of 245,000 maps and 1,000 atlases. The library, which serves the University and the surrounding community, is regarded as a major map collection in the United States.

## *Mission*

Huxley College of the Environment addresses today's environmental issues and prepares tomorrow's interdisciplinary problem solvers. We accomplish this mission by integrating outstanding educational programs, faculty-student collaboration, applied research, and professional and community service.

## *Vision*

Huxley College of the Environment is a premier institution for the education of future environmental experts and leaders.

## **Academic Programs Leading to Undergraduate and Graduate Degrees**

Economics/Environmental Studies	BA
Environmental Education	BA, MED
Environmental Science Major	BS, MS

Environmental Studies/Elementary	BAE
Environmental Studies/Journalism	BA
Geography	BA, MS
Geography/Elementary	BAE
Geography/Social Studies	BA
Planning and Environmental Policy	BA
Student/Faculty Designed	BA, BS

## Majors/Minors

### *Student/Faculty Designed Major*

Students who wish to design their own majors within Huxley College should obtain complete guidelines from the Undergraduate Advisors located in ES 539, the Huxley College office. The major must be developed with faculty advisement and must be approved by two faculty members and the Huxley College Curriculum Committee at least four quarters before the student's anticipated graduation.

## **College Admission and Advisement**

### *Admissions and Declaration of Major*

- Completion of required preparatory course work
  - Academic performance (GPA)
  - A brief essay in response to a given question
  - Relevant experience

Applications should be received by the Huxley College office (ES 539) by:

- April 25 for admission to summer or fall quarters
  - October 6 for admission winter quarter
  - January 15 for admission spring quarter.

## **Department Chairs**

Dr. Leo R. Bodensteiner	Environmental Sciences
Dr. Thomas A. Terich	Environmental Studies

## Other College Information

## *Departments, Courses and Programs*

Courses listed in this catalog constitute a record of the total academic program of the University. For an exact scheduling of courses at Western, students should consult the annual online Timetable of Classes, and Extended Education and Summer Programs' bulletins.

**Student/Faculty Designed, BA (Huxley College of the Environment)**

Students who wish to design their own majors within Huxley College should obtain complete guidelines from the Undergraduate Advisors located in ES 539, the Huxley College office. The major must be developed with faculty advisement and must be approved by two faculty members and the Huxley College Curriculum Committee at least four quarters before the student's anticipated graduation.

**Student/Faculty Designed, BS (Huxley College of the Environment)**

Students who wish to design their own majors within Huxley College should obtain complete guidelines from the Undergraduate Advisors located in ES 539, the Huxley College office. The major must be developed with faculty advisement and must be approved by two faculty members and the Huxley College Curriculum Committee at least four quarters before the student's anticipated graduation.

## **Environmental Sciences**

### **Introduction**

*Chair: Leo R. Bodensteiner*

Environmental science draws on basic knowledge of the physical, chemical, biological and quantitative aspects of natural systems. The knowledge of how natural systems work is applied to solving problems largely created by human activities. Often these problems are represented by disturbances in the functioning of natural systems. Humans are altering their own life-support systems — the air, the water and the soil. Scales of disturbance range from the molecular and cellular to individuals, populations, ecosystems, and regional and global levels.

Graduates in environmental science enter a wide variety of career paths in local, state and federal governments, universities, and the private sector. Fields include environmental toxicology, environmental chemistry, terrestrial ecology, environmental impact assessment, watershed studies, air pollution control, solid and hazardous waste management, and marine pollution assessment. Many graduates choose to pursue advanced studies.

### *Faculty*

The interdisciplinary nature of environmental science is reflected in the wide-ranging expertise of the environmental science faculty. Oceanographers, toxicologists, chemists, biologists, limnologists, terrestrial ecologists and others work together as an interdisciplinary team to offer a curriculum grounded in the sciences, but oriented to the understanding and solution of environmental problems. Active engagement in research allows the faculty to bring an analysis of new knowledge into the classroom.

### *Facilities and Equipment*

Facilities are available for teaching laboratory courses and for student research projects. Students gain practical hands-on experience in data collection and analysis in both laboratory and field settings including terrestrial, aquatic, estuarine and marine environments. Specialized equipment is available for a wide variety of applications including toxicological and water quality monitoring (in a state-certified lab), atmospheric chemistry, dendrochronology, global positioning systems, wildlife telemetry, forest and aquatic habitat characterization. Instrumentation includes an autoanalyzer for phosphorous, carbon and nitrogen, a gamma ray detector for sediment dating and a remotely operated vehicle (ROV) equipped with a camera for underwater viewing of the marine environment. Extensive computer facilities which include a Geographic Information Systems and Remote Sensing laboratory with state-of-the-art capabilities.

The Hannegan Center, a nearby off campus facility, provides opportunities for field oriented and mesocosm-type studies of both aquatic and terrestrial systems.

The Shannon Point Marine Center offers access to aquaria and a wide variety of laboratory and field sampling equipment for students interested in the marine environment.

The Canyon Lake Creek Community Forest provides access to 2,300 acres in the foothills of Mt. Baker.

In addition to these university owned facilities, our location provides unparalleled access to public lands that cover a range of environments including the alpine zone, dense old-growth forests, wetlands, lakes, streams, estuaries and the coast.

### *Faculty*

**LEO R. BODENSTEINER** (1995) Chair and Associate Professor. BA (biology), Moorhead State University; MA (zoology), PhD (zoology), Southern Illinois University-Carbondale.

**BRIAN L. BINGHAM** (1995) Professor. BS (zoology), MS (zoology), Brigham Young University; PhD (biology), Florida State University.

**ANDREW G. BUNN** (2006) Associate Professor. BS (zoology) The Evergreen State College; MEM (resource ecology) Duke University; PhD, Montana State University-Bozeman (environmental science).

**DEVON A. CANCELLA** (1998) Associate Professor and Director of Scientific Technical Services. BS (general science), MS (chemistry), University of Iowa; PhD (environmental health sciences), University of California.

**JAMES M. HELFIELD** (2005) Assistant Professor. BA (English), Duke University; MSc (physical geography), University of Toronto; PhD (forest ecology), University of Washington.

**PETER S. HOMANN** (1996) Professor. BA (natural sciences) and BS (chemistry), Case Western Reserve University; MS (forest ecology), Yale School of Forestry and Environmental Studies; PhD (forest soils, nutrient cycling), University of Washington.

**WAYNE G. LANDIS** (1989) Professor and Director, Institute of Environmental Toxicology and Chemistry. BA (biology), Wake Forest University; MA (biology) and PhD (zoology), Indiana University.

**ROBIN A. MATTHEWS** (1986) Professor and Director, Institute for Watershed Studies. BS (biology), University of California-Riverside; MS (environmental studies), Indiana University; PhD (botany/aquatic ecology), Virginia Polytechnic Institute and State University.

**JOHN F. McLAUGHLIN** (1996) Associate Professor. BA (biological sciences), BA (biochemistry), BA (integrated science program), Northwestern University; MS (biological sciences) and PhD (biological sciences, population biology), Stanford University.

**JOHN M. RYBCZYK** (2000) Associate Professor. BS (wildlife biology), Michigan State University; MS (ecosystem biology), Eastern Michigan University; PhD (oceanography and coastal science), Louisiana State University.

**DAVID H. SHULL** (2003) Associate Professor. BS (oceanography), University of Washington; MS (oceanography), University of Connecticut; PhD (environmental, coastal and ocean sciences), University of Massachusetts.

**BRADLEY F. SMITH** (1994) Professor and Dean, Huxley College of the Environment. BA (political science and international relations) and MA (political science and public administration), Western Michigan University; PhD (School of Natural Resources and Environment), University of Michigan.

**RUTH M. SOFIELD** (2003) Associate Professor. BA, West Virginia University; MS, McNeese State University; PhD (environmental science and engineering), Colorado School of Mines.

**DAVID O. WALLIN** (1995) Professor. BS (biology), Juniata College; MA (biology), The College of William and Mary; PhD (environmental science), University of Virginia.

### Adjunct Faculty

**JAMES D. ALLAWAY**, PhD (natural resources, policy, and planning), Cornell University.

**KATHERINE BARIL**, Extension Faculty, Chair, Community Leadership and Natural Resources, Washington State University. JD, University of Puget Sound.

**DWIGHT BARRY**, Education Outreach Coordinator, Peninsula College, PhD (environmental science), University of North Texas.

**WILLARD BROWNELL**, Ecoquest, New Zealand.

**LISA BROWN**, Executive Director Critical Junctures Institute Doctor of Public Health (environmental health), Uniformed Services University of the Health Sciences

**RABEL J. BURDGE** (1996) Visiting Professor. BS (agriculture/economics) and MS (rural sociology), Ohio State University; PhD (sociology), Penn State University.

**ERIC CRECELIUS**, Senior Research Scientist, Battelle Marine Science Laboratory. PhD (oceanography), University of Washington.

**ANTHONY CUMMINGS**, Ecoquest, New Zealand.

**JAMES S. DARLING**, Executive Director, Port of Bellingham.

**JAMES DAVIS**, President of Conservation Partnership Center, PhD (ecology/etymology), University of California-Berkeley.

**PAUL DINNEL** Resident Scientist, Shannon Point Marine Center. PhD (fisheries), University of Washington.

**JERRY FREILICH**, Research and Monitoring Coordinator, Olympic National Park, PhD (aquatic ecology), University of Georgia.

**JEFFREY GIESON**, North Cascades Institute.

**TIMOTHY HALL**, National Council for Air and Stream Improvement, Marine Research Laboratory, Anacortes, WA. MS (biology), Central Washington University.

**MIMI LARSON BECKER**, Associate Professor of Natural Resources and Environmental Policy, University of New

Hampshire. PhD (international environmental resource policy), Duke University.

**PETER MADISON**, Ecoquest, New Zealand.

**SCOTT L. MCCREERY**, President and Chief Environmental Specialist of Environmental Compliance Options.

**CASSANDRA NOBLE, JD**, University of Washington School of Law.

**PONGSAK (LEK) NOOPHAN**, Adjunct Faculty, Thammasat University, Pathumthani Province, Thailand, PhD (environmental science and engineering), Colorado School of Mines.

**WALTER H. PEARSON**, Batelle Laboratory. PhD (oceanography), Oregon State University.

**CLIFFORD G. RICE**, Wildlife Biologist, Washington State Department of Fish and Wildlife, Olympia, Washington.

**RALPH RILEY**, Earthwatch. PhD, Stanford University.

**JEAN ROUSSEAU**, Political Scientist, Quebec, Canada.

**WENDY STEFFENSEN**, Acting Technical Supervisor, Public Works, Operations, City of Bellingham.

**MICHAEL G. STONER**, Environmental Manager, Port of Bellingham. MS (forest soils), University of Washington.

**SUZANNE STROM**, Marine Scientist, Shannon Point Marine Center. PhD (biological oceanography), University of Washington.

**KATHRYN L. VAN ALSTYN**, Professor, Marine Scientist/Information Services Specialist, Shannon Point Marine Center.

#### Affiliated Faculty

**RANDALL S. BABCOCK**, Professor, Department of Geology.

**DANIEL L. BOXBERGER**, Professor, Department of Anthropology.

**GEORGE T. CVETKOVICH**, Professor, Department of Psychology.

**DAVID T. MASON**, Professor, Fairhaven College.

**DEBRA J. SALAZAR**, Professor, Department of Political Science.

**MAURICE SCHWARTZ**, Professor Emeritus, Department of Geology.

**MART A. STEWART**, Professor, Department of History.

**STEPHEN D. SULKIN**, Professor and Director, Shannon Point

**DON C. WILLIAMS**, Professor, Department of Biology.

#### Undergraduate Degrees and Programs

Environmental Science, BS

Environmental Science — Environmental Toxicology, BS

Environmental Science — Freshwater Ecology, BS

Environmental Science — Marine Ecology, BS

Environmental Science — Terrestrial Ecology, BS

Environmental Science Extension Major, BS

Environmental Science Minor

#### Graduate Degrees and Programs

Environmental Science, Freshwater Ecology, Thesis, MS

Environmental Science, Environmental Toxicology & Chemistry, Thesis, MS

Environmental Science, Regional, Global and Terrestrial Ecosystems, Thesis, MS

Environmental Science, Marine and Estuarine Science (MES), Thesis, MS

# **Environmental Science Extension Major, BS**

**132-137 credits (preparatory courses and major)**

## **Introduction**

Students wishing to complete an Environmental Science major in four years should complete the general chemistry series during their freshman year and the general biology series during their sophomore year. Prospective environmental science majors are strongly advised to take additional preparatory courses that provide a strong background in chemistry, biology and mathematics. The preparatory courses are listed with the major, where approved as GUR courses in the catalog, may be used to fulfill both Huxley College and GUR requirements. All preparatory courses required for admission should be completed on a lettered or numeric grading scale, not P/NP, and must be completed with a grade of C- or better. This Environmental Science major is offered at off site locations. Exact locations are listed in the Extended Education and Summer Programs section of this catalog.

## **Admission and Declaration Process**

Admission and Declaration of Major (see Huxley College Admission and Advisement page)

## **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

## **Requirements**

### **Preparatory Courses (47-52 credits)**

- BIOL 204 - Introduction to Evolution, Ecology and Biodiversity
- BIOL 205 - Introduction to Cellular and Molecular Biology
- BIOL 206 - Introduction to Organismal Biology
- CHEM 121 - General Chemistry I
- CHEM 122 - General Chemistry II
- CHEM 123 - General Chemistry III
- ECON 206 - Introduction to Microeconomics
- MATH 124 - Calculus and Analytic Geometry I
- One course from:
  - EGEO 203 - Physical Geography
  - GEOL 211 - Physical Geology
    - Any BCOM or CCOM GUR requirement course
    - Any PLSC course

### **Major (85 credits)**

- ESCI 340 - Biostatistical Analysis
- ESCI 436 - Environmental Impact Assessment
- ESTU 304 - Environment and Resource Policy
- ESTU 305 - Environmental History and Ethics
- Choose either:
  - CHEM 251 - Elementary Organic Chemistry

or

- CHEM 351 - Organic Chemistry
- CHEM 352 - Organic Chemistry
- CHEM 354 - Organic Chemistry Laboratory I
  - One course from:
    - ESCI 321 - Oceanography
    - ESCI 435 - Landscape Ecology
    - ESCI 492 - Climate Change
    - EGEO 330 - Geography of Landforms
    - EGEO 331 - Climatology
    - EGEO 433 - Climate and Biophysical Processes
  - One course from:
    - ESCI 325 - Fundamentals of Ecology
    - BIOL 325 - Ecology
  - One course from (minimum of 10 credits):
    - ESCI 498A - Senior Thesis
    - ESCI 498B - Internship
    - ESCI 498C - Senior Project
  - Two lecture/lab courses or combination of courses from:
    - ESCI 321 and
    - ESCI 322 - Oceanography Laboratory
    - ESCI 328 - Introduction to Ecosystem Management
    - ESCI 361 - Water Quality and
    - ESCI 362 - Water Quality Lab
    - ESCI 407 - Forest Ecology
    - ESCI 429 - Stream Ecology
  - Electives under advisement (28-37 credits)
    - A minimum of 20 credits from:
      - ESCI 300- or 400-level
    - Additional electives, if needed from:
      - BIOL 300- or 400-level
      - CHEM 300- or 400-level
      - EGEO 300- or 400-level
      - ESCI 300- or 400-level
      - ESTU 300- or 400-level
      - EXT 317M
    - EXT 370 - Principles and Practices of Emergency Management
    - EXT 371 - Practical Applications of Emergency Management
    - EXT 372 - Law and Policy of Emergency Management
    - GEOL 300- or 400-level
    - MATH 125 - Calculus and Analytic Geometry II
    - MATH 203 - Linear Algebra and Differential Equations I
    - MATH 204 - Elementary Linear Algebra
    - MATH 205 - Linear Algebra Workshop
    - MATH 207 - Mathematical Computing
    - MATH 209 - Discrete Mathematics
    - MATH 224 - Multivariable Calculus and Geometry I
    - MATH 225 - Multivariable Calculus and Geometry II
    - MATH 226 - Limits and Infinite Series

MATH 300- or 400-level  
Maximum 3 courses allowed from:

- PHYS 114 - Principles of Physics I
  - PHYS 115 - Principles of Physics II
  - PHYS 116 - Principles of Physics III
  - PHYS 121 - Physics With Calculus I
  - PHYS 122 - Physics With Calculus II
- PHYS 300- or 400-level

## **Environmental Science Minor**

**24-29 credits**

### **Admission and Declaration Process**

Admission and Declaration of Major (see Huxley College Admission and Advisement page)

### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

### **Requirements**

- ESCI 101 - Environmental Studies: A Scientific Approach
- ESCI 302 - Environmental Pollution
- ESCI 325 - Fundamentals of Ecology
  - One lab/lecture course or combination of courses from:
- ESCI 321 - Oceanography and
- ESCI 322 - Oceanography Laboratory
- ESCI 361 - Water Quality and
- ESCI 362 - Water Quality Lab
- ESCI 407 - Forest Ecology
- ESCI 408 - Field Methods in Wildlife Ecology
- ESCI 410 - Forestry-Fish Interactions and
- ESCI 411 - Forest and Fish Assessment
- ESCI 421 - Fisheries Management Lab and
- ESCI 425 - Environmental Biology of Fishes
- ESCI 423 - Past Environments of the Pacific Northwest
- ESCI 426 - Marine Invertebrates and Their Environment
- ESCI 429 - Stream Ecology
- ESCI 430 - Limnology and Limnology Lab
- ESCI 440 - Wetlands Ecology
- ESCI 442 - Introduction to Remote Sensing
- ESCI 455 - Environmental Toxicology I and
- ESCI 457 - Environmental Toxicology Laboratory I
- ESCI 456 - Environmental Toxicology II and
- ESCI 458 - Environmental Toxicology Laboratory II

- One course from:
  - ESCI 321
- ESCI 435 - Landscape Ecology
- ESCI 492 - Climate Change
- EGEO 330 - Geography of Landforms
- EGEO 331 - Climatology
- EGEO 433 - Climate and Biophysical Processes
- Electives under advisement (6 credits)
  - BIOL 326 - Ecology Laboratory
  - BIOL 340 - Biometrics
  - ESCI 300- and 400-level
- Maximum 1 course allowed from:
  - EGEO 331
  - EGEO 332 - The Soil Environment
  - EGEO 350 - Introduction to Geographic Information Systems
  - EGEO 430
  - EGEO 434 – Biogeography

## **Environmental Science — Environmental Toxicology, BS**

**132-137 credits**

### **Introduction**

Students wishing to complete an Environmental Science major in four years should complete the general chemistry series during their freshman year and the general biology series during their sophomore year. Prospective environmental science majors are strongly advised to take additional preparatory courses that provide a strong background in chemistry, biology and mathematics. The preparatory courses are listed with the major, where approved as GUR courses in the catalog, may be used to fulfill both Huxley College and GUR requirements. All preparatory courses required for admission should be completed on a lettered or numeric grading scale, not P/NP, and must be completed with a grade of C- or better.

### **Admission and Declaration Process**

Admission and Declaration of Major (see Huxley College Admission and Advisement page)

### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

### **Requirements**

#### **Preparatory Courses (47-52 credits)**

- BIOL 204 - Introduction to Evolution, Ecology and Biodiversity
- BIOL 205 - Introduction to Cellular and Molecular Biology
- BIOL 206 - Introduction to Organismal Biology
- CHEM 121 - General Chemistry I

- CHEM 122 - General Chemistry II
- CHEM 123 - General Chemistry III
- ECON 206 - Introduction to Microeconomics
- MATH 124 - Calculus and Analytic Geometry I
- One course from:
- EGEO 203 - Physical Geography
- GEOL 211 - Physical Geology
- Any BCOM or CCOM GUR requirement course
- Any PLSC course

#### **Major (85 credits)**

- Choose either:
- CHEM 251 - Elementary Organic Chemistry  
or
- CHEM 351 - Organic Chemistry
- CHEM 352 - Organic Chemistry
- CHEM 354 - Organic Chemistry Laboratory I
- One course from:
- ESCI 321 - Oceanography
- ESCI 435 - Landscape Ecology
- ESCI 492 - Climate Change
- EGEO 330 - Geography of Landforms
- EGEO 331 - Climatology
- EGEO 433 - Climate and Biophysical Processes
- One course from:
- BIOL 325 - Ecology
- ESCI 325 - Fundamentals of Ecology
- One course from:
- BIOL 340 - Biometrics
- ESCI 340 - Biostatistical Analysis
- One course from:
- ESCI 436 - Environmental Impact Assessment
- ESCI 470 - Ecological Restoration
- ESCI 490 - Environmental Risk Assessment
- ESCI 491 - Oceanography of Puget Sound
- ESTU 436 - Environmental Impact Assessment
- ESTU 470 - Planning Studio
- ESTU 496 - Environmental Stewardship
- One course from: (minimum of 10 credits; maximum of 15 credits)
- ESCI 498A - Senior Thesis
- ESCI 498B - Internship
- ESCI 498C - Senior Project
- ESCI 498D - International Study
- One course from two of the following categories:  
Human Ecology, Geography:
- ESTU 303 - Human Ecology and Sustainability
- EGEO 311 - Population and Resources

- EGEO 314 - Urbanization: Processes and Patterns
- Environmental Policy:
- ESTU 304 - Environment and Resource Policy
- ESTU 320 - Explorations in Environmental Studies
- Environmental History, Philosophy, Ethics:
- ESTU 305 - Environmental History and Ethics
- ESTU 488 - History of Conservation in America
- Two lecture/lab courses or combination of courses from:
  - ESCI 321 and
  - ESCI 322 - Oceanography Laboratory
  - ESCI 361 - Water Quality and
  - ESCI 362 - Water Quality Lab
  - ESCI 407 - Forest Ecology
  - ESCI 408 - Field Methods in Wildlife Ecology
  - ESCI 410 - Forestry-Fish Interactions and
  - ESCI 411 - Forest and Fish Assessment
  - ESCI 421 - Fisheries Management Lab and
  - ESCI 425 - Environmental Biology of Fishes
  - ESCI 423 - Past Environments of the Pacific Northwest
  - ESCI 426 - Marine Invertebrates and Their Environment
  - ESCI 428 - Freshwater Algae Bioindicators
  - ESCI 429 - Stream Ecology
  - ESCI 430 - Limnology and Limnology Lab
  - ESCI 440 - Wetlands Ecology
  - ESCI 442 - Introduction to Remote Sensing
  - ESCI 455 - Environmental Toxicology I and
  - ESCI 457 - Environmental Toxicology Laboratory I
  - ESCI 456 - Environmental Toxicology II and
  - ESCI 458 - Environmental Toxicology Laboratory II
- Electives under advisement (28-37 credits)
  - A minimum of 20 credits from:
    - ESCI 300- or 400-level
  - Additional electives, if needed from:
    - BIOL 300- or 400-level
    - CHEM 300- or 400-level
    - EGEO 300- or 400-level
    - ESCI 300- or 400-level
    - ESTU 300- or 400-level
    - FAIR 330E - Ethnobotany
    - FAIR 332Q - Topics in Applied Conservation Biology
    - FAIR 434P - Advanced Studies in Field Science
    - FAIR 435Q - Advanced Marine Bird Population Ecology
    - FAIR 463
    - FAIR 465
    - GEOL 300- or 400-level
    - MATH 125 - Calculus and Analytic Geometry II
    - MATH 203 - Linear Algebra and Differential Equations I
    - MATH 204 - Elementary Linear Algebra
    - MATH 205 - Linear Algebra Workshop

- MATH 207 - Mathematical Computing
- MATH 209 - Discrete Mathematics
- MATH 224 - Multivariable Calculus and Geometry I
- MATH 225 - Multivariable Calculus and Geometry II
- MATH 226 - Limits and Infinite Series
- MATH 300- or 400-level

Maximum 3 courses allowed from:

- PHYS 114 - Principles of Physics I
- PHYS 115 - Principles of Physics II
- PHYS 116 - Principles of Physics III
- PHYS 121 - Physics With Calculus I
- PHYS 122 - Physics With Calculus II
- PHYS 300- or 400-level

### Toxicology Emphasis (34 credit minimum)

Complete the following courses to fulfill the Toxicology Emphasis. Courses used to fulfill requirements in the emphasis may also be used to fulfill above major requirements.

Minimum of 2 courses from:

- ESCI 321 - Oceanography
- ESCI 340 - Biostatistical Analysis
- ESCI 361 - Water Quality
- ESCI 362 - Water Quality Lab
- ESCI 421 - Fisheries Management Lab
- ESCI 428 - Freshwater Algae Bioindicators
- ESCI 430 - Limnology and Limnology Lab
- ESCI 431 - Watershed Biogeochemistry
- ESCI 433 - Population Biology
- ESCI 435 - Landscape Ecology
- ESCI 439 - Conservation of Biological Diversity
- ESCI 444 - Biogeochemistry of Marine Sediments
- ESCI 462 - Air Pollution
- ESCI 492 - Climate Change

Minimum of 4 courses, including 1 lab from:

- ESCI 333 - Introduction to Environmental Toxicology
- ESCI 457 - Environmental Toxicology Laboratory I
- ESCI 458 - Environmental Toxicology Laboratory II
- ESCI 459 - Aquatic Toxicology
- ESCI 460 - Contaminant Movement in Environment
- ESCI 490 - Environmental Risk Assessment
- ESCI 455 - Environmental Toxicology I
- ESCI 456 - Environmental Toxicology II

Additional electives, if needed, from:

- BIOL 321 - Genetics
- BIOL 322 - Genetics Lab
- BIOL 405 - Microbial Ecology
- CHEM 333 - Analytical Chemistry
- CHEM 351 - Organic Chemistry

- CHEM 352 - Organic Chemistry
- CHEM 353 - Organic Chemistry
- CHEM 354 - Organic Chemistry Laboratory I
- CHEM 375 - Elements of Biochemistry
- CHEM 471 - Biochemistry I
- EGEO 331 - Climatology
- EGEO 332 - The Soil Environment
- EGEO 350 - Introduction to Geographic Information Systems
- EGEO 433 - Climate and Biophysical Processes

Maximum 6 courses allowed from:

ESTU 300- or 400-level

Maximum 3 courses from:

- PHYS 114 - Principles of Physics I
- PHYS 115 - Principles of Physics II
- PHYS 116 - Principles of Physics III
- PHYS 121 - Physics With Calculus I
- PHYS 122 - Physics With Calculus II

## **Environmental Science — Freshwater Ecology, BS**

**132-137 credits**

### **Introduction**

Students wishing to complete an Environmental Science major in four years should complete the general chemistry series during their freshman year and the general biology series during their sophomore year. Prospective environmental science majors are strongly advised to take additional preparatory courses that provide a strong background in chemistry, biology and mathematics. The preparatory courses are listed with the major, where approved as GUR courses in the catalog, may be used to fulfill both Huxley College and GUR requirements. All preparatory courses required for admission should be completed on a lettered or numeric grading scale, not P/NP, and must be completed with a grade of C- or better.

### **Admission and Declaration Process**

Admission and Declaration of Major (see Huxley College Admission and Advisement page)

### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

### **Requirements**

#### **Preparatory Courses (47-52 credits)**

- BIOL 204 - Introduction to Evolution, Ecology and Biodiversity
- BIOL 205 - Introduction to Cellular and Molecular Biology
- BIOL 206 - Introduction to Organismal Biology

- CHEM 121 - General Chemistry I
- CHEM 122 - General Chemistry II
- CHEM 123 - General Chemistry III
- ECON 206 - Introduction to Microeconomics
- MATH 124 - Calculus and Analytic Geometry I
- One course from:
- EGEO 203 - Physical Geography
- GEOL 211 - Physical Geology
- Any BCOM or CCOM GUR requirement course
- Any PLSC course

#### **Major (85 credits)**

- Choose either:
- CHEM 251 - Elementary Organic Chemistry  
or
- CHEM 351 - Organic Chemistry
- CHEM 352 - Organic Chemistry
- CHEM 354 - Organic Chemistry Laboratory I
- One course from:
- ESCI 321 - Oceanography
- ESCI 435 - Landscape Ecology
- ESCI 492 - Climate Change
- EGEO 330 - Geography of Landforms
- EGEO 331 - Climatology
- EGEO 433 - Climate and Biophysical Processes
- One course from:
- ESCI 325 - Fundamentals of Ecology
- BIOL 325 - Ecology
- One course from:
- ESCI 340 - Biostatistical Analysis
- BIOL 340 - Biometrics
- One course from:
- ESCI 436 - Environmental Impact Assessment
- ESCI 470 - Ecological Restoration
- ESCI 490 - Environmental Risk Assessment
- ESCI 491 - Oceanography of Puget Sound
- ESTU 436 - Environmental Impact Assessment
- ESTU 470 - Planning Studio
- ESTU 496 - Environmental Stewardship
- One course from: (minimum of 10 credits; maximum of 15 credits)
- ESCI 498A - Senior Thesis
- ESCI 498B - Internship
- ESCI 498C - Senior Project
- ESCI 498D - International Study
- One course from two of the following categories:  
Human Ecology, Geography:
- ESTU 303 - Human Ecology and Sustainability

- Egeo 311 - Population and Resources
- Egeo 314 - Urbanization: Processes and Patterns

Environmental Policy:

- ESTU 304 - Environment and Resource Policy
  - ESTU 320 - Explorations in Environmental Studies
- Environmental History, Philosophy, Ethics:
- ESTU 305 - Environmental History and Ethics
  - ESTU 488 - History of Conservation in America

Two lecture/lab courses or combination of courses from:

- ESCI 321 - Oceanography and
- ESCI 322 - Oceanography Laboratory
- ESCI 361 - Water Quality and
- ESCI 362 - Water Quality Lab
- ESCI 407 - Forest Ecology
- ESCI 408 - Field Methods in Wildlife Ecology
- ESCI 410 - Forestry-Fish Interactions and
- ESCI 411 - Forest and Fish Assessment
- ESCI 421 - Fisheries Management Lab and
- ESCI 425 - Environmental Biology of Fishes
- ESCI 423 - Past Environments of the Pacific Northwest
- ESCI 426 - Marine Invertebrates and Their Environment
- ESCI 428 - Freshwater Algae Bioindicators
- ESCI 429 - Stream Ecology
- ESCI 430 - Limnology and Limnology Lab
- ESCI 440 - Wetlands Ecology
- ESCI 442 - Introduction to Remote Sensing
- ESCI 455 - Environmental Toxicology I and
- ESCI 457 - Environmental Toxicology Laboratory I
- ESCI 456 - Environmental Toxicology II and
- ESCI 458 - Environmental Toxicology Laboratory II

Electives under advisement (28-37 credits)

A minimum of 20 credits from

ESCI 300- or 400-level

Additional electives, if needed from:

- BIOL 300- or 400-level
- CHEM 300- or 400-level
- Egeo 300- or 400-level
- ESCI 300- or 400-level
- ESTU 300- or 400-level
- FAIR 330E - Ethnobotany
- FAIR 332Q - Topics in Applied Conservation Biology
- FAIR 434P - Advanced Studies in Field Science
- FAIR 435Q - Advanced Marine Bird Population Ecology
- FAIR 463
- FAIR 465
- GEOL 300- or 400-level
- MATH 125 - Calculus and Analytic Geometry II
- MATH 203 - Linear Algebra and Differential Equations I
- MATH 204 - Elementary Linear Algebra

- MATH 205 - Linear Algebra Workshop
  - MATH 207 - Mathematical Computing
  - MATH 209 - Discrete Mathematics
  - MATH 224 - Multivariable Calculus and Geometry I
  - MATH 225 - Multivariable Calculus and Geometry II
  - MATH 226 - Limits and Infinite Series
  - MATH 300- or 400-level
- Maximum 3 courses allowed from:
- PHYS 114 - Principles of Physics I
  - PHYS 115 - Principles of Physics II
  - PHYS 116 - Principles of Physics III
  - PHYS 121 - Physics With Calculus I
  - PHYS 122 - Physics With Calculus II
  - PHYS 300- or 400-level

#### **Freshwater Ecology Emphasis (34 credits minimum)**

Complete the following courses to fulfill the Freshwater Ecology Emphasis. Courses used to fulfill requirements in the emphasis may also be used to fulfill above major requirements.

A minimum of 25 credits from:

- ESCI 302 - Environmental Pollution
  - ESCI 333 - Introduction to Environmental Toxicology
  - ESCI 361 - Water Quality
  - ESCI 362 - Water Quality Lab
  - ESCI 407 - Forest Ecology
  - ESCI 408 - Field Methods in Wildlife Ecology
  - ESCI 410 - Forestry-Fish Interactions
  - ESCI 411 - Forest and Fish Assessment
  - ESCI 421 - Fisheries Management Lab
  - ESCI 425 - Environmental Biology of Fishes
  - ESCI 428 - Freshwater Algae Bioindicators
  - ESCI 429 - Stream Ecology
  - ESCI 430 - Limnology and Limnology Lab
  - ESCI 431 - Watershed Biogeochemistry
  - ESCI 433 - Population Biology
  - ESCI 439 - Conservation of Biological Diversity
  - ESCI 440 - Wetlands Ecology
  - ESCI 442 - Introduction to Remote Sensing
  - ESCI 459 - Aquatic Toxicology
  - ESCI 460 - Contaminant Movement in Environment
  - ESCI 463 - Wetlands for Wastewater Treatment
  - ESCI 490 - Environmental Risk Assessment
  - ESCI 492 - Climate Change
- Additional electives, if needed, from:
- Maximum 3 courses allowed from:
- BIOL 403 - Physiological Ecology of Animals
  - BIOL 404 - Plant Ecology
  - BIOL 405 - Microbial Ecology

- BIOL 416 - Ecosystem Ecology and Global Change
  - BIOL 452 - Systematic Botany
  - BIOL 456 - Algae
  - BIOL 462 - Entomology
- Maximum 3 courses allowed from:  
CHEM 300- or 400-level
- Maximum 3 courses allowed from:
  - EGEO 332 - The Soil Environment
  - EGEO 350 - Introduction to Geographic Information Systems
  - EGEO 431 - Water Resources
  - EGEO 432 - Soil Landscapes
- Maximum 3 courses allowed from:  
ESTU 300- or 400-level
- FAIR 434P - Advanced Studies in Field Science
- Maximum 3 courses allowed from:
- GEOL 372 - Watershed Hydrology
  - GEOL 413 - Fluvial Geomorphology
  - GEOL 415 - Stratigraphy and Sedimentation
  - GEOL 462 - Hydrogeochemistry
  - GEOL 472 - Surface Water Hydrology
  - GEOL 473 - Ground Water Hydrology
  - GEOL 474 - Ground Water Contamination
- Maximum 3 courses allowed from:
- PHYS 114 - Principles of Physics I
  - PHYS 115 - Principles of Physics II
  - PHYS 116 - Principles of Physics III
  - PHYS 121 - Physics With Calculus I
  - PHYS 122 - Physics With Calculus II

## **Environmental Science — Marine Ecology, BS**

**132-137 credits**

### **Introduction**

Students wishing to complete an Environmental Science major in four years should complete the general chemistry series during their freshman year and the general biology series during their sophomore year. Prospective environmental science majors are strongly advised to take additional preparatory courses that provide a strong background in chemistry, biology and mathematics. The preparatory courses are listed with the major, where approved as GUR courses in the catalog, may be used to fulfill both Huxley College and GUR requirements. All preparatory courses required for admission should be completed on a lettered or numeric grading scale, not P/NP, and must be completed with a grade of C- or better.

### **Admission and Declaration Process**

Admission and Declaration of Major (see Huxley College Admission and Advisement page)

### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

## Requirements

### Preparatory Courses (47-52 credits)

- BIOL 204 - Introduction to Evolution, Ecology and Biodiversity
- BIOL 205 - Introduction to Cellular and Molecular Biology
- BIOL 206 - Introduction to Organismal Biology
- CHEM 121 - General Chemistry I
- CHEM 122 - General Chemistry II
- CHEM 123 - General Chemistry III
- ECON 206 - Introduction to Microeconomics
- MATH 124 - Calculus and Analytic Geometry I
- One course from:
  - EGEO 203 - Physical Geography
  - GEOL 211 - Physical Geology
  - Any BCOM or CCOM GUR requirement course
  - Any PLSC course

### Major (85 credits)

- Choose either:
  - CHEM 251 - Elementary Organic Chemistry
    - or
  - CHEM 351 - Organic Chemistry
  - CHEM 352 - Organic Chemistry
  - CHEM 354 - Organic Chemistry Laboratory I
- One course from:
  - ESCI 321 - Oceanography
  - ESCI 435 - Landscape Ecology
  - ESCI 492 - Climate Change
  - EGEO 330 - Geography of Landforms
  - EGEO 331 - Climatology
  - EGEO 433 - Climate and Biophysical Processes
- One course from:
  - ESCI 325 - Fundamentals of Ecology
  - BIOL 325 - Ecology
- One course from:
  - ESCI 340 - Biostatistical Analysis
  - BIOL 340 - Biometrics
- One course from:
  - ESCI 436 - Environmental Impact Assessment
  - ESCI 470 - Ecological Restoration
  - ESCI 490 - Environmental Risk Assessment
  - ESCI 491 - Oceanography of Puget Sound
  - ESTU 436 - Environmental Impact Assessment
  - ESTU 470 - Planning Studio
  - ESTU 496 - Environmental Stewardship
- One course from: (minimum of 10 credits; maximum of 15 credits)

- ESCI 498A - Senior Thesis
- ESCI 498B - Internship
- ESCI 498C - Senior Project
- ESCI 498D - International Study
- One course from two of the following categories:
  - Human Ecology, Geography:
  - ESTU 303 - Human Ecology and Sustainability
  - EGEO 311 - Population and Resources
  - EGEO 314 - Urbanization: Processes and Patterns
- Environmental Policy:
- ESTU 304 - Environment and Resource Policy
- ESTU 320 - Explorations in Environmental Studies
- Environmental History, Philosophy, Ethics:
- ESTU 305 - Environmental History and Ethics
- ESTU 488 - History of Conservation in America
- Two lecture/lab courses or combination of courses from:
  - ESCI 321 Oceanography and
  - ESCI 322 - Oceanography Laboratory
  - ESCI 361 - Water Quality and
  - ESCI 362 - Water Quality Lab
  - ESCI 407 - Forest Ecology
  - ESCI 408 - Field Methods in Wildlife Ecology
  - ESCI 410 - Forestry-Fish Interactions and
  - ESCI 411 - Forest and Fish Assessment
  - ESCI 421 - Fisheries Management Lab and
  - ESCI 425 - Environmental Biology of Fishes
  - ESCI 423 - Past Environments of the Pacific Northwest
  - ESCI 426 - Marine Invertebrates and Their Environment
  - ESCI 428 - Freshwater Algae Bioindicators
  - ESCI 429 - Stream Ecology
  - ESCI 430 - Limnology and Limnology Lab
  - ESCI 440 - Wetlands Ecology
  - ESCI 442 - Introduction to Remote Sensing
  - ESCI 455 - Environmental Toxicology I and
  - ESCI 457 - Environmental Toxicology Laboratory I
  - ESCI 456 - Environmental Toxicology II and
  - ESCI 458 - Environmental Toxicology Laboratory II
- Electives under advisement (28-37 credits)
  - A minimum of 20 credits from
    - ESCI 300- or 400-level
  - Additional electives, if needed from:
    - BIOL 300- or 400-level
    - CHEM 300- or 400-level
    - EGEO 300- or 400-level
    - ESCI 300- or 400-level
    - ESTU 300- or 400-level
    - FAIR 330E - Ethnobotany
    - FAIR 332Q - Topics in Applied Conservation Biology
    - FAIR 434P - Advanced Studies in Field Science

- FAIR 435Q - Advanced Marine Bird Population Ecology  
FAIR 463  
FAIR 465  
GEOL 300- or 400-level
  - MATH 125 - Calculus and Analytic Geometry II
  - MATH 203 - Linear Algebra and Differential Equations I
  - MATH 204 - Elementary Linear Algebra
  - MATH 205 - Linear Algebra Workshop
  - MATH 207 - Mathematical Computing
  - MATH 209 - Discrete Mathematics
  - MATH 224 - Multivariable Calculus and Geometry I
  - MATH 225 - Multivariable Calculus and Geometry II
  - MATH 226 - Limits and Infinite Series  
MATH 300- or 400-level
- Maximum 3 courses allowed from:
- PHYS 114 - Principles of Physics I
  - PHYS 115 - Principles of Physics II
  - PHYS 116 - Principles of Physics III
  - PHYS 121 - Physics With Calculus I
  - PHYS 122 - Physics With Calculus II
- PHYS 300- or 400-level

#### **Marine Ecology Emphasis (34 credits minimum)**

Complete the following courses to fulfill the Marine Ecology Emphasis. Courses used to fulfill requirements in the emphasis may also be used to fulfill above major requirements.

- A minimum of 25 credits from:
- ESCI 321 - Oceanography
  - ESCI 322 - Oceanography Laboratory
  - ESCI 333 - Introduction to Environmental Toxicology
  - ESCI 361 - Water Quality
  - ESCI 362 - Water Quality Lab
  - ESCI 410 - Forestry-Fish Interactions
  - ESCI 411 - Forest and Fish Assessment
  - ESCI 421 - Fisheries Management Lab
  - ESCI 425 - Environmental Biology of Fishes
  - ESCI 426 - Marine Invertebrates and Their Environment
  - ESCI 431 - Watershed Biogeochemistry
  - ESCI 432 - Topics in Marine Ecology
  - ESCI 433 - Population Biology
  - ESCI 439 - Conservation of Biological Diversity
  - ESCI 440 - Wetlands Ecology
  - ESCI 444 - Biogeochemistry of Marine Sediments
  - ESCI 455 - Environmental Toxicology I
  - ESCI 456 - Environmental Toxicology II
  - ESCI 457 - Environmental Toxicology Laboratory I
  - ESCI 458 - Environmental Toxicology Laboratory II
  - ESCI 459 - Aquatic Toxicology

- ESCI 460 - Contaminant Movement in Environment
- ESCI 463 - Wetlands for Wastewater Treatment
- ESCI 491 - Oceanography of Puget Sound
- ESCI 492 - Climate Change

Additional electives, if needed, from:

Maximum 3 courses allowed from:

- BIOL 403 - Physiological Ecology of Animals
- BIOL 405 - Microbial Ecology
- BIOL 406 - General Oceanography
- BIOL 407 - Marine Ecology
- BIOL 410 - Animal Behavior
- BIOL 416 - Ecosystem Ecology and Global Change
- BIOL 439 - Symbiosis
- BIOL 456 - Algae
- BIOL 460 - Invertebrate Zoology
- BIOL 464 - Biology of Marine Mammals
- BIOL 471 - Biochemistry I

Maximum 3 courses allowed from:

CHEM 300- or 400-level

Maximum 3 courses allowed from:

E GEO 300- or 400-level

Maximum 3 courses allowed from:

ESTU 300- or 400-level

- GEOL 340 - Geological Oceanography

Maximum 3 courses allowed from:

- MATH 125 - Calculus and Analytic Geometry II
- MATH 204 - Elementary Linear Algebra
- MATH 224 - Multivariable Calculus and Geometry I
- MATH 331 - Ordinary Differential Equations

Maximum 3 courses allowed from:

- PHYS 114 - Principles of Physics I
- PHYS 115 - Principles of Physics II
- PHYS 116 - Principles of Physics III
- PHYS 121 - Physics With Calculus I
- PHYS 122 - Physics With Calculus II

## Environmental Science — Terrestrial Ecology, BS

**132-137 credits**

### Introduction

Students wishing to complete an Environmental Science major in four years should complete the general chemistry series during their freshman year and the general biology series during their sophomore year. Prospective environmental science majors are strongly advised to take additional preparatory courses that provide a strong background in chemistry, biology and mathematics. The preparatory courses are listed with the major, where approved as GUR courses in the catalog, may be used to fulfill both Huxley College and GUR requirements. All preparatory courses required for admission should be completed on a lettered or numeric grading scale, not P/NP, and must be completed with a grade of C- or better.

## **Admission and Declaration Process**

Admission and Declaration of Major (see Huxley College Admission and Advisement page)

## **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

## **Requirements**

### **Preparatory Courses (47-52 credits)**

- BIOL 204 - Introduction to Evolution, Ecology and Biodiversity
- BIOL 205 - Introduction to Cellular and Molecular Biology
- BIOL 206 - Introduction to Organismal Biology
- CHEM 121 - General Chemistry I
- CHEM 122 - General Chemistry II
- CHEM 123 - General Chemistry III
- ECON 206 - Introduction to Microeconomics
- MATH 124 - Calculus and Analytic Geometry I
- One course from:
  - EGEO 203 - Physical Geography
  - GEOL 211 - Physical Geology
- Any BCOM or CCOM GUR requirement course
- Any PLSC course

### **Major (85 credits)**

- Choose either:
  - CHEM 251 - Elementary Organic Chemistry  
or
  - CHEM 351 - Organic Chemistry
  - CHEM 352 - Organic Chemistry
  - CHEM 354 - Organic Chemistry Laboratory I
- One course from:
  - ESCI 321 - Oceanography
  - ESCI 435 - Landscape Ecology
  - ESCI 492 - Climate Change
  - EGEO 330 - Geography of Landforms
  - EGEO 331 - Climatology
  - EGEO 433 - Climate and Biophysical Processes
- One course from:
  - BIOL 325 - Ecology
  - ESCI 325 - Fundamentals of Ecology
- One course from:
  - BIOL 340 - Biometrics
  - ESCI 340 - Biostatistical Analysis
- One course from:
  - ESCI 436 - Environmental Impact Assessment

- ESCI 470 - Ecological Restoration
- ESCI 490 - Environmental Risk Assessment
- ESCI 491 - Oceanography of Puget Sound
- ESTU 436 - Environmental Impact Assessment
- ESTU 470 - Planning Studio
- ESTU 496 - Environmental Stewardship
- One course from: (minimum of 10 credits; maximum of 15 credits)
  - ESCI 498A - Senior Thesis
  - ESCI 498B - Internship
  - ESCI 498C - Senior Project
  - ESCI 498D - International Study
- One course from two of the following categories:
  - Human Ecology, Geography:
    - ESTU 303 - Human Ecology and Sustainability
    - EGEO 311 - Population and Resources
    - EGEO 314 - Urbanization: Processes and Patterns
  - Environmental Policy:
    - ESTU 304 - Environment and Resource Policy
    - ESTU 320 - Explorations in Environmental Studies
  - Environmental History, Philosophy, Ethics:
    - ESTU 305 - Environmental History and Ethics
    - ESTU 488 - History of Conservation in America
- Two lecture/lab courses or combination of courses from:
  - ESCI 321 Oceanography and
  - ESCI 322 - Oceanography Laboratory
  - ESCI 361 - Water Quality and
  - ESCI 362 - Water Quality Lab
  - ESCI 407 - Forest Ecology
  - ESCI 408 - Field Methods in Wildlife Ecology
  - ESCI 410 - Forestry-Fish Interactions and
  - ESCI 411 - Forest and Fish Assessment
  - ESCI 421 - Fisheries Management Lab and
  - ESCI 425 - Environmental Biology of Fishes
  - ESCI 423 - Past Environments of the Pacific Northwest
  - ESCI 426 - Marine Invertebrates and Their Environment
  - ESCI 428 - Freshwater Algae Bioindicators
  - ESCI 429 - Stream Ecology
  - ESCI 430 - Limnology and Limnology Lab
  - ESCI 440 - Wetlands Ecology
  - ESCI 442 - Introduction to Remote Sensing
  - ESCI 455 - Environmental Toxicology I and
  - ESCI 457 - Environmental Toxicology Laboratory I
  - ESCI 456 - Environmental Toxicology II and
  - ESCI 458 - Environmental Toxicology Laboratory II
- Electives under advisement (28-37 credits)
  - A minimum of 20 credits from
    - ESCI 300- or 400-level
  - Additional electives, if needed from:
    - BIOL 300- or 400-level

- CHEM 300- or 400-level
  - EGEO 300- or 400-level
  - ESCI 300- or 400-level
  - ESTU 300- or 400-level
  - FAIR 330E - Ethnobotany
  - FAIR 332Q - Topics in Applied Conservation Biology
  - FAIR 434P - Advanced Studies in Field Science
  - FAIR 435Q - Advanced Marine Bird Population Ecology
  - FAIR 463
  - FAIR 465
  - GEOL 300- or 400-level
  - MATH 125 - Calculus and Analytic Geometry II
  - MATH 203 - Linear Algebra and Differential Equations I
  - MATH 204 - Elementary Linear Algebra
  - MATH 205 - Linear Algebra Workshop
  - MATH 207 - Mathematical Computing
  - MATH 209 - Discrete Mathematics
  - MATH 224 - Multivariable Calculus and Geometry I
  - MATH 225 - Multivariable Calculus and Geometry II
  - MATH 226 - Limits and Infinite Series
  - MATH 300- or 400-level
- Maximum 3 courses allowed from:
- PHYS 114 - Principles of Physics I
  - PHYS 115 - Principles of Physics II
  - PHYS 116 - Principles of Physics III
  - PHYS 121 - Physics With Calculus I
  - PHYS 122 - Physics With Calculus II
- PHYS 300- or 400-level

#### **Terrestrial Ecology Emphasis (34 credit minimum)**

Complete the following courses to fulfill the Terrestrial Ecology Emphasis. Courses used to fulfill requirements in the emphasis may also be used to fulfill above major requirements.

- A minimum of 24 credits from
- EGEO 332 - The Soil Environment
- EGEO 432 - Soil Landscapes
- ESCI 330 - Natural History of the Pacific Northwest
- ESCI 392 - Introduction to Global Change
- ESCI 407 - Forest Ecology
- ESCI 408 - Field Methods in Wildlife Ecology
- ESCI 410 - Forestry-Fish Interactions
- ESCI 411 - Forest and Fish Assessment
- ESCI 423 - Past Environments of the Pacific Northwest
- ESCI 431 - Watershed Biogeochemistry
- ESCI 433 - Population Biology
- ESCI 435 - Landscape Ecology
- ESCI 439 - Conservation of Biological Diversity
- ESCI 441 - GIS and Environmental Modeling

- ESCI 442 - Introduction to Remote Sensing
- ESCI 492 - Climate Change
- Additional electives, if needed, from:
  - Maximum 4 courses allowed from:
    - BIOL 326 - Ecology Laboratory
    - BIOL 403 - Physiological Ecology of Animals
    - BIOL 404 - Plant Ecology
    - BIOL 410 - Animal Behavior
    - BIOL 416 - Ecosystem Ecology and Global Change
    - BIOL 432 - Evolutionary Biology
    - BIOL 450 - Plant Anatomy
    - BIOL 451 - Plant Growth and Development
    - BIOL 452 - Systematic Botany
    - BIOL 453 - Investigations in Plant Development
    - BIOL 457 - Pollination Biology
    - BIOL 460 - Invertebrate Zoology
    - BIOL 462 - Entomology
    - BIOL 465 - Vertebrate Zoology
    - BIOL 467 - Comparative Vertebrate Physiology
    - BIOL 468 - Comparative Vertebrate Physiology Laboratory
    - BIOL 479 - Plant Physiology
    - BIOL 482 - Developmental Biology of Animals
  - Maximum 3 courses allowed from:
    - CHEM 300- or 400-level
  - Maximum 4 courses allowed from:
    - EGEO 330 - Geography of Landforms
    - EGEO 331 - Climatology
    - EGEO 350 - Introduction to Geographic Information Systems
    - EGEO 363 - Natural Hazards Planning
    - EGEO 433 - Climate and Biophysical Processes
    - EGEO 434 - Biogeography
    - EGEO 450 - Intermediate Geographic Information Systems
    - EGEO 451 - GIS Databases
    - EGEO 452 - Advanced GIS
  - Maximum 4 courses allowed from:
    - ESCI 321 - Oceanography
    - ESCI 361 - Water Quality
    - ESCI 362 - Water Quality Lab
    - ESCI 421 - Fisheries Management Lab
    - ESCI 429 - Stream Ecology
    - ESCI 430 - Limnology and Limnology Lab
    - ESCI 440 - Wetlands Ecology
    - ESCI 455 - Environmental Toxicology I
    - ESCI 456 - Environmental Toxicology II
    - ESCI 457 - Environmental Toxicology Laboratory I
    - ESCI 458 - Environmental Toxicology Laboratory II
    - ESCI 459 - Aquatic Toxicology
    - ESCI 462 - Air Pollution

- ESCI 490 - Environmental Risk Assessment  
Maximum 3 courses allowed from:  
ESTU 300- or 400-level
- Maximum 3 courses allowed from:
- FAIR 330E - Ethnobotany
- FAIR 332Q - Topics in Applied Conservation Biology
- FAIR 434P - Advanced Studies in Field Science
- FAIR 435Q - Advanced Marine Bird Population Ecology  
FAIR 463  
FAIR 465
- Maximum 3 courses allowed from:
- GEOL 310 - Geomorphology
- GEOL 318 - Structural Geology
- GEOL 372 - Watershed Hydrology
- GEOL 413 - Fluvial Geomorphology
- GEOL 415 - Stratigraphy and Sedimentation
- GEOL 455 - Climate-Related Geologic Hazards
- GEOL 462 - Hydrogeochemistry
- GEOL 470 - Landslides and Slope Stability
- GEOL 472 - Surface Water Hydrology
- GEOL 473 - Ground Water Hydrology
- GEOL 474 - Ground Water Contamination
- Maximum 3 courses allowed from:
- PHYS 114 - Principles of Physics I
- PHYS 115 - Principles of Physics II
- PHYS 116 - Principles of Physics III
- PHYS 121 - Physics With Calculus I
- PHYS 122 - Physics With Calculus II

## **Environmental Science, BS**

**132-137 credits**

### **Introduction**

Students wishing to complete an Environmental Science major in four years should complete the general chemistry series during their freshman year and the general biology series during their sophomore year. Prospective environmental science majors are strongly advised to take additional preparatory courses that provide a strong background in chemistry, biology and mathematics. The preparatory courses are listed with the major, where approved as GUR courses in the catalog, may be used to fulfill both Huxley College and GUR requirements. All preparatory courses required for admission should be completed on a lettered or numeric grading scale, not P/NP, and must be completed with a grade of C- or better.

### **Admission and Declaration Process**

Admission and Declaration of Major

## **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

## **Requirements**

### **Preparatory Courses (47-52 credits)**

- BIOL 204 - Introduction to Evolution, Ecology and Biodiversity
- BIOL 205 - Introduction to Cellular and Molecular Biology
- BIOL 206 - Introduction to Organismal Biology
- CHEM 121 - General Chemistry I
- CHEM 122 - General Chemistry II
- CHEM 123 - General Chemistry III
- ECON 206 - Introduction to Microeconomics
- MATH 124 - Calculus and Analytic Geometry I
- One course from:
- EGEO 203 - Physical Geography
- GEOL 211 - Physical Geology
- Any BCOM or CCOM GUR requirement course
- Any PLSC course

### **Major (85 credits)**

- Choose either:
- CHEM 251 - Elementary Organic Chemistry  
        or
- CHEM 351 - Organic Chemistry
- CHEM 352 - Organic Chemistry
- CHEM 354 - Organic Chemistry Laboratory I
- One course from:
  - ESCI 321 - Oceanography
  - ESCI 435 - Landscape Ecology
  - ESCI 492 - Climate Change
  - EGEO 330 - Geography of Landforms
  - EGEO 331 - Climatology
  - EGEO 433 - Climate and Biophysical Processes
- One course from:
  - ESCI 325 - Fundamentals of Ecology
  - BIOL 325 - Ecology
- One course from:
  - ESCI 340 - Biostatistical Analysis
  - BIOL 340 - Biometrics
- One course from:
  - ESCI 436 - Environmental Impact Assessment
  - ESCI 470 - Ecological Restoration
  - ESCI 490 - Environmental Risk Assessment
  - ESCI 491 - Oceanography of Puget Sound

- ESTU 436 - Environmental Impact Assessment
- ESTU 470 - Planning Studio
- ESTU 496 - Environmental Stewardship
  - One course from: (minimum of 10 credits; maximum of 15 credits)
- ESCI 498A - Senior Thesis
- ESCI 498B - Internship
- ESCI 498C - Senior Project
- ESCI 498D - International Study
  - One course from two of the following categories:
    - Human Ecology, Geography:
- ESTU 303 - Human Ecology and Sustainability
- EGEO 311 - Population and Resources
- EGEO 314 - Urbanization: Processes and Patterns
- Environmental Policy:
  - ESTU 304 - Environment and Resource Policy
  - ESTU 320 - Explorations in Environmental Studies
- Environmental History, Philosophy, Ethics:
  - ESTU 305 - Environmental History and Ethics
  - ESTU 488 - History of Conservation in America
- Two lecture/lab courses or combination of courses from:
  - ESCI 321 Oceanography and
  - ESCI 322 - Oceanography Laboratory
  - ESCI 361 - Water Quality and
  - ESCI 362 - Water Quality Lab
  - ESCI 407 - Forest Ecology
  - ESCI 408 - Field Methods in Wildlife Ecology
  - ESCI 410 - Forestry-Fish Interactions and
  - ESCI 411 - Forest and Fish Assessment
  - ESCI 421 - Fisheries Management Lab and
  - ESCI 425 - Environmental Biology of Fishes
  - ESCI 423 - Past Environments of the Pacific Northwest
  - ESCI 426 - Marine Invertebrates and Their Environment
  - ESCI 428 - Freshwater Algae Bioindicators
  - ESCI 429 - Stream Ecology
  - ESCI 430 - Limnology and Limnology Lab
  - ESCI 440 - Wetlands Ecology
  - ESCI 442 - Introduction to Remote Sensing
  - ESCI 455 - Environmental Toxicology I and
  - ESCI 457 - Environmental Toxicology Laboratory I
  - ESCI 456 - Environmental Toxicology II and
  - ESCI 458 - Environmental Toxicology Laboratory II
- Electives under advisement (28-37 credits)
  - A minimum of 20 credits from
    - ESCI 300- or 400-level
  - Additional electives, if needed from:
    - BIOL 300- or 400-level
    - CHEM 300- or 400-level
    - EGEO 300- or 400-level
    - ESCI 300- or 400-level

- ESTU 300- or 400-level
- — FAIR 330E - Ethnobotany
- — FAIR 332Q - Topics in Applied Conservation Biology
- — FAIR 434P - Advanced Studies in Field Science
- — FAIR 435Q - Advanced Marine Bird Population Ecology
- FAIR 463
- FAIR 465
- GEOL 300- or 400-level
- — MATH 125 - Calculus and Analytic Geometry II
- — MATH 203 - Linear Algebra and Differential Equations I
- — MATH 204 - Elementary Linear Algebra
- — MATH 205 - Linear Algebra Workshop
- — MATH 207 - Mathematical Computing
- — MATH 209 - Discrete Mathematics
- — MATH 224 - Multivariable Calculus and Geometry I
- — MATH 225 - Multivariable Calculus and Geometry II
- — MATH 226 - Limits and Infinite Series
- MATH 300- or 400-level
- Maximum 3 courses allowed from:
  - PHYS 114 - Principles of Physics I
  - PHYS 115 - Principles of Physics II
  - PHYS 116 - Principles of Physics III
  - PHYS 121 - Physics With Calculus I
  - PHYS 122 - Physics With Calculus II
- PHYS 300- or 400-level

## **Environmental Science, Environmental Toxicology & Chemistry, Thesis, MS**

### **Graduate Faculty**

**Abel, Troy D.**, PhD, environmental policy, conservation politics, civic environmentalism, policy analysis, globalization and environment.

**Bach, Andrew J.**, PhD, physical geography, geomorphology, soils and weathering, geoarcheology.

**Berardi, Gigi**, PhD, resources management, agroecology, international community development, food security, all-hazards planning.

**Bingham, Brian L.**, PhD, invertebrate biology, marine ecology, experimental design.

**Bodensteiner, Leo R.**, PhD, fish ecology.

**Buckley, Patrick H.**, PhD, economic and development geography, quantitative methods, GIS, environmental issues in Japan and China, quality of life, transborder environmental issues.

**Bunn, Andrew G.**, PhD, climate change, paleoecology, energy, ecological models.

**Cancilla, Devon A.**, PhD, environmental chemistry, environmental toxicology, chemical ecology.

**Helfield, James M.**, PhD, ecology of rivers and riparian forests, terrestrial-aquatic ecosystem linkages, watershed management and restoration.

**Homann, Peter S.**, PhD, biogeochemistry, soil sciences, forest ecology.

**Landis, Wayne G.**, PhD, environmental toxicology, population biology, risk assessment.

**Matthews, Robin A.**, PhD, freshwater ecology, aquatic toxicology, statistical ecology.

**McLaughlin, John F.**, PhD, terrestrial ecology, population biology, conservation biology.

**Medler, Michael J.**, PhD, biogeography, GIS, remote sensing, forest fire and wilderness management.

**Melious, Jean O.**, JD, environmental and land use law and policy, international environmental policy.

**Miles, John C.**, PhD, environmental education and history, public lands management.  
**Miles, Scott B.**, PhD, sustainable development for risk reduction, social vulnerability, community disaster recovery, local self reliance.  
**Mookherjee, Debnath**, PhD, comparative urbanization, regional development and planning, developing countries.  
**Myers, O. Eugene**, PhD, environmental education, conservation psychology, human ecology, environmental history and ethics.  
**Rossiter, David A.**, PhD, Canada, cultural-historical geographies, political ecologies.  
**Rybczyk, John M.**, PhD, wetland ecology and management, ecosystem modeling, global climate change.  
**Shull, David H.**, PhD, structure and function of marine benthic communities, pollution and marine ecosystems.  
**Smith, Bradley F.**, PhD, global environmental policy, sustainable development.  
**Sofield, Ruth M.**, PhD, aquatic toxicology, biochemical and genetic toxicology, environmental chemistry.  
**Stangl, Paul A.**, PhD, pedestrian planning, new urbanism, urban landscapes, memory and meaning; Europe and Berlin.  
**Sulkin, Stephen D.**, PhD, invertebrate biology, larval ecology.  
**Terich, Thomas A.**, PhD, shoreline processes, natural hazards and geomorphology.  
**Wallin, David O.**, PhD, terrestrial ecology, forest ecosystems.  
**Wang, Grace A.**, PhD, natural resource policy, cultural resources management, community-based forestry.  
**Zaferatos, Nicholas C.**, PhD, community and environmental planning, sustainable development, European environmental policy, Native American political development.

Program Advisor: Dr. John M. Rybczyk, Environmental Studies 336

### **Program Description**

The MS in environmental science is a two-year curriculum which draws upon course work from Huxley College and the other colleges of WWU. It is directed toward the development and integration of scientific information in order to describe, predict and/or manage natural systems, and to assess human impacts on those systems. This specialization focuses on the transport, fate and toxic effects of chemicals in the environment, laboratory testing and field work, chemical analytical measurement of pollutants and the influence of nutritional factors on pollutant toxicity. Studies of chemical fate and toxicity at the biochemical, organismal, population and ecosystem levels.

### **Goals**

The program prepares students to describe, predict and/or manage natural systems and to assess human impacts on those systems.

### **Prerequisites**

A bachelor's degree and college-level course work including a minimum of one year of general chemistry plus one quarter or semester of organic chemistry, one year of general biology, one course each in ecology, calculus and statistics.

### **Application Information**

**Admit Quarter:** Students will be admitted into the MS in environmental science program fall quarter only.

**Deadlines:** Because maximum student enrollment is limited, all applicants are strongly encouraged to submit application materials by February 1. Review of materials will begin after that date and will continue until the enrollment limit is reached or on June 1, whichever comes first.

**TA Deadline:** To be considered for a graduate teaching assistantship, applicants should submit their application materials by February 1 and indicate in the statement of purpose how the prerequisites listed above have or will be met before starting the program.

**Specific Test Requirements:** For all options: Graduate Record Exam, General Test. Applicants with advanced degrees are not required to submit GRE scores.

**Supporting Materials:**

- An application for admission into the MS program in environmental science must include a one- to two-page statement of purpose indicating which specialization the applicant is most interested in, explaining why the applicant wishes to pursue graduate studies in environmental science, and what future expectations he or she has for the MS degree.
- The statement may indicate a preferred faculty advisor; students are encouraged to review faculty research interests as described on the Huxley website, [www.ac.wwu.edu/~huxley](http://www.ac.wwu.edu/~huxley), prior to contacting potential faculty advisors; students are admitted into the program only upon agreement of potential faculty advisors.

**Program Requirements (45-69 credits)**

Minimum of 45 credits are required, including:

- ESCI 501 (3);
- 30 credits of course work, including three courses from the area of specialization, or course substitutions, under advisement;
- 12 credits of ESCI 690 (thesis).

Ten credits or less of approved 400-level course work may be included in the program. No more than four elective credits of ESCI 595 (Teaching Practicum) may be used toward the MS degree in environmental science. Each candidate should note that the department has an annual review of student progress that affects retention, in addition to the other program requirements listed here. The student will make a public presentation of the thesis research either on campus at Western Washington University or Shannon Point and will participate in an oral exam given by the thesis committee.

For further information, write or consult the Huxley Graduate Program Coordinator, Department of Environmental Sciences, Western Washington University, Bellingham, WA 98225-9181, 360-650-3646, [huxgrad@cc.wwu.edu](mailto:huxgrad@cc.wwu.edu).

**Specialization courses:**

- ESCI 450
- □ ESCI 460 - Contaminant Movement in Environment  
□ ESCI 500 (when toxicology/chemistry topic)  
□ ESCI 502  
□ ESCI 503  
□ ESCI 517 (when toxicology/chemistry topic)  
□ ESCI 533  
□ ESCI 545 (when toxicology/chemistry topic)
- □ ESCI 555 - Advanced Environmental Toxicology I
- □ ESCI 556 - Advanced Environmental Toxicology II
- □ ESCI 557 - Advanced Environmental Toxicology Laboratory I
- □ ESCI 558 - Advanced Environmental Toxicology Laboratory II
- □ ESCI 559 - Aquatic Toxicology
- □ ESCI 562 - Advanced Air Pollution
- □ ESCI 590 - Advanced Environmental Risk Assessment  
□ ESCI 597 (when toxicology/chemistry topic)
- □ ESCI 599 - Graduate Environmental Studies Seminar (when toxicology/chemistry topic)

# **Environmental Science, Freshwater Ecology, Thesis, MS**

## **Graduate Faculty**

**Abel, Troy D.**, PhD, environmental policy, conservation politics, civic environmentalism, policy analysis, globalization and environment.

**Bach, Andrew J.**, PhD, physical geography, geomorphology, soils and weathering, geoarcheology.

**Berardi, Gigi**, PhD, resources management, agroecology, international community development, food security, all-hazards planning.

**Bingham, Brian L.**, PhD, invertebrate biology, marine ecology, experimental design.

**Bodensteiner, Leo R.**, PhD, fish ecology.

**Buckley, Patrick H.**, PhD, economic and development geography, quantitative methods, GIS, environmental issues in Japan and China, quality of life, transborder environmental issues.

**Bunn, Andrew G.**, PhD, climate change, paleoecology, energy, ecological models.

**Cancilla, Devon A.**, PhD, environmental chemistry, environmental toxicology, chemical ecology.

**Helfield, James M.**, PhD, ecology of rivers and riparian forests, terrestrial-aquatic ecosystem linkages, watershed management and restoration.

**Homann, Peter S.**, PhD, biogeochemistry, soil sciences, forest ecology.

**Landis, Wayne G.**, PhD, environmental toxicology, population biology, risk assessment.

**Matthews, Robin A.**, PhD, freshwater ecology, aquatic toxicology, statistical ecology.

**McLaughlin, John F.**, PhD, terrestrial ecology, population biology, conservation biology.

**Medler, Michael J.**, PhD, biogeography, GIS, remote sensing, forest fire and wilderness management.

**Melious, Jean O.**, JD, environmental and land use law and policy, international environmental policy.

**Miles, John C.**, PhD, environmental education and history, public lands management.

**Miles, Scott B.**, PhD, sustainable development for risk reduction, social vulnerability, community disaster recovery, local self reliance.

**Mookherjee, Debnath**, PhD, comparative urbanization, regional development and planning, developing countries.

**Myers, O. Eugene**, PhD, environmental education, conservation psychology, human ecology, environmental history and ethics.

**Rossiter, David A.**, PhD, Canada, cultural-historical geographies, political ecologies.

**Rybczyk, John M.**, PhD, wetland ecology and management, ecosystem modeling, global climate change.

**Shull, David H.**, PhD, structure and function of marine benthic communities, pollution and marine ecosystems.

**Smith, Bradley F.**, PhD, global environmental policy, sustainable development.

**Sofield, Ruth M.**, PhD, aquatic toxicology, biochemical and genetic toxicology, environmental chemistry.

**Stangl, Paul A.**, PhD, pedestrian planning, new urbanism, urban landscapes, memory and meaning; Europe and Berlin.

**Sulkin, Stephen D.**, PhD, invertebrate biology, larval ecology.

**Terich, Thomas A.**, PhD, shoreline processes, natural hazards and geomorphology.

**Wallin, David O.**, PhD, terrestrial ecology, forest ecosystems.

**Wang, Grace A.**, PhD, natural resource policy, cultural resources management, community-based forestry.

**Zaferatos, Nicholas C.**, PhD, community and environmental planning, sustainable development, European environmental policy, Native American political development.

Program Advisor: Dr. John M. Rybczyk, Environmental Studies 336

## **Program Description**

The MS in environmental science is a two-year curriculum which draws upon course work from Huxley College and the other colleges of WWU. It is directed toward the development and integration of scientific information in order to describe, predict and/or manage natural systems, and to assess human impacts on those systems. This specialization focuses on the study of physical, chemical and biological processes in freshwater systems, including lakes, streams and watersheds.

## **Goals**

The program prepares students to describe, predict and/or manage natural systems and to assess human impacts on those systems.

## **Prerequisites**

A bachelor's degree and college-level course work including a minimum of one year of general chemistry plus one quarter or semester of organic chemistry, one year of general biology, one course each in ecology, calculus and statistics.

## **Application Information**

**Admit Quarter:** Students will be admitted into the MS in environmental science program fall quarter only.

**Deadlines:** Because maximum student enrollment is limited, all applicants are strongly encouraged to submit application materials by February 1. Review of materials will begin after that date and will continue until the enrollment limit is reached or on June 1, whichever comes first.

**TA Deadline:** To be considered for a graduate teaching assistantship, applicants should submit their application materials by February 1 and indicate in the statement of purpose how the prerequisites listed above have or will be met before starting the program.

**Specific Test Requirements:** For all options: Graduate Record Exam, General Test. Applicants with advanced degrees are not required to submit GRE scores.

## **Supporting Materials:**

- An application for admission into the MS program in environmental science must include a one- to two-page statement of purpose indicating which specialization the applicant is most interested in, explaining why the applicant wishes to pursue graduate studies in environmental science, and what future expectations he or she has for the MS degree.
- The statement may indicate a preferred faculty advisor; students are encouraged to review faculty research interests as described on the Huxley website, [www.ac.wwu.edu/~huxley](http://www.ac.wwu.edu/~huxley), prior to contacting potential faculty advisors; students are admitted into the program only upon agreement of potential faculty advisors.

## **Program Requirements (45-69 credits)**

Minimum of 45 credits are required, including:

- ESCI 501 (3);
- 30 credits of course work, including three courses from the area of specialization, or course substitutions, under advisement;
- 12 credits of ESCI 690 (thesis).

Ten credits or less of approved 400-level course work may be included in the program. No more than four elective credits of ESCI 595 (Teaching Practicum) may be used toward the MS degree in environmental science. Each candidate should note that the department has an annual review of student progress that affects retention, in addition to the other program requirements listed here. The student will make a public presentation of the thesis research either on campus at Western Washington University or Shannon Point and will participate in an oral exam given by the thesis committee.

For further information, write or consult the Huxley Graduate Program Coordinator, Department of Environmental Sciences, Western Washington University, Bellingham, WA 98225-9181, 360-650-3646, [huxgrad@cc.wwu.edu](mailto:huxgrad@cc.wwu.edu).

**Specialization courses:**

- ESCI 410 - Forestry-Fish Interactions
- ESCI 411 - Forest and Fish Assessment
- ESCI 421 - Fisheries Management Lab
- ESCI 425 - Environmental Biology of Fishes
- ESCI 428 - Freshwater Algae Bioindicators
- ESCI 431 - Watershed Biogeochemistry
- ESCI 463 - Wetlands for Wastewater Treatment
- ESCI 500 (when freshwater topic)
- ESCI 502 - Experimental Design
- ESCI 503 - Statistical Ecology
- ESCI 517 (when freshwater topic)
- ESCI 522 - Estuarine Ecology
- ESCI 529 - Advanced Stream Ecology
- ESCI 530 - Advanced Limnology
- ESCI 533 - Advanced Population Biology
- ESCI 540 - Wetlands Ecology
- ESCI 545 (when freshwater topic)
- ESCI 559 - Aquatic Toxicology
- ESCI 597 (when freshwater topic)
- ESCI 599 - Graduate Environmental Studies Seminar (when freshwater topic)

**Environmental Science, Marine and Estuarine Science (MES), Thesis, MS****Graduate Faculty**

**Abel, Troy D.**, PhD, environmental policy, conservation politics, civic environmentalism, policy analysis, globalization and environment.

**Bach, Andrew J.**, PhD, physical geography, geomorphology, soils and weathering, geoarcheology.

**Berardi, Gigi**, PhD, resources management, agroecology, international community development, food security, all-hazards planning.

**Bingham, Brian L.**, PhD, invertebrate biology, marine ecology, experimental design.

**Bodensteiner, Leo R.**, PhD, fish ecology.

**Buckley, Patrick H.**, PhD, economic and development geography, quantitative methods, GIS, environmental issues in Japan and China, quality of life, transborder environmental issues.

**Bunn, Andrew G.**, PhD, climate change, paleoecology, energy, ecological models.

**Cancilla, Devon A.**, PhD, environmental chemistry, environmental toxicology, chemical ecology.

**Helfield, James M.**, PhD, ecology of rivers and riparian forests, terrestrial-aquatic ecosystem linkages, watershed management and restoration.

**Homann, Peter S.**, PhD, biogeochemistry, soil sciences, forest ecology.

**Landis, Wayne G.**, PhD, environmental toxicology, population biology, risk assessment.

**Matthews, Robin A.**, PhD, freshwater ecology, aquatic toxicology, statistical ecology.

**McLaughlin, John F.**, PhD, terrestrial ecology, population biology, conservation biology.

**Medler, Michael J.**, PhD, biogeography, GIS, remote sensing, forest fire and wilderness management.

**Melious, Jean O.**, JD, environmental and land use law and policy, international environmental policy.

**Miles, John C.**, PhD, environmental education and history, public lands management.

**Miles, Scott B.**, PhD, sustainable development for risk reduction, social vulnerability, community disaster recovery, local self reliance.

**Mookherjee, Debnath**, PhD, comparative urbanization, regional development and planning, developing countries.

**Myers, O. Eugene**, PhD, environmental education, conservation psychology, human ecology, environmental history and ethics.

**Rossiter, David A.**, PhD, Canada, cultural-historical geographies, political ecologies.

**Rybczyk, John M.**, PhD, wetland ecology and management, ecosystem modeling, global climate change.

**Shull, David H.**, PhD, structure and function of marine benthic communities, pollution and marine ecosystems.

**Smith, Bradley F.**, PhD, global environmental policy, sustainable development.

**Sofield, Ruth M.**, PhD, aquatic toxicology, biochemical and genetic toxicology, environmental chemistry.

**Stangl, Paul A.**, PhD, pedestrian planning, new urbanism, urban landscapes, memory and meaning; Europe and Berlin.

**Sulkin, Stephen D.**, PhD, invertebrate biology, larval ecology.

**Terich, Thomas A.**, PhD, shoreline processes, natural hazards and geomorphology.

**Wallin, David O.**, PhD, terrestrial ecology, forest ecosystems.

**Wang, Grace A.**, PhD, natural resource policy, cultural resources management, community-based forestry.

**Zaferatos, Nicholas C.**, PhD, community and environmental planning, sustainable development, European environmental policy, Native American political development.

Program Advisor: Dr. John M. Rybczyk, Environmental Studies 336

### **Program Description**

The MS in environmental science is a two-year curriculum which draws upon course work from Huxley College and the other colleges of WWU. It is directed toward the development and integration of scientific information in order to describe, predict and/or manage natural systems, and to assess human impacts on those systems. **The Marine and Estuarine Science (MES) option** is offered through Huxley College of the Environment, the Department of Biology, and Shannon Point Marine Center. Students graduating from the program will have an understanding of biota and topical management issues, and fundamental biological and chemical oceanographic processes. Curriculum Coordinator: Dr. Brian L. Bingham

### **Goals**

The program prepares students to describe, predict and/or manage natural systems and to assess human impacts on those systems.

### **Prerequisites**

A bachelor's degree and college-level course work including a minimum of one year of general chemistry plus one quarter or semester of organic chemistry, one year of general biology, one course each in ecology, calculus and statistics.

### **Application Information**

**Admit Quarter:** Students will be admitted into the MS in environmental science program fall quarter only.

**Deadlines:** Because maximum student enrollment is limited, all applicants are strongly encouraged to submit application materials by February 1. Review of materials will begin after that date and will continue until the enrollment limit is reached or on June 1, whichever comes first.

**TA Deadline:** To be considered for a graduate teaching assistantship, applicants should submit their application materials by February 1 and indicate in the statement of purpose how the prerequisites listed above have or will be met before starting the program.

**Specific Test Requirements:** For all options: Graduate Record Exam, General Test. Applicants with advanced degrees are not required to submit GRE scores.

**Supporting Materials:**

- An application for admission into the MS program in environmental science must include a one- to two-page statement of purpose indicating which specialization the applicant is most interested in, explaining why the applicant wishes to pursue graduate studies in environmental science, and what future expectations he or she has for the MS degree.
- The statement may indicate a preferred faculty advisor; students are encouraged to review faculty research interests as described on the Huxley website, [www.ac.wwu.edu/~huxley](http://www.ac.wwu.edu/~huxley), prior to contacting potential faculty advisors; students are admitted into the program only upon agreement of potential faculty advisors.

**Program Requirements (45 to 69 credits)**

a minimum of 45 credits are required, including:

- ESCI 501 (3);
- 30 credits of course work, including three courses from the area of specialization, or course substitutions, under advisement;
- 12 credits of ESCI 690 (thesis).

Ten credits or less of approved 400-level course work may be included in the program. No more than four elective credits of ESCI 595 (Teaching Practicum) may be used toward the MS degree in environmental science. Each candidate should note that the department has an annual review of student progress that affects retention, in addition to the other program requirements listed here. The student will make a public presentation of the thesis research either on campus at Western Washington University or Shannon Point and will participate in an oral exam given by the thesis committee.

For further information, write or consult the Huxley Graduate Program Coordinator, Department of Environmental Sciences, Western Washington University, Bellingham, WA 98225-9181, 360-650-3646, [huxgrad@cc.wwu.edu](mailto:huxgrad@cc.wwu.edu).

**Specialization courses:**

- ESCI 421 - Fisheries Management Lab
- ESCI 425 - Environmental Biology of Fishes
- ESCI 426 - Marine Invertebrates and Their Environment
- ESCI 432 - Topics in Marine Ecology
- ESCI 441 - GIS and Environmental Modeling
- ESCI 463 - Wetlands for Wastewater Treatment
- ESCI 491 - Oceanography of Puget Sound  
ESCI 500 (when marine topic)
- ESCI 502 - Experimental Design
- ESCI 503 - Statistical Ecology  
ESCI 517 (when marine topic)
- ESCI 521 - Biological Oceanography
- ESCI 522 - Estuarine Ecology
- ESCI 533 - Advanced Population Biology
- ESCI 540 - Wetlands Ecology
- ESCI 542 - Remote Sensing  
ESCI 545 (when marine topic)  
ESCI 597 (when marine topic)

- ESCI 599 - Graduate Environmental Studies Seminar (when marine topic)
- BIOL 503 - Advanced Topics in Ecology
- BIOL 508 - Advanced Topics in Marine Biology
- BIOL 545 (when marine topic)

**Additional requirement in MES option:**

- BIOL 505 - Current Research in Marine Science

Visit the Marine and Estuarine Science graduate program website, [www.ac.wwu.edu/~mesp](http://www.ac.wwu.edu/~mesp), for a complete list of participating faculty and their research interests.

## **Environmental Science, Regional, Global and Terrestrial Ecosystems, Thesis, MS**

### **Graduate Faculty**

**Abel, Troy D.**, PhD, environmental policy, conservation politics, civic environmentalism, policy analysis, globalization and environment.

**Bach, Andrew J.**, PhD, physical geography, geomorphology, soils and weathering, geoarcheology.

**Berardi, Gigi**, PhD, resources management, agroecology, international community development, food security, all-hazards planning.

**Bingham, Brian L.**, PhD, invertebrate biology, marine ecology, experimental design.

**Bodensteiner, Leo R.**, PhD, fish ecology.

**Buckley, Patrick H.**, PhD, economic and development geography, quantitative methods, GIS, environmental issues in Japan and China, quality of life, transborder environmental issues.

**Bunn, Andrew G.**, PhD, climate change, paleoecology, energy, ecological models.

**Cancilla, Devon A.**, PhD, environmental chemistry, environmental toxicology, chemical ecology.

**Helfield, James M.**, PhD, ecology of rivers and riparian forests, terrestrial-aquatic ecosystem linkages, watershed management and restoration.

**Homann, Peter S.**, PhD, biogeochemistry, soil sciences, forest ecology.

**Landis, Wayne G.**, PhD, environmental toxicology, population biology, risk assessment.

**Matthews, Robin A.**, PhD, freshwater ecology, aquatic toxicology, statistical ecology.

**McLaughlin, John F.**, PhD, terrestrial ecology, population biology, conservation biology.

**Medler, Michael J.**, PhD, biogeography, GIS, remote sensing, forest fire and wilderness management.

**Melious, Jean O.**, JD, environmental and land use law and policy, international environmental policy.

**Miles, John C.**, PhD, environmental education and history, public lands management.

**Miles, Scott B.**, PhD, sustainable development for risk reduction, social vulnerability, community disaster recovery, local self reliance.

**Mookherjee, Debnath**, PhD, comparative urbanization, regional development and planning, developing countries.

**Myers, O. Eugene**, PhD, environmental education, conservation psychology, human ecology, environmental history and ethics.

**Rossiter, David A.**, PhD, Canada, cultural-historical geographies, political ecologies.

**Rybczyk, John M.**, PhD, wetland ecology and management, ecosystem modeling, global climate change.

**Shull, David H.**, PhD, structure and function of marine benthic communities, pollution and marine ecosystems.

**Smith, Bradley F.**, PhD, global environmental policy, sustainable development.

**Sofield, Ruth M.**, PhD, aquatic toxicology, biochemical and genetic toxicology, environmental chemistry.

**Stangl, Paul A.**, PhD, pedestrian planning, new urbanism, urban landscapes, memory and meaning; Europe and Berlin.

**Sulkin, Stephen D.**, PhD, invertebrate biology, larval ecology.

**Terich, Thomas A.**, PhD, shoreline processes, natural hazards and geomorphology.

**Wallin, David O.**, PhD, terrestrial ecology, forest ecosystems.

**Wang, Grace A.**, PhD, natural resource policy, cultural resources management, community-based forestry.

**Zaferatos, Nicholas C.**, PhD, community and environmental planning, sustainable development, European environmental policy, Native American political development.

Program Advisor: Dr. John M. Rybczyk, Environmental Studies 336

### **Program Description**

The MS in environmental science is a two-year curriculum which draws upon course work from Huxley College and the other colleges of WWU. It is directed toward the development and integration of scientific information in order to describe, predict and/or manage natural systems, and to assess human impacts on those systems. This specialization focuses on terrestrial ecosystems and on large-scale regional and global environmental problems. Examination of natural ecosystems, resources and the effects of large-scale change.

### **Goals**

The program prepares students to describe, predict and/or manage natural systems and to assess human impacts on those systems.

### **Prerequisites**

A bachelor's degree and college-level course work including a minimum of one year of general chemistry plus one quarter or semester of organic chemistry, one year of general biology, one course each in ecology, calculus and statistics.

### **Application Information**

**Admit Quarter:** Students will be admitted into the MS in environmental science program fall quarter only.

**Deadlines:** Because maximum student enrollment is limited, all applicants are strongly encouraged to submit application materials by February 1. Review of materials will begin after that date and will continue until the enrollment limit is reached or on June 1, whichever comes first.

**TA Deadline:** To be considered for a graduate teaching assistantship, applicants should submit their application materials by February 1 and indicate in the statement of purpose how the prerequisites listed above have or will be met before starting the program.

**Specific Test Requirements:** For all options: Graduate Record Exam, General Test. Applicants with advanced degrees are not required to submit GRE scores.

### **Supporting Materials:**

- An application for admission into the MS program in environmental science must include a one- to two-page statement of purpose indicating which specialization the applicant is most interested in, explaining why the applicant wishes to pursue graduate studies in environmental science, and what future expectations he or she has for the MS degree.
- The statement may indicate a preferred faculty advisor; students are encouraged to review faculty research interests as described on the Huxley website, [www.ac.wwu.edu/~huxley](http://www.ac.wwu.edu/~huxley), prior to contacting potential faculty advisors; students are admitted into the program only upon agreement of potential faculty advisors.

## **Program Requirements (45 to 69 credits)**

Minimum of 45 credits are required, including:

- ESCI 501 (3);
- 30 credits of course work, including three courses from the area of specialization, or course substitutions, under advisement;
- 12 credits of ESCI 690 (thesis).

Ten credits or less of approved 400-level course work may be included in the program. No more than four elective credits of ESCI 595 (Teaching Practicum) may be used toward the MS degree in environmental science. Each candidate should note that the department has an annual review of student progress that affects retention, in addition to the other program requirements listed here. The student will make a public presentation of the thesis research either on campus at Western Washington University or Shannon Point and will participate in an oral exam given by the thesis committee.

For further information, write or consult the Huxley Graduate Program Coordinator, Department of Environmental Sciences, Western Washington University, Bellingham, WA 98225-9181, 360-650-3646, huxgrad@cc.wwu.edu.

### **Specialization courses:**

- ESCI 408 - Field Methods in Wildlife Ecology
- ESCI 410 - Forestry-Fish Interactions
- ESCI 411 - Forest and Fish Assessment
- ESCI 423 - Past Environments of the Pacific Northwest
- ESCI 431 - Watershed Biogeochemistry  
ESCI 500 (when terrestrial ecosystem topic)
- ESCI 502 - Experimental Design
- ESCI 503 - Statistical Ecology
- ESCI 507 - Advanced Forest Ecology  
ESCI 517 (when terrestrial ecosystem topic)
- ESCI 523 - Past Environments of the Pacific Northwest
- ESCI 533 - Advanced Population Biology
- ESCI 535 - Advanced Landscape Ecology
- ESCI 536 - Environmental Impact Assessment Practicum
- ESCI 539 - Advanced Conservation of Biological Diversity
- ESCI 541 - GIS and Environmental Modeling
- ESCI 542 - Remote Sensing  
ESCI 545 (when terrestrial ecosystem topic)
- ESCI 562 - Advanced Air Pollution
- ESCI 590 - Advanced Environmental Risk Assessment
- ESCI 592 - Climate Change  
ESCI 597 (when terrestrial ecosystem topic)
- ESCI 599 - Graduate Environmental Studies Seminar (when terrestrial ecosystem topic)
- EGEO 450 - Intermediate Geographic Information Systems
- EGEO 451 - GIS Databases
- EGEO 504 - Geographic Methods and Techniques
- EGEO 535 - Environmental Problems and Regional Development
- EGEO 552 - Advanced GIS

# **Environmental Studies: Policy, Planning, Education and Geography**

## **Introduction**

*Chair: Thomas A. Terich*

The social sciences and humanities are necessary complements to environmental science in understanding and solving environmental problems. Environmental scientists use the tools of natural science to understand and describe natural systems and their disturbances. Social scientists, historians, philosophers, artists and writers add their descriptive and analytical skill to understanding how cultures and societies can and must respond to the challenges of building and maintaining sustainable societies on a foundation of finite and renewable natural resources.

This department's programs allow students to link their interest in the environment with social science and humanities disciplines. Programs include geography, planning and environmental policy, environmental education, environmental journalism, and environmental economics. These programs direct students to specific environmental career paths or provide an excellent background for advanced study in law, environmental education and interpretation, public administration and resource management. The Institute for Global and Community Resilience is also in the department.

## *Faculty*

The work of this department is largely interdisciplinary, though geography maintains a strong disciplinary identity. Department faculty are trained in anthropology, geography, education, natural resources management, urban and regional planning, law, political science, and related fields. Active research work allows faculty to remain current in the rapidly evolving field of environmental and natural resources management. Department academic programs draw heavily upon the expertise of colleagues in other units of the University, such as the departments of political science and economics.

## *Department Resources*

Department facilities support applied student learning in the 30-computer spatial analysis lab with a complete suite of state-of-the-art GIS, cartography, and remote sensing software, GPS receivers, and extensive local data sets. Facilities also include the planning studio, the map library, and the environmental education lab. Experiential learning is emphasized in many of our programs, taking students into the field where they apply their skills and knowledge to current problems. Student work has received recognition from national and statewide organizations for exceptional problem-solving solutions, which use geographic information systems and computer-aided design.

## **Faculty**

**THOMAS A. TERICH** (1973) Chair and Professor. BA, MA, California State University-Los Angeles; PhD (geography), Oregon State University.

**TROY D. ABEL** (2006) Assistant Professor. BS, Indiana University (public health); MPA, George Mason University (public policy analysis); PhD, public policy and science and technology policy).

**ANDREW J. BACH** (1995) Associate Professor. BS, MA (geography), University of California-Davis; PhD (geography), Arizona State University.

**GIGI BERARDI** (1995) Professor. Department of Environmental Studies: Policy, Planning, Education and Geography, BA (biology), University of California at San Diego; MS (natural resources conservation), PhD (natural resources, policy and planning), Cornell University.

**PATRICK H. BUCKLEY** (1987) Associate Professor. BS (civil engineering and geology), University of Notre Dame; MA (economic geography and South Asian studies), University of Washington; PhD (economic geography), Boston University.

**WILLIAM DIETRICH** (2006) Assistant Professor. BA, Western Washington University (Fairhaven College); Author; Pulitzer Prize (Exxon Valdez); Harvard University (Nieman Fellow)

**MICHAEL J. MEDLER** (2002) Associate Professor. BS (philosophy), MS (environmental studies), University of Oregon;

PhD (geography), University of Arizona.

**JEAN O. MELIOUS** (1996) Associate Professor. BA (government and environmental studies), St. Lawrence University; PhM (urban design and regional planning), University of Edinburgh; JD, Harvard Law School.

**JOHN C. MILES** (1968) Professor. BA (anthropology), Dartmouth College; MA (recreation and park management), University of Oregon; PhD (education), The Union Institute.

**SCOTT B. MILES** (2007) Assistant Professor. BS (civil and environmental engineering), Washington State University; MS (civil and environmental engineering), University of Massachusetts-Amherst; Post-graduate Diploma (geographical information systems), University of Edinburgh; PhD (geography), University of Washington.

**DEBNATH MOOKHERJEE** (1961) Professor. BSc, MSc (geography), University of Calcutta; PhD (geography), University of Florida.

**O. EUGENE MYERS** (1995) Associate Professor. BS (human ecology), Western Washington University; MA, PhD (psychology and human development), University of Chicago.

**DAVID A. ROSSITER** (2005) Associate Professor. BA (Honors), University of British Columbia; MA (geography); PhD, (geography) York University.

**BRADLEY F. SMITH** (1994) Professor and Dean. Huxley College of the Environment. BA (political science and international relations) and MA (political science and public administration), Western Michigan University; PhD (School of Natural Resources and Environment), University of Michigan.

**PAUL STANGL** (2007) Assistant Professor. BS (liberal arts) Kansas State University; MCRP (city and regional planning), Rutgers University; PhD (geography), University of Texas-Austin

**WENDY WALKER** (1991) Visiting Assistant Professor. BA and K-12 Teaching Certificate (geology), Western Washington University; MS (religion), Florida State University.

**GRACE WANG** (2002) Associate Professor. BS (political economy of natural resources), University of California-Berkeley; MS, PhD (forestry), University of Minnesota.

**NICHOLAS C. ZAFERATOS** (1999) Associate Professor. BA (economic and regional geography), State University of New York; MS (urban and regional planning), Western Washington University; PhD (urban planning), University of Washington.

#### Adjunct Faculty

**DWIGHT BARRY**, Education Outreach Coordinator, Peninsula College, PhD (environmental science), University of North Texas.

**JAMES S. DARLING**, Vice President/Principal, Maul Foster Alongi

**JAMES DAVIS**, President of Conservation Partnership Center, PhD (ecology/ etymology), University of California-Berkeley.

**PAUL DINNEL** Resident Scientist, Shannon Point Marine Center. PhD (fisheries), University of Washington.

**JERRY FREILICH**, Research and Monitoring Coordinator, Olympic National Park, PhD (aquatic ecology), University of Georgia.

**JEFFREY GIESON**, North Cascades Institute.

**DON HUNGER**, Associate Vice President for Agency Affairs, The Student Conservation Association.

**CLIFFORD G. RICE**, Wildlife Biologist, Washington State Department of Fish and Wildlife, Olympia, Washington.

**MICHAEL G. STONER**, Environmental Manager, Port of Bellingham. MS (forest soils), University of Washington.

**SUZANNE STROM**, Marine Scientist, Shannon Point Marine Center. PhD (biological oceanography), University of Washington.

#### Affiliated Faculty

**RANDALL S. BABCOCK**, Professor, Department of Geology.

**DANIEL L. BOXBERGER**, Professor, Department of Anthropology.

**DEBRA J. SALAZAR**, Professor, Department of Political Science.

**MAURICE SCHWARTZ**, Professor Emeritus, Department of Geology.

**STEPHEN D. SULKIN**, Professor and Director, Shannon Point Marine Center.

## **Undergraduate Degrees and Programs**

Economics/Environmental Studies, BA  
Environmental Education — Community Education and Mass Communication Emphasis, BA  
Environmental Education — Outdoor Education and Interpretation Emphasis, BA  
Environmental Studies — Elementary, BAE  
Environmental Studies/Journalism, BA  
  
Geography — Environmental and Resource Management Emphasis, BA  
Geography — International: Society and Environment Emphasis, BA  
Geography/Social Studies, BA  
Geography — Elementary, BAE  
Planning and Environmental Policy — Disaster Reduction and Emergency Planning Emphasis, BA  
Planning and Environmental Policy — Environmental Policy Emphasis (Extension), BA  
Planning and Environmental Policy — Environmental Policy Emphasis, BA  
Planning and Environmental Policy — Urban Planning Emphasis, BA  
Environmental Education Minor  
Environmental Policy Minor  
Environmental Studies Minor  
Geographic Information Systems Minor  
Geography Minor  
Sustainable Design Minor

## **Graduate Degrees and Programs**

Environmental Education, Thesis, MEd  
Environmental Education, Non-Thesis, MEd  
Environmental Education, Residency, Non-Thesis, MEd  
Geography Thesis, MS

## **Economics/Environmental Studies, BA (also see Economics Department)**

**103-104 credits (preparatory courses and major)**

### **Introduction**

Students wishing to complete an Economics/Environmental Studies major in four years should complete all GUR requirements in their first two years. The preparatory courses listed below may be used to fulfill both Huxley College and GUR requirements. All preparatory courses required for admission should be completed on a lettered or numeric grading scale, not P/NP, and must be completed with a grade of C- or better.

### **Admission and Declaration Process**

Admission and Major Declaration (see Huxley College and Advisement page)

### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

## Requirements

### Preparatory Courses (18-19 credits)

- One course from:
  - BIOL 101 - Introduction to Biology
  - BIOL 204 - Introduction to Evolution, Ecology and Biodiversity
  - CHEM 121 - General Chemistry I
- One course from:
  - MATH 114 - Precalculus I
  - MATH 156 - Algebra With Applications to Business and Economics
- Additional Lab Science course in BIOL, CHEM, GEOL or PHYS

### Major (85 credits)

- ECON 206 - Introduction to Microeconomics
- ECON 207 - Introduction to Macroeconomics
- ECON 303 - The History of Economic Thought
- ECON 306 - Intermediate Microeconomics
- ECON 307 - Intermediate Macroeconomics
- ECON 383 - Environmental Economics
- ECON 384 - Energy Economics
- ECON 483 - Resource Economics
- ECON 493 - Senior Seminar: Economics, the Environment and Natural Resources
- ESTU 464 - United States Environmental Policy
- ESTU 468 - Environmental Law
- One course from:
  - DSCI 205 - Business Statistics
  - MATH 240 - Introduction to Statistics
  - MATH 341 - Probability and Statistical Inference
- One course from:
  - EGEO 310 - Developing World
  - EGEO 311 - Population and Resources
  - EGEO 312 - Geography of the World Economy
- One course from:
  - ESCI 302 - Environmental Pollution
  - ESCI 310 - Environmental Systems
  - ESCI 325 - Fundamentals of Ecology
  - ESCI 392 - Introduction to Global Change
- One course from:
  - ESCI 309 - Exploring Environmental Data
  - ESCI 321 - Oceanography
  - ESCI 330 - Natural History of the Pacific Northwest
  - ESCI 333 - Introduction to Environmental Toxicology
  - ESCI 361 - Water Quality
  - ESCI 463 - Wetlands for Wastewater Treatment
- One course from:
  - ESTU 436 - Environmental Impact Assessment

- ESCI 436 - Environmental Impact Assessment
  - One course from:
- MATH 124 - Calculus and Analytic Geometry I
- MATH 157 - Calculus With Applications to Business and Economics
  - Electives under advisement (15-18 credits)
    - ECON 300- and 400-level
    - ESTU 300- and 400-level
  - Take one Communication Focus (CF) course and a minimum of three writing proficiency points in approved upper-division writing proficiency courses (WP-3 points) at WWU with a minimum grade of C-. The CF course must be taken within the College of Business and Economics, while the WP requirement can be met with courses from any of the combined major departments. These requirements can be completed as part of the above required and elective credits. Consult the Timetable of Classes for the specific course sections that fulfill the CF and WP requirements.

## Environmental Education Minor

**26 credits**

### Admission and Declaration Process

Admission and Declaration of Major (see Huxley College and Advisement page)

### Grade Requirements

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

### Requirements

- ESCI 330 - Natural History of the Pacific Northwest
- ESTU 371 - Environmental Education
- ESTU 372 - The Environmental Education Curriculum
  - One course from:
    - ESTU 305 - Environmental History and Ethics
    - ESTU 488 - History of Conservation in America
  - Electives under advisement (10 credits)
- EDUC 309 - Storytelling: Oral Narrative in History, Culture, and Society
- ESCI 325 - Fundamentals of Ecology  
ESCI 326
- ESCI 340 - Biostatistical Analysis  
ESTU 300- and 400-level  
Maximum 1 course allowed from:
  - FAIR 331N - Natural History
  - FAIR 335N - Visioning Sustainable Futures
  - FAIR 339N - Environmental Issues of Indigenous Peoples of North America

# **Environmental Education — Community Education and Mass Communication Emphasis, BA**

**121-128 credits (preparatory courses and major)**

## **Introduction**

Students in Huxley's environmental education major obtain basic knowledge of the interdependent natural processes and human choices and institutions that affect environmental quality and human well-being. With this grounding, they focus on education as a critical factor in humans' abilities to create positive solutions. In particular the major offers a highly experiential approach to the distinct nature of, reasons for, and techniques of environmental education as a diverse and dynamic profession. Some graduate work in formal school classrooms, while others work in agency, non-profit, media or other community-based settings. The major offered two emphases: 1) Outdoor Education and Interpretation, and 2) Community Education and Mass Communication.

## **Admission and Declaration Process**

Admission and Declaration of Major (see Huxley College and Advisement page)

## **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

## **Requirements**

### **Preparatory Courses (36-43 credits)**

- CHEM 121 - General Chemistry I
- ECON 206 - Introduction to Microeconomics
  - One course from:
  - BIOL 101 - Introduction to Biology
  - BIOL 204 - Introduction to Evolution, Ecology and Biodiversity
    - One course from:
    - E GEO 203 - Physical Geography
    - GEOL 211 - Physical Geology
    - One course from:
    - MATH 114 - Precalculus I
    - MATH 156 - Algebra With Applications to Business and Economics
      - Any BCOM or CCOM GUR requirement course
      - Any PLSC course
      - Additional Lab Science course in BIOL, CHEM, GEOL or PHYS
      - Introductory Statistics course from one of the following:
        - ANTH 335 - Quantitative Methods in Anthropology
        - DSCI 205 - Business Statistics
        - FAIR 232P - User-Friendly Statistics
        - MATH 240 - Introduction to Statistics
        - SOC 215 - Social Statistics

## **Major (85 credits)**

- ESTU 305 - Environmental History and Ethics
- ESTU 371 - Environmental Education
- ESTU 372 - The Environmental Education Curriculum
- ESTU 477 - The American Literature of Nature and Place
- ESTU 479 - Environmental Interpretation Methods
- ESTU 480 - The Planet Staff
- ESTU 481 - Environmental Journalism
- ESTU 486 - Community-Based Environmental Education
  - One course from:
    - ESCI 302 - Environmental Pollution
    - ESCI 310 - Environmental Systems
    - ESCI 325 - Fundamentals of Ecology
    - ESCI 392 - Introduction to Global Change
  - One course from:
    - ESCI 309 - Exploring Environmental Data
    - ESCI 321 - Oceanography
    - ESCI 330 - Natural History of the Pacific Northwest
    - ESCI 333 - Introduction to Environmental Toxicology
    - ESCI 361 - Water Quality
    - ESCI 463 - Wetlands for Wastewater Treatment
  - One course from:
    - ESCI 436 - Environmental Impact Assessment
    - ESCI 470 - Ecological Restoration
    - ESCI 490 - Environmental Risk Assessment
    - ESCI 491 - Oceanography of Puget Sound
    - ESTU 436 - Environmental Impact Assessment
    - ESTU 470 - Planning Studio
    - ESTU 496 - Environmental Stewardship
  - One course from:
    - ESTU 304 - Environment and Resource Policy
    - ESTU 464 - United States Environmental Policy
    - ESTU 468 - Environmental Law
    - ESTU 488 - History of Conservation in America
  - One course from (minimum of 10 credits):
    - ESTU 498A - Senior Thesis
    - ESTU 498B - Internship
    - ESTU 498C - Senior Project
    - ESTU 498D - Foreign Study
  - Electives under advisement (25-29 credits)
    - COMM 300- and 400-level
  - CSCI 202 - Dynamic Web Pages
  - ECON 383 - Environmental Economics
    - EGEO 300- and 400-level
  - ENG 301 - Writing Studies
  - ENG 302 - Introduction to Technical and Professional Writing
    - ESCI 300- and 400-level

- ESTU 300- and 400-level
- FAIR 300- and 400-level
- HIST 460 - American Environmental History
- JOUR 300- and 400-level
- MGMT 311 - Introduction to Management and Organizational Behavior
- MGMT 313 - Teamwork Basics
- MGMT 413 - Organizational Change Practicum
- PLSC 420 - Environmental Politics
- SOC 330 - Introduction to Social Psychology
- SOC 340 - Sociology of Organizations
- SOC 375 - Community and Urban Society

## **Environmental Education — Outdoor Education and Interpretation Emphasis, BA**

**121-128 credits (preparatory courses and major)**

### **Introduction**

Students in Huxley's environmental education major obtain basic knowledge of the interdependent natural processes and human choices and institutions that affect environmental quality and human well-being. With this grounding, they focus on education as a critical factor in humans' abilities to create positive solutions. In particular the major offers a highly experiential approach to the distinct nature of, reasons for, and techniques of environmental education as a diverse and dynamic profession. Some graduate work in formal school classrooms, while others work in agency, non-profit, media or other community-based settings. The major offered two emphases: 1) Outdoor Education and Interpretation, and 2) Community Education and Mass Communication.

### **Admission and Declaration Process**

Admission and Declaration of Major (see Huxley College and Advisement page)

### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

### **Requirements**

#### **Preparatory Courses (36-43 credits)**

- CHEM 121 - General Chemistry I
- ECON 206 - Introduction to Microeconomics
  - One course from:
    - BIOL 101 - Introduction to Biology
    - BIOL 204 - Introduction to Evolution, Ecology and Biodiversity
      - One course from:
        - E GEO 203 - Physical Geography
        - GEOL 211 - Physical Geology
- MATH 114 - Precalculus I
- MATH 156 - Algebra With Applications to Business and Economics
  - Any BCOM or CCOM GUR requirement course

- Any PLSC course
- Additional Lab Science course in BIOL, CHEM, GEOL or PHYS
- Introductory Statistics course from one of the following:
  - ANTH 335 - Quantitative Methods in Anthropology
  - DSCI 205 - Business Statistics
  - FAIR 232P - User-Friendly Statistics
  - MATH 240 - Introduction to Statistics
  - SOC 215 - Social Statistics

**Major (85 credits)**

- ESCI 330 - Natural History of the Pacific Northwest
- ESTU 305 - Environmental History and Ethics
- ESTU 371 - Environmental Education
- ESTU 372 - The Environmental Education Curriculum
- ESTU 473 - Environmental Interpretation
- ESTU 474 - Outdoor Education
- ESTU 476 - Experiential Learning in Environmental Education
- ESTU 477 - The American Literature of Nature and Place
- ESTU 483 - Field Methods in Environmental Education
- ESTU 484 - Natural History for Environmental Education
- One course from:
  - ESCI 302 - Environmental Pollution
  - ESCI 310 - Environmental Systems
  - ESCI 325 - Fundamentals of Ecology
  - ESCI 392 - Introduction to Global Change
- One course from:
  - ESCI 309 - Exploring Environmental Data
  - ESCI 321 - Oceanography
  - ESCI 333 - Introduction to Environmental Toxicology
  - ESCI 361 - Water Quality
  - ESCI 463 - Wetlands for Wastewater Treatment
- One course from:
  - ESCI 436 - Environmental Impact Assessment
  - ESCI 470 - Ecological Restoration
  - ESCI 490 - Environmental Risk Assessment
  - ESCI 491 - Oceanography of Puget Sound
  - ESTU 436 - Environmental Impact Assessment
  - ESTU 470 - Planning Studio
  - ESTU 496 - Environmental Stewardship
- One course from:
  - ESTU 304 - Environment and Resource Policy
  - ESTU 464 - United States Environmental Policy
  - ESTU 468 - Environmental Law
  - ESTU 488 - History of Conservation in America
- One course from (minimum of 10 credits):
  - ESTU 498A - Senior Thesis
  - ESTU 498B - Internship

- ESTU 498C - Senior Project
- ESTU 498D - Foreign Study
  - Electives under advisement (16-20 credits)
- ECON 383 - Environmental Economics
- EDUC 309 - Storytelling: Oral Narrative in History, Culture, and Society
- EDUC 310 - The Teacher and the Social Order
- EDUC 320 - Reader's Theatre in the Classroom
- EDUC 409 - Advanced Storytelling
  - EGEO 300- and 400-level
  - ESCI 300- and 400-level
  - ESTU 300- and 400-level
  - FAIR 300- and 400-level
- HIST 460 - American Environmental History
  - RECR 300- and 400-level
- THTR 350 - Theatre for Youth
- THTR 351 - Creativity Across the Curriculum

## **Environmental Policy Minor**

**20-24 credits**

### **Admission and Declaration Process**

Admission and Declaration of Major (see Huxley College and Advisement page)

### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

### **Requirements**

- ESTU 304 - Environment and Resource Policy
- One course from:
  - ESTU 202 - Introduction to Environmental Studies and Sustainability
  - ESTU 320 - Explorations in Environmental Studies
- One course from each of the four categories of environmental policy:
  - Law – One course from:
    - ESTU 443 - Land Use Law
    - ESTU 468 - Environmental Law
  - Planning – One course from:
    - ESTU 369 - Introduction to Planning
    - EGEO 314 - Urbanization: Processes and Patterns
  - Policy – One course from:
    - ESTU 463 - Environmental Policy Analysis
    - ESTU 464 - United States Environmental Policy

- ESTU 467 - Natural Resource Policy  
Skills – One course from:
- ESTU 444 - Environmental Dispute Resolution
- ESTU 466 - U.S. and Washington State Environmental Regulations
- EGEO 362 - Land Resource Analysis

## **Environmental Studies Minor**

**24 credits**

### **Admission and Declaration Process**

Admission and Declaration of Major (see Huxley College and Advisement page)

### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

### **Requirements**

- ESCI 101 - Environmental Studies: A Scientific Approach
- ESTU 202 - Introduction to Environmental Studies and Sustainability
- Two courses from:
  - ESCI 310 - Environmental Systems
  - ESTU 303 - Human Ecology and Sustainability
  - ESTU 304 - Environment and Resource Policy
  - ESTU 305 - Environmental History and Ethics
- Electives under advisement (10 credits)
  - EGEO 331 - Climatology
  - EGEO 350 - Introduction to Geographic Information Systems
  - EGEO 362 - Land Resource Analysis
  - EGEO 363 - Natural Hazards Planning
  - EGEO 434 - Biogeography
  - EGEO 461 - Natural Resources Management
- ESCI 300- and 400-level
- ESTU 300- and 400-level
- Maximum 1 course allowed from:
  - FAIR 331N - Natural History
  - FAIR 335N - Visioning Sustainable Futures
  - FAIR 339N - Environmental Issues of Indigenous Peoples of North America

## **Environmental Studies — Elementary, BAE**

**61-68 credits (preparatory courses and major)**

### **Introduction**

This major satisfies the academic major requirement for teacher certification with an endorsement in elementary education and must be accompanied by the professional preparation program in elementary education. See the

Elementary Education section of this catalog for program admission, completion, and teaching certification requirements. This program fulfills the academic major requirement for elementary education candidates who wish to have a solid background in studies related to the environment. Although environmental studies itself is not an endorsable area, some of the courses might be counted toward endorsement in other areas. Students should contact a faculty advisor for clarification of course work applications.

Students wishing to complete an Environmental Studies Elementary Education major in four years should complete all GUR requirements in their first two years. The preparatory courses may be used to fulfill both Huxley College and GUR requirements.

### **Admission and Declaration Process**

Admission and Declaration of Major

### **Grade Requirements**

A grade of C (2.0) or better is required for courses in the elementary education professional program and all courses required for the endorsement.

All preparatory courses required for admission should be completed on a lettered or numeric grading scale, not P/NP, and must be completed with a grade of C (2.0) or better.

### **Requirements**

#### **Preparatory courses (16-19 credits)**

- CHEM 121 - General Chemistry I
- One course from:
  - BIOL 101 - Introduction to Biology
  - BIOL 204 - Introduction to Evolution, Ecology and Biodiversity
  - One course from:
    - MATH 114 - Precalculus I
    - MATH 156 - Algebra With Applications to Business and Economics
    - Additional Lab Science course in BIOL, CHEM, GEOL or PHYS

#### **Major (45-49 credits)**

- ESTU 371 - Environmental Education
- ESTU 372 - The Environmental Education Curriculum
- One course from:
  - ESCI 302 - Environmental Pollution
  - ESCI 310 - Environmental Systems
  - ESCI 325 - Fundamentals of Ecology
  - ESCI 392 - Introduction to Global Change
  - One course from:
    - ESCI 309 - Exploring Environmental Data
    - ESCI 321 - Oceanography
    - ESCI 330 - Natural History of the Pacific Northwest
    - ESCI 333 - Introduction to Environmental Toxicology
    - ESCI 361 - Water Quality

- ESCI 463 - Wetlands for Wastewater Treatment
  - Two courses from:
- ESTU 303 - Human Ecology and Sustainability
- ESTU 304 - Environment and Resource Policy
- ESTU 305 - Environmental History and Ethics
  - Electives under advisement (23-25 credits)
  - Maximum 2 courses allowed from ESCI 300- and 400-level
  - ESTU 300- and 400-level

#### **Additional Requirements**

#### **Link to Woodring College of Education Elementary Teacher Education Program**

#### *Elementary Education Professional Program Requirements (106 credits)*

##### **Professional Studies Core (25 credits)**

- EDUC 301 - Educational Psychology I: Development and Individual Differences
- EDUC 302 - Educational Psychology II: Motivation, Learning and Assessment
- EDUC 310 - The Teacher and the Social Order
- ELED 370 - Introduction to Teaching
- IT 344 - Basic Instructional Technology Skills
- IT 442 - Classroom Use of Instructional Technology (Elementary)
- SPED 364 - Teaching All Students

##### **Elementary Program — Methods, Curriculum Content, and Field Experiences (81 credits)**

- ART 380 - Art Educating the Child
- ELED 425 - Social Studies for the Elementary School
- ELED 470 - Developing Teaching
- ELED 471 - Documenting Teaching
- ELED 480 - Literacy: Beginning Communicators
- ELED 491 - September Experience
- ELED 492 - Practicum: Experience in Literacy Methods
- ELED 494 - Internship - Elementary
- HLED 455 - Health Education Grades K-8
- MATH 381 - Teaching K-8 Mathematics I
- MATH 382 - Teaching K-8 Mathematics II
- MATH 383 - Teaching K-8 Mathematics III
- MATH 491 - Internship Seminar - Teaching K-8 Mathematics
- MUS 361 - Music for Elementary Teachers
- PE 345 - Physical Education for Elementary School
- SCED 480 - Science Methods and Curriculum for the Elementary School
- SCED 490 - Laboratory/Field Experience in Elementary Science
- SPED 430 - Problem Solving for Diverse Needs

## **Environmental Studies/Journalism, BA (also see Journalism Department)**

**120-126 credits (preparatory courses and major)**

### **Introduction**

Students wishing to complete an Environmental Studies major in four years should complete all GUR requirements in their first two years. Prospective environmental science majors are strongly advised to take additional preparatory course work that provides a strong background in chemistry, biology and mathematics. The preparatory courses listed below may be used to fulfill both Huxley College and GUR requirements.

### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors. All preparatory courses required for admission should be completed on a lettered or numeric grading scale, not P/NP, and must be completed with a grade of C- or better.

### **Requirements**

#### **Preparatory Courses (36-42 credits)**

- ❑ One course from:
  - BIOL 101 - Introduction to Biology
  - BIOL 204 - Introduction to Evolution, Ecology and Biodiversity
  - ❑ CHEM 121 - General Chemistry I
  - ❑ ECON 206 - Introduction to Microeconomics
  - ❑ EGEO 203 - Physical Geography
- ❑ One course from:
  - MATH 114 - Precalculus I
  - MATH 156 - Algebra With Applications to Business and Economics
  - ❑ Any BCOM and CCOM GUR requirement course
  - ❑ Any PLSC course
  - ❑ Additional Lab Science course in BIOL, CHEM, GEOL or PHYS
- ❑ One Introductory Statistics course from:
  - ANTH 335 - Quantitative Methods in Anthropology
  - DSCI 205 - Business Statistics
  - FAIR 232P - User-Friendly Statistics
  - MATH 240 - Introduction to Statistics
  - SOC 215 - Social Statistics

#### **Major (84 credits)**

- ❑ ESTU 480 - The Planet Staff
- ❑ ESTU 481 - Environmental Journalism
- ❑ JOUR 207 completed with a grade of B- or better
- ❑ JOUR 190 - Introduction to Mass Media
- ❑ JOUR 307 - Reporting
- ❑ JOUR 309 - Editing
- ❑ JOUR 350 - Mass Media Law

- JOUR 430 - Field Internship
  - JOUR 450 - Advanced Reporting
  - JOUR 480 - Senior Seminar
  - One course from:
    - ESCI 302 - Environmental Pollution
    - ESCI 310 - Environmental Systems
    - ESCI 325 - Fundamentals of Ecology
    - ESCI 392 - Introduction to Global Change
  - One course from:
    - ESCI 309 - Exploring Environmental Data
    - ESCI 321 - Oceanography
    - ESCI 330 - Natural History of the Pacific Northwest
    - ESCI 333 - Introduction to Environmental Toxicology
    - ESCI 361 - Water Quality
    - ESCI 463 - Wetlands for Wastewater Treatment
  - One course from:
    - ESCI 436 - Environmental Impact Assessment
    - ESCI 470 - Ecological Restoration
    - ESCI 490 - Environmental Risk Assessment
    - ESCI 491 - Oceanography of Puget Sound
    - ESTU 436 - Environmental Impact Assessment
    - ESTU 470 - Planning Studio
    - ESTU 496 - Environmental Stewardship
  - One course from:
    - JOUR 214 - Newspaper Staff
    - JOUR 314 - Newspaper Staff
    - JOUR 414 - Newspaper Staff
    - JOUR 415 - Newspaper Editorship
  - One course from:
    - JOUR 321 - Periodical Staff
    - JOUR 421 - Periodical Staff
    - JOUR 422 - Periodical Editorship
  - One course from:
    - JOUR 214 - Newspaper Staff
    - JOUR 314 - Newspaper Staff
    - JOUR 321 - Periodical Staff
    - JOUR 414 - Newspaper Staff
    - JOUR 415 - Newspaper Editorship
    - JOUR 421 - Periodical Staff
    - JOUR 422 - Periodical Editorship
    - ESTU 480 - The Planet Staff
  - ESTU 482 - Editing the Planet \*
- \*ESTU 482 offered only to Environmental/Journalism Majors - Editor status.
- Electives under advisement (11-18 credits):
    - ECON 383 - Environmental Economics
    - ECON 384 - Energy Economics
    - ECON 483 - Resource Economics
    - EGEO 300- and 400-level
    - ESCI 300- and 400-level

- ESTU 300- and 400-level
- FAIR 300- and 400-level
- HIST 480 - Modern Chinese Social History
- JOUR 300- and 400-level
- PLSC 346 - Politics of Inequality
- PLSC 347 - Race, Politics and Public Policy
- PLSC 390 - The Politics of Development
- PLSC 420 - Environmental Politics
- SOC 321 - Demography
- SOC 385

## **Geographic Information Systems Minor**

**29-31 credits**

### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

### **Admission and Declaration Process**

Admission and Declaration of Major (see Huxley College and Advisement page)

### **Requirements**

- One course from:
  - E GEO 305 - Analysis of Spatial Data
  - E SCI 340 - Biostatistical Analysis
  - D SCI 305 - Applied Business Statistics or approved substitute
- One course from:
  - E GEO 350 - Introduction to Geographic Information Systems
  - ESTU 401 - Applications in GIS
  - E GEO 352 - Computer Cartography
  - E GEO 450 - Intermediate Geographic Information Systems
  - E GEO 451 - GIS Databases
  - E GEO 452 - Advanced GIS
  - E GEO 453 - GIS Processing and Analysis
  - E SCI 442 - Introduction to Remote Sensing

## **Geography Minor**

**25 credits**

### **Admission and Declaration Process**

Admission and Declaration of Major (see Huxley College and Advisement page)

## **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

## **Requirements**

- Egeo 201 - Human Geography
- Egeo 203 - Physical Geography
- Egeo 320 - The United States: Society & Environment
- Egeo 351 - Map Reading and Analysis
- 11 Electives credits under advisement from:  
Egeo 300- and 400-level

## **Geography — Elementary, BAE**

**66-73 credits (preparatory courses and major)**

### **Introduction**

This major satisfies the academic major requirement for teacher certification with an endorsement in elementary education and must be accompanied by the professional preparation program in elementary education. See the Elementary Education section of this catalog for program admission, completion, and teacher certification requirements. This program is designed to provide necessary depth as well as breadth to teaching majors who wish to specialize in geography in the public school system.

Students wishing to complete a Geography Elementary Education major should complete the general chemistry series during their freshman year and the general biology series during their sophomore year. Prospective environmental science majors are strongly advised to take additional preparatory course work that provides a strong background in chemistry, biology and mathematics. The preparatory courses may be used to fulfill both Huxley College and GUR requirements.

### **Admission and Declaration Process**

Admission and Declaration of Major (see Huxley College and Advisement page)

## **Grade Requirements**

A grade of C (2.0) or better is required for courses in the elementary education professional program and all courses required for the endorsement.

All preparatory courses required for admission should be completed on a lettered or numeric grading scale, not P/NP, and must be completed with a grade of C (2.0) or better.

## **Requirements**

### **Preparatory Courses (29-36 credits)**

- Egeo 201 - Human Geography
- Egeo 203 - Physical Geography
- Esci 101 - Environmental Studies: A Scientific Approach
- One course from:

- MATH 107 - Mathematical Reasoning and its Applications
- MATH 112 - Functions and Algebraic Methods
- MATH 114 - Precalculus I
- MATH 156 - Algebra With Applications to Business and Economics
  - Any BCOM or CCOM GUR requirement course
  - Two Natural Science GUR lab courses

### **Major (37 credits)**

- EGEO 209 - Geography and World Affairs
- EGEO 250 - Geographic Information Systems Survey
- EGEO 301 - Research and Writing
- EGEO 310 - Developing World
- EGEO 320 - The United States: Society & Environment
- EGEO 351 - Map Reading and Analysis
- 20 Electives credits under advisement from:  
EGEO 300- and 400-level

### **Additional Requirements**

#### **Link to Woodring College of Education Elementary Teacher Education Program**

#### *Elementary Education Professional Program Requirements (106 credits)*

### **Professional Studies Core (25 credits)**

- EDUC 301 - Educational Psychology I: Development and Individual Differences
- EDUC 302 - Educational Psychology II: Motivation, Learning and Assessment
- EDUC 310 - The Teacher and the Social Order
- ELED 370 - Introduction to Teaching
- IT 344 - Basic Instructional Technology Skills
- IT 442 - Classroom Use of Instructional Technology (Elementary)
- SPED 364 - Teaching All Students

### **Elementary Program — Methods, Curriculum Content, and Field Experiences (81 credits)**

- ART 380 - Art Educating the Child
- ELED 425 - Social Studies for the Elementary School
- ELED 470 - Developing Teaching
- ELED 471 - Documenting Teaching
- ELED 480 - Literacy: Beginning Communicators
- ELED 481 - Literacy: Fluent Communicators
- ELED 491 - September Experience
- ELED 492 - Practicum: Experience in Literacy Methods
- ELED 494 - Internship - Elementary
- HLED 455 - Health Education Grades K-8
- MATH 381 - Teaching K-8 Mathematics I
- MATH 382 - Teaching K-8 Mathematics II

- MATH 383 - Teaching K-8 Mathematics III
- MATH 491 - Internship Seminar - Teaching K-8 Mathematics
- MUS 361 - Music for Elementary Teachers
- PE 345 - Physical Education for Elementary School
- SCED 480 - Science Methods and Curriculum for the Elementary School
- SCED 490 - Laboratory/Field Experience in Elementary Science
- SPED 430 - Problem Solving for Diverse Needs

## **Geography — Environmental and Resource Management Emphasis, BA**

### **125-131 Credits**

#### **Introduction**

Students wishing to complete a Geography major in four years should complete all GUR requirements in first two years. Prospective Geography majors are strongly advised to take additional preparatory course work that provides a strong background in chemistry, biology, geology, physics and mathematics. The preparatory courses are listed with the major, where approved as GUR courses in the catalog, may be used to fulfill both Huxley College and GUR requirements. All preparatory courses required for admission should be completed on a lettered or numeric grading scale, not P/NP, and must be completed with a grade of C- or better,

#### **Admission and Declaration Process**

Admission and Declaration of Major (see Huxley College and Advisement page)

#### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

#### **Requirements**

##### **Preparatory Courses (40-46 credits)**

- CHEM 121 - General Chemistry I
- ECON 206 - Introduction to Microeconomics
- EGEO 201 - Human Geography
- EGEO 203 - Physical Geography
- One course from:
  - BIOL 101 - Introduction to Biology
  - BIOL 204 - Introduction to Evolution, Ecology and Biodiversity
- One course from:
  - MATH 114 - Precalculus I
  - MATH 156 - Algebra With Applications to Business and Economics
- One Introductory Statistics course from:
  - ANTH 335 - Quantitative Methods in Anthropology
  - DSCI 205 - Business Statistics
  - FAIR 232P - User-Friendly Statistics
  - MATH 240 - Introduction to Statistics
  - SOC 215 - Social Statistics

## **Major (85 credits)**

- Egeo 301 - Research and Writing
- Egeo 305 - Analysis of Spatial Data
- Egeo 351 - Map Reading and Analysis
- Egeo 352 - Computer Cartography
- One course from:
  - Egeo 320 - The United States: Society & Environment
  - Egeo 321 - Africa: Society and Environment
  - Egeo 322 - The Middle East: Society and Environment
  - Egeo 323 - South Asia: Society and Environment
  - Egeo 324 - East Asia: Society and Environment
  - Egeo 327 - The Pacific Northwest: Society and Environment
  - Egeo 328 - Canada: Society and Environment
- One course from:
  - Egeo 350 - Introduction to Geographic Information Systems
  - Egeo 450 - Intermediate Geographic Information Systems
  - Egeo 451 - GIS Databases
  - Egeo 452 - Advanced GIS
  - Egeo 453 - GIS Processing and Analysis
  - Estu 401 - Applications in GIS
- One course from:
  - Esci 302 - Environmental Pollution
  - Esci 310 - Environmental Systems
  - Esci 325 - Fundamentals of Ecology
  - Esci 392 - Introduction to Global Change
- One course from:
  - Esci 309 - Exploring Environmental Data
  - Esci 321 - Oceanography
  - Esci 330 - Natural History of the Pacific Northwest
  - Esci 333 - Introduction to Environmental Toxicology
  - Esci 361 - Water Quality
  - Esci 463 - Wetlands for Wastewater Treatment
- One course from:
  - Esci 436 - Environmental Impact Assessment
  - Esci 470 - Ecological Restoration
  - Esci 490 - Environmental Risk Assessment
  - Esci 491 - Oceanography of Puget Sound
  - Estu 436 - Environmental Impact Assessment
  - Estu 470 - Planning Studio
  - Estu 496 - Environmental Stewardship
- One course from: (minimum 10 credits)
  - Estu 498A - Senior Thesis
  - Estu 498B - Internship
  - Estu 498C
  - Estu 498D - Foreign Study
- Five courses from:
  - Egeo 330 - Geography of Landforms

- Egeo 331 - Climatology
  - Egeo 332 - The Soil Environment
  - Egeo 362 - Land Resource Analysis
  - Egeo 363 - Natural Hazards Planning
  - Egeo 431 - Water Resources
  - Egeo 432 - Soil Landscapes
  - Egeo 433 - Climate and Biophysical Processes
  - Egeo 434 - Biogeography
  - Egeo 461 - Natural Resources Management
  - ESCI 492 - Climate Change
- 30-37 elective credits under advisement from the following:
- ANTH 300- and 400-level
  - Egeo 300- and 400-level
  - ESCI 300- and 400-level
  - ESTU 300- and 400-level
  - GEOL 300- and 400-level
  - PHYS 300- and 400-level
- MATH 124 - Calculus and Analytic Geometry I
  - MATH 125 - Calculus and Analytic Geometry II

## **Geography — International: Society and Environment Emphasis, BA**

**125-131 credits (preparatory courses and major)**

### **Introduction**

Students wishing to complete a Geography major in four years should complete all GUR requirements in first two years. Prospective Geography majors are strongly advised to take additional preparatory course work that provides a strong background in chemistry, biology, geology, physics and mathematics. The preparatory courses are listed with the major, where approved as GUR courses in the catalog, may be used to fulfill both Huxley College and GUR requirements. All preparatory courses required for admission should be completed on a lettered or numeric grading scale, not P/NP, and must be completed with a grade of C- or better.

### **Admission and Declaration Process**

Admission and Declaration of Major (see Huxley College and Advisement page)

### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

### **Requirements**

#### **Preparatory Courses (40-46 credits)**

- CHEM 121 - General Chemistry I
- ECON 206 - Introduction to Microeconomics
- Egeo 201 - Human Geography
- Egeo 203 - Physical Geography
- One course from:

- BIOL 101 - Introduction to Biology
- BIOL 204 - Introduction to Evolution, Ecology and Biodiversity
  - One course from:
- MATH 114 - Precalculus I
- MATH 156 - Algebra With Applications to Business and Economics
  - Any BCOM or CCOM GUR requirement course
  - Any PLSC course
  - Additional Lab Science course in BIOL, CHEM, GEOL or PHYS
  - Introductory Statistics course from one of the following:
- ANTH 335 - Quantitative Methods in Anthropology
- DSCI 205 - Business Statistics
- FAIR 232P - User-Friendly Statistics
- MATH 240 - Introduction to Statistics
- SOC 215 - Social Statistics

#### Major (85 credits)

- EGEO 301 - Research and Writing
- EGEO 305 - Analysis of Spatial Data
- EGEO 351 - Map Reading and Analysis
- EGEO 352 - Computer Cartography
  - Select 5 courses from the following (2 courses must be at the 400-level)
- EGEO 310 - Developing World
- EGEO 311 - Population and Resources
- EGEO 312 - Geography of the World Economy
- EGEO 314 - Urbanization: Processes and Patterns
- EGEO 412 - Regional Environmental and Economic Resource Modeling
- EGEO 414 - The Urban Environment
- EGEO 421 - Borderlands
- EGEO 423 - Pacific Rim
- EGEO 425 - Colonial Landscapes of the Pacific Northwest
  - Select 3 courses from:
- EGEO 320 - The United States: Society & Environment
- EGEO 321 - Africa: Society and Environment
- EGEO 322 - The Middle East: Society and Environment
- EGEO 323 - South Asia: Society and Environment
- EGEO 324 - East Asia: Society and Environment
- EGEO 327 - The Pacific Northwest: Society and Environment
- EGEO 328 - Canada: Society and Environment
  - One course from:
- EGEO 350 - Introduction to Geographic Information Systems
- EGEO 450 - Intermediate Geographic Information Systems
- EGEO 451 - GIS Databases
- EGEO 452 - Advanced GIS
- EGEO 453 - GIS Processing and Analysis
- ESTU 401 - Applications in GIS
  - One course from:
- ESCI 302 - Environmental Pollution

- ESCI 310 - Environmental Systems
- ESCI 325 - Fundamentals of Ecology
- ESCI 392 - Introduction to Global Change
  - One course from:
    - ESCI 309 - Exploring Environmental Data
    - ESCI 321 - Oceanography
    - ESCI 330 - Natural History of the Pacific Northwest
    - ESCI 333 - Introduction to Environmental Toxicology
    - ESCI 361 - Water Quality
    - ESCI 463 - Wetlands for Wastewater Treatment
  - One course from:
    - ESCI 436 - Environmental Impact Assessment
    - ESCI 470 - Ecological Restoration
    - ESCI 490 - Environmental Risk Assessment
    - ESCI 491 - Oceanography of Puget Sound
    - ESTU 436 - Environmental Impact Assessment
    - ESTU 470 - Planning Studio
    - ESTU 496 - Environmental Stewardship
  - One course from (minimum 10 credits):
    - ESTU 498A - Senior Thesis
    - ESTU 498B - Internship
    - ESTU 498C
    - ESTU 498D - Foreign Study
  - Electives under advisement (17-22 credits)
    - ANTH 300- and 400-level
- C/AM 401 - Research Problem Identification and Development
- C/AM 402 - Research Analysis and Writing
- EAST 313 - Early Inner Asia
- EAST 314 - The Mongols
- EAST 367 - Chinese Literature in Translation
- EAST 368 - Japanese Literature in Translation
- EAST 417T
- EAST 475
- ECON 383 - Environmental Economics
- ECON 384 - Energy Economics
- ECON 385 - Comparative Economic Systems
- ECON 389 - Economies of the Pacific Rim
- ECON 465 - Development Economics
- ECON 483 - Resource Economics
- ECON 493 - Senior Seminar: Economics, the Environment and Natural Resources
- EGEO 300- and 400-level
- ESCI 300- and 400-level
- ESTU 300- and 400-level
- HIST 300- and 400-level
- INTL 301 - Study Abroad Predeparture Orientation
- LBRL 301 - Historical Methods in the Humanities
- LBRL 302 - Methods of Interdisciplinary Study
- LBRL 360 - China and the Emerging World Economy: From Antiquity to the Early Modern
- LBRL 378 - Religion and Society in India

- LBRL 478 - Renewal and Reform in the Islamic World Since the Eighteenth Century  
PLSC 300- and 400-level
  - SOC 310 - Methodological Applications in Social Research
  - SOC 321 - Demography
  - SOC 326 - American Family and Household Demography
  - SOC 364 - Social Stratification
  - SOC 369 - Sociology of Race and Ethnicity
  - SOC 375 - Community and Urban Society
  - SOC 421 - Demographic Analysis
  - SOC 426 - Advanced Topics in Demography
  - SOC 440 - Globalization
- Foreign language courses from a single language 200-level or above. Arabic & Russian 100 level is also accepted.

## **Geography/Social Studies, BA**

Jointly offered by the Department of Environmental Studies, Huxley College of the Environment and the Department of Social Studies Education, College of Humanities and Social Sciences

**106-117 credits (preparatory courses and major)**

### **Introduction**

Students wishing to complete a Geography/Social Studies major in four years should complete the general chemistry series during their freshman year and the general biology series during their sophomore year. Prospective environmental science majors are strongly advised to take additional preparatory course work that provides a strong background in chemistry, biology and mathematics. The preparatory courses are listed with the major, where approved as GUR courses in the catalog, may be used to fulfill both Huxley College and GUR requirements. All preparatory courses required for admission should be completed on a lettered or numeric grading scale, not P/NP, and must be completed with a grade of C (2.0) or better.

To receive a recommendation for state of Washington certification, students must complete the teacher certification program, including the content methods course, SEC 426, which is offered by the Department of Secondary Education as 1) a part of the undergraduate BA degree, or 2) as a post-baccalaureate program, or 3) as part of the Master's in Education degree. See the Secondary Education section of this catalog for program admission, completion, and teaching certification requirements. Completion of this combined major leads to an endorsement in social studies.

### **Admission and Declaration Process**

Admission and Declaration of Major (see Huxley College Admissions and Advisement page)

### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors. Courses required for a state teaching endorsement must be completed with a grade of C (2.0) or better.

## Requirements

### Preparatory Courses (29-36 credits)

- Egeo 201 - Human Geography
- Egeo 203 - Physical Geography
- Esci 101 - Environmental Studies: A Scientific Approach
- One course from:
  - MATH 107 - Mathematical Reasoning and its Applications
  - MATH 112 - Functions and Algebraic Methods
  - MATH 114 - Precalculus I
  - MATH 156 - Algebra With Applications to Business and Economics
- Any BCOM or CCOM GUR requirement course
- Two Natural Science GUR lab courses

### Major (77-81 credits)

- Egeo 209 - Geography and World Affairs
- Egeo 250 - Geographic Information Systems Survey
- Egeo 301 - Research and Writing
- Egeo 320 - The United States: Society & Environment
- Egeo 351 - Map Reading and Analysis
- Hist 103 - Introduction to American Civilization: American History to 1865
- Hist 104 - Introduction to American Civilization: American History Since 1865
- Hist 391 - History of the Pacific Northwest
- One Physical Geography course from:
  - Egeo 330 - Geography of Landforms
  - Egeo 331 - Climatology
  - Egeo 362 - Land Resource Analysis
  - Egeo 363 - Natural Hazards Planning
  - Egeo 431 - Water Resources
  - Egeo 432 - Soil Landscapes
  - Egeo 433 - Climate and Biophysical Processes
- Two Regional Geography courses from:
  - Egeo 321 - Africa: Society and Environment
  - Egeo 322 - The Middle East: Society and Environment
  - Egeo 323 - South Asia: Society and Environment
  - Egeo 324 - East Asia: Society and Environment
  - Egeo 327 - The Pacific Northwest: Society and Environment
  - Egeo 328 - Canada: Society and Environment
- Three courses from:
  - Egeo 310 - Developing World
  - Egeo 311 - Population and Resources
  - Egeo 312 - Geography of the World Economy
  - Egeo 314 - Urbanization: Processes and Patterns
- 7 Electives credits under advisement from:
  - Egeo 300- and 400-level
- One course from:

- ANTH 201 - Introduction to Cultural Anthropology
- SOC 221 - Introduction to Population Issues
- SOC 251 - Sociology of Deviant Behavior
- SOC 255 - Social Organization of Criminal Justice
- SOC 260 - The Family in Society
- SOC 268 - Gender and Society
- SOC 269 - Race and Ethnic Relations
  - One course from:
- ECON 206 - Introduction to Microeconomics
- ECON 446 - Economics for the Teacher (preferred)
  - One course from:
- ECON 207 - Introduction to Macroeconomics
- ECON 447 - Methods for Teaching About the National Economy in the Public Schools (preferred)
  - Three additional history courses (minimum 12 credits) distributed as follows:
    - One course in Ancient
    - One course from two of the following areas:
      - Europe
      - East & South Asia
      - Africa & Middle East
      - Western Hemisphere
- PLSC 250 - The American Political System

## **Planning and Environmental Policy — Disaster Reduction and Emergency Planning Emphasis, BA**

**125-132 credits (preparatory courses and major)**

### **Introduction**

The interdisciplinary program in Planning and Environmental Policy prepares students to enter professional fields concerned with the sustainability of the human and natural environment. The program provides students with the knowledge and skills necessary to promote positive change by solving problems and implementing shared visions in both natural settings and urban communities. The three major concentrations in the program: 1) Disaster Reduction and Emergency Preparedness, 2) Environmental Policy, and 3) Planning, concentrate studies in public policy development, sustainability, law, and the methods and processes of planning and decision making. The preparatory courses are listed with the major, where approved as GUR courses in the catalog, may be used to fulfill both Huxley College and GUR requirements.

### **Admission and Declaration Process**

Admission and Declaration of Major (see Huxley College Admission and Advisement page)

### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

## Requirements

### Preparatory Courses (40-47 credits)

- CHEM 121 - General Chemistry I
- ECON 206 - Introduction to Microeconomics
- EGEO 201 - Human Geography
- One course from:
  - BIOL 101 - Introduction to Biology
  - BIOL 204 - Introduction to Evolution, Ecology and Biodiversity
- One course from:
  - EGEO 203 - Physical Geography
  - GEOL 211 - Physical Geology
- One course from:
  - MATH 114 - Precalculus I
  - MATH 156 - Algebra With Applications to Business and Economics
    - Any BCOM or CCOM GUR requirement course
    - Any PLSC course
    - Additional Lab Science course in BIOL, CHEM, GEOL or PHYS
    - Introductory Statistics course from one of the following:
      - ANTH 335 - Quantitative Methods in Anthropology
      - DSCI 205 - Business Statistics
      - FAIR 232P - User-Friendly Statistics
      - MATH 240 - Introduction to Statistics
      - SOC 215 - Social Statistics

### Major (85 credits)

- EGEO 350 - Introduction to Geographic Information Systems
- EGEO 363 - Natural Hazards Planning
- ENG 302 - Introduction to Technical and Professional Writing
- ESTU 304 - Environment and Resource Policy
- ESTU 330 - History and Theory of Emergency Planning
- ESTU 369 - Introduction to Planning
- ESTU 401 - Applications in GIS
- ESTU 430 - Disaster Risk Reduction
- ESTU 432 - Disaster Reduction and Emergency Planning Studio
- ESTU 466 - U.S. and Washington State Environmental Regulations
- One course from:
  - COMM 318 - Professional Communication
  - COMM 322 - Civil Discourse as Learning Interaction
  - MGMT 311 - Introduction to Management and Organizational Behavior
- One course from:
  - EGEO 330 - Geography of Landforms
  - EGEO 331 - Climatology
  - GEOL 455 - Climate-Related Geologic Hazards
- One course from:
  - ESCI 302 - Environmental Pollution

- ESCI 310 - Environmental Systems
- ESCI 325 - Fundamentals of Ecology
- ESCI 392 - Introduction to Global Change
  - One course from:
    - ESCI 309 - Exploring Environmental Data
    - ESCI 321 - Oceanography
    - ESCI 330 - Natural History of the Pacific Northwest
    - ESCI 333 - Introduction to Environmental Toxicology
    - ESCI 361 - Water Quality
    - ESCI 463 - Wetlands for Wastewater Treatment
  - One course from:
    - ESCI 436 - Environmental Impact Assessment
    - ESTU 436 - Environmental Impact Assessment
  - One course from (minimum of 10 credits):
    - ESTU 498A - Senior Thesis
    - ESTU 498B - Internship
    - ESTU 498C – Senior Project
    - ESTU 498D - Foreign Study
  - Electives under advisement (14-18 credits)
- AMST 301 - Comparative Cultural Studies
- AMST 315 - Contemporary American Indian Issues
- AMST 316 - Contemporary African American Issues
- AMST 362 - Asian-American History
- ANTH 300- and 400-level  
COMM 322 – Civil Discourse as Learning Interaction
- COMM 325 - Introduction to Intercultural Communication
- COMM 339 - Practicum in Applied Communication
- COMM 350 - Emerging Communication Technologies
- COMM 398 - Research Methods in Communication
- COMM 428 - Organizational Communication
- CSCI 140 - Programming Fundamentals in C++
- CSCI 141 - Computer Programming I
- DSCI 405 - Simulation Models for Decision Making
- ECON 300- and 400-level  
EGEO 300- and 400-level  
ESCI 300- and 400-level  
ESTU 300- and 400-level
- FAIR 339N - Environmental Issues of Indigenous Peoples of North America  
GEOL 300- and 400-level
- M/CS 335 - Linear Optimization
- M/CS 375 - Numerical Computation
- M/CS 435 - Nonlinear Optimization
- M/CS 475 - Numerical Analysis  
MGMT 311 – Introduction to Management and Organizational Behavior
- MGMT 313 - Teamwork Basics
- MGMT 401 - Conflict Management and Negotiations
- MGMT 413 - Organizational Change Practicum
- MGMT 414 - Leadership Practicum
- MGMT 481 - Managing Cultural Diversity

- MIS 313 - Computer Hardware and Operating Systems
- MIS 422 - Management Support Systems
- MIS 432 - Expert Systems in Business
- OPS 461 - Project Management
- PHIL 340 - Philosophy of Science  
PLSC 300- and 400-level
- PSY 342 - Social Cognition
- PSY 343 - Social Processes
- PSY 440 - Seminar in Environmental Psychology  
SOC 300- and 400-level

## **Planning and Environmental Policy — Environmental Policy Emphasis (Extension), BA**

**121-128 credits (preparatory courses and major)**

### **Introduction**

The interdisciplinary program in Planning and Environmental Policy is offered at off site locations and prepares students to enter professional fields concerned with the sustainability of the human and natural environment. The program provides students with the knowledge and skills necessary to promote positive change by solving problems and implementing shared visions in both natural settings and urban communities. The Environmental Policy Emphasis concentrates in public policy development, sustainability, law and decision making. Exact off site locations are listed in the Extended Education and Summer Programs section of this catalog.

### **Admission and Declaration Process**

Admission and Declaration of Major (see Huxley College Admissions and Advisement page)

### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

### **Requirements**

#### **Preparatory Courses (36-43 credits)**

- CHEM 121 - General Chemistry I
- ECON 206 - Introduction to Microeconomics
- One course from:
  - BIOL 101 - Introduction to Biology
  - BIOL 204 - Introduction to Evolution, Ecology and Biodiversity
- One course from:
  - E GEO 203 - Physical Geography
  - GEOL 211 - Physical Geology
- One course from:
  - MATH 114 - Precalculus I
  - MATH 156 - Algebra With Applications to Business and Economics

- Any BCOM or CCOM GUR requirement course
- Any PLSC course
- Additional Lab Science course in BIOL, CHEM, GEOL or PHYS
- Introductory Statistics course from one of the following:
  - ANTH 335 - Quantitative Methods in Anthropology
  - DSCI 205 - Business Statistics
  - FAIR 232P - User-Friendly Statistics
  - MATH 240 - Introduction to Statistics
  - SOC 215 - Social Statistics

**Major (85 credits)**

- ECON 383 - Environmental Economics
- ESCI 325 - Fundamentals of Ecology
- ESTU 304 - Environment and Resource Policy
- ESTU 369 - Introduction to Planning
- ESTU 420 - Environmental Politics
- ESTU 436 - Environmental Impact Assessment
- ESTU 464 - United States Environmental Policy
- ESTU 465 - International Environmental Policies
- ESTU 466 - U.S. and Washington State Environmental Regulations
- ESTU 468 - Environmental Law
- One course from:
  - ESCI 321 - Oceanography
  - ESCI 330 - Natural History of the Pacific Northwest
  - ESCI 361 - Water Quality
- One course from:
  - ESTU 441 - Parks and Protected Areas
  - ESTU 444 - Environmental Dispute Resolution
  - ESTU 475 - Native American Planning and Natural Resources Policy
  - EGEO 461 - Natural Resources Management
- One course from (minimum of 10 credits):
  - ESTU 498A - Senior Thesis
  - ESTU 498B - Internship
  - ESTU 498C – Senior Project
- Electives under advisement
- CHEM 251 - Elementary Organic Chemistry  
CHEM 300- or 400-level
- EGEO 350 - Introduction to Geographic Information Systems  
EGEO 300- or 400-level  
ESCI 300- or 400-level  
ESTU 300- or 400-level  
EXT 317M
- EXT 370 - Principles and Practices of Emergency Management
- EXT 371 - Practical Applications of Emergency Management
- EXT 372 - Law and Policy of Emergency Management

# **Planning and Environmental Policy — Environmental Policy Emphasis, BA**

**121-128 credits (preparatory courses and major)**

## **Introduction**

The interdisciplinary program in Planning and Environmental Policy prepares students to enter professional fields concerned with the sustainability of the human and natural environment. The program provides students with the knowledge and skills necessary to promote positive change by solving problems and implementing shared visions in both natural settings and urban communities. The three major concentrations in the program: 1) Disaster Reduction and Emergency Preparedness, 2) Environmental Policy, and 3) Planning, concentrate studies in public policy development, sustainability, law, and the methods and processes of planning and decision making. The preparatory courses are listed with the major, where approved as GUR courses in the catalog, may be used to fulfill both Huxley College and GUR requirements.

## **Admission and Declaration Process**

Admission and Declaration of Major (see Huxley College Admission and Advisement page)

## **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

## **Requirements**

### **Preparatory Courses (36-43 credits)**

- CHEM 121 - General Chemistry I
- ECON 206 - Introduction to Microeconomics
- One course from:
  - BIOL 101 - Introduction to Biology
  - BIOL 204 - Introduction to Evolution, Ecology and Biodiversity
  - One course from:
    - EGEO 203 - Physical Geography
    - GEOL 211 - Physical Geology
    - One course from:
      - MATH 114 - Precalculus I
      - MATH 156 - Algebra With Applications to Business and Economics
      - Any BCOM or CCOM GUR requirement course
      - Any PLSC course
      - Additional Lab Science course in BIOL, CHEM, GEOL or PHYS
      - Introductory Statistics course from one of the following:
        - ANTH 335 - Quantitative Methods in Anthropology
        - DSCI 205 - Business Statistics
        - FAIR 232P - User-Friendly Statistics
        - MATH 240 - Introduction to Statistics
        - SOC 215 - Social Statistics

## **Major (85 credits)**

- ECON 383 - Environmental Economics
- ESTU 304 - Environment and Resource Policy
- ESTU 369 - Introduction to Planning
- ESTU 464 - United States Environmental Policy
- ESTU 465 - International Environmental Policies
- ESTU 466 - U.S. and Washington State Environmental Regulations
  - ❑ One course from:
    - ESCI 302 - Environmental Pollution
    - ESCI 310 - Environmental Systems
    - ESCI 325 - Fundamentals of Ecology
    - ESCI 392 - Introduction to Global Change
  - ❑ One course from:
    - ESCI 309 - Exploring Environmental Data
    - ESCI 321 - Oceanography
    - ESCI 330 - Natural History of the Pacific Northwest
    - ESCI 333 - Introduction to Environmental Toxicology
    - ESCI 361 - Water Quality
    - ESCI 463 - Wetlands for Wastewater Treatment
  - ❑ One course from:
    - ESTU 420 - Environmental Politics
    - ESTU 463 - Environmental Policy Analysis
  - ❑ One course from:
    - ESTU 436 - Environmental Impact Assessment
    - ESCI 436 - Environmental Impact Assessment
  - ❑ One course from:
    - ESTU 441 - Parks and Protected Areas
    - ESTU 444 - Environmental Dispute Resolution
    - ESTU 467 - Natural Resource Policy
    - ESTU 475 - Native American Planning and Natural Resources Policy
    - EGEO 461 - Natural Resources Management
  - ❑ One course from:
    - ESTU 443 - Land Use Law
    - ESTU 468 - Environmental Law
  - ❑ One course from (minimum of 10 credits):
    - ESTU 498A - Senior Thesis
    - ESTU 498B - Internship
    - ESTU 498C - Senior Project
    - ESTU 498D - Foreign Study
  - ❑ Electives under advisement (26-30 credits)
- COMM 322 - Civil Discourse as Learning Interaction
  - Maximum 2 courses allowed from:
    - ECON 384 - Energy Economics
    - ECON 483 - Resource Economics
    - ECON 493 - Senior Seminar: Economics, the Environment and Natural Resources
  - Maximum 2 courses allowed from EGEO 300- and 400-level
  - Maximum 2 courses allowed from ESCI 300- and 400-level

- ESTU 300- and 400-level
- Maximum 2 courses allowed from FAIR 300- and 400-level
- Maximum 1 course allowed from:
  - HIST 461 - US Urban History
  - HIST 480 - Modern Chinese Social History
- Maximum 2 courses allowed from:
  - PLSC 346 - Politics of Inequality
  - PLSC 390 - The Politics of Development
  - PLSC 420 - Environmental Politics
  - PLSC 427 - Policy-Making and Policy Analysis
  - PLSC 436 - Managing Environmental Commons

## **Planning and Environmental Policy — Urban Planning Emphasis, BA**

**121-128 credits (preparatory courses and major)**

### **Introduction**

The interdisciplinary program in Planning and Environmental Policy prepares students to enter professional fields concerned with the sustainability of the human and natural environment. The program provides students with the knowledge and skills necessary to promote positive change by solving problems and implementing shared visions in both natural settings and urban communities. The three major concentrations in the program: 1) Disaster Reduction and Emergency Preparedness, 2) Environmental Policy, and 3) Planning, concentrate studies in public policy development, sustainability, law, and the methods and processes of planning and decision making. The preparatory courses are listed with the major, where approved as GUR courses in the catalog, may be used to fulfill both Huxley College and GUR requirements.

### **Admission and Declaration Process**

Admission and Declaration of Major (see Huxley College Admissions and Advisement page)

### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

### **Requirements**

#### **Preparatory Courses (36-43 credits)**

- CHEM 121 - General Chemistry I
- ECON 206 - Introduction to Microeconomics
- One course from:
  - BIOL 101 - Introduction to Biology
  - BIOL 204 - Introduction to Evolution, Ecology and Biodiversity
- One course from:
  - E GEO 203 - Physical Geography
  - GEOL 211 - Physical Geology
- One course from:
  - MATH 114 - Precalculus I
  - MATH 156 - Algebra With Applications to Business and Economics

- Any BCOM or CCOM GUR requirement course
- Any PLSC course
- Additional Lab Science course in BIOL, CHEM, GEOL or PHYS
- Introductory Statistics course from one of the following:
  - ANTH 335 - Quantitative Methods in Anthropology
  - DSCI 205 - Business Statistics
  - FAIR 232P - User-Friendly Statistics
  - MATH 240 - Introduction to Statistics
  - SOC 215 - Social Statistics

#### **Major (85 credits)**

- E GEO 314 - Urbanization: Processes and Patterns
- E GEO 363 - Natural Hazards Planning
- E GEO 462 - Transportation Systems and Planning
- ESTU 304 - Environment and Resource Policy
- ESTU 368 - Plan Graphics: Methods in Urban Planning Design Graphics
- ESTU 369 - Introduction to Planning
- ESTU 370 - Processes and Methods in Planning
- ESTU 380 - History and Politics of Planning
- ESTU 443 - Land Use Law
- ESTU 444 - Environmental Dispute Resolution
- ESTU 466 - U.S. and Washington State Environmental Regulations
- ESTU 470 - Planning Studio
- ESTU 472 - Planning Theory
- ESTU 497G
- One course from:
  - ESCI 302 - Environmental Pollution
  - ESCI 310 - Environmental Systems
  - ESCI 325 - Fundamentals of Ecology
  - ESCI 392 - Introduction to Global Change
- One course from:
  - ESCI 309 - Exploring Environmental Data
  - ESCI 321 - Oceanography
  - ESCI 330 - Natural History of the Pacific Northwest
  - ESCI 333 - Introduction to Environmental Toxicology
  - ESCI 361 - Water Quality
  - ESCI 463 - Wetlands for Wastewater Treatment
- One course from:
  - ESCI 436 - Environmental Impact Assessment
  - ESTU 436 - Environmental Impact Assessment
- One course from (minimum of 10 credits):
  - ESTU 498A - Senior Thesis
  - ESTU 498B - Internship
  - ESTU 498C – Senior Project
  - ESTU 498D - Foreign Study
- Electives under advisement (12-14 credits)
- COMM 322 - Civil Discourse as Learning Interaction

- Maximum 2 courses allowed from:
- ECON 384 - Energy Economics
  - ECON 483 - Resource Economics
  - ECON 493 - Senior Seminar: Economics, the Environment and Natural Resources
- Maximum 2 courses allowed from EGEO 300- and 400-level
- Maximum 2 courses allowed from ESCI 300- and 400-level
- ESTU 300- and 400-level
- Maximum 2 courses allowed from FAIR 300- and 400-level
- Maximum 1 course allowed from:
- HIST 461 - US Urban History
  - HIST 480 - Modern Chinese Social History
- Maximum 2 courses allowed from:
- PLSC 346 - Politics of Inequality
  - PLSC 390 - The Politics of Development
  - PLSC 420 - Environmental Politics
  - PLSC 427 - Policy-Making and Policy Analysis
  - PLSC 436 - Managing Environmental Commons

## **Sustainable Design Minor**

Jointly offered by the Department of Environmental Studies, Huxley College of the Environment and the Department of Engineering Technology, College of Sciences and Technology

### **30-32 Credits**

#### **Introduction**

Huxley College of the Environment and the Department of Engineering Technology jointly offer a minor in Sustainable Design. The goal of the program is to enable students with strengths in design or in environmental studies to gain complementary skills in the other area so as to pursue sustainable design careers more effectively. The program is also open to students from any area that would benefit by the set of concepts and skills offered. Students are accepted into the sustainable design minor by application based on their demonstrated affinity to integrate environmental systems knowledge and sustainable design principles, and on enrollment limits. Students submit an application and a portfolio of work. Applications are accepted semi-annually on the third Friday of fall and spring quarters. See WWU Industrial Design website and the Huxley College of the Environment website.

#### **Admission and Declaration Process**

Admission and Declaration of Major (see Huxley College Admission and Advisement page)

#### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

#### **Requirements**

- ESTU 369 - Introduction to Planning
- ESTU 415 - Planning for Sustainable Communities
- ETEC 311 - Perspective and Rendering I
- ETEC 312 - Industrial Design CAD Skills

- One course from:
    - \* ESCI 302 - Environmental Pollution
    - \* ESCI 310 - Environmental Systems
    - \* ESCI 321 - Oceanography
    - \* ESCI 325 - Fundamentals of Ecology
    - \* ESCI 380 - Energy and Environment
    - \* ESCI 392 - Introduction to Global Change  
or approved substitute
  - One course from:
    - ESTU 303 - Human Ecology and Sustainability
    - ESTU 304 - Environment and Resource Policy
    - ESTU 305 - Environmental History and Ethics
    - FAIR 335N - Visioning Sustainable Futures
  - Electives under advisement (8 credits):
    - ACCT 484 - Environmental Accounting
    - ECON 383 - Environmental Economics
    - ECON 384 - Energy Economics
      - \* ESCI 302 - Environmental Pollution
      - \* ESCI 310 - Environmental Systems
      - \* ESCI 321 - Oceanography
      - \* ESCI 325 - Fundamentals of Ecology
      - \* ESCI 380 - Energy and Environment
      - \* ESCI 392 - Introduction to Global Change
    - ESCI 431 - Watershed Biogeochemistry
    - ESCI 490 - Environmental Risk Assessment
    - ESTU 464 - United States Environmental Policy
    - ESTU 466 - U.S. and Washington State Environmental Regulations
    - ESTU 467 - Natural Resource Policy
    - ESTU 470 - Planning Studio
    - ESTU 471 - Campus Planning Studio
    - ETEC 214 - Sophomore Industrial Design I
    - ETEC 215 - History of Industrial Design
    - ETEC 216 - Sophomore Industrial Design II
    - ETEC 231 - Design Problems in Woodworking
    - ETEC 315 - Perspective and Rendering II
- \* ESCI courses cannot be counted twice

## Environmental Education, Non-Thesis, MEd

### Graduate Faculty

**Abel, Troy D.**, PhD, environmental policy, conservation politics, civic environmentalism, policy analysis, globalization and environment.

**Bach, Andrew J.**, PhD, physical geography, geomorphology, soils and weathering, geoarcheology.

**Berardi, Gigi**, PhD, resources management, agroecology, international community development, food security, all-hazards planning.

**Bingham, Brian L.**, PhD, invertebrate biology, marine ecology, experimental design.

**Bodensteiner, Leo R.**, PhD, fish ecology.  
**Buckley, Patrick H.**, PhD, economic and development geography, quantitative methods, GIS, environmental issues in Japan and China, quality of life, transborder environmental issues.  
**Bunn, Andrew G.**, PhD, climate change, paleoecology, energy, ecological models.  
**Cancilla, Devon A.**, PhD, environmental chemistry, environmental toxicology, chemical ecology.  
**Halfield, James M.**, PhD, ecology of rivers and riparian forests, terrestrial-aquatic ecosystem linkages, watershed management and restoration.  
**Homann, Peter S.**, PhD, biogeochemistry, soil sciences, forest ecology.  
**Landis, Wayne G.**, PhD, environmental toxicology, population biology, risk assessment.  
**Matthews, Robin A.**, PhD, freshwater ecology, aquatic toxicology, statistical ecology.  
**McLaughlin, John F.**, PhD, terrestrial ecology, population biology, conservation biology.  
**Medler, Michael J.**, PhD, biogeography, GIS, remote sensing, forest fire and wilderness management.  
**Melious, Jean O.**, JD, environmental and land use law and policy, international environmental policy.  
**Miles, John C.**, PhD, environmental education and history, public lands management.  
**Miles, Scott B.**, PhD, sustainable development for risk reduction, social vulnerability, community disaster recovery, local self reliance.  
**Mookherjee, Debnath**, PhD, comparative urbanization, regional development and planning, developing countries.  
**Myers, O. Eugene**, PhD, environmental education, conservation psychology, human ecology, environmental history and ethics.  
**Rossiter, David A.**, PhD, Canada, cultural-historical geographies, political ecologies.  
**Rybicky, John M.**, PhD, wetland ecology and management, ecosystem modeling, global climate change.  
**Shull, David H.**, PhD, structure and function of marine benthic communities, pollution and marine ecosystems.  
**Smith, Bradley F.**, PhD, global environmental policy, sustainable development.  
**Sofield, Ruth M.**, PhD, aquatic toxicology, biochemical and genetic toxicology, environmental chemistry.  
**Stangl, Paul A.**, PhD, pedestrian planning, new urbanism, urban landscapes, memory and meaning; Europe and Berlin.  
**Sulkin, Stephen D.**, PhD, invertebrate biology, larval ecology.  
**Terich, Thomas A.**, PhD, shoreline processes, natural hazards and geomorphology.  
**Wallin, David O.**, PhD, terrestrial ecology, forest ecosystems.  
**Wang, Grace A.**, PhD, natural resource policy, cultural resources management, community-based forestry.  
**Zaferatos, Nicholas C.**, PhD, community and environmental planning, sustainable development, European environmental policy, Native American political development.

Program Advisor: Dr. John C. Miles

## Goals

The program prepares environmental educators for settings outside the formal classroom, especially in not-for-profit organizations.

Environmental education may occur in formal classrooms, nature centers, outdoor and environmental education programs, government agency programs or in many other settings. The content of the program may include science, history, the arts or many other disciplines. The philosophy of environmental education at Huxley College is that it is to be broad and inclusive. Graduate students are expected to identify the path they wish to take in studying the field, and build their emphasis around a set of program requirements. The residency option is aimed at students who will approach environmental education in settings outside the formal classroom, especially in not-for-profit organizations. The option involves a partnership with the North Cascades Institute, which awards a certificate in Nonprofit Administration and Leadership for completion of the professional residency. The thesis/field project option serves teachers and others who wish to develop background and skill to incorporate environmental education into their educational work. All graduate students are expected to develop and implement creative projects that will aid their own teaching with the guidance and advice of the program advisor and other teachers.

## **Prerequisites**

All applicants should have experience in the field of environmental education and a basic background in natural history. Each applicant's background will be examined to determine if additional preparation is needed.

## *Application Information*

**Deadline:** Please refer to Graduate School deadline dates. This program specialization admits students for any quarter, but fall quarter is the best time to begin so that students in this option may go through the core program with students from the Residency option.

## *Supporting Materials:*

- Graduate Record Exam or Miller Analogies Test; applicants with advanced degrees are not required to submit test scores
- One- to two-page statement of purpose

## **Program Requirements (47-53 credits)**

- Core requirements (21 credits)
  - ESTU 571 - Environmental Education Foundations
  - ESTU 575 - Assessment, Evaluation and Research in Environmental Education
  - ESTU 587 - Conservation Psychology
  - ESTU 588 - Language, Discourse and Environment
  - ESTU 589 - Curriculum in Environmental Education
- Requirements in specialization (6-12 credits)
  - ESTU 691 - Field Project
- Electives (20 credits): Courses selected under advisement and including at least 10 credits in environmental studies, geography, or environmental science

## **Environmental Education, Residency, Non-Thesis, MEd**

### **Graduate Faculty**

**Abel, Troy D.**, PhD, environmental policy, conservation politics, civic environmentalism, policy analysis, globalization and environment.

**Bach, Andrew J.**, PhD, physical geography, geomorphology, soils and weathering, geoarcheology.

**Berardi, Gigi**, PhD, resources management, agroecology, international community development, food security, all-hazards planning.

**Bingham, Brian L.**, PhD, invertebrate biology, marine ecology, experimental design.

**Bodensteiner, Leo R.**, PhD, fish ecology.

**Buckley, Patrick H.**, PhD, economic and development geography, quantitative methods, GIS, environmental issues in Japan and China, quality of life, transborder environmental issues.

**Bunn, Andrew G.**, PhD, climate change, paleoecology, energy, ecological models.

**Cancilla, Devon A.**, PhD, environmental chemistry, environmental toxicology, chemical ecology.

**Helfield, James M.**, PhD, ecology of rivers and riparian forests, terrestrial-aquatic ecosystem linkages, watershed management and restoration.

**Homann, Peter S.**, PhD, biogeochemistry, soil sciences, forest ecology.

**Landis, Wayne G.**, PhD, environmental toxicology, population biology, risk assessment.  
**Matthews, Robin A.**, PhD, freshwater ecology, aquatic toxicology, statistical ecology.  
**McLaughlin, John F.**, PhD, terrestrial ecology, population biology, conservation biology.  
**Medler, Michael J.**, PhD, biogeography, GIS, remote sensing, forest fire and wilderness management.  
**Melious, Jean O.**, JD, environmental and land use law and policy, international environmental policy.  
**Miles, John C.**, PhD, environmental education and history, public lands management.  
**Miles, Scott B.**, PhD, sustainable development for risk reduction, social vulnerability, community disaster recovery, local self reliance.  
**Mookherjee, Debnath**, PhD, comparative urbanization, regional development and planning, developing countries.  
**Myers, O. Eugene**, PhD, environmental education, conservation psychology, human ecology, environmental history and ethics.  
**Rossiter, David A.**, PhD, Canada, cultural-historical geographies, political ecologies.  
**Rybczyk, John M.**, PhD, wetland ecology and management, ecosystem modeling, global climate change.  
**Shull, David H.**, PhD, structure and function of marine benthic communities, pollution and marine ecosystems.  
**Smith, Bradley F.**, PhD, global environmental policy, sustainable development.  
**Sofield, Ruth M.**, PhD, aquatic toxicology, biochemical and genetic toxicology, environmental chemistry.  
**Stangl, Paul A.**, PhD, pedestrian planning, new urbanism, urban landscapes, memory and meaning; Europe and Berlin.  
**Sulkin, Stephen D.**, PhD, invertebrate biology, larval ecology.  
**Terich, Thomas A.**, PhD, shoreline processes, natural hazards and geomorphology.  
**Wallin, David O.**, PhD, terrestrial ecology, forest ecosystems.  
**Wang, Grace A.**, PhD, natural resource policy, cultural resources management, community-based forestry.  
**Zaferatos, Nicholas C.**, PhD, community and environmental planning, sustainable development, European environmental policy, Native American political development.

Program Advisor: Dr. John C. Miles

## Goals

The program prepares environmental educators for settings outside the formal classroom, especially in not-for-profit organizations.

Environmental education may occur in formal classrooms, nature centers, outdoor and environmental education programs, government agency programs or in many other settings. The content of the program may include science, history, the arts or many other disciplines. The philosophy of environmental education at Huxley College is that it is to be broad and inclusive. Graduate students are expected to identify the path they wish to take in studying the field, and build their emphasis around a set of program requirements. The residency option is aimed at students who will approach environmental education in settings outside the formal classroom, especially in not-for-profit organizations. The option involves a partnership with the North Cascades Institute, which awards a certificate in Nonprofit Administration and Leadership for completion of the professional residency. The thesis/field project option serves teachers and others who wish to develop background and skill to incorporate environmental education into their educational work. All graduate students are expected to develop and implement creative projects that will aid their own teaching with the guidance and advice of the program advisor and other teachers.

## Prerequisites

All applicants should have experience in the field of environmental education and a basic background in natural history. Each applicant's background will be examined to determine if additional preparation is needed.

### *Application Information*

**Admit Quarter:** This track admits students only in the summer.

**Deadline:** For priority consideration, applications should be received by February 1.

*Supporting Materials:*

- Graduate Record Exam or Miller Analogies Test; applicants with advanced degrees are not required to submit test scores
- North Cascades Institute supplemental application and questionnaire

**Program Requirements (52-55 credits)**

- Core requirements (21 credits)
  - ESTU 571 - Environmental Education Foundations
  - ESTU 575 - Assessment, Evaluation and Research in Environmental Education
  - ESTU 587 - Conservation Psychology
  - ESTU 588 - Language, Discourse and Environment
  - ESTU 589 - Curriculum in Environmental Education
- A written and oral comprehensive exam
- Requirements in specialization (28 credits)
  - ESTU 572 - Introduction to Place-Based Environmental Education
  - ESTU 573 - Resource Issues in the North Cascades
  - ESTU 574 - Cultural Studies of the North Cascades
  - ESTU 576 - Natural History and Science of the North Cascades
  - ESTU 577 - Nonprofit Administration for Environmental Educators
  - ESTU 578 - Practicum in Teaching Natural and Cultural History
  - ESTU 581 - Professional Writing and Presentation
- Electives: 3-5 credits under advisement

**NOTE:** This option requires seven quarters of continuous enrollment and involves fees to the North Cascades Institute in addition to University tuition and fees.

**Environmental Education, Thesis, MEd**

**Graduate Faculty**

**Abel, Troy D.**, PhD, environmental policy, conservation politics, civic environmentalism, policy analysis, globalization and environment.

**Bach, Andrew J.**, PhD, physical geography, geomorphology, soils and weathering, geoarcheology.

**Berardi, Gigi**, PhD, resources management, agroecology, international community development, food security, all-hazards planning.

**Bingham, Brian L.**, PhD, invertebrate biology, marine ecology, experimental design.

**Bodensteiner, Leo R.**, PhD, fish ecology.

**Buckley, Patrick H.**, PhD, economic and development geography, quantitative methods, GIS, environmental issues in Japan and China, quality of life, transborder environmental issues.

**Bunn, Andrew G.**, PhD, climate change, paleoecology, energy, ecological models.

**Cancilla, Devon A.**, PhD, environmental chemistry, environmental toxicology, chemical ecology.

**Helfield, James M.**, PhD, ecology of rivers and riparian forests, terrestrial/aquatic ecosystem linkages, watershed management and restoration.

**Homann, Peter S.**, PhD, biogeochemistry, soil sciences, forest ecology.

**Landis, Wayne G.**, PhD, environmental toxicology, population biology, risk assessment.

**Matthews, Robin A.**, PhD, freshwater ecology, aquatic toxicology, statistical ecology.

**McLaughlin, John F.**, PhD, terrestrial ecology, population biology, conservation biology.

**Medler, Michael J.**, PhD, biogeography, GIS, remote sensing, forest fire and wilderness management.

**Melious, Jean O.**, JD, environmental and land use law and policy, international environmental policy.

**Miles, John C.**, PhD, environmental education and history, public lands management.  
**Miles, Scott B.**, PhD, sustainable development for risk reduction, social vulnerability, community disaster recovery, local self reliance.  
**Mookherjee, Debnath**, PhD, comparative urbanization, regional development and planning, developing countries.  
**Myers, O. Eugene**, PhD, environmental education, conservation psychology, human ecology, environmental history and ethics.  
**Rossiter, David A.**, PhD, Canada, cultural-historical geographies, political ecologies.  
**Rybczyk, John M.**, PhD, wetland ecology and management, ecosystem modeling, global climate change.  
**Shull, David H.**, PhD, structure and function of marine benthic communities, pollution and marine ecosystems.  
**Smith, Bradley F.**, PhD, global environmental policy, sustainable development.  
**Sofield, Ruth M.**, PhD, aquatic toxicology, biochemical and genetic toxicology, environmental chemistry.  
**Stangl, Paul A.**, PhD, pedestrian planning, new urbanism, urban landscapes, memory and meaning; Europe and Berlin.  
**Sulkin, Stephen D.**, PhD, invertebrate biology, larval ecology.  
**Terich, Thomas A.**, PhD, shoreline processes, natural hazards and geomorphology.  
**Wallin, David O.**, PhD, terrestrial ecology, forest ecosystems.  
**Wang, Grace A.**, PhD, natural resource policy, cultural resources management, community-based forestry.  
**Zaferatos, Nicholas C.**, PhD, community and environmental planning, sustainable development, European environmental policy, Native American political development.

Program Advisor: Dr. John C. Miles

## Goals

The program prepares environmental educators for settings outside the formal classroom, especially in not-for-profit organizations.

Environmental education may occur in formal classrooms, nature centers, outdoor and environmental education programs, government agency programs or in many other settings. The content of the program may include science, history, the arts or many other disciplines. The philosophy of environmental education at Huxley College is that it is to be broad and inclusive. Graduate students are expected to identify the path they wish to take in studying the field, and build their emphasis around a set of program requirements. The residency option is aimed at students who will approach environmental education in settings outside the formal classroom, especially in not-for-profit organizations. The option involves a partnership with the North Cascades Institute, which awards a certificate in Nonprofit Administration and Leadership for completion of the professional residency. The thesis/field project option serves teachers and others who wish to develop background and skill to incorporate environmental education into their educational work. All graduate students are expected to develop and implement creative projects that will aid their own teaching with the guidance and advice of the program advisor and other teachers.

## Prerequisites

All applicants should have experience in the field of environmental education and a basic background in natural history. Each applicant's background will be examined to determine if additional preparation is needed.

## *Application Information*

**Deadline:** Please refer to Graduate School deadline dates. This program specialization admits students for any quarter, but fall quarter is the best time to begin so that students in this option may go through the core program with students from the Residency option.

## *Supporting Materials:*

- Graduate Record Exam or Miller Analogies Test; applicants with advanced degrees are not required to submit test scores

- One- to two-page statement of purpose

### **Program Requirements (47-53 credits)**

- Core requirements (21 credits)
  - ESTU 571 - Environmental Education Foundations
  - ESTU 575 - Assessment, Evaluation and Research in Environmental Education
  - ESTU 587 - Conservation Psychology
  - ESTU 588 - Language, Discourse and Environment
  - ESTU 589 - Curriculum in Environmental Education
- Requirements in specialization (6-12 credits)
  - ESTU 690 - Thesis Research
- Electives (20 Credits) Courses selected under advisement and including at least 10 credits in environmental studies, geography, or environmental science

### **Geography Thesis, MS**

Program Advisor: Dr. David A. Rossiter, Arntzen Hall 232, (360-650-3603)

### **Program Goals**

The program prepares students in the development and management of environmental resources for careers in business, government, planning, consulting, teaching and research.

The focus of the MS degree in geography is on the development and management of environmental resources. The program is designed to allow students to develop and integrate social and natural science course work in a regional context. Students are provided with an opportunity to understand the spatial, ethical and societal (cultural) basis for the protection and management of resources.

### **MS Specializations**

- *Resource Conservation and Management:* Study of biophysical and socioeconomic processes in natural systems; a variety of perspectives and techniques are used to investigate and assess management and development policies.
- *Regional Development and Environmental Policy:* Study of regional economic development processes in the context of development and planning; environmental elements — natural and human — are examined in framing development plans and policies toward improving regional community service
- *Earth Surface Processes:* Study of physical processes occurring at the earth/atmosphere interface; coastal, glacial, hillslope, eolian, fluvial and soil environments are examples of the complex and dynamic systems which are examined under conditions of alteration by human or natural forces

### **Prerequisites**

Students with a degree in geography or allied fields, who meet the requirements of the Graduate School and who show evidence of superior scholarship, are particularly encouraged to apply. Students with degrees in fields other than geography will be considered but must acquire background, under advisement, through course work or other approved methods, in introductory human or cultural geography, introductory physical geography, regional geography, a GIS course, and two upper-division courses or equivalent in physical geography/geographic information systems or urban/economic geography. Knowledge of intermediate-level statistics is required of all students as evidenced by satisfactorily completing course work or as assessed by the program advisor. A plan for completion of any outstanding

prerequisites must be described in the statement of purpose and approved by the Department of Environmental Studies Graduate Program Committee prior to admission.

### **Admissions Information**

**Deadline:** Students generally will be admitted into the MS in geography fall quarter only. Admission for subsequent quarters will be considered on a space-available basis. The Graduate Program Committee will begin reviewing application materials until the enrollment limit is reached or on June 1, whichever comes first. Because maximum student enrollment is limited, all applicants are strongly encouraged to submit application materials by February 1.

**TA Deadline:** To be considered for a graduate teaching assistantship, applicants must submit their application materials by February 1.

**Specific Test Requirements:** Graduate Record Exam, General Test; applicants with advanced degrees are not required to submit GRE scores.

**Supporting Materials:** An application for admission into the MS program in geography must include a one- to two-page statement of purpose indicating which specialization the applicant is most interested in, explaining why the applicant wishes to pursue graduate studies in geography, and what future expectations she or he has for the MS degree. The statement may indicate a preferred faculty advisor; students are encouraged to review faculty research interests as described on the Huxley website, [www.wwu.edu/depts/huxley](http://www.wwu.edu/depts/huxley), prior to contacting potential advisors; students are admitted to the program only upon agreement of potential faculty advisors.

### **Program Requirements (minimum 45 to 69 credits)**

- Egeo 501 - History and Philosophy of Geography
- Egeo 502 - Geographic Frameworks for Resource Analysis
- Egeo 503 - Research Problems
- Egeo 504 - Geographic Methods and Techniques
  - 17 credits of elective courses selected under advisement
- 12 credits of Egeo 690 - Thesis
  - Ten credits or less of approved 400-level work may be included in the program. No more than 4 elective credits of Egeo 595 (teaching practicum) may be used toward the MS degree in geography.

### **Additional Information**

#### **Thesis**

The thesis requires satisfactory completion of a research project emphasizing original theoretical or applied research and resulting in a comprehensive written thesis. The candidate will provide a public seminar based on the thesis, after an oral defense and acceptance of the thesis by the candidate's thesis committee.

#### **Committee Makeup**

The thesis committee will have a minimum of two graduate faculty members from Huxley College; one will serve as chair. One of these two members is to be a geographer. The third member, with approval of the graduate advisor and Graduate School, can come from elsewhere.

#### **Thesis Proposal Presentation**

The student is to make a public presentation of her/his proposed research, followed by questions and discussion. The purpose of this presentation is to allow the student to share his/her proposed research with a broader audience than the

thesis committee to facilitate further refinement of the work. The student may be asked to expand the discussion on specific theoretical and/or empirical content of her/his intended thesis, as well as the broader scholarly field. The presentation will be made as soon as the student and the thesis committee have agreed upon a topic, typically in the third quarter of residency. Major changes to the thesis topic will require a new presentation at the discretion of the thesis committee.

# **College of Sciences and Technology**

## **Introduction**

*Dr. Arlan Norman, Dean*

The College of Sciences and Technology consists of seven academic departments: biology, chemistry, computer science, engineering technology, geology, mathematics, and physics/astronomy. In addition to the academic departments, the college is home to Western's Science, Mathematics, and Technology Education (SMATE) program and the Advanced Materials Science and Engineering Center (AMSEC). SMATE is dedicated to the enrichment and education of K-12 pre-service teachers and education reform. AMSEC's mission is to educate students and promote interdisciplinary research in materials science and to assist regional companies solve their materials related challenges. The college is committed to excellence in teaching, fostering interdisciplinary research and study opportunities, enhancing diversity, enhancing the quality of science, mathematics and technology K-12 teaching, and the development of critical thinking. Western has extensively invested in new facilities for the sciences in recent years (biology, chemistry, engineering technology, and SMATE). Additionally, the communications facility opened in the spring of 2004 and houses both the computer science department and the physics/astronomy department. Thus, students in the college are engaged in high-quality classroom experiences that, when combined with laboratory experiences, foster a basic understanding of the scientific method and research methodologies. Students in the college are encouraged to participate in individual or team research projects with faculty members.

All the departments within the college are dedicated to providing a high-quality education for students by incorporating undergraduate research and practical laboratory-based experiences to stimulate intellectual curiosity, critical thinking abilities and application of the scientific method. Graduates from the college pursue graduate degrees, a wide variety of jobs in industry or governmental organizations, or become teachers. All of the graduates are expected to be excellent communicators and be vigorous throughout their lives in the active pursuit of knowledge.

Within the college, students will find a wide variety of majors and minors from which to choose, including many interdisciplinary majors or minors. Both bachelor's and master's degrees are offered. Graduates from many majors also seek certification in education. The College of Sciences and Technology partners with the College of Humanities and Social Sciences to provide students with a liberal education. Graduates from the College of Sciences and Technology are uniquely positioned, therefore, to contribute leading roles in their scientific, professional and technical lives in our increasingly complex world.

## **Academic Programs Leading to Undergraduate and Graduate Degrees**

Applied Mathematics	BS
Behavioral Neuroscience	BA*
Biology	BA, BS, MS
Biology/Anthropology	BS
Biochemistry/Cellular and Molecular Biology	BS
Biology/Chemistry	BAE
Biology/Mathematics	BS
Biochemistry	BS
Chemistry	BA, BS, MS

Chemistry/Mathematics	BAE
Chemistry/Physics	BAE
Computer Science	BS, MS
Earth Science	BAE, MEd
Earth Science/General Science	BAE
Economics/Mathematics	BA
Electronics Engineering Technology	BS
General Science	BAE
Geology	BA, BS, MS
Industrial Design	BS
Industrial Technology	BS
Manufacturing Engineering Technology	BS
Mathematics	BA, BAE, BS, MS
Mathematics/Computer Science	BS
Natural Science/Science Education	MEd
Physics	BS
Physics/Mathematics	BAE
Plastics Engineering Technology	BS
Technology Education	BS, MEd

\*Interdisciplinary between the College of Humanities and Social Sciences and the College of Sciences and Technology.

### **Majors and Minors**

In addition to the General University Requirements (GURs) and other common degree requirements of the University, the candidate for a Bachelor of Arts or Bachelor of Science degree must complete a major area emphasis which is usually accompanied by supporting courses. A minor is optional. A few concentrations are offered which encompass both a major and a minor. Students will confer with appropriate departmental advisors to plan study programs. Transfer students are expected to complete at least a portion of their work in the major and minor fields in this institution.

### **College Admission and Advisement**

As the student completes the freshman year, which usually consists largely of courses that also meet the GURs, he or she is referred to the academic departments for continued personalized advisement in planning and selecting courses of study. Faculty within each department share responsibility for counseling students electing concentrations in their area. Faculty members may recommend to the department chair the waiving of certain course prerequisites (when it has been demonstrated that the student already has these competencies). Students who are undecided about a major may seek advisement through the Academic Advising Center in Old Main.

## **Department Chairs**

Dr. Joann Otto, Biology  
Dr. Steven D. Gammon, Chemistry  
Dr. David Bover, Computer Science  
Professor Todd Morton, Engineering Technology  
Dr. Scott Babcock, Geology  
Dr. Tjalling Ypma, Mathematics  
Dr. Brad Johnson, Physics/Astronomy

## **Other College Information**

### *Departments, Courses and Programs*

Courses listed in this catalog constitute a record of the total academic program of the University. For an exact scheduling of courses at Western, students should consult the online *Timetable of Classes* and *Extended Education* and *Summer Programs*' bulletins.

### *Interdisciplinary Sciences, Technology and Mathematics (ISTM)*

Courses containing scientific, technological and/or mathematical topics without focusing on a particular discipline are offered under the Interdisciplinary Science(s), Technology and Mathematics designation. Courses are designed for both science and non-science students. Faculty will come from across the College of Sciences and Technology, and will offer a wide range of perspectives on the institutions, tools and practice of science, technology and mathematics. A new course on scientific literacy is an example of the type of course that will be offered with this new designation.

## Biology

### Introduction

<http://www.biol.wwu.edu/biology/>

Biology is the study of living organisms and is one of the broadest fields in science. It ranges in scale from the molecular and cellular level to the level of ecosystems and evolutionary biology. Biology at Western Washington University gives students the opportunity to explore this breadth in all degree programs, as well as to specialize.

### Faculty

**JOANN OTTO** (2004) Chair and Professor. AB, AM, Mount Holyoke College; PhD, University of California-Irvine.

**ALEJANDRO ACEVEDO-GUTIÉRREZ** (2002) Associate Professor. BSc, Universidad Autonoma de Baja California Sur, Mexico; PhD, Texas A&M University.

**ROGER A. ANDERSON** (1994) Professor. BS, University of Minnesota; MA, University of California-Riverside; PhD, University of California-Los Angeles.

**MARION BRODHAGEN** (2006) Assistant Professor. BS, University of Wisconsin; MS, PhD, Oregon State University.

**ERIC DECHAINE** (2006) Assistant Professor. BA, University of California-San Diego; MS, University of Hawaii-Manoa; PhD, University of Colorado-Boulder.

**DEBORAH A. DONOVAN** (1998) Professor. BSc, MSc, University of California-Davis; PhD, University of British Columbia.

**DAVID U. HOOPER** (1998) Professor. BA, Middlebury College; PhD, Stanford University.

**DAVID S. LEAF** (1991) Professor. BS, University of Washington; PhD, Indiana University.

**BENJAMIN MINER** (2006) Assistant Professor. BA, University of Florida; PhD, University of California-Santa Cruz.

**CRAIG L. MOYER** (1997) Professor. BS, MS, Oregon State University; PhD, University of Hawaii.

**MERRILL A. PETERSON** (1997) Professor. BS, University of Washington; PhD, Cornell University.

**LYNN J. PILLITTERI** (2008) Assistant Professor. BS, State University of New York at Binghamton; MS, PhD, University of California, Riverside.

**SANDRA SCHULZE** (2006) Assistant Professor. BS, University of British Columbia; PhD, Simon Fraser University.

**DIETMAR SCHWARZ** (2008) Assistant Professor. Diplom Biology, Christian-Albrechts Universität, Kiel, Germany; PhD Pennsylvania State University.

**JOSÉ SERRANO-MORENO** (2007) Assistant Professor. Lic. Biol., Universidad Central de Venezuela; PhD, Case Western Reserve University.

**ANU SINGH-CUNDY** (1996) Associate Professor. BSc, MSc, Delhi University, Delhi, India; PhD, Cornell University.

**CAROL TRENT** (1989) Professor. BS, Indiana University; PhD, Massachusetts Institute of Technology.

**HEATHER VAN EPPS** (2008) Assistant Professor. BS, University of Illinois, Urbana/Champaign; PhD, University of Washington.

**JEFF C. YOUNG** (1999) Professor. BA, PhD, Ohio State University.

### Research Associates

**DAVID L. ALLES.** BS, University of Colorado; MS, Western Washington University.

**GEORGE H. CZERLINSKI.** BS, University of Hamburg; MS, Northwestern University; PhD, University of Göttingen.

**MELISSA MINER.** BS, University Of California-Santa Cruz; MS, University of California, Moss Landing Marine Lab.

**FREDERICK M. RHOADES.** BA, Swarthmore; MS, Oregon State University; PhD, University of Oregon.

### Adjunct Faculty

**JOHN BOWERS.** BS, PhD, Cornell University.

**GISÈLE MULLER-PARKER** (1990) BS, State University of New York Stony Brook; MS, University of Delaware; PhD, University of California Los Angeles.

**JENNIFER PURCELL.** BS, MS, Stanford University; PhD, University of California-Santa Barbara.

**SUZANNE STROM.** BA, Middlebury College; MA, Harvard University; PhD, University of Washington.

**STEPHEN SULKIN.** BA, Miami University; MS, PhD, Duke University.

**KATHRYN L. VAN ALSTYNE.** BS, University of Rhode Island; PhD, University of Washington

### **Departmental Mission**

Our mission is to provide an outstanding learning environment that integrates education, scholarship, and service to actively engage students in the biological sciences and to foster their development as lifelong learners. We accomplish this mission by:

- Offering a broad-based, rigorous, and integrative curriculum
- Having diverse upper-division courses
- Fostering critical thinking and quantitative reasoning skills
- Offering opportunities for undergraduate research and writing
- Providing for timely completion of degree

### **Other Departmental Information**

#### *Facilities and Resources*

The Biology building includes teaching labs, research labs, and multimedia lecture halls. Two greenhouses, on campus support teaching and research. The Shannon Point Marine Center in Anacortes supports research and teaching in marine science. Western's location offers fascinating learning opportunities for students in biology. The variety of plant communities and climatic patterns of the Cascade and Olympic Mountains and nearby lowlands, the numerous ponds and lakes, streams and rivers and the many marine habitats provide a rich diversity of organisms for students to encounter and study.

#### *Undergraduate Programs*

Our programs are designed for students with broad or specialized interests in the biological sciences. They are intended to (1) prepare undergraduates for graduate studies in diverse areas of biology; (2) prepare students for advanced study in the health professions [e.g., medicine, veterinary medicine, dentistry]; (3) provide a broad exposure to biology for students who want a general science education as biologists and teachers; (4) provide students with a foundation in biology that is combined with another discipline.

- BA Biology - flexible, student-advisor designed program
- BS Biology - flexible, student-advisor designed program
- BS Biology - Cell Emphasis - focuses on the cell biology, molecular genetics, and genomics of prokaryotic and eukaryotic organisms
- BS Biology - Ecology, Evolution and Organismal Biology Emphasis - focuses on the structure, function, ecology & evolution of organisms
- BS Biology - Marine Emphasis – focuses on the structure and function of marine organisms and their relationship with the environment BS
- BS Biology - Secondary Teaching Emphasis – prepares students for a state teaching endorsement in biology
- BS Biology/Anthropology - focus on human biology and behavioral science
- BS Biology/Mathematics - brings biology together with linear algebra, advanced calculus and methods of computer programming and mathematical modeling
- BA Behavioral Neuroscience - emphasizes neurobiology and the psychology of normal and abnormal behavior at the molecular and organismal level
- BS Cellular and Molecular Biology – focuses on the biochemistry, cell biology, molecular genetics and genomics of prokaryotic and eukaryotic model organisms
- BAE Chemistry/Biology - Secondary - a combined study of biology and chemistry courses for teaching endorsements

### *Declaration Process*

Biology Major Declaration is a two-phase process for a Biology BS, BA, or Minor degree program. Students can declare a Biology Phase I major as soon as they are admitted to the University. In Phase I, majors complete CHEM 121, 122, 123 and BIOL 204, 205, 206. Entrance to Phase II is competitive and is based on performance in Phase I chemistry and biology classes.

### *Mid-Program Checkpoint*

Students seeking to complete a BS degree in biology within a four-year time span should have completed these courses prior to their junior year: MATH 124; CHEM 121, CHEM 123, CHEM 122; BIOL 204, BIOL 206, BIOL 205; either CHEM 351, CHEM 352 or PHYS 114, PHYS 115 (or PHYS 121, PHYS 122); ENG 101; plus 18 credits from the nonscience/math GUR sections. Major omissions from this list will make it difficult or impossible to complete this degree within two additional years.

### *Teaching Careers in Biology*

Students wishing to teach at the high school-level in the Washington State public schools need to seek advisement prior to or at the beginning of their third year of college. A Biology Endorsement is earned by completion of the courses in the Biology BS-Secondary Teaching Emphasis and the certification program in Woodring College of Education ([www.wce.wwu.edu/Resources/Certification/](http://www.wce.wwu.edu/Resources/Certification/)).

A Science Endorsement may be completed by taking the additional courses of GEOL 211, GEOL 212; PHYS 116; and ASTR 315. All courses for the state teaching endorsement must be completed with a C (2.0) or higher. Students who wish to teach at the college-level complete a Biology BS or BA degree and continue graduate work leading to a master's or doctoral degree.

### *Transfer Students*

Transfer students will be well prepared for admission and able to complete a biology major in two more years if they have completed the math and science courses listed above in the MID-PROGRAM CHECKPOINT paragraph; have earned excellent grades in each of these courses; and state in the personal letter for admission their educational goals and that they can no longer progress toward these goals at their present institution.

### *Access to Biology Classes*

Because of high student demand for many biology program courses, the Biology Department must give enrollment priority to students for whom these courses are required for their major over students who want to take them as electives. Registration details for biology courses are listed on the Biology Department Registration webpage at: <http://www.biol.wwu.edu/biology/registration.shtml>.

### **Graduate Study**

For concentrations leading to the Master of Education or the Master of Science degrees, see the *Graduate School* section of this catalog.

### **Undergraduate Degrees and Programs**

Behavioral Neuroscience, BA

Biology, BA

Chemistry/Biology - Secondary, BAE

Biology, BS

Biology — Cell Emphasis, BS

Biology - Ecology, Evolution, and Organismal Biology (EEO) Emphasis, BS

Biology - Marine Emphasis, BS

Biology — Secondary Teaching Emphasis, BS

Biology/Anthropology, BS

Biology/Mathematics, BS

Cellular and Molecular Biology, BS

#### **Graduate Degrees and Programs**

Biology, Thesis, MS

Biology, Marine and Estuarine Science, Thesis, MS

## **Anthropology/Biology, BA (also see Anthropology Department)**

Jointly offered by the Department of Anthropology, College of Humanities and Social Sciences and the Department of Biology, College of Sciences and Technology.

**89 credits including 23 in supporting courses**

### **Introduction**

Biology Phase II status required for admission into 300- and 400-level biology courses for biology majors.

### **Admission and Declaration Process**

Declaration of Major ([see Biology Dept page](#))

### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

### **Requirements**

- ANTH 201 - Introduction to Cultural Anthropology
- ANTH 210 - Introduction to Archaeology
- ANTH 215 - Introductory Biological Anthropology
- ANTH 496 - Portfolio Assembly
- BIOL 204 - Introduction to Evolution, Ecology and Biodiversity
- BIOL 205 - Introduction to Cellular and Molecular Biology
- BIOL 206 - Introduction to Organismal Biology
- BIOL 321 - Genetics

- BIOL 348 - Human Anatomy and Physiology
- BIOL 349 - Human Physiology
- Choose one of the following series:
- CHEM 121 - General Chemistry I
- CHEM 122 - General Chemistry II
- CHEM 123 - General Chemistry III  
    or
- CHEM 125 - General Chemistry I, Honors
- CHEM 126 - General Chemistry II, Honors
- CHEM 225 - General Chemistry III, Honors
- Choose either:
- CHEM 251 - Elementary Organic Chemistry  
    or all three of the following:
- CHEM 351 - Organic Chemistry
- CHEM 352 - Organic Chemistry
- CHEM 353 - Organic Chemistry
- One course from:
- PHYS 101 - Physics Analysis
- PHYS 114 - Principles of Physics I
- PHYS 115 - Principles of Physics II (recommended)
- One course from:
- ANTH 335 - Quantitative Methods in Anthropology
- BIOL 340 - Biometrics
- MATH 240 - Introduction to Statistics
- 10 credits in anthropology under advisement
- 8 credits of biology under advisement

Advisors: Joann Otto, Biology, and Joan Stevenson, Anthropology.

## **Behavioral Neuroscience, BA (also see Psychology Department)**

**108-109 credits**

### **Introduction**

This interdisciplinary program provides students with the specialized preparation and technological sophistication critical for success in a variety of graduate-training programs, including neurosciences, psychology, pharmacology, mental health, and neurobiology; and health care, including medicine and dentistry. For those students who do not anticipate pursuing post-graduate education, the degree program provides an excellent platform for entry-level positions in such areas as biomedical research and the pharmaceutical industry.

### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

## Requirements

### *Required Supporting Courses 24 credits*

- MATH 114 - Precalculus I
- CHEM 121 - General Chemistry I
- CHEM 122 - General Chemistry II
- CHEM 123 - General Chemistry III
- CHEM 251 - Elementary Organic Chemistry or equivalent

### *Required Biology Courses 26 credits*

- BIOL 204 - Introduction to Evolution, Ecology and Biodiversity
- BIOL 205 - Introduction to Cellular and Molecular Biology
- BIOL 206 - Introduction to Organismal Biology
- BIOL 321 - Genetics
- BIOL 323 - Cell and Molecular Biology
- BIOL 432 - Evolutionary Biology

### *Required Psychology Courses 39 credits*

- PSY 101 - Introduction to Psychology
- PSY 220 - Introduction to Behavioral Neuroscience
- PSY 301 - Overview of Research Methods
- PSY 303 - Research Methods and Statistical Analysis: Experimental Approaches
- PSY 319 - Cognitive Neuroscience
- PSY 320 - Topics in Behavioral Neuroscience
- PSY 323 - Psychopharmacology
- PSY 328 - Techniques in Behavioral Neuroscience

### *Required Biology or Psychology Courses 4-5 credits*

- One course from:
  - BIOL 410 - Animal Behavior
  - PSY 321 - Learning
  - PSY 324 - Comparative Psychology

### *Electives under advisement 15 credits*

- BIOL 322 - Genetics Lab
- BIOL 324 - Methods in Molecular Biology
- BIOL 325 - Ecology
- BIOL 410 – Animal Behavior
- BIOL 445
- BIOL 467 - Comparative Vertebrate Physiology
- BIOL 468 - Comparative Vertebrate Physiology Laboratory
- BIOL 471 - Biochemistry I
- BIOL 472 - Biochemistry II
- BIOL 476 - The Structural Basis of Membrane Transport Proteins
- BIOL 482 - Developmental Biology of Animals
- BIOL 484 - Cell and Developmental Biology Laboratory
- BIOL 497

### One course from:

- BIOL 300
- BIOL 395 - Biology Research Participation
- BIOL 400
- BIOL 494 - Biology Research

- BIOL 495 - Research Communication
- CHEM 375 - Elements of Biochemistry
- PSY 210 - Cognition
- PSY 302 - Research Methods and Statistical Analysis: Correlational Approaches
- PSY 310 - Sensation and Perception
- PSY 322 - Motivation
- PSY 327 - Cognitive Neuroscience Lab
- PSY 410 - Seminar in Cognitive Neuroscience
- PSY 420 - Seminar in Behavioral Neuroscience
- PSY 421 - Seminar in Learning
- PSY 422 - Seminar in Motivation
- PSY 424 - Seminar in Comparative Psychology
- PSY 428 - Advanced Techniques in Behavioral Neuroscience
- One course from:  
PSY 300  
PSY 400

#### **Additional Information**

A maximum combined total of 10 credits in PSY 300, 400 or BIOL 300, 395, 400, 494, 495 can be applied to the major.

Faculty Advisors: Biology: Roger Anderson, Heather Van Epps, Jose Serrano-Moreno; Psychology: Janet Finlay, Jeffrey Grimm, Kelly Jantzen, Mike Mana, Jacqueline Rose

## **Biology - Ecology, Evolution, and Organismal Biology (EEO) Emphasis, BS**

**90 credits**

#### **Introduction**

A diploma granted under this major will indicate "Bachelor of Science"; official transcripts will indicate Biology and the area of emphasis.

Required supporting courses 37 credits; basic breadth, depth, and elective courses 53 credits. Biology Phase II status required for admission into 300- and 400-level biology courses for biology majors. (Credits for recommended supporting courses cannot be applied toward credits in the major.)

Faculty advisors: Alejandro Acevedo-Gutiérrez, Roger Anderson, Eric DeChaine, Deborah Donovan, David Hooper, Benjamin Miner, Craig Moyer, Merrill Peterson, Dietmar Schwarz, Anu Singh-Cundy, Jeff Young.

#### **Admission and Declaration Process**

Declaration Process ([see Biology Department page](#))

#### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

## **Requirements**

### **Supporting courses: 37 credits**

- CHEM 351 - Organic Chemistry
- CHEM 352 - Organic Chemistry
- CHEM 353 - Organic Chemistry (recommended)
- CHEM 354 - Organic Chemistry Laboratory I (recommended)
- GEOL 211 - Physical Geology (recommended)
- GEOL 212 - Historical Geology (recommended)
- Choose one of the following series:
  - CHEM 121 - General Chemistry I
  - CHEM 122 - General Chemistry II
  - CHEM 123 - General Chemistry III
- OR
- CHEM 125 - General Chemistry I, Honors
- CHEM 126 - General Chemistry II, Honors
- CHEM 225 - General Chemistry III, Honors
- Choose one of the following series:
  - PHYS 114 - Principles of Physics I
  - PHYS 115 - Principles of Physics II
  - PHYS 116 - Principles of Physics III (recommended)
- OR
- PHYS 121 - Physics With Calculus I
- PHYS 122 - Physics With Calculus II
- PHYS 123 - Electricity and Magnetism
- One course from:
  - MATH 124 - Calculus and Analytic Geometry I
  - MATH 134 - Calculus I Honors
- One course from:
  - MATH 125 - Calculus and Analytic Geometry II (recommended)
  - MATH 135 - Calculus II Honors (recommended)

### **Basic Requirements: 14 credits**

- BIOL 204 - Introduction to Evolution, Ecology and Biodiversity
- BIOL 205 - Introduction to Cellular and Molecular Biology
- BIOL 206 - Introduction to Organismal Biology

### **Breadth Requirements: 20 credits**

- BIOL 321 - Genetics
- BIOL 323 - Cell and Molecular Biology
- BIOL 325 - Ecology
- BIOL 340 - Biometrics
- BIOL 432 - Evolutionary Biology

**Depth Requirements: 13-19 credits**

Three courses from two categories (at least one course from each category):

Structure, Function and Ecology:

- BIOL 403 - Physiological Ecology of Animals
- BIOL 405 - Microbial Ecology
- BIOL 407 - Marine Ecology
- BIOL 410 - Animal Behavior
- BIOL 416 - Ecosystem Ecology and Global Change
- BIOL 450 - Plant Anatomy
- BIOL 451 - Plant Growth and Development
- BIOL 453 - Investigations in Plant Development
- BIOL 457 - Pollination Biology
- BIOL 467 - Comparative Vertebrate Physiology
- BIOL 468 - Comparative Vertebrate Physiology Laboratory
- BIOL 479 - Plant Physiology
- BIOL 482 - Developmental Biology of Animals
- BIOL 484 - Cell and Developmental Biology Laboratory

Taxon, Diversity and Evolution:

- BIOL 434 - Population Genetics
- BIOL 436 - Molecular Phylogeny and Microbial Diversity
- BIOL 439 - Symbiosis
- BIOL 452 - Systematic Botany
- BIOL 456 - Algae
- BIOL 457 - Pollination Biology
- BIOL 460 - Invertebrate Zoology
- BIOL 462 - Entomology
- BIOL 463 - Ornithology
- BIOL 464 - Biology of Marine Mammals
- BIOL 465 - Vertebrate Zoology

Three upper-division lab classes:

One of the following:

- BIOL 322 - Genetics Lab
- BIOL 324 - Methods in Molecular Biology
- BIOL 326 - Ecology Laboratory

Two additional upper-division lab (or lecture and lab) courses, including at least one 400-level course

**Electives:**

0-6 credits to make 53 total when combined with the required biology courses. No more than 3 credit hours combined in BIOL 395, 496 and 498 and no more than 4 credit hours combined in BIOL 494 and 495 can be applied to this category. Additional elective credits in these courses (or other courses listed below) can be taken to fulfill University Graduation Requirements:

Any 300- or 400-level biology course under advisement, including BIOL 300, 400 445, and 497; suggested electives include:

- BIOL 345 - Fundamentals of Microbiology
- BIOL 395 - Biology Research Participation
- BIOL 455 - Economic Botany

- BIOL 494 - Biology Research
- BIOL 495 - Research Communication
- BIOL 496 - Professional Work Experience in Biology
- BIOL 498 - Teaching Practicum
  - any course listed in the categories Structure, Function and Ecology or Taxon, Diversity and Evolution
  - ESCI courses under advisement

## Biology - Marine Emphasis, BS

**95 credits**

### Introduction

A diploma granted under this major will indicate "Bachelor of Science"; official transcripts will indicate Biology and the area of emphasis.

Required supporting courses 42 credits; basic, breadth, depth and elective courses 53 credits. Biology Phase II status required for admission into 300- and 400-level biology courses for biology majors. (Credits for recommended supporting courses cannot be applied toward credits in the major.)

Faculty Advisors: Alejandro Acevedo-Gutiérrez, Deborah Donovan, Benjamin Miner, Craig Moyer

### Admission and Declaration Process

Declaration Process ([see Biology department page](#))

### Grade Requirements

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

### Requirements

#### Supporting courses: 42 credits

- CHEM 351 - Organic Chemistry
- CHEM 352 - Organic Chemistry
- CHEM 353 - Organic Chemistry (recommended)
- CHEM 354 - Organic Chemistry Laboratory I (recommended)
- GEOL 211 - Physical Geology
- Choose one of the following series:
  - CHEM 121 - General Chemistry I
  - CHEM 122 - General Chemistry II
  - CHEM 123 - General Chemistry III  
or
  - CHEM 125 - General Chemistry I, Honors
  - CHEM 126 - General Chemistry II, Honors
  - CHEM 225 - General Chemistry III, Honors
- Choose one of the following series:
  - PHYS 114 - Principles of Physics I
  - PHYS 115 - Principles of Physics II

- PHYS 116 - Principles of Physics III (recommended)  
or
- PHYS 121 - Physics With Calculus I
- PHYS 122 - Physics With Calculus II
- PHYS 123 - Electricity and Magnetism
- ❑ One course from:
- MATH 124 - Calculus and Analytic Geometry I
- MATH 134 - Calculus I Honors
- ❑ One course from:
- MATH 125 - Calculus and Analytic Geometry II (recommended)
- MATH 135 - Calculus II Honors (recommended)

**Basic Requirements: 14 credits**

- ❑ BIOL 204 - Introduction to Evolution, Ecology and Biodiversity
- ❑ BIOL 205 - Introduction to Cellular and Molecular Biology
- ❑ BIOL 206 - Introduction to Organismal Biology

**Breadth Requirements: 20 credits**

- ❑ BIOL 321 - Genetics
- ❑ BIOL 323 - Cell and Molecular Biology
- ❑ BIOL 325 - Ecology
- ❑ BIOL 340 - Biometrics
- ❑ BIOL 432 - Evolutionary Biology

**Depth Requirements: 17 credits**

- ❑ BIOL 326 - Ecology Laboratory
- ❑ Three courses chosen from these two categories (at least one from each category):
  - Taxa:
    - BIOL 456 - Algae
    - BIOL 460 - Invertebrate Zoology
    - BIOL 464 - Biology of Marine Mammals
  - Ecology:
    - BIOL 403 - Physiological Ecology of Animals
    - BIOL 405 - Microbial Ecology
    - BIOL 407 - Marine Ecology
    - ESCI 321 - Oceanography

**Electives:**

- ❑ 1-4 credits (additional electives can be taken to fulfill University Graduation Requirements):
- BIOL 345 - Fundamentals of Microbiology
- CHEM 333 - Analytical Chemistry other BIOL or ESCI courses under advisement  
BIOL 300  
Other BIOL or ESCI courses under advisement
- BIOL 395 - Biology Research Participation  
BIOL 400

- BIOL 445
- BIOL 494 - Biology Research
- BIOL 495 - Research Communication
- BIOL 496 - Professional Work Experience in Biology
- BIOL 497
- BIOL 498 - Teaching Practicum

## Biology Minor

### 43 Credits

#### Introduction

The course requirements for a biology minor are different from those stated here when coupled with certain academic majors. Students must consult their major department or the biology department for specific course requirements which will fulfill a biology minor accompanying their declared major.

At least 20 credits of biology must be taken at Western.

#### Admission and Declaration Process

Declaration Process ([see Biology department page](#))

#### Grade Requirements

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

#### Requirements

- BIOL 204 - Introduction to Evolution, Ecology and Biodiversity
- BIOL 205 - Introduction to Cellular and Molecular Biology
- BIOL 206 - Introduction to Organismal Biology
  - Choose one of the following series:
    - CHEM 121 - General Chemistry I
    - CHEM 122 - General Chemistry II
    - CHEM 123 - General Chemistry III
      - or
    - CHEM 125 - General Chemistry I, Honors
    - CHEM 126 - General Chemistry II, Honors
    - CHEM 225 - General Chemistry III, Honors
  - 15 credits of upper-division biology electives

# Biology — Cell Emphasis, BS

**94 credits**

## Introduction

A diploma granted under this major will indicate "Bachelor of Science"; official transcripts will indicate Biology and the area of emphasis.

Required supporting courses 40 credits; basic breadth, depth, and elective courses 54 credits. Biology Phase II status required for admission into 300- and 400-level biology courses for biology majors. (Credits for recommended supporting courses cannot be applied toward credits in the major.)

Faculty advisors: Marion Brodhagen, David Leaf, Craig Moyer, Joann Otto, Lynn Pillitteri, Sandra Schulze, José Serrano-Moreno, Anu Singh-Cundy, Carol Trent, Heather Van Epps, Jeff Young.

## Admission and Declaration Process

Declaration Process ([see Biology department page](#))

## Grade Requirements

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

## Requirements

### Supporting courses: 40 credits

- CHEM 351 - Organic Chemistry
- CHEM 352 - Organic Chemistry
- CHEM 353 - Organic Chemistry
- CHEM 354 - Organic Chemistry Laboratory I (recommended)
  - Choose one of the following series:
  - CHEM 121 - General Chemistry I
  - CHEM 122 - General Chemistry II
  - CHEM 123 - General Chemistry III
    - or
  - CHEM 125 - General Chemistry I, Honors
  - CHEM 126 - General Chemistry II, Honors
  - CHEM 225 - General Chemistry III, Honors
    - Choose one of the following series:
    - PHYS 114 - Principles of Physics I
    - PHYS 115 - Principles of Physics II
    - PHYS 116 - Principles of Physics III (recommended)
      - or
    - PHYS 121 - Physics With Calculus I
    - PHYS 122 - Physics With Calculus II
    - PHYS 123 - Electricity and Magnetism
      - One course from:
    - MATH 124 - Calculus and Analytic Geometry I

- MATH 134 - Calculus I Honors
  - One course from:
- MATH 125 - Calculus and Analytic Geometry II (recommended)
- MATH 135 - Calculus II Honors (recommended)

**Basic Requirements: 14 credits**

- BIOL 204 - Introduction to Evolution, Ecology and Biodiversity
- BIOL 205 - Introduction to Cellular and Molecular Biology
- BIOL 206 - Introduction to Organismal Biology

**Breadth Requirements: 19 credits**

- BIOL 321 - Genetics
- BIOL 323 - Cell and Molecular Biology
- BIOL 325 - Ecology
- BIOL 432 - Evolutionary Biology
- MATH 240 - Introduction to Statistics

**Depth Requirements: 18-22 credits**

- BIOL 345 - Fundamentals of Microbiology
- BIOL 471 - Biochemistry I
  - One course from:
    - BIOL 451 - Plant Growth and Development
    - BIOL 482 - Developmental Biology of Animals
  - Three upper-division lab courses:
    - BIOL 324 - Methods in Molecular Biology
      - Two of the following:
    - BIOL 322 - Genetics Lab
    - BIOL 346 - Microbiology Lab
    - BIOL 453 - Investigations in Plant Development
    - BIOL 484 - Cell and Developmental Biology Laboratory

**Electives:**

1-3 credits to make 54 total when combined with the basic, breadth and depth courses. No more than 3 credit hours combined in BIOL 395, 496 and 498 and no more than 4 credit hours combined in BIOL 494 and 495 can be applied to this category. Additional elective credits in these courses (or other courses listed below) can be taken to fulfill University Graduation Requirements:

- Any course listed under Depth Requirements
- BIOL 395 - Biology Research Participation
- BIOL 470 - Functional Genomics
- BIOL 472 - Biochemistry II
- BIOL 473 - Molecular Biology
- BIOL 479 - Plant Physiology
- BIOL 494 - Biology Research

- BIOL 495 - Research Communication
- BIOL 496 - Professional Work Experience in Biology
- BIOL 498 - Teaching Practicum
- BIOL 300, 400 and 445 and other 400-level courses under advisement

## Biology — Secondary Teaching Emphasis, BS

**90 credits**

### Introduction

A diploma granted under this major will indicate "Bachelor of Science"; official transcripts will indicate Biology and the area of emphasis.

Required supporting courses 37 credits; basic, breadth, depth and elective courses 53 credits. Biology Phase II status required for admission into 300- and 400-level biology courses for biology majors. (Credits for recommended supporting courses cannot be applied toward credits in major.)

To receive a recommendation for state of Washington certification, students must complete a professional preparation program in secondary education. See the Secondary Education section of this catalog for program admission, completion and teacher certification requirements for Woodring College of Education.

To receive a Biology endorsement with a teaching certification will require taking SCED 481 and 491 after being admitted to Woodring College of Education. Students who elect to complete certification as an undergraduate while completing a Biology Bachelor of Science degree can count these two courses as electives for the BS. To receive a Science endorsement, take GEOL 211 and 212, PHYS 116 and ASTR 315 in addition to the courses listed for the Biology endorsement.

Faculty Advisors: Alejandro Acevedo-Gutiérrez, Deborah Donovan

### Admission and Declaration Process

Declaration Process ([see Biology department page](#))

### Grade Requirements

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors. Science courses required for state teaching endorsements must be completed with a grade of C (2.0) or better.

### Requirements

#### Supporting courses: 37 credits

- ASTR 315 - The Solar System (recommended)
- CHEM 351 - Organic Chemistry
- CHEM 352 - Organic Chemistry
- CHEM 353 - Organic Chemistry (recommended)
- CHEM 354 - Organic Chemistry Laboratory I (recommended)
- GEOL 211 - Physical Geology (recommended)
- GEOL 212 - Historical Geology (recommended)
- Choose one of the following series:

- CHEM 121 - General Chemistry I
- CHEM 122 - General Chemistry II
- CHEM 123 - General Chemistry III
  - or
- CHEM 125 - General Chemistry I, Honors
- CHEM 126 - General Chemistry II, Honors
- CHEM 225 - General Chemistry III, Honors
  - Choose one of the following series:
  - PHYS 114 - Principles of Physics I
  - PHYS 115 - Principles of Physics II
  - PHYS 116 - Principles of Physics III (recommended)
    - or
  - PHYS 121 - Physics With Calculus I
  - PHYS 122 - Physics With Calculus II
  - PHYS 123 - Electricity and Magnetism
    - One course from:
    - MATH 124 - Calculus and Analytic Geometry I
    - MATH 134 - Calculus I Honors
      - One course from:
      - MATH 125 - Calculus and Analytic Geometry II (recommended)
      - MATH 135 - Calculus II Honors (recommended)

**Basic Requirements: 14 credits**

- BIOL 204 - Introduction to Evolution, Ecology and Biodiversity
- BIOL 205 - Introduction to Cellular and Molecular Biology
- BIOL 206 - Introduction to Organismal Biology

**Breadth Requirements: 19-20 credits**

- BIOL 321 - Genetics
- BIOL 323 - Cell and Molecular Biology
- BIOL 325 - Ecology
- BIOL 432 - Evolutionary Biology
  - One course from:
  - BIOL 340 - Biometrics
  - MATH 240 - Introduction to Statistics

**Depth Requirements: 18-21 credits**

- BIOL 326 - Ecology Laboratory
  - One course from:
  - BIOL 322 - Genetics Lab
  - BIOL 324 - Methods in Molecular Biology
  - SCED 370 - Science and Society
    - One of the following:
    - BIOL 460 - Invertebrate Zoology

- BIOL 465 - Vertebrate Zoology
- BIOL 467 - Comparative Vertebrate Physiology (AND)
- BIOL 468 - Comparative Vertebrate Physiology Laboratory
- BIOL 482 - Developmental Biology of Animals (AND)
- BIOL 484 - Cell and Developmental Biology Laboratory
  - One of the following:
- BIOL 450 - Plant Anatomy
- BIOL 451 - Plant Growth and Development (AND)
- BIOL 453 - Investigations in Plant Development
- BIOL 452 - Systematic Botany
- BIOL 479 - Plant Physiology

**Electives:**

0-2 credits to make 53 total when combined with the basic, breadth and depth courses. Additional elective credits can be taken to fulfill University Graduation Requirements.

- Upper-division courses under advisement, including:
- SCED 481 - Fundamentals of Teaching Science
- SCED 491 - Methods in Secondary Education for Science Teachers (see comments above)

## Biology, BA

### 74 credits

#### Introduction

Supporting courses 23 credits; 51 credits in biology; Biology Phase II status required for admission into 300- and 400-level biology courses for biology majors.

Faculty Advisors: Assigned faculty

#### Admission and Declaration Process

Declaration Process ([see Biology department page](#))

#### Grade Requirements

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

#### Requirements

- BIOL 204 - Introduction to Evolution, Ecology and Biodiversity
- BIOL 205 - Introduction to Cellular and Molecular Biology
- BIOL 206 - Introduction to Organismal Biology
- BIOL 321 - Genetics
- BIOL 323 - Cell and Molecular Biology
- BIOL 325 - Ecology
- BIOL 432 - Evolutionary Biology

- CHEM 251 - Elementary Organic Chemistry
- MATH 240 - Introduction to Statistics or equivalent
- Choose one of the following series:
  - CHEM 121 - General Chemistry I
  - CHEM 122 - General Chemistry II
  - CHEM 123 - General Chemistry III  
or
  - CHEM 125 - General Chemistry I, Honors
  - CHEM 126 - General Chemistry II, Honors
  - CHEM 225 - General Chemistry III, Honors
- One course from:
  - PHYS 101 - Physics Analysis
  - PHYS 114 - Principles of Physics I
  - PHYS 115 - Principles of Physics II (recommended)
- Upper-division biology courses approved by faculty advisor

## Biology, BS

**90 credits**

### Introduction

Required supporting courses 37 credits; basic breadth, depth, and elective courses 53 credits. Biology Phase II status required for admission into 300- and 400-level biology courses for biology majors. (Credits for recommended supporting courses cannot be applied toward credits in the major.)

Faculty Advisors: Assigned faculty.

### Admission and Declaration Process

Declaration Process ([see Biology Department page](#))

### Grade Requirements

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

### Requirements

#### Supporting courses: 37 credits

- Choose one of the following series:
  - CHEM 121 - General Chemistry I
  - CHEM 122 - General Chemistry II
  - CHEM 123 - General Chemistry III  
or
  - CHEM 125 - General Chemistry I, Honors
  - CHEM 126 - General Chemistry II, Honors
  - CHEM 225 - General Chemistry III, Honors
  - CHEM 351 - Organic Chemistry

- CHEM 352 - Organic Chemistry
- CHEM 353 - Organic Chemistry (recommended)
- CHEM 354 - Organic Chemistry Laboratory I (recommended)
- Choose one of the following series:
  - PHYS 114 - Principles of Physics I
  - PHYS 115 - Principles of Physics II
  - PHYS 116 - Principles of Physics III (recommended)  
or
  - PHYS 121 - Physics With Calculus I
  - PHYS 122 - Physics With Calculus II
  - PHYS 123 - Electricity and Magnetism
- One course from:
  - MATH 124 - Calculus and Analytic Geometry I
  - MATH 134 - Calculus I Honors
- One course from:
  - MATH 125 - Calculus and Analytic Geometry II (recommended)
  - MATH 135 - Calculus II Honors (recommended)

**Basic Requirements: 14 credits**

- BIOL 204 - Introduction to Evolution, Ecology and Biodiversity
- BIOL 205 - Introduction to Cellular and Molecular Biology
- BIOL 206 - Introduction to Organismal Biology

**Breadth Requirements: 20 credits**

- BIOL 321 - Genetics
- BIOL 323 - Cell and Molecular Biology
- BIOL 325 - Ecology
- BIOL 340 - Biometrics
- BIOL 432 - Evolutionary Biology

**Depth Requirements: 12-13 credits**

- 10 credit hours in selected 400-level courses excluding:
    - BIOL 432 - Evolutionary Biology
    - BIOL 494 - Biology Research
    - BIOL 495 - Research Communication
    - BIOL 496 - Professional Work Experience in Biology
    - BIOL 498 - Teaching Practicum
  - 3 upper-division lab classes:  
One of the following:
    - BIOL 322 - Genetics Lab
    - BIOL 324 - Methods in Molecular Biology
    - BIOL 326 - Ecology Laboratory
    - BIOL 346 - Microbiology Lab
    - BIOL 349 - Human Physiology
- Two additional upper-division lab (or lecture and lab) courses, including at least one 400-level course

**Electives:**

6-7 credits to make 53 credits total when combined with the required biology courses. No more than 3 credit hours combined in BIOL 395, 496 and 498 and no more than 4 credit hours combined in BIOL 494 and 495 can be applied to this category. Additional elective credits in these courses (or other courses listed below) can be taken to fulfill University Graduation Requirements:

- Any 300- or 400-level biology course under advisement, including:
  - BIOL 300
  - BIOL 395 - Biology Research Participation
  - BIOL 400
  - BIOL 445
  - BIOL 494 - Biology Research
  - BIOL 495 - Research Communication
  - BIOL 496 - Professional Work Experience in Biology
  - BIOL 498 - Teaching Practicum

## **Biology/Anthropology, BS**

Jointly offered by the Department of Biology, College of Sciences and Technology and the Department of Anthropology, College of Humanities and Social Sciences

### **101-104 Credits**

#### **Introduction**

Required supporting courses 34-37 credits; basic, breadth, depth and elective courses 66 credits; 1 completion credit. Biology Phase II status required for admission into 300- and 400-level biology courses for biology majors.(Credits for recommended supporting courses cannot be applied toward credits in major.)

Anthropology: Michael Grimes or Joan Stevenson; Biology: Joann Otto

#### **Admission and Declaration Process**

Declaration Process ([see Biology department page](#))

#### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

#### **Requirements**

##### **Supporting courses: 34-37 credits**

- CHEM 351 - Organic Chemistry
- CHEM 352 - Organic Chemistry (or CHEM 251 only with approval of adviser)
- CHEM 353 - Organic Chemistry (recommended)
- CHEM 354 - Organic Chemistry Laboratory I (recommended)

- Choose one of the following series:
  - PHYS 114 - Principles of Physics I
  - PHYS 115 - Principles of Physics II
  - PHYS 116 - Principles of Physics III (recommended)
    - or
  - PHYS 121 - Physics With Calculus I
  - PHYS 122 - Physics With Calculus II
  - PHYS 123 - Electricity and Magnetism
- Choose one of the following series:
  - CHEM 121 - General Chemistry I
  - CHEM 122 - General Chemistry II
  - CHEM 123 - General Chemistry III
    - or
  - CHEM 125 - General Chemistry I, Honors
  - CHEM 126 - General Chemistry II, Honors
  - CHEM 225 - General Chemistry III, Honors
- One course from:
  - MATH 124 - Calculus and Analytic Geometry I
  - MATH 134 - Calculus I Honors
  - MATH 138 - Accelerated Calculus

**Basic requirements: Biology 14 credits**

- BIOL 204 - Introduction to Evolution, Ecology and Biodiversity
- BIOL 205 - Introduction to Cellular and Molecular Biology
- BIOL 206 - Introduction to Organismal Biology

**Basic requirements: Anthropology 15 credits**

- ANTH 201 - Introduction to Cultural Anthropology
- ANTH 210 - Introduction to Archaeology
- ANTH 215 - Introductory Biological Anthropology

**Breadth requirements: 16-19 credits**

- BIOL 321 - Genetics
- One course from:
  - BIOL 325 - Ecology
  - ANTH 350 - The Ecology of Human Variation
- One course from:
  - BIOL 340 - Biometrics
  - ANTH 335 - Quantitative Methods in Anthropology
- One course from:
  - BIOL 432 - Evolutionary Biology
  - ANTH 423 - Human Evolution

**Depth requirements: 12-15 credits**

- BIOL 348 - Human Anatomy and Physiology
- One course from:
- BIOL 349 - Human Physiology
- BIOL 467 - Comparative Vertebrate Physiology
- One of the following:
- ANTH 308 - Hunter-Gatherer Societies in World Prehistory
- ANTH 422 - Nutritional Anthropology
- ANTH 424 - Medical Anthropology
- BIOL 410 - Animal Behavior

**Electives:**

3-9 credits to make 66 total when combined with the required biology and anthropology courses

- One course from:
- BIOL 322 - Genetics Lab
- BIOL 324 - Methods in Molecular Biology
- BIOL 323 - Cell and Molecular Biology
- BIOL 345 - Fundamentals of Microbiology
- BIOL 410 - Animal Behavior
- BIOL 465 - Vertebrate Zoology
- BIOL 467 - Comparative Vertebrate Physiology
- ANTH 308 - Hunter-Gatherer Societies in World Prehistory
- ANTH 422 - Nutritional Anthropology
- ANTH 424 - Medical Anthropology
- ANTH 466 - Reproductive Ecology
- Other electives under advisement

**Completion requirement: 1 credit**

- ANTH 496 - Portfolio Assembly

**Biology/Mathematics, BS**

Jointly offered by the Department of Biology, College of Sciences and Technology and the Department of Mathematics, College of Sciences and Technology

**104-105 credits****Introduction**

Biology Phase II status required for admission into 300- and 400-level biology courses for biology majors.

Faculty Advisors: Biology: Merrill Peterson; Mathematics: Tilmann Glimm.

## **Admission and Declaration Process**

Declaration Process ([see Biology department page](#))

### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

### **Requirements**

- BIOL 204 - Introduction to Evolution, Ecology and Biodiversity
  - BIOL 205 - Introduction to Cellular and Molecular Biology
  - BIOL 206 - Introduction to Organismal Biology
  - BIOL 321 - Genetics
  - BIOL 323 - Cell and Molecular Biology
  - BIOL 325 - Ecology
  - BIOL 432 - Evolutionary Biology
  - CHEM 251 - Elementary Organic Chemistry
  - MATH 204 - Elementary Linear Algebra
  - MATH 224 - Multivariable Calculus and Geometry I
  - MATH 331 - Ordinary Differential Equations
  - MATH 341 - Probability and Statistical Inference
  - MATH 342 - Statistical Methods
  - MATH 432 - Systems of Differential Equations
- NOTE:** The pair MATH 203 and 303 may be substituted for MATH 204 and 331.
- PHYS 121 - Physics With Calculus I
  - PHYS 122 - Physics With Calculus II
  - Choose either:
    - MATH 124 - Calculus and Analytic Geometry I
    - MATH 125 - Calculus and Analytic Geometry II
      - or
    - MATH 134 - Calculus I Honors
    - MATH 135 - Calculus II Honors
      - or
    - MATH 138 - Accelerated Calculus
  - One course from:
    - CSCI 139 - Programming Fundamentals in Python
    - CSCI 140 - Programming Fundamentals in C++
    - CSCI 141 - Computer Programming I
    - MATH 207 - Mathematical Computing
  - 8 credits of approved upper-division electives from biology, math, or math/computer science
  - Choose one of the following series:
    - CHEM 121 - General Chemistry I
    - CHEM 122 - General Chemistry II
    - CHEM 123 - General Chemistry III
      - or
    - CHEM 125 - General Chemistry I, Honors
    - CHEM 126 - General Chemistry II, Honors
    - CHEM 225 - General Chemistry III, Honors

## **Cellular and Molecular Biology, BS**

Jointly offered by the Department of Biology, College of Sciences and Technology and the department of Chemistry, College of Sciences and Technology

**108 credits**

### **Introduction**

This program is specifically designed for students who seek employment or graduate study in cellular biology, molecular biology, or biochemistry.

This is the Cellular and Molecular Biology emphasis. For the Biochemistry Emphasis, see the Chemistry Department section of this catalog.

Faculty Advisors: Marion Brodhagen, David Leaf, Craig Moyer, Joann Otto, Lynn Pillitteri, Sandra Schulze, José Serrano-Moreno, Carol Trent, Heather Van Epps, Jeff Young

Biology Phase II status required for admission into 300- and 400-level biology courses for biology majors.

### **Admission and Declaration Process**

Declaration Process ([see Biology department page](#))

### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

### **Requirements**

- BIOL 204 - Introduction to Evolution, Ecology and Biodiversity
- BIOL 205 - Introduction to Cellular and Molecular Biology
- BIOL 206 - Introduction to Organismal Biology
- BIOL 321 - Genetics
- BIOL 323 - Cell and Molecular Biology
- BIOL 324 - Methods in Molecular Biology
- BIOL 345 - Fundamentals of Microbiology
- BIOL 470 - Functional Genomics
- BIOL 471 - Biochemistry I
- BIOL 472 - Biochemistry II
- BIOL 473 - Molecular Biology
- BIOL 474 - Biochemistry Laboratory
- CHEM 351 - Organic Chemistry
- CHEM 352 - Organic Chemistry
- CHEM 353 - Organic Chemistry
- CHEM 354 - Organic Chemistry Laboratory I
- PHYS 121 - Physics With Calculus I
- PHYS 122 - Physics With Calculus II
- PHYS 123 - Electricity and Magnetism

- One course from:
    - BIOL 322 - Genetics Lab
    - BIOL 346 - Microbiology Lab
  - Choose one of the following series:
    - CHEM 121 - General Chemistry I
    - CHEM 122 - General Chemistry II
    - CHEM 123 - General Chemistry III
      - or
    - CHEM 125 - General Chemistry I, Honors
    - CHEM 126 - General Chemistry II, Honors
    - CHEM 225 - General Chemistry III, Honors
  - One course from:
    - MATH 124 - Calculus and Analytic Geometry I
    - MATH 134 - Calculus I Honors
  - One course from:
    - MATH 125 - Calculus and Analytic Geometry II
    - MATH 135 - Calculus II Honors
  - One course from:
    - MATH 240 - Introduction to Statistics
    - MATH 341 - Probability and Statistical Inference
- Electives should be chosen from the courses listed below to make 55 total credits when combined with the required biology courses. One Group A selection must be included among the electives chosen.
- Group A Electives:
    - BIOL 436 - Molecular Phylogeny and Microbial Diversity
    - BIOL 451 - Plant Growth and Development and (AND)
      - BIOL 453 - Investigations in Plant Development
      - BIOL 467 - Comparative Vertebrate Physiology and (AND)
      - BIOL 468 - Comparative Vertebrate Physiology Laboratory
      - BIOL 479 - Plant Physiology
      - BIOL 482 - Developmental Biology of Animals and (AND)
      - BIOL 484 - Cell and Developmental Biology Laboratory
  - One course from:
    - BIOL 494 - Biology Research (at least 2 credit hours)
    - BIOL 495 - Research Communication (at least 2 credit hours)  
(at least 2 credit hours)
  - Group B Electives:
    - BIOL 325
    - BIOL 432 - Evolutionary Biology  
BIOL 445 or BIOL 497 (under advisement)
    - BIOL 467

## **Chemistry/Biology - Secondary, BAE (also see Chemistry Department)**

Jointly offered by the Department of Biology, College of Sciences and Technology and the Department of Chemistry, College of Sciences and Technology

### **104-109 credits**

Biology Phase II status required for admission into 300- and 400-level biology courses for biology majors.

#### **Introduction**

Biology Phase II status required for admission into 300- and 400-level biology courses for biology majors.

This major must be accompanied by the professional preparation program in secondary education. See the Secondary Education section of this catalog for program admission, completion, and teacher certification requirements.

As certification to teach high school now requires more than four years of study, advisement prior to or at the beginning of the third year is absolutely necessary to avoid lengthening the program.

Faculty Advisors: Deborah Donovan, Alejandro Acevedo-Gutiérrez

#### **Admission and Declaration Process**

Declaration Process ([see Biology department page](#))

#### **Grade Requirements**

Recommendation for teaching endorsement normally requires completion of the major with a grade point of 2.50 or better in the required major courses. Students must earn a grade of C (2.0) or better in the secondary education professional program and in all courses required for the endorsement.

#### **Requirements**

- BIOL 204 - Introduction to Evolution, Ecology and Biodiversity
- BIOL 205 - Introduction to Cellular and Molecular Biology
- BIOL 206 - Introduction to Organismal Biology
- BIOL 321 - Genetics
- BIOL 323 - Cell and Molecular Biology
- BIOL 325 - Ecology
- BIOL 326 - Ecology Laboratory
- BIOL 432 - Evolutionary Biology
- CHEM 351 - Organic Chemistry
- CHEM 352 - Organic Chemistry
- CHEM 353 - Organic Chemistry
- CHEM 354 - Organic Chemistry Laboratory I
- SCED 370 - Science and Society
- SCED 481 - Fundamentals of Teaching Science
- SCED 491 - Methods in Secondary Education for Science Teachers
  - One course from:
- BIOL 471 - Biochemistry I

- CHEM 471 - Biochemistry I
  - One course from:
- BIOL 472 - Biochemistry II
- CHEM 472 - Biochemistry II
  - One course from:
- BIOL 474 - Biochemistry Laboratory
- CHEM 474 - Biochemistry Laboratory
  - One course from:
- BIOL 322 - Genetics Lab
- BIOL 324 - Methods in Molecular Biology
  - Choose one of the following series:
- CHEM 121 - General Chemistry I
- CHEM 122 - General Chemistry II
- CHEM 123 - General Chemistry III
- CHEM 333 - Analytical Chemistry
  - or
- CHEM 125 - General Chemistry I, Honors
- CHEM 126 - General Chemistry II, Honors
- CHEM 225 - General Chemistry III, Honors
  - Choose one of the following series:
- PHYS 114 - Principles of Physics I
- PHYS 115 - Principles of Physics II
- PHYS 116 - Principles of Physics III
  - or
- PHYS 121 - Physics With Calculus I
- PHYS 122 - Physics With Calculus II
- PHYS 123 - Electricity and Magnetism
  - One course from:
- MATH 124 - Calculus and Analytic Geometry I
- MATH 134 - Calculus I Honors

#### **Additional Requirements**

#### **Link to Woodring College of Education Secondary Teacher Education Program**

#### ***Secondary Education Professional Program Requirements***

- EDUC 301 - Educational Psychology I: Development and Individual Differences
- EDUC 302 - Educational Psychology II: Motivation, Learning and Assessment
- EDUC 310 - The Teacher and the Social Order
- IT 444 - Classroom Use of Instructional Technology (Secondary)
- SEC 410 - Dynamics of Teaching
- SEC 411 - Philosophical Foundations of Education
- SEC 425 - Developmental Reading, Writing and Learning in Secondary Schools
- SEC 430 - Secondary School Methods I - Instructional Strategies, Daily Planning, and Standards
- SEC 431 - Secondary School Methods II-Assessment and Long Term Planning
- SEC 432 - Secondary School Methods III - Management, Motivation and Discipline
- SEC 433 - Peer Teaching Laboratory
- SEC 435 - Middle Level Practicum

- SEC 436 - Secondary School Practicum
- SEC 495 - Internship - Secondary
- SPED 363 - Secondary Students With Special Needs

## Biology, Marine and Estuarine Science, Thesis, MS

### Graduate Faculty

**Acevedo-Gutierrez, Alejandro**, PhD, marine vertebrate ecology.  
**Anderson, Roger A.**, PhD, vertebrate behavioral and physiological ecology.  
**Brodhagen, Marion**, PhD, chemical ecology, plant-microbe interactions.  
**DeChaine, Eric**, PhD, evolution and ecology of alpine and arctic flora.  
**Donovan, Deborah A.**, PhD, marine invertebrate physiological ecology.  
**Hooper, David U.**, PhD, ecosystem ecology and plant community ecology.  
**Leaf, David S.**, PhD, cell and developmental biology.  
**Miner, Benjamin G.**, PhD, marine invertebrate ecology and evolution.  
**Moyer, Craig L.**, PhD, evolutionary molecular microbiology.  
**Otto, Joann J.**, PhD, cell biology.  
**Peterson, Merrill A.**, PhD, insect ecology and evolutionary biology.  
**Pillitteri, Lynn**, PhD, eukaryotic cell and molecular biology.  
**Schulze, Sandra**, PhD, chromatin structure and nuclear organization.  
**Schwarz, Dietmar**, PhD, ecological genetics.  
**Serrano-Moreno, José**, PhD, cellular physiology.  
**Singh-Cundy, Anu**, PhD, plant developmental biology.  
**Sulkin, Stephen D.**, PhD, invertebrate larval biology.  
**Trent, Carol**, PhD, molecular and developmental genetics.  
**Van Epps, Heather**, PhD, neuronal development.  
**Y oung, Jeff C.**, PhD, plant genetics.

Program Advisor: Dr. Merrill Peterson, Biology Building 312

Curriculum Coordinators: Dr. Brian Bingham, Huxley College of the Environment; Dr. Stephen Sulkin, Department of Biology

For a complete list of participating faculty and their research interests, and for additional information, visit the MESP website.

The Marine and Estuarine Science option is a joint offering of the Department of Biology, Huxley College, and Shannon Point Marine Center. Students graduating from the program will have an understanding of coastal marine and estuarine environments, biota and topical management issues, and fundamental biological and chemical oceanographic processes.

### Goals

To provide a first-class research experience for our students that will provide them with the background and skills to enter a variety of professional careers in biology. We aim to provide a stimulating intellectual environment with rigorous scholarship that facilitates multiple opportunities for graduate students.

### Prerequisites

A bachelor's degree and departmental permission. Deficiencies in undergraduate courses or those subsequently revealed to the Biology Graduate Committee or to the student's program committee must be removed prior to advancement to candidacy. Applicants are directed to the current requirements of the basic BS degree in biology for a summary of

expected preparation for graduate work. All students should have completed upper-division courses in genetics, cell biology, ecology and biometrics, and supporting introductory course work in organismal biology.

## **Application Information**

**Admit Quarter:** Fall quarter only; spring quarter by petition.

**Deadline:** The deadline for priority consideration is February 1 for fall quarter. See Graduate School deadlines for other quarters.

**TA Deadline:** The deadline for applying for a teaching assistantship is February 1.

**Required Test:** Graduate Record Exam, General Test.

**Supporting Materials:** Application with \$50 fee; three recent letters of reference; two sets of official transcripts from every college/university attended; written description of background and research interests, including an indication of three potential faculty advisors.

## **Program Requirements**

At least 45 total combined credits from the following areas:

### **Requirements in Specialization**

- BIOL 501 - Fundamentals of Biological Research (3 credits)
- BIOL 505 - Current Research in Marine Science
- BIOL 525 - Research Mentorship (4 credits)
- BIOL 598 - Essentials of Biology Graduate Studies (2 credits)
- BIOL 690 - Thesis Research (12-36 credits)

### **Electives**

Courses selected under advisement from 400- and 500-level courses in biology and supporting disciplines. No more than 10 credits may come from 400-level courses. All elective courses must be approved by the student's program committee (14-23).

### **Thesis and Examination**

Degree candidates will submit a thesis based on independent and original research on a problem approved by the student's thesis committee. A final oral exam will be conducted by the advisory committee. Degree candidates will present a department seminar based on the results of the thesis research.

## **Biology, Thesis, MS**

### **Graduate Faculty**

**Acevedo-Gutierrez, Alejandro**, PhD, marine vertebrate ecology.

**Anderson, Roger A.**, PhD, vertebrate behavioral and physiological ecology.

**Brodhagen, Marion**, PhD, chemical ecology, plant-microbe interactions.

**DeChaine, Eric**, PhD, evolution and ecology of alpine and arctic flora.

**Donovan, Deborah A.**, PhD, marine invertebrate physiological ecology.

**Hooper, David U.**, PhD, ecosystem ecology and plant community ecology.  
**Leaf, David S.**, PhD, cell and developmental biology.  
**Miner, Benjamin G.**, PhD, marine invertebrate ecology and evolution.  
**Moyer, Craig L.**, PhD, evolutionary molecular microbiology.  
**Otto, Joann J.**, PhD, cell biology.  
**Peterson, Merrill A.**, PhD, insect ecology and evolutionary biology.  
**Pillitteri, Lynn**, PhD, eukaryotic cell and molecular biology.  
**Schulze, Sandra**, PhD, chromatin structure and nuclear organization.  
**Schwarz, Dietmar**, PhD, ecological genetics.  
**Serrano-Moreno, José**, PhD, cellular physiology.  
**Singh-Cundy, Anu**, PhD, plant developmental biology.  
**Sulkin, Stephen D.**, PhD, invertebrate larval biology.  
**Trent, Carol**, PhD, molecular and developmental genetics.  
**Van Epps, Heather**, PhD, neuronal development.  
**Y oung, Jeff C.**, PhD, plant genetics.

Program Advisor: Dr. Merrill Peterson, Biology Building 312

### Goals

To provide a first-class research experience for our students that will provide them with the background and skills to enter a variety of professional careers in biology. We aim to provide a stimulating intellectual environment with rigorous scholarship that facilitates multiple opportunities for graduate students.

### Prerequisites

A bachelor's degree and departmental permission. Deficiencies in undergraduate courses or those subsequently revealed to the Biology Graduate Committee or to the student's program committee must be removed prior to advancement to candidacy. Applicants are directed to the current requirements of the basic BS degree in biology for a summary of expected preparation for graduate work. All students should have completed upper-division courses in genetics, cell biology, ecology and biometrics, and supporting introductory course work in organismal biology.

### Application Information

**Admit Quarters:** Fall quarter only; spring quarter by petition.

**Deadline:** The deadline for priority consideration is February 1 for fall quarter. See Graduate School deadlines for other quarters.

**TA Deadline:** The deadline for applying for a teaching assistantship is February 1.

**Required Test:** Graduate Record Exam, General Test.

**Supporting Materials:** Application with \$50 fee; three recent letters of reference; two sets of official transcripts from every college/university attended; written description of background and research interests, including an indication of potential faculty advisors.

### Program Requirements

At least 45 total combined credits from the following areas:

## **Requirements in Specialization**

- BIOL 501 - Fundamentals of Biological Research (3 credits)
- BIOL 525 - Research Mentorship (4 credits)
- BIOL 598 - Essentials of Biology Graduate Studies (2 credits)
- BIOL 690 - Thesis Research (12-36 credits)
- Courses offered through the biology department, selected under advisement (2)

## **Electives**

Courses selected under advisement from 400- and 500-level courses in biology and supporting disciplines. No more than 10 credits may come from 400-level courses. All elective courses must be approved by the student's program committee (13-22).

## **Thesis and Examination**

Degree candidates will submit a thesis based on independent and original research on a problem approved by the student's thesis committee. A final oral exam will be conducted by the advisory committee. Degree candidates will present a seminar based on the results of the thesis research.

# **Chemistry**

## **Introduction**

[www.chem.wwu.edu/dept](http://www.chem.wwu.edu/dept)

The Department of Chemistry offers undergraduate degree programs in chemistry and biochemistry. American Chemical Society accreditation is available to BS graduates in chemistry. The WWU chemistry and biochemistry program is recognized as one of the finest in the country and is focused on supporting our students and ensuring their success in their chosen careers. The Department of Chemistry — in addition to its core of fundamental studies in physical, inorganic, organic, analytical and biochemistry — has added a variety of elective courses that offer diversity in training, study and research at both the undergraduate and graduate levels. Within the department, faculty members are active in many research areas, including organometallic chemistry, organic synthesis, photochemistry, protein and nucleic acid biochemistry, molecular biology of viruses, electrochemistry, molecular spectroscopy, reaction kinetics, materials, polymers, and environmental chemistry. Detailed explanations of the current research areas of the faculty can be found on the department website (<http://www.chem.wwu.edu>).

Every effort is made to update and modernize course work and teaching methods. The department maintains state-of-the-art instrumentation for both teaching and research activities. Students gain experience in modern analytical methods through hands-on use of the instrumentation. Several faculty members have authored successful textbooks and computer-assisted instructional materials that have found wide usage at major universities. Western's graduates have a long and enviable record of success in PhD programs at major research-oriented universities and in a variety of medical, dental and pharmacy programs.

## **Faculty**

All of the members of the department hold the PhD degree, and most have had postdoctoral experience before coming to Western. The department supports an active undergraduate research program, and students are encouraged to undertake a research project early in their studies.

There is a high degree of personal contact between faculty and students in the department. Supporting students is a core mission of the department. Faculty and department staff members can assist with academic and career counseling.

**STEVEN D. GAMMON** (2002) Chair and Professor. BA, Bowdoin College; PhD, University of Illinois at Urbana-Champaign.

**SPENCER J. ANTHONY-CAHILL** (1997) Associate Professor. BA, Whitman College; PhD, University of California-Berkeley.

**EMILY J. BORDA** (2005) Assistant Professor. BS, Gonzaga University; MEd, PhD, University of Washington.

**MARK E. BUSSELL** (1990) Professor. BA, Reed College; PhD, University of California-Berkeley.

**TIMOTHY B. CLARK** (2007) Assistant Professor. BA, University of San Diego; PhD, University of California-Irvine.

**STEVEN R. EMORY** (2001) Associate Professor. BS, California Lutheran University; PhD, Indiana University.

**JOHN D. GILBERTSON** (2008) Assistant Professor. BA, Augustana College; MS, PhD, University of Oregon.

**GEORGE S. KRIZ** (1967) Professor. BS, University of California-Berkeley; PhD, Indiana University.

**AMANDA MURPHY** (2010) Assistant Professor, BS and BA, Western Washington University; PhD, University of California-Berkeley.

**ARLAN NORMAN** (2003) Professor and Dean of the College of Sciences and Technology. BS, University of North Dakota; PhD, Indiana University.

**GREGORY W. O'NEIL** (2008) Assistant Professor. BS, Boston College; PhD University of Colorado-Boulder.

**DAVID L. PATRICK** (1996) Professor. BS, University of California-Davis; PhD, University of Utah.

**GERRY A. PRODY** (1984) Associate Professor. BS, PhD, University of California-Davis.

**ELIZABETH A. RAY MOND** (2006) Assistant Professor. BA, Whitman College; PhD, University of Oregon.

**SERGE SMIRNOV** (2008) Assistant Professor. BS, MS, Moscow Institute of Physics & Technology; PhD, State University of New York at Stony Brook.

**P. CLINT SPIEGEL** (2007) Assistant Professor. BS, Oregon State University; PhD, University of Washington.

**JAMES R. VYVYAN** (1997) Professor. BS, University of Wisconsin-Eau Claire; PhD, University of Minnesota.

## **Research Associate**

**THOMAS K. PRATUM** (2004) BS, University of Puget Sound; PhD, University of California-Berkeley.

## **Departmental Honors**

A chemistry department major who wishes to graduate with honors in chemistry must complete a one-year program of research, culminating in CHEM 498. The student must also maintain a 3.50 cumulative grade point average, submit a senior thesis and present a public seminar covering the research topic. Criteria for candidacy for departmental honors are 1) a minimum grade point average of 3.50 at the conclusion of the penultimate year and 2) acceptance for admission to the program by the chemistry department. Students who are in the University Honors Program must also satisfy these departmental requirements.

## **Other Departmental Information**

### *Programs and Career Opportunities*

The programs of study offered by the chemistry department are diverse and challenging, and provide the following benefits to the student:

- A wide variety of accredited programs, designed to meet diverse career goals
- A faculty committed to excellence in undergraduate education and research
- Close student-faculty contact and relatively small classes
- Direct access to modern laboratory equipment and instrumentation
- Opportunity for research work under the direction of a faculty advisor

The chemistry department offers three basic degree programs: Bachelor of Science, Bachelor of Arts and Bachelor of Arts in Education. All three programs have a common core of study:

- One year of general chemistry and one year of college-level calculus
- One year of organic chemistry, one year of college physics and one quarter of analytical chemistry
- One year of physical chemistry

This provides the foundation for elective courses in the student's area of interest. Through choice of degree programs and electives, the student can prepare for careers in industry or government, teaching at the secondary level or further study at the graduate level.

Students planning to major in chemistry or biochemistry or to begin university transfer programs involving chemistry courses are advised to consult the department during the first year to arrange for the proper sequence of courses.

Students planning to transfer to Western after completing two years of college study elsewhere should complete as many of the following program requirements as possible prior to transfer in order to avoid delays in degree work completion:

- One year of general chemistry
- One year of college-level calculus
- One year of organic chemistry
- One year of college-level physics
- One quarter or one semester of analytical chemistry

**Bachelor of Science.** The department offers BS programs in chemistry and biochemistry. These are specifically designed for students interested in graduate study or careers in industry and government as laboratory scientists.

**Bachelor of Arts.** This program provides less intensive training in chemistry but, when combined with a minor in a related area, prepares students for a variety of career opportunities in fields such as:

- Chemical Sales and Marketing
- Computer Sciences
- Technical Writing (Journalism)
- Environmental Sciences
- Secondary School Teaching

**Bachelor of Arts in Education.** This program provides several program emphases (chemistry-biology, chemistry-mathematics, and chemistry-physics). Although requirements within these options differ in detail, the three programs are similar enough that the prospective teacher need not choose among them until the sophomore or junior year. Successful graduates are qualified to teach in their areas of concentration at the middle school or high school level. Prospective teachers with qualifications in more than one area will have a distinct advantage in seeking such positions. Detailed descriptions of each of these degree programs and course descriptions are given below.

#### **Graduate Study**

For concentrations leading to the Master of Education or the Master of Science degrees, see the *Graduate School* section of this catalog.

#### **Undergraduate Degrees and Programs**

Biochemistry, BS

Biology/Chemistry - Secondary, BAE

Chemistry, BA

Chemistry/Physics — Secondary, BAE

Chemistry/Mathematics — Secondary, BAE

Chemistry, BS

#### **Graduate Degrees and Programs**

Chemistry, Thesis, MS

Chemistry, Industry Internship, Non-Thesis, MS

## **Biochemistry, BS**

Jointly offered by the Department of Chemistry, College of Sciences and Technology and the Department of Biology, College of Science and Technology

**110 credits**

### **Introduction**

Admission to the Bachelor of Science major in biochemistry is selective and based upon preparation and prior academic performance. Application may be made through the chemistry department, Chemistry Building 270. Admission to the biochemistry major will be in two phases. Students will be designated Phase I majors until they have completed CHEM 121, 122, 123, 351 and 352 and BIOL 205. Students will be admitted to Phase II based on their performance in Phase I. Students with a grade point average of 3.0 or higher in the Phase I courses will be given preferential admission to Phase II. Students with a grade point average below 3.0 will be considered on a case by case basis for remaining spaces in the major. See the department's website for more details.

This major is part of an interdisciplinary program between the biology and chemistry departments at Western. The BS degree in biochemistry (with greater emphasis on the physical chemical theory behind biological chemistry) is offered via the chemistry department, whereas a BS degree in cellular and molecular biology (with a different emphasis) is offered via the biology department. The requirements for the BS in biochemistry are listed below. For the cellular and molecular biology degree program, see the biology department section of this catalog.

This program is specifically designed for students who seek graduate study or employment in biochemistry or molecular biology.

A typical four-year program leading to a Bachelor of Science degree in biochemistry is described on the department's website.

### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

### **Requirements**

- BIOL 204 - Introduction to Evolution, Ecology and Biodiversity
- BIOL 205 - Introduction to Cellular and Molecular Biology
- BIOL 321 - Genetics
- BIOL 323 - Cell and Molecular Biology
- BIOL 324 - Methods in Molecular Biology
- CHEM 351 - Organic Chemistry
- CHEM 352 - Organic Chemistry
- CHEM 353 - Organic Chemistry
- CHEM 354 - Organic Chemistry Laboratory I
- CHEM 461 - Physical Chemistry
- CHEM 467 - Biophysical Chemistry
- CHEM 468 - Biophysical Chemistry
- CHEM 471 - Biochemistry I
- CHEM 472 - Biochemistry II
- CHEM 473 - Molecular Biology

- CHEM 474 - Biochemistry Laboratory
- MATH 224 - Multivariable Calculus and Geometry I
- PHYS 121 - Physics With Calculus I
- PHYS 122 - Physics With Calculus II
- PHYS 123 - Electricity and Magnetism
- Choose one of the following series:
- CHEM 121 - General Chemistry I
- CHEM 122 - General Chemistry II
- CHEM 123 - General Chemistry III
- CHEM 333 - Analytical Chemistry  
        or
- CHEM 125 - General Chemistry I, Honors
- CHEM 126 - General Chemistry II, Honors
- CHEM 225 - General Chemistry III, Honors
- Choose either:
- MATH 124 - Calculus and Analytic Geometry I
- MATH 125 - Calculus and Analytic Geometry II  
        or
- MATH 134 - Calculus I Honors
- MATH 135 - Calculus II Honors  
        or
- MATH 138 - Accelerated Calculus
- Approved electives to total 2 credits

### **Departmental Honors**

A chemistry department major who wishes to graduate with honors in chemistry must complete a one-year program of research, culminating in CHEM 498. The student must also maintain a 3.50 cumulative grade point average, submit a senior thesis and present a public seminar covering the research topic. Criteria for candidacy for departmental honors are 1) a minimum grade point average of 3.50 at the conclusion of the penultimate year and 2) acceptance for admission to the program by the chemistry department. Students who are in the University Honors Program must also satisfy these departmental requirements.

### **Chemistry Minor**

**30-33 credits**

#### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

#### **Requirements**

- CHEM 121 - General Chemistry I
- CHEM 122 - General Chemistry II
- CHEM 123 - General Chemistry III
- Completion of one of the following tracks:  
      — A.
- CHEM 333 - Analytical Chemistry

- CHEM 461 - Physical Chemistry
  - CHEM 462 - Physical Chemistry
  - CHEM 463 - Physical Chemistry
- B.
- CHEM 333
- CHEM 351 - Organic Chemistry
  - CHEM 352 - Organic Chemistry
  - CHEM 353 - Organic Chemistry
  - CHEM 354 - Organic Chemistry Laboratory I
- C.
- CHEM 351
  - CHEM 352
  - CHEM 353
  - CHEM 354
- One course from:
- CHEM 375 - Elements of Biochemistry
  - CHEM 471 - Biochemistry I

The general chemistry honors sequence (CHEM 125, 126, 225) may be substituted for CHEM 121, 122, 123 and 333, for Tracks A and B.

## Chemistry, BA

**88 credits**

### Introduction

Admission to the Bachelor of Arts major in chemistry is selective and based upon preparation and prior academic performance. Application may be made through the chemistry department, Chemistry Building 270. Admission to the chemistry major will be in two phases. Students will be designated Phase I majors until they have completed CHEM 121, 122, 123, 351 and 352. Students will be admitted to Phase II based on their performance in Phase I. Students with a grade point average of 2.5 or higher in the Phase I courses will be given preferential admission to Phase II. Students with a grade point average below 2.5 will be considered on a case by case basis for remaining spaces in the major. See the department's website for more details.

Students planning on careers as high school teachers must take SCED 370, 481 and 491 to earn an endorsement in chemistry, plus the secondary education program in addition to the Bachelor of Arts degree. See the Secondary Education section of this catalog for program admission, completion, and teacher certification requirements. Because certification to teach high school now requires more than four years, advisement prior to or at the beginning of the third year is absolutely necessary to avoid lengthening the program. Students also are strongly advised to complete requirements for a broad area science endorsement by taking BIOL 204, 205, 206 and Geol 211, 212 and ASTR 103 or 315.

### Grade Requirements

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors. Courses required for a state teaching endorsement must be completed with a grade of C (2.0) or above.

## Requirements

- CHEM 351 - Organic Chemistry
- CHEM 352 - Organic Chemistry
- CHEM 353 - Organic Chemistry
- CHEM 354 - Organic Chemistry Laboratory I
- CHEM 355 - Organic Chemistry Laboratory II
- CHEM 441 - Advanced Inorganic Chemistry
- CHEM 461 - Physical Chemistry
- CHEM 462 - Physical Chemistry
- CHEM 463 - Physical Chemistry
- CHEM 464 - Physical/Inorganic Chemistry Laboratory I
- MATH 224 - Multivariable Calculus and Geometry I
  - Choose either:
    - CHEM 121 - General Chemistry I
    - CHEM 122 - General Chemistry II
    - CHEM 123 - General Chemistry III
    - CHEM 333 - Analytical Chemistry
  - or
  - CHEM 125 - General Chemistry I, Honors
  - CHEM 126 - General Chemistry II, Honors
  - CHEM 225 - General Chemistry III, Honors
- Choose either:
  - CHEM 375 - Elements of Biochemistry
  - or
  - CHEM 471 - Biochemistry I
  - CHEM 472 - Biochemistry II
- Choose either:
  - MATH 124 - Calculus and Analytic Geometry I
  - MATH 125 - Calculus and Analytic Geometry II
  - or
  - MATH 134 - Calculus I Honors
  - MATH 135 - Calculus II Honors
  - or
  - MATH 138 - Accelerated Calculus
- One year of college physics (recommended sequence is Phys 121, 122, 123)

## Departmental Honors

A chemistry department major who wishes to graduate with honors in chemistry must complete a one-year program of research, culminating in CHEM 498. The student must also maintain a 3.50 cumulative grade point average, submit a senior thesis and present a public seminar covering the research topic. Criteria for candidacy for departmental honors are 1) a minimum grade point average of 3.50 at the conclusion of the penultimate year and 2) acceptance for admission to the program by the chemistry department. Students who are in the University Honors Program must also satisfy these departmental requirements.

## **Chemistry, BS**

**109 credits**

### **Introduction**

Admission to the Bachelor of Science major in chemistry is selective and based upon preparation and prior academic performance. Application may be made through the chemistry department, Chemistry Building 270. Admission to the chemistry major will be in two phases. Students will be designated Phase I majors until they have completed CHEM 121, 122, 123, 351 and 352. Students will be admitted to Phase II based on their performance in Phase I. Students with a grade point average of 2.5 or higher in the Phase I courses will be given preferential admission to Phase II. Students with a grade point average below 2.5 will be considered on a case by case basis for remaining spaces in the major. See the department's website for more details. The chemistry department at Western Washington University is approved by the American Chemical Society, and students who complete the Bachelor of Science in chemistry program receive ACS certification of their degree.

A typical four-year program leading to a Bachelor of Science (ACS certified) is described on the department's website.

### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

### **Requirements**

- CHEM 351 - Organic Chemistry
- CHEM 352 - Organic Chemistry
- CHEM 353 - Organic Chemistry
- CHEM 354 - Organic Chemistry Laboratory I
- CHEM 355 - Organic Chemistry Laboratory II
- CHEM 434 - Instrumental Analysis
- CHEM 436 - Instrumental Analysis Laboratory
- CHEM 441 - Advanced Inorganic Chemistry
- CHEM 461 - Physical Chemistry
- CHEM 462 - Physical Chemistry
- CHEM 463 - Physical Chemistry
- CHEM 464 - Physical/Inorganic Chemistry Laboratory I
- CHEM 465 - Physical/Inorganic Chemistry Laboratory II
- MATH 224 - Multivariable Calculus and Geometry I
- MATH 204 - Elementary Linear Algebra
- PHYS 121 - Physics With Calculus I
- PHYS 122 - Physics With Calculus II
- PHYS 123 - Electricity and Magnetism
- Choose either:
- CHEM 121 - General Chemistry I
- CHEM 122 - General Chemistry II
- CHEM 123 - General Chemistry III
- CHEM 333 - Analytical Chemistry  
      or
- CHEM 125 - General Chemistry I, Honors

- CHEM 126 - General Chemistry II, Honors
- CHEM 225 - General Chemistry III, Honors
  - Choose either:
  - CHEM 375 - Elements of Biochemistry  
or
  - CHEM 471 - Biochemistry I
  - CHEM 472 - Biochemistry II
    - Choose either:
    - MATH 124 - Calculus and Analytic Geometry I
    - MATH 125 - Calculus and Analytic Geometry II  
or
    - MATH 134 - Calculus I Honors
    - MATH 135 - Calculus II Honors  
or
    - MATH 138 - Accelerated Calculus
- Advanced electives with prior departmental approval to total 9 credits

### **Departmental Honors**

A chemistry department major who wishes to graduate with honors in chemistry must complete a one-year program of research, culminating in CHEM 498. The student must also maintain a 3.50 cumulative grade point average, submit a senior thesis and present a public seminar covering the research topic. Criteria for candidacy for departmental honors are 1) a minimum grade point average of 3.50 at the conclusion of the penultimate year and 2) acceptance for admission to the program by the chemistry department. Students who are in the University Honors Program must also satisfy these departmental requirements.

## **Chemistry/Biology - Secondary, BAE**

Jointly offered by the Department of Biology, College of Sciences and Technology and the Department of Chemistry, College of Sciences and Technology

### **104-109 credits**

Biology Phase II status required for admission into 300- and 400-level biology courses for biology majors.

### **Introduction**

Biology Phase II status required for admission into 300- and 400-level biology courses for biology majors.

This major must be accompanied by the professional preparation program in secondary education. See the Secondary Education section of this catalog for program admission, completion, and teacher certification requirements.

As certification to teach high school now requires more than four years of study, advisement prior to or at the beginning of the third year is absolutely necessary to avoid lengthening the program.

Faculty Advisors: Deborah Donovan, Alejandro Acevedo-Gutiérrez

### **Admission and Declaration Process**

Declaration Process ([see Chemistry department page](#))

## **Grade Requirements**

Recommendation for teaching endorsement normally requires completion of the major with a grade point of 2.50 or better in the required major courses. Students must earn a grade of C (2.0) or better in the secondary education professional program and in all courses required for the endorsement.

## **Requirements**

- BIOL 204 - Introduction to Evolution, Ecology and Biodiversity
- BIOL 205 - Introduction to Cellular and Molecular Biology
- BIOL 206 - Introduction to Organismal Biology
- BIOL 321 - Genetics
- BIOL 323 - Cell and Molecular Biology
- BIOL 325 - Ecology
- BIOL 326 - Ecology Laboratory
- BIOL 432 - Evolutionary Biology
- CHEM 351 - Organic Chemistry
- CHEM 352 - Organic Chemistry
- CHEM 353 - Organic Chemistry
- CHEM 354 - Organic Chemistry Laboratory I
- SCED 370 - Science and Society
- SCED 481 - Fundamentals of Teaching Science
- SCED 491 - Methods in Secondary Education for Science Teachers
- One course from:
  - BIOL 471 - Biochemistry I
  - CHEM 471 - Biochemistry I
- One course from:
  - BIOL 472 - Biochemistry II
  - CHEM 472 - Biochemistry II
- One course from:
  - BIOL 474 - Biochemistry Laboratory
  - CHEM 474 - Biochemistry Laboratory
- One course from:
  - BIOL 322 - Genetics Lab
  - BIOL 324 - Methods in Molecular Biology
- Choose one of the following series:
  - CHEM 121 - General Chemistry I
  - CHEM 122 - General Chemistry II
  - CHEM 123 - General Chemistry III
  - CHEM 333 - Analytical Chemistry
    - or
  - CHEM 125 - General Chemistry I, Honors
  - CHEM 126 - General Chemistry II, Honors
  - CHEM 225 - General Chemistry III, Honors
- Choose one of the following series:
  - PHYS 114 - Principles of Physics I
  - PHYS 115 - Principles of Physics II
  - PHYS 116 - Principles of Physics III

- or
- PHYS 121 - Physics With Calculus I
  - PHYS 122 - Physics With Calculus II
  - PHYS 123 - Electricity and Magnetism
    - One course from:
  - MATH 124 - Calculus and Analytic Geometry I
  - MATH 134 - Calculus I Honors

#### **Additional Requirements**

#### **Link to Woodring College of Education Secondary Teacher Education Program**

##### ***Secondary Education Professional Program Requirements***

- EDUC 301 - Educational Psychology I: Development and Individual Differences
- EDUC 302 - Educational Psychology II: Motivation, Learning and Assessment
- EDUC 310 - The Teacher and the Social Order
- IT 444 - Classroom Use of Instructional Technology (Secondary)
- SEC 410 - Dynamics of Teaching
- SEC 411 - Philosophical Foundations of Education
- SEC 425 - Developmental Reading, Writing and Learning in Secondary Schools
- SEC 430 - Secondary School Methods I - Instructional Strategies, Daily Planning, and Standards
- SEC 431 - Secondary School Methods II-Assessment and Long Term Planning
- SEC 432 - Secondary School Methods III - Management, Motivation and Discipline
- SEC 433 - Peer Teaching Laboratory
- SEC 435 - Middle Level Practicum
- SEC 436 - Secondary School Practicum
- SEC 495 - Internship - Secondary
- SPED 363 - Secondary Students With Special Needs

#### **Chemistry/Mathematics — Secondary, BAE**

Jointly offered by the Department of Chemistry, College of Sciences and Technology and the Department of Physics, College of Sciences and Technology

**102-121 credits plus supporting courses in physics**

#### **Introduction**

This major must be accompanied by the professional education program in secondary education. This major meets the requirements for Washington state teaching endorsements in both chemistry and mathematics. See the Secondary Education section of this catalog for program admission, completion, and teacher certification requirements.

As certification to teach high school now requires more than four years of study, advisement prior to or at the beginning of the third year is absolutely necessary to avoid lengthening the program.

#### **Grade Requirements**

Recommendation for teaching endorsement normally requires completion of the following major with a grade point of 2.50 or better in the required major courses.

Students must earn a grade of C (2.0) or better in the secondary education professional program and in all courses required for the endorsement.

## Requirements

- CHEM 461 - Physical Chemistry
  - CHEM 462 - Physical Chemistry
  - MATH 204 - Elementary Linear Algebra
  - MATH 209 - Discrete Mathematics
  - MATH 224 - Multivariable Calculus and Geometry I
  - MATH 331 - Ordinary Differential Equations
  - MATH 360 - Euclidean and Non-Euclidean Geometry
  - MATH 419 - Historical Perspectives of Mathematics
  - MATH 483 - Methods of Teaching Secondary Mathematics
- NOTE:** The pair MATH 203 and 303 may be substituted for MATH 204 and 331
- PHYS 121 - Physics With Calculus I
  - PHYS 122 - Physics With Calculus II
  - PHYS 123 - Electricity and Magnetism
  - SCED 370 - Science and Society
  - SCED 481 - Fundamentals of Teaching Science
  - SCED 491 - Methods in Secondary Education for Science Teachers
- Choose either:
- CHEM 121 - General Chemistry I
  - CHEM 122 - General Chemistry II
  - CHEM 123 - General Chemistry III
  - CHEM 333 - Analytical Chemistry
- or
- CHEM 125 - General Chemistry I, Honors
  - CHEM 126 - General Chemistry II, Honors
  - CHEM 225 - General Chemistry III, Honors
- Option A or B:
- A:
- CHEM 251 - Elementary Organic Chemistry
  - CHEM 375 - Elements of Biochemistry
- B:
- CHEM 351 - Organic Chemistry
  - CHEM 352 - Organic Chemistry
  - CHEM 353 - Organic Chemistry
  - CHEM 354 - Organic Chemistry Laboratory I
- CHEM 375
- or
- CHEM 471 - Biochemistry I
  - CHEM 472 - Biochemistry II
  - CHEM 473 - Molecular Biology
- Choose either:
- MATH 124 - Calculus and Analytic Geometry I
  - MATH 125 - Calculus and Analytic Geometry II
- or

- MATH 134 - Calculus I Honors
- MATH 135 - Calculus II Honors  
or
- MATH 138 - Accelerated Calculus
- At least two of the following:
- MATH 207 - Mathematical Computing
- MATH 341 - Probability and Statistical Inference
- MATH 410 - Mathematical Modeling

#### **Additional Requirements**

#### **Link to Woodring College of Education Secondary Teacher Education Program**

#### *Secondary Education Professional Program Requirements*

- EDUC 301 - Educational Psychology I: Development and Individual Differences
- EDUC 302 - Educational Psychology II: Motivation, Learning and Assessment
- EDUC 310 - The Teacher and the Social Order
- IT 444 - Classroom Use of Instructional Technology (Secondary)
- SEC 410 - Dynamics of Teaching
- SEC 411 - Philosophical Foundations of Education
- SEC 425 - Developmental Reading, Writing and Learning in Secondary Schools
- SEC 430 - Secondary School Methods I - Instructional Strategies, Daily Planning, and Standards
- SEC 431 - Secondary School Methods II-Assessment and Long Term Planning
- SEC 432 - Secondary School Methods III - Management, Motivation and Discipline
- SEC 433 - Peer Teaching Laboratory
- SEC 435 - Middle Level Practicum
- SEC 436 - Secondary School Practicum
- SEC 495 - Internship - Secondary
- SPED 363 - Secondary Students With Special Needs

## **Chemistry/Physics — Secondary, BAE**

Jointly offered by the Department of Chemistry, College of Sciences and Technology and the Department of Physics, College of Sciences and Technology

**97-117 credits**

#### **Introduction**

This major must be accompanied by the professional preparation program in secondary education. See the Secondary Education section of this catalog for program admission, completion, and teacher certification requirements.

As certification to teach high school now requires more than four years of study, advisement prior to or at the beginning of the third year is absolutely necessary to avoid lengthening the program.

## **Grade Requirements**

A cumulative GPA of at least 2.50, plus a minimum grade of C (2.0) or better in the individual courses, must be maintained in the courses required by the major. Students must also earn a grade of c (2.0) or better in the secondary education professional program.

## **Requirements**

- ASTR 315 - The Solar System
- CHEM 461 - Physical Chemistry
- CHEM 462 - Physical Chemistry
- MATH 224 - Multivariable Calculus and Geometry I
- PHYS 121 - Physics With Calculus I
- PHYS 122 - Physics With Calculus II
- PHYS 123 - Electricity and Magnetism
- PHYS 223 - Waves and Optics
- PHYS 224 - Modern Physics I
- PHYS 225 - Modern Physics II
- PHYS 233 - Waves and Optics Laboratory
- PHYS 235 - Modern Physics Lab
- PHYS 326 - Tools and Data Analysis in Physics
- SCED 370 - Science and Society
- SCED 481 - Fundamentals of Teaching Science
- SCED 491 - Methods in Secondary Education for Science Teachers
- Choose either:
  - CHEM 121 - General Chemistry I
  - CHEM 122 - General Chemistry II
  - CHEM 123 - General Chemistry III
  - CHEM 333 - Analytical Chemistryor
  - CHEM 125 - General Chemistry I, Honors
  - CHEM 126 - General Chemistry II, Honors
  - CHEM 225 - General Chemistry III, Honors
- Choose either option A or B:
  - Option A:
    - CHEM 251 - Elementary Organic Chemistry
    - CHEM 375 - Elements of Biochemistry
  - Option B:
    - The following:
      - CHEM 351 - Organic Chemistry
      - CHEM 352 - Organic Chemistry
      - CHEM 353 - Organic Chemistry
      - CHEM 354 - Organic Chemistry Laboratory I
    - CHEM 375
      - or
      - The following:
        - CHEM 471 - Biochemistry I
        - CHEM 472 - Biochemistry II
        - CHEM 473 - Molecular Biology

- 6 upper-division credits in physics and/or astronomy under advisement, to include 2-3 credits of:
- PHYS 491 - Senior Project in Experimental Physics
- PHYS 492 - Senior Project in Theoretical Physics
- ASTR 493 - Senior Project in Astronomy
- Choose either:
- MATH 124 - Calculus and Analytic Geometry I
- MATH 125 - Calculus and Analytic Geometry II  
or
- MATH 134 - Calculus I Honors
- MATH 135 - Calculus II Honors  
or
- MATH 138 - Accelerated Calculus

### **Additional Requirements**

#### **Link to Woodring College of Education Secondary Teacher Education Program**

##### ***Secondary Education Professional Program Requirements***

- EDUC 301 - Educational Psychology I: Development and Individual Differences
- EDUC 302 - Educational Psychology II: Motivation, Learning and Assessment
- EDUC 310 - The Teacher and the Social Order
- IT 444 - Classroom Use of Instructional Technology (Secondary)
- SEC 410 - Dynamics of Teaching
- SEC 425 - Developmental Reading, Writing and Learning in Secondary Schools
- SEC 430 - Secondary School Methods I - Instructional Strategies, Daily Planning, and Standards
- SEC 431 - Secondary School Methods II-Assessment and Long Term Planning
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- SEC 433 - Peer Teaching Laboratory
- SEC 435 - Middle Level Practicum
- SEC 436 - Secondary School Practicum
- SEC 495 - Internship - Secondary
- SPED 363 - Secondary Students With Special Needs

### **Chemistry, Industry Internship, Non-Thesis, MS**

#### **Graduate Faculty**

**Anthony-Cahill, Spencer J.**, PhD, protein folding, protein engineering.

**Borda, Emily J.**, PhD, investigation of college students' development of epistemological beliefs about science.

**Bussell, Mark E.**, PhD, surface and materials chemistry of catalytic and environmental processes.

**Clark, Timothy B.**, PhD, organic reaction development, asymmetric catalysis, organometallic catalyst design

**Emory, Steven R.**, PhD, analytical chemistry, spectroscopy, nanomaterials.

**Gilbertson, John D.**, PhD, inorganic synthesis, small molecule activation, nanoparticle catalysis.

**Gammon, Steven D.**, PhD, chemical education, computer-based instruction.

**Kriz, George S.**, PhD, physical organic chemistry.

**Murphy, Amanda.**, PhD, organic synthesis, polymer and materials chemistry.

**O'Neil, Gregory W.**, PhD, natural products chemistry, organic synthesis.

**Patrick, David L.**, PhD, analytical and computational chemistry of condensed phases.

**Prody, Gerry A.**, PhD, biochemistry and molecular biology of plant viruses, plant pollen tubes, marine biochemistry, environmental biochemistry.

**Raymond, Elizabeth A.**, PhD, liquid interfaces and surfaces.

**Smirnov, Serge**, PhD, structure, dynamics, function and engineering of modular proteins.

**Spiegel, P. Clint**, PhD, RNA and protein biochemistry, ribosome structure and function.

**Vyvyan, James R.**, PhD, organic synthesis, natural products, asymmetric catalysis.

Program Advisor: P. Clint Spiegel

## Goals

This program prepares students for technical careers in industry, or for further study toward a more advanced degree.

## Prerequisites

A bachelor's degree and departmental approval. Applicants are expected to have completed the following courses (or their equivalent) with a grade of B or better: CHEM 333, CHEM 434, CHEM 351, 352, 353, CHEM 461, 462, 463, and CHEM 441 or CHEM 471, 472, 473. A student with lower than B may be required to repeat that course as determined under advisement with the graduate program advisor.

## Application Information

**Specific Test Requirements:** Graduate Record Exam, General Test.

**Supporting Materials:** A statement of research interests and future goals, including identification of up to three potential faculty research advisors, must accompany application.

## Industrial Internship Option, Non-Thesis

Students interested in pursuing a career in industry can obtain practical experience by participating in the industrial internship option as part of their MS program. Students choosing this option will normally earn a master's degree via the non-thesis option. However, in those instances where the research problem undertaken in the industrial setting can be coordinated with on-campus research, the student may exercise the thesis option, with approval of the graduate advisor.

Students spend one or two quarters as an intern with a company which has been selected in advance. This internship will normally take place during the second year of graduate study. Students interested in pursuing an industrial internship should notify the program advisor as early as possible during the first year of graduate study. The department cannot guarantee that an internship opening will be available for all interested students.

In addition to the internship, students exercising this option will be expected to submit a comprehensive report, according to an approved format, describing the work accomplished during the internship. A seminar presentation describing the work is required. Additionally, the student will be expected to pursue a limited research problem on campus. This research problem will normally require the equivalent of one quarter's work, although it may be extended over more than one quarter.

## Course Work Requirements (48 credits)

- CHEM 501 - Research Project in Chemistry
- CHEM 595 - Seminar
- CHEM 596 - Seminar in Current Chemistry and Biochemistry
- CHEM 694 - Industrial Internship in Chemistry  
plus 31 credits under advisement

# **Chemistry, Thesis, MS**

## **Graduate Faculty**

**Anthony-Cahill, Spencer J.**, PhD, protein folding, protein engineering.  
**Borda, Emily J.**, PhD, investigation of college students' development of epistemological beliefs about science.  
**Bussell, Mark E.**, PhD, surface and materials chemistry of catalytic and environmental processes.  
**Clark, Timothy B.**, PhD, organic reaction development, asymmetric catalysis, organometallic catalyst design  
**Emory, Steven R.**, PhD, analytical chemistry, spectroscopy, nanomaterials.  
**Gilbertson, John D.**, PhD, inorganic synthesis, small molecule activation, nanoparticle catalysis.  
**Gammon, Steven D.**, PhD, chemical education, computer-based instruction.  
**Kriz, George S.**, PhD, physical organic chemistry.  
**Murphy, Amanda.**, PhD, organic synthesis, polymer and materials chemistry.  
**O'Neil, Gregory W.**, PhD, natural products chemistry, organic synthesis.  
**Patrick, David L.**, PhD, analytical and computational chemistry of condensed phases.  
**Prody, Gerry A.**, PhD, biochemistry and molecular biology of plant viruses, plant pollen tubes, marine biochemistry, environmental biochemistry.  
**Raymond, Elizabeth A.**, PhD, liquid interfaces and surfaces.  
**Smirnov, Serge**, PhD, structure, dynamics, function and engineering of modular proteins.  
**Spiegel, P. Clint**, PhD, RNA and protein biochemistry, ribosome structure and function.  
**Vyvyan, James R.**, PhD, organic synthesis, natural products, asymmetric catalysis.

Program Advisor: P. Clint Spiegel

## **Goals**

This program prepares students for technical careers in industry, or for further study toward a more advanced degree.

## **Prerequisites**

A bachelor's degree and departmental approval. Applicants are expected to have completed the following courses (or their equivalent) with a grade of B or better: CHEM 333, CHEM 434, CHEM 351, 352,353, CHEM 461, 462, 463, and CHEM 441 or CHEM 471, 472, 473. A student with lower than B may be required to repeat that course as determined under advisement with the graduate program advisor.

## **Application Information**

**Specific Test Requirements:** Graduate Record Exam, General Test.

**Supporting Materials:** A statement of research interests and future goals, including identification of up to three potential faculty research advisors, must accompany application.

## **Course Work Requirements**

- Thesis option: (minimum 45 credits)
  - CHEM 595 - Seminar
  - CHEM 596 - Seminar in Current Chemistry and Biochemistry
  - CHEM 690 - Thesis
    - plus 28 credits under advisement

### **Thesis Option**

The Master of Science thesis demonstrates that you are capable of pursuing a program of original and independent research, that you can formulate and carry out a research project, and that you can report on the project in a proper scientific manner. The thesis option prepares students for technical careers in industry, or for further study toward a more advanced degree. This option requires advanced course work in chemistry, biochemistry, or environmental chemistry, and research, with the latter culminating in a MS thesis. Shortly after entering the program students select a faculty advisor based on their research interests and agree on a research problem. Under the guidance of their faculty advisor, students carry out the research program, and write and defend the thesis in a final oral exam.

# **Computer Science**

## **Introduction**

The proliferation of computers and computer networks (the World Wide Web) is transforming the world rapidly and irreversibly. Developments in many fields such as medicine, genetic engineering, atomic physics, and telecommunications depend on computers to produce their work. The increasing use of and reliance on computers in our modern technological culture and society makes the study of computer science an exciting and challenging one.

Computer science at Western is organized around the study of design and analysis techniques used to write software or programs in various application areas, along with details about the internal workings of computers (known as computer architecture and operating systems). The design and analysis techniques encompass many areas of study such as algorithms and data structures (ways to organize instructions and information efficiently), programming languages (specific methods of delivering instructions to computers), software methodology and engineering (processes to develop software and ways to organize groups of instructions), databases and information retrieval, and artificial intelligence.

Faculty interests represent many diverse areas of computer science, including distributed and parallel computing, object-oriented development, graphics, computer networks, image processing, cryptography, robotics, and formal methods. Members of the department are also involved in collaborative projects with local industry and other academic units.

## **Faculty**

**GEOFFREY B. MATTHEWS** (1985), Chair and Professor. BA, University of California; MA, PhD, Indiana University.

**DAVID C. BOVER** (2002) Professor. BS, Monash University; PhD, Australian National University.

**PERRY FIZZANO** (2007) Assistant Professor. BS, Widener University; PhD, Dartmouth College.

**MARTIN GRANIER** (1997) Visiting Associate Professor and Director, Internet Studies Center. BS, Middle Tennessee State University; MS, University of Southwestern Louisiana; PhD, University of Oregon.

**JAMES W. HEARNE** (1986) Professor. BA, MA, PhD, University of California.

**JAMES L. JOHNSON** (1981) Professor. BS, University of Louisville; MS, PhD, University of Minnesota.

**DEBRA S. JUSAK** (1988) Associate Professor. BA, State University of New York at Potsdam; MS, University of Connecticut; PhD, University of California-Irvine.

**MICHAEL MEEHAN** (1996) Professor. BS, Birmingham-Southern College; MS, PhD, University of Alabama-Huntsville.

**PHILIP A. NELSON** (1987), Associate Professor. BS, Pacific Union College; MS, University of California-Davis; PhD, University of Washington.

**MARTIN L. OSBORNE** (1977), Professor. BA, Hamilton College; MA, University of Oregon; PhD, Oregon State University.

**JIANNA ZHANG** (2002) Associate Professor. BS, MS, PhD, University of Regina.

## **Declaration Process**

### *Bachelor of Science*

Students must apply for admission to the major by completing a form in the advisor's office, Communication Facility 459, or online at [www.cs.wvu.edu](http://www.cs.wvu.edu). Students are assigned a faculty advisor when accepted as a major. Students who have not yet been accepted as majors or who need major evaluations for graduation should seek advice in the undergraduate advisor's office. To graduate, the student must satisfy the requirements as stated in the catalog in effect at the time of declaration or in a subsequent catalog.

## **Other Departmental Information**

### *Programs*

The computer science department offers Bachelor of Science and Master of Science degree programs and cooperates with the departments of mathematics and accounting to offer joint majors. The Bachelor of Science program is accredited by the Computing Accreditation Commission of ABET, 111 Market Place, Suite 1050, Baltimore, MD 21202-4012, phone 410-347-7700. The department also offers two computer science minors, an interdisciplinary minor in Internet Resource Creation and Management, and three certificate programs (Web content development, Web programming, and Website management). The ISC minor and certificate programs are designed so that computer science majors, as well as non-computer science majors, may gain the technical and communication background necessary for developing, maintaining, and managing websites and resources.

### *Career Opportunities*

Computer science graduates often begin their careers as computer programmers or systems analysts. Expert programmers are widely sought and bring to bear a wealth of knowledge and creativity far surpassing mere knowledge of a programming language and/or its syntax. The Bachelor of Science degree provides a problem-solving and analytical background that is typical of the expertise employed by very good programmers and systems analysts to obtain programming solutions. Systems analysts assess the needs of a project for computer hardware and software, then proceed to design systems that meet those needs. Systems analyst positions are not entry-level positions, but rather are the typical career path for computer scientists with a bachelor's degree.

### *Internet Studies Center and Minor in Internet Resource Creation and Management*

The Internet Studies Center provides an adjunct program to a regular degree program. The center offers courses in Website development and management that enable students to apply their major field in the world of Web-based communications and enterprise. Students completing a sequence of these courses are eligible for certification. The courses follow three different tracks. Students from a wide variety of liberal arts and science majors can earn certification in Web content development. This certifies that students have sufficient technical knowledge and skill to work effectively as Web content producers in a development team where they must work with programmers and project managers to produce a professional Website. The Web programmer certification track provides a deeper technical program for CS majors to master programming skills pertinent to content delivery in large, dynamic websites. Finally, the Website management certification track, offered in conjunction with the finance, marketing and decision sciences department of the College of Business and Economics, provides students with in-depth knowledge of large Website management for e-commerce and other enterprise applications.

Those students interested in Web development but not seeking certification may take a set of courses that leads to a minor in Internet resource creation and management. This minor complements degrees in disciplines outside computing, providing students with the ability to publish and maintain material on the World Wide Web. This minor will enhance students' standing in applications to entry-level positions and helps increase the marketability of their major degree. The curriculum for this minor and all of the center-sponsored courses adapt to changes in Internet technology as the Internet evolves.

### *Facilities*

The department has a number of general and special purpose laboratories that support the computer science program. The general purpose labs contain i386/Amd64 workstations running Windows XP and Linux. Most computer science classes use these laboratories for their programming and other homework needs. Additionally, there are special purpose labs to support computer architecture, networking, parallel and distributed computing, computer visualization and animation, and robotics.

### *Transfer Students*

Washington community college transfers comprise a large percentage of Western's students, especially computer science majors. Transfer students are very welcome in the computer science program; however, optimum progress depends upon fulfilling the following requirements:

- MATH 124 and MATH 125
- Two programming courses in a high-level language, such as Ada, C++, C# or Java
- A year sequence chosen from BIOL 204, BIOL 205, BIOL 206; CHEM 121, CHEM 122, CHEM 123; PHYS 121, PHYS 122, PHYS 123; GEOL 211, GEOL 212, and one of GEOL 308, GEOL 309, GEOL 310, GEOL 314

Students are further encouraged to take a linear algebra course (MATH 204).

### *Mid-Program Checkpoint*

To complete the Bachelor of Science degree in computer science within four years, the student should complete the following courses by the start of the junior year. Major omissions from this list will make it difficult or impossible to complete this degree within two additional years.

- MATH 124, MATH 125
- CSCI 141, and CSCI 145; or CSCI 146
- CSCI 211, CSCI 241
- The supporting science sequence (choice of biology, chemistry, geology or physics)

### *Information*

Department of Computer Science, Communication Facility 495, Western Washington University, Bellingham, WA 98225-9165. Please direct questions to the departmental office: The phone is 360-650-3805, or correspond by e-mail to [csdept@cc.wwu.edu](mailto:csdept@cc.wwu.edu).

### *Advising*

Undergraduate Advisor: Julie Marx, CF 459, 360-650-2300, [Julie.Marx@wwu.edu](mailto:Julie.Marx@wwu.edu)

For more detailed information on advising issues, go to [www.cs.wwu.edu](http://www.cs.wwu.edu) and click on the advising link.

### *Five-Year BS and MS Fast Track Program*

The Five-Year BS + MS Fast Track program makes it possible for exceptional undergraduate computer science majors to complete both a BS and MS degree in computer science in five years. Computer science majors who qualify will take four core courses from the graduate program when they are seniors. The computer science master's degree may then be completed in only one additional year of study at the master's level after students have applied to, and been accepted as, master's degree candidates by the WWU Graduate School.

Computer science majors who have achieved a GPA of 3.0 or above in their first three years as an undergraduate should contact the computer science graduate advisor. Applications are available at the graduate advisor's office, the undergraduate advisor's office, and may be downloaded from the computer science Website, [www.cs.wwu.edu](http://www.cs.wwu.edu).

Students should apply for admission into the undergraduate honors program after the completion of their junior year of study. Once admitted to the honors program, students will take the four MS core curriculum courses. The course substitutions are: CSCI 509 for CSCI 460, CSCI 510 for CSCI 401, CSCI 511 for CSCI 405, CSCI 512 for CSCI 410.

After students graduate with the BS degree in the computer science honors program, they will then complete all remaining requirements for the MS degree, i.e., CSCI 601, 602, 603 plus six graduate electives. Registering for three

courses per term, it is possible to complete all MS requirements in only one additional year. When students enter the MS program via this path, the qualifying examination will be given during their first term as a graduate student, which implies that they may register for CSCI 601 while pending the outcome of the qualifying exam.

#### *Advancement to Candidacy*

Students are advanced to candidacy when they have demonstrated a reasonable likelihood of completing their program of study. The student must have completed the core curriculum courses with a B or better GPA and must have passed the qualifying examination. Students are recommended for candidacy by the Computer Science Graduate Committee.

#### *Combined Majors*

The computer science department cooperates with other departments in offering combined majors for students wishing to acquire some familiarity and experience in both areas.

Mathematics/Computer Science: See the *Mathematics* section of this catalog.

### **Undergraduate Degrees and Programs**

Computer Science, BS

Mathematics/Computer Science, BS

Computer Science Minor

Computer Systems Minor

Internet Resource Creation and Management Minor

Internet Studies Center Certification

### **Graduate Degrees and Programs**

Computer Science, Non-Thesis, MS

## **Computer Science Minor**

### **32-39 credits**

#### **Admission and Declaration Process**

Declaring a major (see Computer Science department page)

#### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

## **Requirements**

- CSCI 211 - Discrete Structures and Functional Programming I
- CSCI 241 - Data Structures
- CSCI 245 - Object-Oriented Programming C++
- CSCI 330 - Database Systems
- CSCI 352 - Unix Software Development
  - Choose either:
  - CSCI 141 - Computer Programming I  
and
  - CSCI 145 - Computer Programming and Linear Data Structures  
or
  - CSCI 146 - Accelerated Computer Programming
    - One course from:
- MATH 124 - Calculus and Analytic Geometry I
- MATH 157 - Calculus With Applications to Business and Economics
  - Two upper-division computer science or math/computer science courses of at least 3 credit hours each

## **Computer Science, BS**

**89 to 93 credits from computer science and mathematics**

### **Admission and Declaration Process**

Declaring a major ([see Computer Science department page](#))

### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

## **Requirements**

- Choose either:
- CSCI 141 - Computer Programming I  
and
- CSCI 145 - Computer Programming and Linear Data Structures  
or
- CSCI 146 - Accelerated Computer Programming
- CSCI 211 - Discrete Structures and Functional Programming I
- CSCI 227 - Computer Organization I
- CSCI 241 - Data Structures
- CSCI 245 - Object-Oriented Programming C++
- CSCI 305 - Analysis of Algorithms and Data Structures I
- CSCI 322 - Principles of Concurrent Programming
- CSCI 330 - Database Systems
- CSCI 347 - Computer Organization II

- CSCI 352 - Unix Software Development
- CSCI 367 - Computer Networks I
- CSCI 401 - Formal Languages and Automata
- CSCI 405 - Analysis of Algorithms and Data Structures II
- CSCI 410 - Programming Languages
- CSCI 460 - Operating Systems
- CSCI 491 - Software Project Requirements Analysis
- CSCI 492 - Software Project Design
- CSCI 493 - Software Project Implementation
- MATH 124 - Calculus and Analytic Geometry I
- MATH 125 - Calculus and Analytic Geometry II
- MATH 204 - Elementary Linear Algebra
- MATH 341 - Probability and Statistical Inference
- 12 credits chosen from the following, of which a maximum of 4 credits may be from CSCI 400 projects:
- CSCI 311 - Discrete Structures and Functional Programming II
- CSCI 321 - Game Programming
- CSCI 342 - Web Scripting
- CSCI 343 - Programming Workshop
- CSCI 351 - Windows Software Development
- CSCI 380 - Numerical Computations
- CSCI 400
- CSCI 402 - Artificial Intelligence
- CSCI 417
- CSCI 420 - Computer Architecture
- CSCI 430 - Database Theory
- CSCI 442 - Advanced Web Programming in Java
- CSCI 450 - Compiler Theory and Design
- CSCI 461 - Computer Security
- CSCI 462 - OS Device Drivers
- CSCI 467 - Computer Networks II
- CSCI 480 - Computer Graphics
- CSCI 483 - Computer Animation
- CSCI 515 - Parallel Computation
- CSCI 517
- CSCI 520 - Advanced Compiler Design
- CSCI 525 - Advanced Topics in Operating Systems
- CSCI 527 - Embedded Systems
- CSCI 528 - Corba Applied to Scada Systems
- CSCI 530 - Advanced Database Theory
- CSCI 536 - Web Services
- CSCI 540 - Theory and Practice of Programming Language Design
- CSCI 545
- CSCI 571 - Machine Learning Algorithms
- CSCI 572 - Robotics
- CSCI 573 - Computational Linguistics
- CSCI 577 - Data Mining
- CSCI 578 - Cryptography
- CSCI 580 - Advanced Computer Graphics

- CSCI 584 - Scientific Visualization
- CSCI 585 - Image Processing
- M/CS 335 - Linear Optimization
- M/CS 375 - Numerical Computation
- M/CS 435 - Nonlinear Optimization
- M/CS 475 - Numerical Analysis

A maximum of 4 credits may be from CSCI 400 projects

**NOTE:** Undergraduate students may take 500-level courses only if they have a GPA of at least 3.0 and instructor permission

A science sequence chosen from:

- BIOL 204 - Introduction to Evolution, Ecology and Biodiversity
- BIOL 205 - Introduction to Cellular and Molecular Biology
- BIOL 206 - Introduction to Organismal Biology
- or
- CHEM 121 - General Chemistry I
- CHEM 122 - General Chemistry II
- CHEM 123 - General Chemistry III
- or
- GEOL 211 - Physical Geology
- GEOL 212 - Historical Geology
- and one of:
- GEOL 308 - Earthquakes
- GEOL 309 - Volcanology
- GEOL 310 - Geomorphology
- GEOL 314 - Engineering Geology
- or
- PHYS 121 - Physics With Calculus I
- PHYS 122 - Physics With Calculus II
- PHYS 123 - Electricity and Magnetism

A minimum of 45 credit hours of mathematics content and science. This total includes the science sequence and mathematics courses listed above as well as 3 credit hours of mathematics content for CSCI 211 and 2 credit hours of mathematics content for CSCI 305. Additional courses used to satisfy the minimum 45 credit hour total must be chosen from:

- MATH or M/CS courses for which at least one of the required MATH courses is a prerequisite.
- Science courses for which at least one of the courses from the chosen science sequence is a prerequisite.
- Science courses from science sequences other than the chosen sequence.

Exit requirement: Major Field Examination, administered externally.

## Computer Systems Minor

**24 credits**

### Admission and Declaration Process

Declaring a major ([see Computer Science department page](#))

### Grade Requirements

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

## **Requirements**

- CSCI 146 - Accelerated Computer Programming
- CSCI 241 - Data Structures
- CSCI 245 - Object-Oriented Programming C++
- CSCI 322 - Principles of Concurrent Programming
- CSCI 330 - Database Systems
- CSCI 347 - Computer Organization II
- CSCI 352 - Unix Software Development

## **Internet Resource Creation and Management Minor**

**28-29 credits**

### **Admission and Declaration Process**

Declaring a major ([see Computer Science department page](#))

### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

## **Requirements**

- CSCI 102 - Computer-Mediated Communications
- CSCI 202 - Dynamic Web Pages
- CSCI 403 - Internship in Internet Studies
- MIS 314 - Fundamentals of Web Site Development and Management
- COMM 318 - Professional Communication
- Choose Either:
  - ENG 302 - Introduction to Technical and Professional Writing
  - ENG 402 - Advanced Technical and Professional Writing  
or
  - JOUR 207 - Newswriting
  - JOUR 309 - Editing

## **Internet Studies Center Certification**

### **Admission and Declaration Process**

Declaring a major ([see Computer Science department page](#))

### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

## Requirements

- CSCI 202 - Dynamic Web Pages
- MIS 314 - Fundamentals of Web Site Development and Management
  - One course from:
- CSCI 102 - Computer-Mediated Communications  
CSCI 112
  - One course from:
- CSCI 403 - Internship in Internet Studies
- CSCI 494 - Professional Work Experience
  - CSCI 403 allows students to obtain real-world experience while staying on campus; CSCI 494 allows students to work in intern positions in real companies on actual Website development.
  - Certification requires a minimum of eight hours of content-oriented courses from the student's major, approved by center director. Courses currently approved include the following sequences:
- COMM 244 - Advocacy Through Media
- COMM 318 - Professional Communication  
CSCI 242
- CSCI 342 - Web Scripting
- CSCI 442 - Advanced Web Programming in Java
- DSGN 270 - Graphic Design I
- DSGN 371 - Design II
- ENG 302 - Introduction to Technical and Professional Writing
- ENG 402 - Advanced Technical and Professional Writing
- MIS 324 - Intermediate Web Site Development and Management
- MIS 424 - E-Commerce Systems Management
- MKTG — Any two marketing courses
  - Choose either:
- JOUR 207 - Newswriting
- JOUR 309 - Editing
  - or
  - JOUR 207 - Newswriting
- JOUR 305 - Photojournalism
- JOUR 330 - Principles of Public Relations

Students whose major course of study does not include preapproved content-oriented courses are encouraged to consult with their major advisor and the director of the ISC to determine whether acceptable courses dealing with Internet technology are available.

## Mathematics/Computer Science, BS (also see Mathematics Department)

**91 credits**

### Admission and Declaration Process

Declaration of Major ([see Mathematics department page](#))

### Grade Requirements

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

## Requirements

- CSCI 141 - Computer Programming I
- CSCI 145 - Computer Programming and Linear Data Structures
- CSCI 211 - Discrete Structures and Functional Programming I
- CSCI 241 - Data Structures
- CSCI 245 - Object-Oriented Programming C++
- CSCI 305 - Analysis of Algorithms and Data Structures I
- CSCI 401 - Formal Languages and Automata
- CSCI 405 - Analysis of Algorithms and Data Structures II
- MATH 204 - Elementary Linear Algebra
- MATH 224 - Multivariable Calculus and Geometry I
- MATH 226 - Limits and Infinite Series
- MATH 302 - Introduction to Proofs Via Number Theory
- MATH 312 - Proofs in Elementary Analysis
- MATH 331 - Ordinary Differential Equations
- Choose either:
  - MATH 124 - Calculus and Analytic Geometry I
  - MATH 125 - Calculus and Analytic Geometry II
- or
- MATH 134 - Calculus I Honors
- MATH 135 - Calculus II Honors
- or
- MATH 138 - Accelerated Calculus
- One course from:
  - MATH 430 - Fourier Series and Applications to Partial Differential Equations
  - MATH 432 - Systems of Differential Equations
- One course from:
  - MATH 341 - Probability and Statistical Inference
  - MATH 441 - Probability
- One course from:
  - MATH 304 - Linear Algebra
  - MATH 401 - Introduction to Abstract Algebra
- NOTE:** The pair MATH 203-303 may be substituted for MATH 204 and 331
- Three courses from:
  - M/CS 335 - Linear Optimization
  - M/CS 375 - Numerical Computation
  - M/CS 435 - Nonlinear Optimization
  - M/CS 475 - Numerical Analysis
- 3 additional upper-division credits in mathematics or computer science as advised

# **Computer Science, Non-Thesis, MS**

## **Graduate Faculty**

**Bover, David C.**, PhD, software engineering, software quality assurance, computer security.  
**Fizzano, Perry**, PhD, algorithms, optimization, bioinformatics.  
**Hearne, James W.**, PhD, artificial intelligence, computational science.  
**Johnson, James Lee**, PhD, database theory, probabilistic algorithms.  
**Jusak, Debra S.**, PhD, distributed computing, middleware, embedded systems.  
**Matthews, Geoffrey B.**, PhD, artificial intelligence, data mining, scientific visualization.  
**Meehan, J. Michael**, PhD, parallel and distributed computing, programming languages, networks.  
**Nelson, Philip A.**, PhD, parallel and distributed computing, compilers, computer networks.  
**Osborne, Martin L.**, PhD, object oriented computing, Internet-related computing.  
**Ural, Saim**, PhD, computer graphics, image processing, cryptography.  
**Zhang, Jianna**, PhD, machine learning robotics, natural language processing.

Program Advisor: Jianna J. Zhang.

Send e-mail related to the graduate program in computer science to g radinfo.cs@wwu.edu. For further information concerning the program, consult the departmental website at [www.cs.wwu.edu](http://www.cs.wwu.edu).

## **Goals**

- To graduate students with strong, in-depth background in computer science
- To prepare students for PhD programs
- To engage students in high quality research-oriented projects

## **Objectives**

- To educate students in core concepts in computer science
- To provide students with in depth knowledge, skills, and experiences in computer science
- To focus on the applied aspects of computer science, especially real-world projects that use core concepts and expert knowledge of computer science
- To provide students and faculty opportunities to engage in research in computer science

## **Prerequisites**

Students who have completed an undergraduate degree and who meet the requirements of the Graduate School and who show evidence of superior scholarship are invited to apply for admission to the graduate program in computer science. Students may be admitted into the computer science master's degree program in one of three ways: full admit, full admit with prerequisite course work, and provisional admit. Students who have a sufficient background in computer science, i.e. an undergraduate degree in CS, and who meet the general requirements of the Graduate School can be given a "full admit." Due to the nature of this field of study, it is often the case that students with an undergraduate degree in an area other than computer science seek admission to the graduate program in computer science. Such students usually require a number of prerequisite undergraduate courses before they can embark on their graduate studies. If they meet the other requirements of the Graduate School, such students can usually be given a "full admit with prerequisite course work." The student is admitted into the graduate program but is required to complete a number of undergraduate prerequisite courses. Other constraints may be placed on such admissions, such as a minimum acceptable grade(s) for the prerequisites and perhaps a time frame for completion of the prerequisites. The exact nature of the composition of the prerequisite course work will be determined on a case by case basis. In rare cases, students who do not meet the general requirements of the graduate school, for example do not have the required minimum

GPA, can be given a "provisional admit" provided their background is such that it indicates a high probability of success in the program.

### **Application Information**

**Admission Deadlines:** Fall, April 15; Winter, October 1; Spring, February 1.

**TA Deadlines:** Same as admission deadlines. Application requirements and forms are available from the Graduate School website.

**Test scores:** GRE General Test. An applicant with an advanced degree need not submit test scores. A statement of purpose is recommended.

### **Program Requirements:**

#### **Core Curriculum**

**The core curriculum consists of five courses of 4 credits each.**

- CSCI 509 - Operating System Internals
- CSCI 510 - Automata and Formal Language Theory
- CSCI 511 - Analysis of Algorithms
- CSCI 512 - Design and Implementation of Computer Programming Languages
- CSCI 514 - Research Methodology in Computer Science

These courses must be taken by all students in the MS in computer science program. These five courses should be scheduled during the first three terms the student is enrolled in the MS program or the first three terms following the completion of assigned prerequisite courses.

The following course *must* be taken by all students in each quarter the student is enrolled in the MS Computer Science program, up to a total of 6 credit hours.

- CSCI 590 - Graduate Seminar

#### **Qualifying Examination**

A qualifying exam covering CSCI 509, 510, 5111, and 512 will be given to the student after completion of those courses. To be advanced to candidacy in the MS program in computer science the student must pass the qualifying exam. The student is responsible for requesting of the faculty that the qualifying exam be administered when the conditions have been met.

#### **Advancement to Candidacy**

Students are advanced to candidacy when they have demonstrated a reasonable likelihood of completing their program of study. The student must have completed the core curriculum courses with a B or better GPA and must have passed the qualifying exam. Students are recommended for candidacy by the Graduate Committee.

#### **Elective Courses**

If possible, the student should take elective courses in support of their area of research.

## **Research Experience**

In addition to the five core courses and five elective courses, all students in the MS in computer science program are required to take three research experience courses. The student should register for one of these courses each of the last three terms of study in the MS program. The three research experience courses are tied to one of a number of ongoing projects in the computer science department. Effectively, the student is joining that research team effort by registering for these courses. As such, the student should discuss their intentions with the faculty members involved in that project prior to registering for these courses. The research experience courses are numbers CSCI 601, CSCI 602 and CSCI 603. The CSCI 601, CSCI 602 and CSCI 603 sequence should be taken after the student has completed the qualifying exam for the core courses.

## **Total Credit Hours Required for the MS Degree in Computer Science**

Core Courses: 5 courses x 4 credits = 20 credits Graduate Seminar: Variable, 3 to 6 credit hours  
Elective Courses: 5 courses x 4 credits = 20 credits Research Experience Courses: 3 courses x 4 credits = 12 credits Total:  
55-58 credits

## **Additional Information**

### **Five-Year BS And MS Fast Track Program**

For students who complete their undergraduate study in computer science at WWU there is an option by which at the end of only one additional year of study past the BS degree they will have completed all requirements for the MS degree. To participate in this program, a student must request enrollment in the undergraduate honors program in computer science. To be admitted to this program, the student must have an overall GPA of 3.0 and a GPA of 3.0 in all undergraduate computer science classes. Students should apply for admission into the undergraduate honors program during the junior year of study. Once admitted to this program, the student will take CSCI 509-512 while an undergraduate. These courses will substitute for four senior-level courses the student would normally take as an undergraduate. The course substitutions are: CSCI 509 replaces CSCI 460, CSCI 510 replaces CSCI 401, CSCI 511 replaces CSCI 405, CSCI 512 replaces CSCI 410. A student must maintain an overall GPA of 3.0 in these courses.

After students graduate with the BS degree in the computer science honors program, they then will complete all remaining requirements for the MS degree, i.e., CSCI 514, 590, 601, 602, 603 plus 5 graduate electives.

Registering for three courses per term, it is possible to complete all MS requirements in only one additional year. When a student enters the MS program via this path, the qualifying exam will be given during their first term as a graduate student, which implies that they may register for CSCI 601 while pending the outcome of the qualifying exam.

# **Engineering Technology**

## **Introduction**

The Department of Engineering Technology offers Bachelor of Science degree programs that prepare graduates for technical and professional careers in industry and one program to prepare students for careers in education. Each program offers a unique mix of theoretical course work and laboratory exercises where students apply the theory learned in lectures to solve practical problems and experience industrial applications of technology. Creativity is encouraged and emphasized. In addition, Western's General University Requirements (GURs) provide graduates with a solid foundation in communication skills and contribute to a liberal education.

The programs are:

- Electronics Engineering Technology
- Manufacturing Engineering Technology
- Manufacturing Engineering Technology – Computer Aided Design and Manufacturing
- Plastics Engineering Technology
- Plastics Engineering Technology – Vehicle Engineering Technology
- Industrial Design
- Industrial Technology – Vehicle Design
- Technology Education

Engineering technology is a profession in which knowledge of mathematics and natural sciences, technical experience and practice are used to plan, design, create and enhance technologies that benefit humanity. Graduates are employed by major technological and industrial companies, including regional operations such as Boeing, Paccar, Alpha Technologies, Cypress Semiconductor, Nike, and Korry Electronics. Career opportunities range across the technological spectrum but graduates are best suited to areas that deal with application, manufacturing, implementation, engineering operations and production.

Students planning to major in any engineering technology program are encouraged to have a solid foundation in mathematics, chemistry and physics. Students planning to major in industrial design are also encouraged to have a sound background in art and design.

## **Faculty**

**TODD MORTON** (1988) Chair and Professor. BSEE, MSEE, University of Washington.

**JANET M. BRAUN** (2007) Assistant Professor. BS, MS (mechanical engineering), Marquette University; MBA, Cardinal Stritch University.

**STEVEN H. DILLMAN** (1993) Professor. BS (chemical engineering), Rice University; PhD (chemical engineering), University of Washington.

**STEVEN M. FLEISHMAN** (2006) Assistant Professor. BTME, State University of New York College of Technology-Utica; MSEd (technology education), State University of New York-Oswego.

**THOMAS GRADY** (1986) Associate Professor. BA, BS, MSEE, University of Colorado.

**F. DAVID HARRIS** (1990) Professor. BSEE, Newark College of Engineering; MAT (Physical Sciences), Rhode Island College; MSEE, Rensselaer Polytechnic Institute. Registered professional engineer.

**NICOLE HOEKSTRA** (1998) Professor. BSME, MSME, University of Minnesota, Institute of Technology.

**KATHLEEN L. KITTO** (1988) Professor and Associate Dean, College of Sciences and Technology. BS, MSME, Montana College of Mineral Science and Technology.

**NICOLE M. LARSON** (2005) Associate Professor. BSME, Bradley University; MSME, University of Washington.

**ERIC C. LEONHARDT** (2002) Associate Professor. BA, Whitman College; BS, Western Washington University; MS (automotive systems engineering), University of Michigan.

**YING LIN** (2010) Assistant Professor. BSEE, MSEE, Harbin Institute of Technology; MS (applied statistics), PhD (electrical

engineering), Syracuse University .

**ERIC K. MCKELL** (1997) Associate Professor. BSMET, MSMFE, Brigham Young University. Registered professional engineer.

**JASON A. MORRIS** (2004) Associate Professor. BSME, West Virginia University; MID, Pratt Institute.

**JEFFREY L. NEWCOMER** (1998) Professor. BS, MEng, MS, PhD (mechanical engineering), Rensselaer Polytechnic Institute.

**ARUNAS P. OSLAPAS** (1991) Professor. BFA, Montana State University; MFA, University of Illinois.

**DEREK M. YIP-HOI** (2006) Assistant Professor. BSME, University of the West Indies; MSME, State University of New York-Buffalo; PhD (mechanical engineering), University of Michigan.

### **Adjunct Faculty**

**MICHAEL J. FLAHERTY** (1998) BEd, MEd, Western Washington University.

**INDLE G. KING** (1987). BA, MA, University of Washington.

### **Other Departmental Information**

#### *Declaration of Major*

Students who intend to complete one of the majors should obtain advisement from a department advisor and declare the major early so that a program of study can be planned. Engineering technology programs require courses that also fulfill GURs (natural sciences and communications, for example). Both freshmen and transfer students may begin their studies within the department in their first year at Western. Declaration of a major does not decrease the opportunity to change plans or majors. Students or prospective students may wish to participate in department projects and student club organizations since that is often a good way to understand the different career opportunities and requirements of the majors.

#### *Mid-Program Checkpoint*

Students intending to complete a Bachelor of Science degree in one of the department majors within four years should complete the following courses by the start of their junior year. Students are expected to follow all prerequisite requirements for courses and seek early departmental advisement.

### **Electronics Engineering Technology**

- ETEC 270, ETEC 271, ETEC 272, ETEC 273, ETEC 274, ETEC 371, ETEC 372, ETEC 375
- MATH 124 or MATH 134, MATH 125 or MATH 135
- CHEM 121
- PHYS 121, PHYS 122, PHYS 123
- COMM 101 or COMM 235
- CSCI 140
- 18 credits technical electives and/or GURs

### **Manufacturing Engineering Technology**

- ETEC 112, ETEC 113, ETEC 220, ETEC 222, ETEC 223, ETEC 224, ETEC 225
- MATH 124 or MATH 134, MATH 125 or MATH 135, MATH 245
- PHYS 121, PHYS 122, PHYS 123
- CHEM 121
- CSCI 140
- COMM 101 or COMM 235
- 20-24 credits other GURs

## **Manufacturing Engineering Technology – Computer-Aided Design and Manufacturing Option**

- ETEC 112, ETEC 113, ETEC 220, ETEC 222, ETEC 223, ETEC 224, ETEC 225
- MATH 124 or MATH 134, MATH 125 or MATH 135
- PHYS 121, PHYS 122, PHYS 123
- CHEM 121
- CSCI 138 or CSCI 140
- COMM 101 or COMM 235
- 20-24 credit other GURs

## **Plastics Engineering Technology**

- ETEC 112, ETEC 113, ETEC 220, ETEC 223, ETEC 224, ETEC 225
- MATH 124 or MATH 134, MATH 125 or MATH 135, MATH 245 or MATH 240
- PHYS 121, PHYS 122 (or PHYS 114, PHYS 115)
- CHEM 121 and CHEM 251
- CSCI 140 or CSCI 141
- COMM 101 or COMM 235
- 25-30 credits other GURs

## **Plastics Engineering Technology — Vehicle Engineering Technology Option**

- ETEC 112, ETEC 113, ETEC 220, ETEC 223, ETEC 224, ETEC 225, ETEC 280, ETEC 281
- MATH 124 or MATH 134, MATH 125 or MATH 135, MATH 204, MATH 245 or MATH 240
- PHYS 114 or PHYS 121, PHYS 115 or PHYS 122
- CHEM 121, CHEM 251
- CSCI 140 or CSCI 141
- COMM 101 or COMM 235
- Other GURs (with advisement)

## **Industrial Design**

- ETEC 112, ETEC 113, ETEC 214, ETEC 215, ETEC 216, ETEC 231, ETEC 311, ETEC 312, ETEC 315
- MATH 115 or MATH 118
- PHYS 114, PHYS 115
- ECON 206
- MGMT 271
- ART 109 ART 110, ART 120, ART 130 or ART 140, ART 203, ART 220
- A/HI 240 or A/HI 241
- Other GURs (with advisement)

## **Industrial Technology — Vehicle Design**

- ETEC 112, ETEC 113, ETEC 220, ETEC 223, ETEC 224, ETEC 225, ETEC 280, ETEC 281
- MATH 114, MATH 115 or MATH 118, MATH 124 or MATH 134, MATH 125 or MATH 135
- CSCI 138 or CSCI 140 or CSCI 141
- CHEM 121
- PHYS 114 or PHYS 121, PHYS 115 or PHYS 122
- Minimum of 22 credits of GURs

### *Vehicle Design*

A post-baccalaureate professional development certificate program in vehicle design is offered for students with an undergraduate degree in engineering. The three quarter lockstep program begins fall quarter, is self supporting and has a different tuition rate. Students interested in the post-baccalaureate program need to be referred by Eric Leonhardt, program coordinator of the Industrial Technology – Vehicle Design program. Upon referral, students should complete the Extension Undergraduate Application. Extension admission and registration information is available from Extended Education and Summer Programs, 360-650-3308.

### *Academic Standards*

A grade of C- or higher is required to pass all engineering technology program sequence courses and all prerequisites for those courses. Students are required to drop any major class if they receive a K grade or a D+ or lower grade in the prerequisite class.

Students may request a program course exception (any grade lower than a C- in a required program course is always considered a program exception). To make a request, a student must submit an Exception Request Form for consideration by the department Curriculum Committee. The form can be found in the student information section of the Engineering Technology department website. In the exception request, a student must clearly and thoroughly state their request and provide a detailed explanation why the exception is being requested and why it is appropriate. The form is then submitted to their department faculty advisor who must add their comments and recommendation before forwarding the form to the committee. Students should expect that the curriculum committee will need ample time to consider the request; deadlines are listed on the form.

### **Undergraduate Degrees and Programs**

Electronics Engineering Technology, BS

Industrial Design, BS

Industrial Technology — Vehicle Design, BS

Manufacturing Engineering Technology, BS

Manufacturing Engineering Technology - Computer-Aided Design and Manufacturing, BS

Plastics Engineering Technology - Vehicle Engineering Technology Option, BS

Plastics Engineering Technology, BS

Embedded Systems Minor

Industrial Technology — Vehicle Design Minor

Manufacturing Engineering Technology Minor

Sustainable Design Minor

### **Graduate Study**

This program is not currently accepting new students. For further information, contact the Graduate School, Western Washington University, 516 High St., Bellingham, WA 98225-9037, 360-650-3170, [gradschool@wwu.edu](mailto:gradschool@wwu.edu).

## **Graduate Degrees and Programs**

Technology Education, MEd

### **Electronics Engineering Technology, BS**

**149 credits**

#### **Introduction**

The electronics engineering technology program prepares engineering technologists who understand and can apply established scientific and engineering knowledge and methods in combination with technical skills of modern technology to support engineering activities. Students are provided with a strong concentration of both classroom instruction and practical hands-on laboratory design and testing experiences. Graduates are qualified for application positions in electronic systems analysis and design, product design and development, technical sales and service, and field engineering operations and maintenance.

Western's electronics engineering technology program is accredited by the Technology Accreditation Commission of ABET, 111 Market Place, Suite 1050, Baltimore, MD 21202-4012, phone 410-347-7700.

#### **Admission and Declaration Process**

Declaration of Major ([see Engineering Technology department page](#))

#### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

#### **Requirements**

##### **Electronics Core: 104 credits**

- ETEC 270 - Electronics Seminar
- ETEC 271 - Circuit Analysis I
- ETEC 272 - Electronic Devices and Circuits
- ETEC 273 - Digital Electronics
- ETEC 274 - Fundamentals of Microprocessors
- ETEC 371 - Circuit Analysis II
- ETEC 372 - Electronic Analysis and Design
- ETEC 373 - Digital Systems
- ETEC 374 - Microprocessor Applications
- ETEC 375 - Electronic Systems
- ETEC 376 - Electrical Power
- ETEC 378 - Network Analysis
- ETEC 379 - Active Linear and Non-Linear Circuits
- ETEC 405 - Communications Circuits
- ETEC 454 - Embedded Systems

- ETEC 455 - Communication Systems
- ETEC 457 - Automatic Control Systems
- ETEC 471 - Project Definition
- ETEC 474 - Microcomputer-Based Design
- ETEC 475 - Digital Communications
- Technical electives (21 credits) of which 4 credits must be upper division, as approved by the program advisor

#### **Supporting Courses: 45 credits**

- CHEM 121 - General Chemistry I
- CSCI 140 - Programming Fundamentals in C++
- MATH 321 - Mathematics for Technology
- PHYS 121 - Physics With Calculus I
- PHYS 223 - Waves and Optics
- PHYS 233 - Waves and Optics Laboratory
- One course from:
  - MATH 124 - Calculus and Analytic Geometry I
  - MATH 134 - Calculus I Honors
- One course from:
  - MATH 125 - Calculus and Analytic Geometry II
  - MATH 135 - Calculus II Honors
- One course from:
  - ENG 302 - Introduction to Technical and Professional Writing
  - ETEC 341 - Engineering and Society
- One course from:
  - COMM 101 - Fundamentals of Speech
  - COMM 235 - Exposition and Argumentation

Minimum total credits for the electronics engineering technology degree, including additional GUR requirements, equal 186.

## **Embedded Systems Minor**

### **27 credits**

#### **Admission and Declaration Process**

Declaration of Major ([see Engineering Technology department page](#))

#### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

#### **Requirements**

- ETEC 271 - Circuit Analysis I
- ETEC 272 - Electronic Devices and Circuits

- ETEC 373 - Digital Systems
- ETEC 374 - Microprocessor Applications
- ETEC 375 - Electronic Systems
- ETEC 454 - Embedded Systems

## Industrial Design, BS

**138-139 credits**

### Introduction

The Bachelor of Science degree program in industrial design prepares graduates to work as practicing designers in a corporate, consulting, or entrepreneurial position in virtually any industry. Industrial design is a highly competitive, professional service of creating and developing concepts and specifications that optimize function, value, and appearance of products and systems for the mutual benefit of both user and manufacturer.

### Admission and Declaration Process

Declaration of Major ([see Engineering Technology department page](#))

### Entrance Portfolio Requirement

Declaration of a major in the industrial design program at Western Washington University requires the submission of a portfolio which, in the judgment of the faculty, offers evidence of a candidate's potential for success within the program.

A portfolio is a collection of an applicant's best work, revealing the applicant's interests and presented as professionally as possible. Applicants should submit work from high school/university courses, professional work, or self-initiated projects. For more information on design portfolios and what makes a good portfolio, please refer to links on the industrial design website, [www.wwu.edu/id/links.html](http://www.wwu.edu/id/links.html).

The applicant's entrance portfolio may provide examples in the following five areas:

- Sketching (examples of sketches that express ideas and creative problem solving, show a variety of concepts, or demonstrate an ability to draw)
- 2-D design (examples of page layout, composition, color, et cetera, as demonstrated in an illustration, advertisement, painting, or other 2-dimensional work)
- 3-D design (examples of form development, construction, craftsmanship, et cetera, as demonstrated in a 3-dimensional piece such as a model, sculpture, clothing, et cetera)
- Computer skills (examples of computer-aided drafting (CAD), and/or evidence of aptitude in drawing/image editing software programs such as Adobe Illustrator, Photoshop, et cetera)
- Communication (examples of written or visual communication through papers, reports, or presentations)

Portfolios are reviewed by an industrial design committee three times per year prior to the quarter of acceptance into the major. Submission deadlines are October 22 for winter quarter, February 14 for spring quarter, and June 10 for fall quarter. If applicants do not qualify for acceptance one quarter, they may apply for a following quarter after improving the content of their portfolio.

Since the sophomore series of design courses begins in the fall and the courses are sequential, it is highly recommended that transfer students begin studies in the fall quarter. Most industrial design courses are only offered one quarter per year and serve as prerequisites for the subsequent courses, so it is important to begin the sequence in September.

### *Entrance Portfolio Submission Format*

To apply for admission to the major, an individual must submit a physical portfolio containing a maximum of 12 pieces of their work. (No CDs, slides, or digital files accepted.) Each piece should be clearly marked with the applicant's name, title of the project, medium (or software/materials) used, size, and date of completion. In the case of professional or group projects, applicants should indicate their personal responsibilities. Neatness of presentation is important; it reflects your attitude toward your work. Application materials will not be returned unless a self-addressed, stamped envelope is provided.

### **Sophomore Portfolio Review**

The sophomore portfolio review is held once a year during the first week in June and takes place after the first two years of studies (freshman and sophomore courses) have been successfully completed. Through this second review, 12 students are accepted into the third year of studies (junior professional practice series).

The requirements for this second portfolio review include completion of the following classes: Math 115 or 118; Phys 115; ETEC 112, 214, 215, 216, 231, 311, 312, 315; a minimum of four studio art courses (Art 110, 120, 130 or 140, and 203 recommended); one art history course (Art 109 recommended); a maximum of 90 credits remaining to graduate; a portfolio consisting of seven pieces or projects. Early advisement is essential.

More information on the second portfolio review is available on the Western Washington University Industrial Design Website and is discussed in depth throughout the sophomore industrial design courses.

The industrial design program is accredited by the National Association of Schools of Art and Design (NASAD), 11250 Roger Bacon Drive, Suite 21, Reston, VA 20190, phone 703-437-0700.

### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

### **Major -- Industrial Design (138-139 credits)**

#### **Industrial Design Core: 45 credits**

- ETEC 112 - Introduction to Engineering, Design and Graphics
- ETEC 113 - Introduction to Computer-Aided Design
- ETEC 214 - Sophomore Industrial Design I
- ETEC 215 - History of Industrial Design
- ETEC 216 - Sophomore Industrial Design II
- ETEC 223 - Machine Metal Processes
- ETEC 231 - Design Problems in Woodworking
- ETEC 301 - Materials for Design
- ETEC 311 - Perspective and Rendering I
- ETEC 312 - Industrial Design CAD Skills
- ETEC 315 - Perspective and Rendering II

#### **Professional Practice Series: 30 credits**

- ETEC 314 - Junior Industrial Design I
- ETEC 316 - Junior Industrial Design II
- ETEC 318 - Junior Industrial Design III

- ETEC 414 - Senior Industrial Design I
- ETEC 416 - Senior Industrial Design II
- ETEC 418 - Senior Industrial Design III

**Supporting Courses: 63-64 credits**

- ART 109 - Visual Dialogue
- ART 110 - Form and Content I: Drawing
- ART 120 - 2-Dimensional Design/Color
- One course from:
  - ART 130 - Form and Content III: 3-D
  - ART 140 - Form & Content IV: Special Topics
- ART 203 - Contemporary Studio Drawing
- ART 220 - Painting
- ART 230 - Beginning Sculpture
- Four courses from:
  - A/HI 220 - Visual Culture in Ancient Greece and Rome
  - A/HI 221 - Visual Culture in Medieval Europe
  - A/HI 230 - Visual Culture in Western Europe 1400-1550
  - A/HI 231 - Visual Culture in Western Europe 1550-1700
  - A/HI 240 - Visual Culture in Western Europe in the 19th Century
  - A/HI 241 - Visual Culture in Western Europe and America in the 20th Century
  - A/HI 270 - Visual Culture in South and Southeast Asia
  - A/HI 271 - Visual Culture in East Asia
  - LBRL 273 - Art and Society in China and Japan
  - DSGN 270 - Graphic Design I
- One course from:
  - MATH 115 - Precalculus II
  - MATH 118 - Accelerated Precalculus
  - PHYS 114 - Principles of Physics I
  - PHYS 115 - Principles of Physics II
  - MGMT 271 - Law and the Business Environment
  - MKTG 380 - Principles of Marketing

## **Industrial Technology — Vehicle Design Minor**

**43 credits**

**Admission and Declaration Process**

Declaration of Major ([See Engineering Technology department page](#))

**Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

## **Requirements**

- ETEC 220 - Introduction to Engineering Materials
  - ETEC 224 - Applied Engineering Statics
  - ETEC 225 - Strength of Materials
  - ETEC 280 - Power Mechanics
  - ETEC 281 - Power Transmission
  - ETEC 351 - Electronics for Engineering Technology I
  - ETEC 380 - Advanced Power Mechanics
  - ETEC 382 - Automotive Electronics
  - ETEC 484 - Vehicle Design
  - ETEC 486 - Advanced Vehicle Design
- Students are advised that MATH 125, PHYS 122, and CHEM 121 are prerequisites to some of the required courses and should be taken prior to the required courses.
- All Plastics Engineering Technology majors cannot get the ITVD minor; the programs are too closely related.

## **Industrial Technology — Vehicle Design, BS**

**110 credits**

### **Introduction**

The Bachelor of Science degree program in industrial technology-vehicle design prepares graduates to solve open-ended challenges in vehicle design, composites, manufacturing and alternative fuels. The program uses vehicle research, design and development projects to educate students. Graduates have entered a wide range of industry sectors including: automotive, racing industries, aerospace, marine, heavy duty vehicle, composites, prototype design and manufacturing, computer numerically controlled machining and biofuels. Graduates gain an understanding of the tools, materials and processes used in industry.

### **Admission and Declaration Process**

Declaration of Major ([See Engineering Technology department page](#))

### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

### **Requirements**

#### **Core Courses: 71 credits**

- ETEC 112 - Introduction to Engineering, Design and Graphics
- ETEC 113 - Introduction to Computer-Aided Design
- ETEC 220 - Introduction to Engineering Materials
- ETEC 223 - Machine Metal Processes
- ETEC 224 - Applied Engineering Statics
- ETEC 225 - Strength of Materials

- ETEC 280 - Power Mechanics
- ETEC 281 - Power Transmission
- ETEC 327 - Manufacturing Economics
- ETEC 333 - Polymer Technology
- ETEC 334 - Reinforced Plastics/Composites
- ETEC 351 - Electronics for Engineering Technology I
- ETEC 380 - Advanced Power Mechanics
- ETEC 382 - Automotive Electronics
- ETEC 400
- ETEC 480 - Advanced Emission Control
- ETEC 484 - Vehicle Design
- ETEC 486 - Advanced Vehicle Design

**Supporting courses: 39 credits**

- CHEM 121 - General Chemistry I  
 One course from:
    - CSCI 138 - Programming Fundamentals in Visual Basic
    - CSCI 140 - Programming Fundamentals in C++
    - CSCI 141 - Computer Programming I
    - MATH 114 - Precalculus I and MATH 115 – Precalculus II  
**OR**  
 MATH 118 - Accelerated Precalculus  
 One course from:
      - MATH 124 - Calculus and Analytic Geometry I
      - MATH 134 - Calculus I Honors  
 One course from:
        - MATH 125 - Calculus and Analytic Geometry II
        - MATH 135 - Calculus II Honors
      - One course from:
        - PHYS 114 - Principles of Physics I
        - PHYS 121 - Physics With Calculus I
      - One course from:
        - PHYS 115 - Principles of Physics II
        - PHYS 122 - Physics With Calculus II
- Recommended electives to fulfill 60 credit upper division course requirement:

- ETEC 311 - Perspective and Rendering I
- ETEC 322 - Numerical Control Operations
- ETEC 381 - Advanced Power Transmission
- ETEC 481 - Gaseous Fuels
- ETEC 489 - Directed Research in Power Mechanics

# **Manufacturing Engineering Technology - Computer-Aided Design and Manufacturing, BS**

**144 credits**

## **Requirements**

### **Manufacturing Core: 94 credits**

- ETEC 112 - Introduction to Engineering, Design and Graphics
- ETEC 113 - Introduction to Computer-Aided Design
- ETEC 220 - Introduction to Engineering Materials
- ETEC 222 - Foundry, Forming and Joining
- ETEC 223 - Machine Metal Processes
- ETEC 224 - Applied Engineering Statics
- ETEC 225 - Strength of Materials
- ETEC 322 - Numerical Control Operations
- ETEC 325 - Manufacturing Process Planning
- ETEC 326 - Fluid Power
- ETEC 333 - Polymer Technology
- ETEC 335 - Tooling for Plastics Processing
- ETEC 344 - Industrial Quality Assurance
- ETEC 351 - Electronics for Engineering Technology I
- ETEC 361 - Advanced Cad: Pro/Engineer
- ETEC 362 - Advanced Cad: Surface Modeling
- ETEC 424 - Manufacturing Implementation
- ETEC 426
- ETEC 427 - Tool Design
- ETEC 461 - CAD Automation

### **Supporting courses: 50 credits**

- One course from:
  - MATH 124 - Calculus and Analytic Geometry I
  - MATH 134 - Calculus I Honors
- One course from:
  - MATH 125 - Calculus and Analytic Geometry II
  - MATH 135 - Calculus II Honors
- One course from:
  - MATH 245 - Statistics for Engineering Technology
- One course from:
  - CSCI 138 - Programming Fundamentals in Visual Basic
  - CSCI 140 - Programming Fundamentals in C++
  - OPS 461 - Project Management
  - PHYS 121 - Physics With Calculus I
  - PHYS 122 - Physics With Calculus II
  - PHYS 123 - Electricity and Magnetism
  - CHEM 121 - General Chemistry I

- One course from:
    - COMM 101 - Fundamentals of Speech
    - COMM 235 - Exposition and Argumentation
    - ETEC 341 - Engineering and Society
    - ETEC 422 - Manufacturing Project Definition
- Total credits for the manufacturing engineering technology CAD/CAM degree, including additional GUR requirements, equals 186.

**Technical Electives: 15 credits\***

- ETEC 312 - Industrial Design CAD Skills
- ETEC 334 - Reinforced Plastics/Composites
- ETEC 338 - Injection Molding
- ETEC 352 - Electronics for Engineering Technology II
- ETEC 354 - Electronics for Engineering Technology III  
 ETEC 397 (when relevant)
- ETEC 420 - Manufacturing Automation and Robotics
- ETEC 425 - Machine Design
- ETEC 426A - Advanced Computer Numerical Control - Surfacing and Contours
- ETEC 426B - Advanced Computer Numerical Control - Mill/Turn
- ETEC 426C - Advanced Computer Numerical Control - Hi-Speed Machining
- ETEC 426D - Advanced Computer Numerical Control - EDM
- ETEC 428 - Advanced Manufacturing Laboratory
- ETEC 429 - Directed Research in Manufacturing
- ETEC 431 - Plastics Product Design
- ETEC 434 - Advanced Composites
- ETEC 444 - Data Analysis and Design of Experiments  
 ETEC 497 (when relevant)
- OPS 460 - Designing and Improving Operations
- OPS 463 - Enterprise Resource Planning Systems
- OPS 466 - Supply Chain Management
- MATH 204 - Elementary Linear Algebra
- MATH 207 - Mathematical Computing
- MATH 224 - Multivariable Calculus and Geometry I
- MATH 331 - Ordinary Differential Equations
- MGMT 311 - Introduction to Management and Organizational Behavior
- MGMT 313 - Teamwork Basics

\* Technical electives are to be chosen from the list above approved list. The list is also available from program faculty advisors.

# Manufacturing Engineering Technology Minor

27-34 credits

## Grade Requirements

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

## Requirements

- ETEC 112 - Introduction to Engineering, Design and Graphics
  - ETEC 113 - Introduction to Computer-Aided Design
  - ETEC 220 - Introduction to Engineering Materials
  - ETEC 223 - Machine Metal Processes
  - ETEC 325 - Manufacturing Process Planning
  - One of the following sequences:
    - General Manufacturing* (8 or 9 credits):  
Choose 2 of the following courses:
      - ETEC 222 - Foundry, Forming and Joining
      - ETEC 322 - Numerical Control Operations
      - ETEC 333 - Polymer Technology
    - Engineering Design* (9 credits):
      - ETEC 224 - Applied Engineering Statics
      - ETEC 225 - Strength of Materials
    - Computer Aided Manufacturing* (15 credits):
      - ETEC 222 - Foundry, Forming and Joining
      - ETEC 322 - Numerical Control Operations
    - ETEC 427 - Tool Design
      - One course from:
        - ETEC 426A - Advanced Computer Numerical Control - Surfacing and Contours
        - ETEC 426B - Advanced Computer Numerical Control - Mill/Turn
        - ETEC 426C - Advanced Computer Numerical Control - Hi-Speed Machining
  - Engineering Polymers* (10 credits):
    - ETEC 333 - Polymer Technology
    - ETEC 334 - Reinforced Plastics/Composites
- \* The MET minor was designed for non-ET majors. Because of this the following restrictions are placed on ET majors desiring to obtain an MET minor:
- Plastics Engineering Technology students must take the Computer Aided Manufacturing option
  - Industrial Technology-Vehicle Design majors can choose between Computer Aided Manufacturing and General Manufacturing; when working toward the General Manufacturing option, ETEC 322 must be one of the courses
  - Students are advised that MATH 125, PHYS 122 and CHEM 121 are pre-requisites to some of the required courses and should be taken prior to the required courses.

# **Manufacturing Engineering Technology, BS**

**144 credits**

## **Introduction**

Manufacturing engineering technology prepares engineering technologists who understand and can apply established scientific and engineering knowledge and methods in combination with technical skills of modern technology to support engineering activities. Career fields include development and testing of new products, computer-aided design and manufacturing, computer numerical control operations, process planning and tooling design, robotics, cost analysis, production supervision and management, marketing and technical support, production process control, manufacturing support, and technical sales and service.

MET majors can declare under a CAD/CAM option. This is geared towards preparing technologists who are knowledgeable in the use of 3D parametric modeling techniques, tool path planning and CNC programming and operations for product/tooling design and fabrication.

Prospective students are encouraged to include physics, chemistry and mathematics in their high school preparation. University-level physics, computer science, precalculus and calculus must be taken during the first two years to ensure that junior-level course prerequisites are completed.

Certain community colleges offer the first two years as direct transfer. Therefore, it is necessary for interested students to seek early advisement from the Department of Engineering Technology.

Students can expect to complete this program in four years by carrying 15-16 credits per quarter in a prescribed sequence of courses.

The manufacturing engineering technology degree program is accredited by the Technology Accreditation Commission of ABET, 111 Market Place, Suite 1050, Baltimore, MD 21202-4012, phone 410-347-7700.

## **Admission and Declaration Process**

Declaration of Major ([See Engineering Department page](#))

## **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

## **Requirements**

### **Manufacturing Core: 90 credits**

- ETEC 112 - Introduction to Engineering, Design and Graphics
- ETEC 113 - Introduction to Computer-Aided Design
- ETEC 220 - Introduction to Engineering Materials
- ETEC 222 - Foundry, Forming and Joining
- ETEC 223 - Machine Metal Processes
- ETEC 224 - Applied Engineering Statics
- ETEC 225 - Strength of Materials
- ETEC 322 - Numerical Control Operations
- ETEC 325 - Manufacturing Process Planning

- ETEC 326 - Fluid Power
- ETEC 333 - Polymer Technology
- ETEC 344 - Industrial Quality Assurance
- ETEC 351 - Electronics for Engineering Technology I
- ETEC 352 - Electronics for Engineering Technology II
- ETEC 354 - Electronics for Engineering Technology III
- ETEC 420 - Manufacturing Automation and Robotics
- ETEC 424 - Manufacturing Implementation
- ETEC 427 - Tool Design
- ETEC 444 - Data Analysis and Design of Experiments
- Technical electives (13 credits)\*

**Supporting Courses: 54 credits**

- CHEM 121 - General Chemistry I
- CSCI 140 - Programming Fundamentals in C++
- ETEC 341 - Engineering and Society
- ETEC 422 - Manufacturing Project Definition
- MATH 245 - Statistics for Engineering Technology
- OPS 460 - Designing and Improving Operations
- OPS 461 - Project Management
- PHYS 121 - Physics With Calculus I
- PHYS 122 - Physics With Calculus II
- PHYS 123 - Electricity and Magnetism
- One course from:
  - MATH 124 - Calculus and Analytic Geometry I
  - MATH 134 - Calculus I Honors
- One course from:
  - MATH 125 - Calculus and Analytic Geometry II
  - MATH 135 - Calculus II Honors
- One course from:
  - COMM 101 - Fundamentals of Speech
  - COMM 235 - Exposition and Argumentation
- Technical electives:
  - ETEC 226 - Engineering Dynamics
  - ETEC 329 - Virtual Simulation
  - ETEC 334 - Reinforced Plastics/Composites \*\*
  - ETEC 335 - Tooling for Plastics Processing
  - ETEC 338 - Injection Molding \*\*
  - ETEC 361 - Advanced Cad: Pro/Engineer
  - ETEC 362 - Advanced Cad: Surface Modeling
  - ETEC 377 - Instrumentation  
ETEC 397 (when relevant)
  - ETEC 425 - Machine Design
  - ETEC 426A - Advanced Computer Numerical Control - Surfacing and Contours \*\*
  - ETEC 426B - Advanced Computer Numerical Control - Mill/Turn \*\*
  - ETEC 426C - Advanced Computer Numerical Control - Hi-Speed Machining \*\*

- ETEC 426D - Advanced Computer Numerical Control - EDM \*\*
- ETEC 428 - Advanced Manufacturing Laboratory \*\*
- ETEC 429 - Directed Research in Manufacturing
- ETEC 431 - Plastics Product Design
- ETEC 433 - Engineering Polymers
- ETEC 434 - Advanced Composites
- ETEC 439 - Directed Research in Woods  
ETEC 497 (when relevant)
- MATH 204 - Elementary Linear Algebra
- MATH 207 - Mathematical Computing
- MATH 224 - Multivariable Calculus and Geometry I
- MATH 331 - Ordinary Differential Equations
- MGMT 311 - Introduction to Management and Organizational Behavior
- MGMT 313 - Teamwork Basics
- OPS 463 - Enterprise Resource Planning Systems
- OPS 466 - Supply Chain Management
- OPS 467 - Global Operations Strategy
- OPS 468 - Manufacturing and Supply Train Strategy

Total credits for the manufacturing engineering technology degree, including additional GUR requirements, equal 186.

*\*Technical electives, one of which must be an advanced processing course,*

*\*\* are to be chosen from the following approved list. The list is also available from program faculty advisors. Electives are grouped by subject area so that some degree of specialization may be attained. Only one 200-level course may be counted.*

## Plastics Engineering Technology - Vehicle Engineering Technology Option, BS

**139 credits**

### Introduction

The plastics engineering technology program prepares students for productive, professional careers in the plastics and composites industries. The technical curriculum is built upon a firm base of mathematics, physics, chemistry and materials science, and provides extensive coverage of polymeric and composite materials and processing methods. Practical experience and applied research in design, tooling, processing, testing, analysis and production is a crucial part of the curriculum that is provided in the program's extensive and well-equipped laboratory facilities.

Students can expect to complete the program in four years by carrying 15-16 credits per quarter in a prescribed sequence of courses. The plastics engineering technology degree program is accredited by the Technology Accreditation Commission of ABET, 111 Market Place, Suite 1050, Baltimore, MD 21202-4012, phone 410-347-7700.

### Admission and Declaration Process

#### Declaration of Major

Declaration Process: PET/VET Declaration is a two-phase process for a PET/VET Bachelor of Science major. In phase one, students declare as an Industrial Technology – Vehicle Design major. Entrance to the PET/VET major (phase II) is

competitive and based on performance in ETEC 220, 280, 281, CHEM 121, and additional project work. Students must submit grades in these courses, evidence of project work and any additional academic work three weeks prior to registration for the following term. Students are allowed to apply to the PET/VET major three times per year.

### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

### **Requirements**

#### **Technical Core: 84 credits**

- ETEC 112 - Introduction to Engineering, Design and Graphics
- ETEC 113 - Introduction to Computer-Aided Design
- ETEC 220 - Introduction to Engineering Materials
- ETEC 223 - Machine Metal Processes
- ETEC 224 - Applied Engineering Statics
- ETEC 225 - Strength of Materials
- ETEC 280 - Power Mechanics
- ETEC 281 - Power Transmission
- ETEC 327 - Manufacturing Economics
- ETEC 333 - Polymer Technology
- ETEC 334 - Reinforced Plastics/Composites
- ETEC 344 - Industrial Quality Assurance
- ETEC 351 - Electronics for Engineering Technology I
- ETEC 380 - Advanced Power Mechanics
- ETEC 382 - Automotive Electronics
- ETEC 432 - Plastics Senior Project - Implementation
- ETEC 434 - Advanced Composites
- ETEC 444 - Data Analysis and Design of Experiments
- ETEC 480 - Advanced Emission Control
- ETEC 481 - Gaseous Fuels
- ETEC 484 - Vehicle Design
- ETEC 486 - Advanced Vehicle Design

#### **Technical electives**

- 9 credits from:
  - ETEC 322 - Numerical Control Operations
  - ETEC 335 - Tooling for Plastics Processing
  - ETEC 337 - Secondary Options
  - ETEC 338 - Injection Molding
  - ETEC 431 - Plastics Product Design
  - ETEC 433 - Engineering Polymers
  - ETEC 436 - Polymer Compounding
  - ETEC 438 - Directed Research in Plastics
  - ETEC 445
  - ETEC 300/400 - Directed Independent Studies

- ETEC 489 - Directed Research in Power Mechanics  
or courses approved by major advisor

**Supporting courses: 46 credits**

- MATH 124 - Calculus and Analytic Geometry I
- MATH 125 - Calculus and Analytic Geometry II
- One course from:
  - MATH 240 - Introduction to Statistics
  - MATH 245 - Statistics for Engineering Technology
- One course from:
  - PHYS 114 - Principles of Physics I
  - PHYS 121 - Physics With Calculus I
- One course from:
  - PHYS 115 - Principles of Physics II
  - PHYS 122 - Physics With Calculus II
- CHEM 121 - General Chemistry I
- CHEM 251 - Elementary Organic Chemistry
- One course from:
  - CSCI 140 - Programming Fundamentals in C++
  - CSCI 141 - Computer Programming I
- One course from:
  - COMM 101 - Fundamentals of Speech
  - COMM 235 - Exposition and Argumentation
  - ETEC 341 - Engineering and Society
  - ETEC 430 - Plastics Senior Project - Definition

Total credits for the Vehicle Engineering Technology Option in Plastics Engineering Technology, including additional GUR requirements, equal 186.

## Plastics Engineering Technology, BS

**139 credits**

### Introduction

The plastics engineering technology program prepares students for productive, professional careers in the plastics and composites industries. The technical curriculum is built upon a firm base of mathematics, physics, chemistry and materials science, and provides extensive coverage of polymeric and composite materials and processing methods. Practical experience and applied research in design, tooling, processing, testing, analysis and production is a crucial part of the curriculum that is provided in the program's extensive and well-equipped laboratory facilities.

Students can expect to complete the program in four years by carrying 15-16 credits per quarter in a prescribed sequence of courses.

The plastics engineering technology degree program is accredited by the Technology Accreditation Commission of ABET, 111 Market Place, Suite 1050, Baltimore, MD 21202-4012, phone 410-347-7700.

## **Admission and Declaration Process**

Declaration of Major (See Engineering department page)

## **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

## **Requirements**

### **Plastics Core: 86 credits**

- ETEC 112 - Introduction to Engineering, Design and Graphics
- ETEC 113 - Introduction to Computer-Aided Design
- ETEC 220 - Introduction to Engineering Materials
- ETEC 223 - Machine Metal Processes
- ETEC 224 - Applied Engineering Statics
- ETEC 225 - Strength of Materials
- ETEC 322 - Numerical Control Operations
- ETEC 333 - Polymer Technology
- ETEC 334 - Reinforced Plastics/Composites
- ETEC 335 - Tooling for Plastics Processing
- ETEC 337
- ETEC 338 - Injection Molding
- ETEC 344 - Industrial Quality Assurance
- ETEC 351 - Electronics for Engineering Technology I
- ETEC 431 - Plastics Product Design
- ETEC 432 - Plastics Senior Project - Implementation
- ETEC 433 - Engineering Polymers
- ETEC 434 - Advanced Composites
- ETEC 436 - Polymer Compounding
- ETEC 444 - Data Analysis and Design of Experiments
- Technical electives approved by major advisor (10 credits)

### **Supporting Courses: 53 credits**

- CHEM 121 - General Chemistry I
- CHEM 251 - Elementary Organic Chemistry
- CHEM 308 - Introduction to Polymer Chemistry
- ETEC 341 - Engineering and Society
- ETEC 430 - Plastics Senior Project - Definition
- OPS 461 - Project Management
- One course from:
  - MATH 124 - Calculus and Analytic Geometry I
  - MATH 134 - Calculus I Honors
- One course from:
  - MATH 125 - Calculus and Analytic Geometry II
  - MATH 135 - Calculus II Honors

- One course from:
  - MATH 245 - Statistics for Engineering Technology
  - MATH 240 - Introduction to Statistics
- Choose either:
  - PHYS 121 - Physics With Calculus I
  - PHYS 122 - Physics With Calculus II
  - or
  - PHYS 114 - Principles of Physics I
  - PHYS 115 - Principles of Physics II
- One course from:
  - COMM 101 - Fundamentals of Speech
  - COMM 235 - Exposition and Argumentation
- One course from:
  - CSCI 140 - Programming Fundamentals in C++
  - CSCI 141 - Computer Programming I

**NOTE:** PHYS 123 is recommended but not required if natural science GUR is otherwise completed. CHEM 122 and 123 will also satisfy this natural science GUR.

Total credits for the plastics engineering technology degree, including additional GUR requirements, equal 186.

## **Sustainable Design Minor (also see Environmental Studies Department)**

Jointly offered by the Department of Environmental Studies, Huxley College of the Environment and the Department of Engineering Technology, College of Sciences and Technology

### **30-32 Credits**

#### **Introduction**

Huxley College of the Environment and the Department of Engineering Technology jointly offer a minor in Sustainable Design. The goal of the program is to enable students with strengths in design or in environmental studies to gain complementary skills in the other area so as to pursue sustainable design careers more effectively. The program is also open to students from any area that would benefit by the set of concepts and skills offered. Students are accepted into the sustainable design minor by application based on their demonstrated affinity to integrate environmental systems knowledge and sustainable design principles, and on enrollment limits. Students submit an application and a portfolio of work. Applications are accepted semi-annually on the third Friday of fall and spring quarters. See WWU Industrial Design website and the Huxley College of the Environment website.

#### **Admission and Declaration Process**

Admission and Declaration of Major (see Huxley College Admission and Advisement page)

#### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

#### **Requirements**

- ESTU 369 - Introduction to Planning
- ESTU 415 - Planning for Sustainable Communities

- ETEC 311 - Perspective and Rendering I
  - ETEC 312 - Industrial Design CAD Skills
  - One course from:
    - \* ESCI 302 - Environmental Pollution
    - \* ESCI 310 - Environmental Systems
    - \* ESCI 321 - Oceanography
    - \* ESCI 325 - Fundamentals of Ecology
    - \* ESCI 380 - Energy and Environment
    - \* ESCI 392 - Introduction to Global Change  
or approved substitute
  - One course from:
    - ESTU 303 - Human Ecology and Sustainability
    - ESTU 304 - Environment and Resource Policy
    - ESTU 305 - Environmental History and Ethics
    - FAIR 335N - Visioning Sustainable Futures
  - Electives under advisement (8 credits):
    - ACCT 484 - Environmental Accounting
    - ECON 383 - Environmental Economics
    - ECON 384 - Energy Economics
    - \* ESCI 302 - Environmental Pollution
    - \* ESCI 310 - Environmental Systems
    - \* ESCI 321 - Oceanography
    - \* ESCI 325 - Fundamentals of Ecology
    - \* ESCI 380 - Energy and Environment
    - \* ESCI 392 - Introduction to Global Change
  - ESCI 431 - Watershed Biogeochemistry
  - ESCI 490 - Environmental Risk Assessment
  - ESTU 464 - United States Environmental Policy
  - ESTU 466 - U.S. and Washington State Environmental Regulations
  - ESTU 467 - Natural Resource Policy
  - ESTU 470 - Planning Studio
  - ESTU 471 - Campus Planning Studio
  - ETEC 214 - Sophomore Industrial Design I
  - ETEC 215 - History of Industrial Design
  - ETEC 216 - Sophomore Industrial Design II
  - ETEC 231 - Design Problems in Woodworking
  - ETEC 315 - Perspective and Rendering II
- \* ESCI courses cannot be counted twice

## **Technology Education, MEd**

Program Advisor: Professor Todd Morton, Ross Engineering Technology 204

The graduate program in technology education is currently not accepting new students. Admission to the program may be reopened should there be sufficient student interest. Individuals with an interest should contact the engineering technology department chair, Professor Todd Morton, (360) 650-3380 or [Todd.Morton@wwu.edu](mailto:Todd.Morton@wwu.edu).

# **Geology**

## **Introduction**

The natural setting of Western Washington University adjacent to the Cascade Mountains and Puget Sound provides an ideal situation for study of a wide variety of geologic problems.

## **Faculty**

At the present time the department consists of 14 faculty members who have a broad range of backgrounds covering the entire field of geology. There are about 120 undergraduate students declaring geology majors and approximately 30 graduate students in the department.

**RANDALL S. BABCOCK** (1967) Chair and Professor. AB, Dartmouth College; MS, PhD, University of Washington.

**JACQUELINE CAPLAN-AUERBACH** (2006) Assistant Professor. BA, Yale University; PhD, University of Hawaii-Manoa.

**DOUGLAS H. CLARK** (1998) Associate Professor. BS, MS, Stanford University; PhD, University of Washington.

**JULIET G. CRIDER** (2001) Associate Professor. BA, Amherst College; MS, University of Washington; PhD, Stanford University.

**SUSAN M. DEBARI** (1998) Associate Professor. BA, Cornell University; PhD, Stanford University.

**DAVID C. ENGBRETSON** (1983) Professor. BA, Western Washington University; MS, PhD, Stanford University.

**THOR A. HANSEN** (1985) Professor. BS, George Washington University; PhD, Yale University.

**DAVID M. HIRSCH** (2001) Assistant Professor. BS, University of California-Los Angeles; PhD, University of Texas-Austin.

**BE RNARD A. HOUSEN** (1997) Professor. BS, University of Washington; MS, PhD, University of Michigan.

**SCOTT R. LINNEMAN** (2000) Associate Professor. BA, Carleton College; PhD, University of Wyoming.

**ROBERT J. MITCHELL** (1996) Associate Professor. BS, University of Wisconsin-River Falls; MS, Michigan Technological University; PhD, Michigan Technological University.

**ELIZABETH R. SCHERMER** (1990) Professor. BS, Stanford University; PhD, Massachusetts Institute of Technology.

**CHRISTOPHER A. SUCZEK** (1977) Associate Professor. AB, University of California-Berkeley; PhD, Stanford University.

## **Research Associates**

**CLARK M. BLAKE** (1993). AB, University of California-Berkeley; PhD, Stanford University.

**RUSSELL F. BURMESTER** (1978). BS, Stanford University; MA, University of Texas-Austin; PhD, Princeton University.

**CHARLES A. ROSS** (1992). BA, University of Colorado; MS, PhD, Yale University.

## **Adjunct Faculty**

**DAVID TUCKER** (2006) BS, MS, Western Washington University.

**PETER WILLING** (1997). BA, University of Washington; MS, PhD, Cornell University.

## **Declaration of Major**

Some 300-level geology courses give preference to majors during Phase I of registration, so it is important to declare a major as early as possible.

Students are admitted to the BA or BS major once they have completed GEOL 211. (NOTE: Grades of D-, D, or D+ are not acceptable for major and supporting courses.) Students must apply to the department for admission to the major.

## **Departmental Honors and Distinctions**

BA or BS students and students in the University Honors program who have completed at least 4 credits of GEOL 490 and have a cumulative GPA of 3.50 or higher meet the requirements for departmental honors. Those students who have

completed at least 4 credits of GEOL 490 and have a cumulative GPA higher than 3.20 meet the requirements for departmental distinction.

### **Other Departmental Information**

#### *Facilities and Equipment*

Geology is a science that studies the earth, including its surfaces, interior and history and the processes that have altered it through time. It embraces investigation of the natural environment both in the field and in the laboratory. The Department of Geology occupies modern laboratories, classrooms and offices constructed in 1976 in the Environmental Studies Center. Geology laboratory facilities and equipment are available for X-ray diffraction, atomic absorption, sedimentation, air photo interpretation, flume and wave tank studies, paleomagnetic analysis, geochemistry, petrography and scanning electron microscopy. The Sundquist Marine Laboratory at Shannon Point near Anacortes provides facilities for studies in marine geology.

#### *Programs*

Objectives of the department are varied, including preparation of undergraduate and graduate students for careers as professional geoscientists and also preparation of earth science teachers at the primary and secondary levels.

A wide variety of geologic phenomena in the adjacent Cascade Range and the marine environment of Puget Sound provide a broad spectrum of geologic features for study.

The department offers BA, BAE, BS and MS degrees plus specialized courses in the following subjects: economic geology; environmental geology; geochemistry; geomorphology; geophysics; glacial geology; hydrology; paleomagnetism; paleontology; petrology; sedimentation; stratigraphy; and structure and tectonics.

#### *Student Involvement in Research*

The faculty in the Department of Geology are active in a wide variety of ongoing research projects that frequently involve undergraduate and graduate students in special projects and thesis projects or provide employment. Some of this research is funded or partially supported from grants to individual faculty members from the National Science Foundation, U.S. Geological Survey, National Parks Commission, Office of Ecology and geological-related companies. Many of these projects are in the Western Washington region, others include investigations in other parts of the United States, Canada and even overseas.

#### *Writing Proficiency Course Guidelines*

The geology department has a multi-tiered system for upper division writing proficiency courses. Courses are assigned writing proficiency points based on the percentage of the course grade that is determined by writing assignments. A minimum of three writing proficiency points in approved upper-division writing proficiency courses at WWU with a minimum grade of C- is required.

### **Undergraduate Degrees and Programs**

Earth Science — Elementary, BAE

Earth Science/General Science — Secondary, BAE

Earth Science — Secondary, BAE

Geology, BA

Geology — Thesis Option, BA

Geology, BS

Geology — Thesis Option, BS

Geology — Environmental Geology Concentration, BS

Geology — Environmental Geology Concentration: Thesis Option, BS

Geology — Geophysics Concentration, BS

Geology — Geophysics Concentration: Thesis Option, BS

Geophysics, BS

Geology Minor

#### **Graduate Degrees and Programs**

Geology, Thesis, MS

## **Earth Science — Elementary, BAE**

**73-84 credits**

### **Introduction**

This major satisfies the academic major requirement for teacher certification with an endorsement in elementary education and must be accompanied by the professional preparation program in elementary education. See the Elementary Education section of this catalog for program admission, completion, and teacher certification requirements. This major does not lead to an endorsement in Earth & Space Science.

### **Admission and Declaration Process**

Declaration of Major

Some 300-level geology courses give preference to majors during Phase I of registration, so it is important to declare a major as early as possible.

Students are admitted to the BA or BS major once they have completed Geol 211. (NOTE: Grades of D-, D, or D+ are not acceptable for major and supporting courses.) Students must apply to the department for admission to the major.

### **Grade Requirements**

Students must earn a grade of C (2.0) or better in the elementary education professional program and in all courses required for the endorsement.

## **Requirements**

- CHEM 121 - General Chemistry I
- GEOL 212 - Historical Geology
- GEOL 252 - The Earth and Its Weather
- GEOL 310 - Geomorphology
- GEOL 340 - Geological Oceanography
- MATH 114 - Precalculus I
- SCED 201 - Matter and Energy in Physical Systems
- SCED 202 - Matter and Energy in Earth Systems
- SCED 203 - Matter and Energy in Life Systems
- SCED 294 - Investigative Science
- SCED 370 - Science and Society
- SCED 480 - Science Methods and Curriculum for the Elementary School
- SCED 490 - Laboratory/Field Experience in Elementary Science
- One course from:
  - GEOL 211 - Physical Geology
  - GEOL 211A - Physical Geology Review
- Choose either:
  - GEOL 311 - Earth Materials
    - or
  - GEOL 306 - Mineralogy
    - and
  - GEOL 406 - Igneous and Metamorphic Petrology
- One course from:
  - PHYS 101 - Physics Analysis
  - PHYS 104 - Physics Applications
- One course from:
  - ASTR 103 - Introduction to Astronomy
  - ASTR 113 - Sun, Moon, and Planets
- Electives (choose two of the following):
  - GEOL 213 - GIS in Geology
  - GEOL 214 - Environmental Geology
  - GEOL 303 - Dinosaurs and Their Environment
  - GEOL 308 - Earthquakes
  - GEOL 309 - Volcanology
  - GEOL 316 - Research in Marine Paleontology
  - GEOL 372 - Watershed Hydrology
  - GEOL 414 - Geology of Washington
  - GEOL 415 - Stratigraphy and Sedimentation
  - GEOL 430 - Image Interpretation
  - GEOL 440 - Glacial Geology

## **Additional Requirements**

### **Elementary Education Professional Program Requirements (106 credits)**

**Professional Studies Core (25 credits)**

- EDUC 301 - Educational Psychology I: Development and Individual Differences
- EDUC 302 - Educational Psychology II: Motivation, Learning and Assessment
- EDUC 310 - The Teacher and the Social Order
- ELED 370 - Introduction to Teaching
- IT 344 - Basic Instructional Technology Skills
- IT 442 - Classroom Use of Instructional Technology (Elementary)
- SPED 364 - Teaching All Students

**Elementary Program — Methods, Curriculum Content, and Field Experiences (81 credits)**

- ART 380 - Art Educating the Child
- ELED 425 - Social Studies for the Elementary School
- ELED 470 - Developing Teaching
- ELED 471 - Documenting Teaching
- ELED 480 - Literacy: Beginning Communicators
- ELED 481 - Literacy: Fluent Communicators
- ELED 491 - September Experience
- ELED 492 - Practicum: Experience in Literacy Methods
- ELED 494 - Internship - Elementary
- HLED 455 - Health Education Grades K-8
- MATH 381 - Teaching K-8 Mathematics I
- MATH 382 - Teaching K-8 Mathematics II
- MATH 383 - Teaching K-8 Mathematics III
- MATH 491 - Internship Seminar - Teaching K-8 Mathematics
- MUS 361 - Music for Elementary Teachers
- PE 345 - Physical Education for Elementary School
- SCED 480 - Science Methods and Curriculum for the Elementary School
- SCED 490 - Laboratory/Field Experience in Elementary Science
- SPED 430 - Problem Solving for Diverse Needs

**Departmental Honors**

BA or BS students and students in the University Honors program who have completed at least 4 credits of GEOL 490 and have a cumulative GPA of 3.50 or higher meet the requirements for departmental honors. Those students who have completed at least 4 credits of GEOL 490 and have a cumulative GPA higher than 3.20 meet the requirements for departmental distinction.

## **Earth Science — Secondary, BAE**

**74-90 credits**

### **Introduction**

The geology department recommends for teaching endorsement those students who have satisfactorily completed requirements for the bachelor's degree in education with 1) an earth science secondary major or 2) a geology minor combined with a major in one of the other physical or biological sciences.

This program must be accompanied by the professional preparation program in secondary education. See the Secondary Education section of this catalog for program admission, completion, and teacher certification requirements.

This major leads to an endorsement in Earth & Space Science.

### **Admission and Declaration Process**

#### **Declaration of Major**

Some 300-level geology courses give preference to majors during Phase I of registration, so it is important to declare a major as early as possible.

Students are admitted to the BA or BS major once they have completed Geol 211. (NOTE: Grades of D-, D, or D+ are not acceptable for major and supporting courses.) Students must apply to the department for admission to the major.

#### **Grade Requirements**

Students must earn a grade of C (2.0) or better in the secondary education professional program and in all courses required for the endorsement.

#### **Requirements**

- CHEM 121 - General Chemistry I
- CHEM 122 - General Chemistry II
- GEOL 212 - Historical Geology
- GEOL 213 - GIS in Geology
- GEOL 252 - The Earth and Its Weather
- GEOL 310 - Geomorphology
- GEOL 340 - Geological Oceanography
- MATH 240 - Introduction to Statistics
- PHYS 114 - Principles of Physics I
- PHYS 115 - Principles of Physics II
- SCED 370 - Science and Society
- SCED 481 - Fundamentals of Teaching Science
- SCED 491 - Methods in Secondary Education for Science Teachers
- One course from:
  - GEOL 211 - Physical Geology
  - GEOL 211A - Physical Geology Review
- Choose either:
  - GEOL 311 - Earth Materials

- or
- GEOL 306 - Mineralogy  
and
  - GEOL 406 - Igneous and Metamorphic Petrology  
 One course from:
  - ASTR 103 - Introduction to Astronomy
  - ASTR 113 - Sun, Moon, and Planets  
 Choose either:
  - MATH 114 - Precalculus I and
  - MATH 115 - Precalculus II
  - or complete MATH 124 - Calculus and Analytic Geometry I  
 Electives (choose two of the following):
  - GEOL 308 - Earthquakes
  - GEOL 309 - Volcanology
  - GEOL 314 - Engineering Geology
  - GEOL 316 - Research in Marine Paleontology
  - GEOL 318 - Structural Geology
  - GEOL 407 - Advanced Petrography
  - GEOL 414 - Geology of Washington
  - GEOL 415 - Stratigraphy and Sedimentation
  - GEOL 430 - Image Interpretation
  - GEOL 440 - Glacial Geology

#### **Additional Requirements**

#### **Link to Woodring College of Education Secondary Teacher Education Program**

##### *Secondary Education Professional Program Requirements*

- EDUC 301 - Educational Psychology I: Development and Individual Differences
- EDUC 302 - Educational Psychology II: Motivation, Learning and Assessment
- EDUC 310 - The Teacher and the Social Order
- IT 444 - Classroom Use of Instructional Technology (Secondary)
- SEC 410 - Dynamics of Teaching
- SEC 411 - Philosophical Foundations of Education
- SEC 425 - Developmental Reading, Writing and Learning in Secondary Schools
- SEC 430 - Secondary School Methods I - Instructional Strategies, Daily Planning, and Standards
- SEC 431 - Secondary School Methods II-Assessment and Long Term Planning
- SEC 432 - Secondary School Methods III - Management, Motivation and Discipline
- SEC 433 - Peer Teaching Laboratory
- SEC 435 - Middle Level Practicum
- SEC 436 - Secondary School Practicum
- SEC 495 - Internship - Secondary
- SPED 363 - Secondary Students With Special Needs

#### **Departmental Honors**

BA or BS students and students in the University Honors program who have completed at least 4 credits of GEOL

490 and have a cumulative GPA of 3.50 or higher meet the requirements for departmental honors. Those students who have completed at least 4 credits of GEOL 490 and have a cumulative GPA higher than 3.20 meet the requirements for departmental distinction.

## **Earth Science/General Science — Secondary, BAE**

**95-109 credits**

### **Introduction**

The geology department recommends for teaching endorsement those students who have satisfactorily completed requirements for the bachelor's degree in education with 1) an earth science secondary major or 2) a geology minor combined with a major in one of the other physical or biological sciences.

This program must be accompanied by the professional preparation program in secondary education. See the Secondary Education section of this catalog for program admission, completion, and teacher certification requirements.

This major leads to recommendation for teaching endorsements in Earth & Space Science and Science.

### **Admission and Declaration Process**

#### **Declaration of Major**

Some 300-level geology courses give preference to majors during Phase I of registration, so it is important to declare a major as early as possible.

Students are admitted to the BA or BS major once they have completed Geol 211. (NOTE: Grades of D-, D, or D+ are not acceptable for major and supporting courses.) Students must apply to the department for admission to the major.

### **Grade Requirements**

Students must earn a grade of C (2.0) or better in the secondary education professional program and in all courses required for the endorsement.

### **Requirements**

- BIOL 204 - Introduction to Evolution, Ecology and Biodiversity
- BIOL 205 - Introduction to Cellular and Molecular Biology
- BIOL 206 - Introduction to Organismal Biology
- CHEM 121 - General Chemistry I
- CHEM 122 - General Chemistry II
- CHEM 251 - Elementary Organic Chemistry
- GEOL 212 - Historical Geology
- GEOL 213 - GIS in Geology
- GEOL 252 - The Earth and Its Weather
- GEOL 310 - Geomorphology

- GEOL 340 - Geological Oceanography
- MATH 240 - Introduction to Statistics
- SCED 370 - Science and Society
- SCED 481 - Fundamentals of Teaching Science
- SCED 491 - Methods in Secondary Education for Science Teachers
- One course from:
  - GEOL 211 - Physical Geology
  - GEOL 211A - Physical Geology Review
- Choose either:
  - GEOL 311 - Earth Materials  
or
  - GEOL 306 - Mineralogy  
and
  - GEOL 406 - Igneous and Metamorphic Petrology
- One course from:
  - ASTR 103 - Introduction to Astronomy
  - ASTR 113 - Sun, Moon, and Planets
- Choose either:
  - MATH 114 - Precalculus I and
  - MATH 115 - Precalculus II
  - or complete MATH 124 - Calculus and Analytic Geometry I
- Choose either:
  - PHYS 114 - Principles of Physics I
  - PHYS 115 - Principles of Physics II
  - PHYS 116 - Principles of Physics III  
or
  - PHYS 121 - Physics With Calculus I
  - PHYS 122 - Physics With Calculus II
  - PHYS 123 - Electricity and Magnetism
- At least one elective from:
  - GEOL 308 - Earthquakes
  - GEOL 309 - Volcanology
  - GEOL 314 - Engineering Geology
  - GEOL 316 - Research in Marine Paleontology
  - GEOL 318 - Structural Geology
  - GEOL 372 - Watershed Hydrology
  - GEOL 407 - Advanced Petrography
  - GEOL 414 - Geology of Washington
  - GEOL 415 - Stratigraphy and Sedimentation
  - GEOL 430 - Image Interpretation
  - GEOL 440 - Glacial Geology

#### **Additional Requirements**

**[Link to Woodring College of Education Secondary Teacher Education Program](#)**

## **Secondary Education Professional Program Requirements (68 credits)**

- EDUC 301 - Educational Psychology I: Development and Individual Differences
- EDUC 302 - Educational Psychology II: Motivation, Learning and Assessment
- EDUC 310 - The Teacher and the Social Order
- IT 444 - Classroom Use of Instructional Technology (Secondary)
- SEC 410 - Dynamics of Teaching
- SEC 411 - Philosophical Foundations of Education
- SEC 425 - Developmental Reading, Writing and Learning in Secondary Schools
- SEC 430 - Secondary School Methods I - Instructional Strategies, Daily Planning, and Standards
- SEC 431 - Secondary School Methods II-Assessment and Long Term Planning
- SEC 432 - Secondary School Methods III - Management, Motivation and Discipline
- SEC 433 - Peer Teaching Laboratory
- SEC 435 - Middle Level Practicum
- SEC 436 - Secondary School Practicum
- SEC 495 - Internship - Secondary
- SPED 363 - Secondary Students With Special Needs

### **Departmental Honors**

BA or BS students and students in the University Honors program who have completed at least 4 credits of GEOL 490 and have a cumulative GPA of 3.50 or higher meet the requirements for departmental honors. Those students who have completed at least 4 credits of GEOL 490 and have a cumulative GPA higher than 3.20 meet the requirements for departmental distinction.

## **Geology Minor**

**25 credits**

### **Admission and Declaration Process**

#### **Declaration of Major**

Some 300-level geology courses give preference to majors during Phase I of registration, so it is important to declare a major as early as possible.

Students are admitted to the BA or BS major once they have completed Geol 211. ( **NOTE:** Grades of D-, D, or D+ are not acceptable for major and supporting courses.) Students must apply to the department for admission to the major.

#### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

#### **Requirements**

- GEOL 211 - Physical Geology
- GEOL 212 - Historical Geology
- Geology electives 200 level and above

# **Geology — Environmental Geology Concentration, BS**

**99-105 credits**

## **Introduction**

This program is recommended for students who are preparing to become professional geologists and intend to enter industry or enroll in a graduate program upon completion of the degree.

Students intending to pursue graduate study are strongly advised to take Math 224 or 204, PHYS 123 and other science support courses appropriate to the specialty.

Students must complete both the Core Program and one of the three concentrations.

## **Admission and Declaration Process**

### **Declaration of Major**

Some 300-level geology courses give preference to majors during Phase I of registration, so it is important to declare a major as early as possible.

Students are admitted to the BA or BS major once they have completed Geol 211. (NOTE: Grades of D-, D, or D+ are not acceptable for major and supporting courses.) Students must apply to the department for admission to the major.

This option is designed to provide students with a general background in the surficial and hydrologic processes required for the involvement in site assessments, groundwater investigations, hazard evaluations, watershed analyses, stream characterization and restoration, land use planning, location of waste disposal sites and other projects that involve the Earth and the activities of humankind. This option is also suitable preparation for graduate work in geology or environmental sciences.

### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

## **Requirements**

### **Core Program**

- CHEM 121 - General Chemistry I
- CHEM 122 - General Chemistry II
- CHEM 123 - General Chemistry III
- GEOL 211 - Physical Geology
- GEOL 212 - Historical Geology
- GEOL 213 - GIS in Geology
- GEOL 306 - Mineralogy
- GEOL 310 - Geomorphology
- GEOL 318 - Structural Geology
- GEOL 352 - Introduction to Geophysics
- GEOL 406 - Igneous and Metamorphic Petrology
- GEOL 409 - Field Methods and Theory
- GEOL 410 - Geologic Mapping

- GEOL 415 - Stratigraphy and Sedimentation
- PHYS 121 - Physics With Calculus I
- PHYS 122 - Physics With Calculus II
- Choose either:
  - MATH 124 - Calculus and Analytic Geometry I
  - MATH 125 - Calculus and Analytic Geometry II  
or
  - MATH 134 - Calculus I Honors
  - MATH 135 - Calculus II Honors  
or
  - MATH 138 - Accelerated Calculus

#### **Environmental Geology Concentration courses**

- GEOL 314 - Engineering Geology
- GEOL 473 - Ground Water Hydrology
- One course from:
  - MATH 203 - Linear Algebra and Differential Equations I
  - MATH 204 - Elementary Linear Algebra
  - MATH 224 - Multivariable Calculus and Geometry I
  - MATH 341 - Probability and Statistical Inference
- 9 additional credits from:
  - GEOL 413 - Fluvial Geomorphology
  - GEOL 430 - Image Interpretation
  - GEOL 440 - Glacial Geology
  - GEOL 449 - Geomechanics
  - GEOL 450 - Advanced Topics in Structural Geology
  - GEOL 451 - Active Tectonics Seminar
  - GEOL 452 - Applied Geophysics
  - GEOL 461 - Analytical Geochemistry
  - GEOL 462 - Hydrogeochemistry
  - GEOL 470 - Landslides and Slope Stability
  - GEOL 472 - Surface Water Hydrology
  - GEOL 474 - Ground Water Contamination

#### **Departmental Honors**

BA or BS students and students in the University Honors program who have completed at least 4 credits of GEOL 490 and have a cumulative GPA of 3.50 or higher meet the requirements for departmental honors. Those students who have completed at least 4 credits of GEOL 490 and have a cumulative GPA higher than 3.20 meet the requirements for departmental distinction.

# **Geology — Environmental Geology Concentration: Thesis Option, BS**

**96-105 credits**

## **Introduction**

This program is recommended for students who are preparing to become professional geologists and intend to enter industry or enroll in a graduate program upon completion of the degree.

Students intending to pursue graduate study are strongly advised to take Math 224 or 204, PHYS 123 and other science support courses appropriate to the specialty.

Students must complete both the Core Program and one of the three concentrations.

## **Admission and Declaration Process**

### **Declaration of Major**

Some 300-level geology courses give preference to majors during Phase I of registration, so it is important to declare a major as early as possible.

Students are admitted to the BA or BS major once they have completed Geol 211. (NOTE: Grades of D-, D, or D+ are not acceptable for major and supporting courses.) Students must apply to the department for admission to the major.

This option is designed to provide students with a general background in the surficial and hydrologic processes required for the involvement in site assessments, groundwater investigations, hazard evaluations, watershed analyses, stream characterization and restoration, land use planning, location of waste disposal sites and other projects that involve the Earth and the activities of humankind. This option is also suitable preparation for graduate work in geology or environmental sciences.

### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

## **Requirements**

### **Core Program**

- CHEM 121 - General Chemistry I
- CHEM 122 - General Chemistry II
- CHEM 123 - General Chemistry III
- GEOL 211 - Physical Geology
- GEOL 212 - Historical Geology
- GEOL 213 - GIS in Geology
- GEOL 306 - Mineralogy
- GEOL 310 - Geomorphology
- GEOL 318 - Structural Geology
- GEOL 352 - Introduction to Geophysics
- GEOL 406 - Igneous and Metamorphic Petrology
- GEOL 409 - Field Methods and Theory
- GEOL 410 - Geologic Mapping

- GEOL 415 - Stratigraphy and Sedimentation
- PHYS 121 - Physics With Calculus I
- PHYS 122 - Physics With Calculus II
- Choose either:
- MATH 124 - Calculus and Analytic Geometry I
- MATH 125 - Calculus and Analytic Geometry II  
or
- MATH 134 - Calculus I Honors
- MATH 135 - Calculus II Honors  
or
- MATH 138 - Accelerated Calculus

### **Environmental Geology — Thesis Option**

- GEOL 314 - Engineering Geology
- GEOL 473 - Ground Water Hydrology
- One course from:
  - MATH 203 - Linear Algebra and Differential Equations I
  - MATH 204 - Elementary Linear Algebra
  - MATH 224 - Multivariable Calculus and Geometry I
  - MATH 341 - Probability and Statistical Inference
- One of the following research methods courses in consultation with advisor:
  - GEOL 413 - Fluvial Geomorphology
  - GEOL 430 - Image Interpretation
  - GEOL 440 - Glacial Geology
  - GEOL 450 - Advanced Topics in Structural Geology
  - GEOL 451 - Active Tectonics Seminar
  - GEOL 452 - Applied Geophysics
  - GEOL 461 - Analytical Geochemistry
  - GEOL 470 - Landslides and Slope Stability
  - GEOL 472 - Surface Water Hydrology
  - GEOL 474 - Ground Water Contamination
- Successful application to the department approving the thesis topic
- Complete at least 4 credits of:
  - GEOL 490 - Senior Thesis

### **Senior Thesis**

An undergraduate thesis is an excellent way to develop research skills, establish closer working relationships with faculty, and gain a more in-depth knowledge of geology. Completion of a thesis is also a notable achievement that highlights a student's ability to do research, providing tangible evidence of research ability to either graduate schools or potential employers. Thesis options are available for the BA and BS degrees in geology. Students interested in pursuing a senior thesis should contact potential advisors during their junior year to discuss possible thesis topics. A formal application to the department must be made, and accepted, prior to the start of the thesis project.

### **Departmental Honors**

BA or BS students and students in the University Honors program who have completed at least 4 credits of GEOL 490 and have a cumulative GPA of 3.50 or higher meet the requirements for departmental honors. Those students who have

completed at least 4 credits of GEOL 490 and have a cumulative GPA higher than 3.20 meet the requirements for departmental distinction.

## **Geology — Geophysics Concentration, BS**

**98-105 credits**

### **Introduction**

This program is recommended for students who are preparing to become professional geologists and intend to enter industry or enroll in a graduate program upon completion of the degree.

Students intending to pursue graduate study are strongly advised to take Math 224 or 204, PHYS 123 and other science support courses appropriate to the specialty.

Students must complete both the Core Program and one of the three concentrations.

### **Admission and Declaration Process**

#### **Declaration of Major**

Some 300-level geology courses give preference to majors during Phase I of registration, so it is important to declare a major as early as possible.

Students are admitted to the BA or BS major once they have completed Geol 211. (NOTE: Grades of D-, D, or D+ are not acceptable for major and supporting courses.) Students must apply to the department for admission to the major.

This option will prepare students to apply various geophysical techniques to the study of the Earth. Completion of this concentration will prepare students for careers in environmental geophysics or graduate work in geotectonics and other quantitative aspects of Earth Science.

### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

### **Requirements**

#### **Core Program**

- CHEM 121 - General Chemistry I
- CHEM 122 - General Chemistry II
- CHEM 123 - General Chemistry III
- GEOL 211 - Physical Geology
- GEOL 212 - Historical Geology
- GEOL 213 - GIS in Geology
- GEOL 306 - Mineralogy
- GEOL 310 - Geomorphology
- GEOL 318 - Structural Geology
- GEOL 352 - Introduction to Geophysics
- GEOL 406 - Igneous and Metamorphic Petrology
- GEOL 409 - Field Methods and Theory

- GEOL 410 - Geologic Mapping
- GEOL 415 - Stratigraphy and Sedimentation
- PHYS 121 - Physics With Calculus I
- PHYS 122 - Physics With Calculus II
- Choose either:
- MATH 124 - Calculus and Analytic Geometry I
- MATH 125 - Calculus and Analytic Geometry II  
or
- MATH 134 - Calculus I Honors
- MATH 135 - Calculus II Honors  
or
- MATH 138 - Accelerated Calculus

### **Geophysics Concentration courses**

- GEOL 452 - Applied Geophysics
- At least one from:
  - GEOL 453 - Plate Tectonics
  - GEOL 456 - Principles of Orogeny Seminar
  - GEOL 457 - Practical Paleomagnetism
  - GEOL 463 - Introduction to Seismology
- At least one from:
  - GEOL 449 - Geomechanics
  - GEOL 450 - Advanced Topics in Structural Geology
  - GEOL 451 - Active Tectonics Seminar
  - GEOL 454 - Magnetic Fabrics and Geologic Processes
  - GEOL 472 - Surface Water Hydrology
  - GEOL 473 - Ground Water Hydrology
- or 4 additional credits from the math or physics courses listed below.
- 8 credits from:
  - MATH 203 - Linear Algebra and Differential Equations I
  - MATH 204 - Elementary Linear Algebra
  - MATH 224 - Multivariable Calculus and Geometry I
  - MATH 225 - Multivariable Calculus and Geometry II
  - MATH 331 - Ordinary Differential Equations
  - PHYS 123 - Electricity and Magnetism
  - PHYS 223 - Waves and Optics
  - PHYS 233 - Waves and Optics Laboratory
  - PHYS 363 - Classical Mechanics

### **Departmental Honors**

BA or BS students and students in the University Honors program who have completed at least 4 credits of GEOL 490 and have a cumulative GPA of 3.50 or higher meet the requirements for departmental honors. Those students who have completed at least 4 credits of GEOL 490 and have a cumulative GPA higher than 3.20 meet the requirements for departmental distinction.

# **Geology — Geophysics Concentration: Thesis Option, BS**

**98-106 credits**

## **Introduction**

This program is recommended for students who are preparing to become professional geologists and intend to enter industry or enroll in a graduate program upon completion of the degree.

Students intending to pursue graduate study are strongly advised to take Math 224 or 204, PHYS 123 and other science support courses appropriate to the specialty. Students must complete both the Core Program and one of the three concentrations.

## **Admission and Declaration Process**

### **Declaration of Major**

Some 300-level geology courses give preference to majors during Phase I of registration, so it is important to declare a major as early as possible.

Students are admitted to the BA or BS major once they have completed Geol 211. (NOTE: Grades of D-, D, or D+ are not acceptable for major and supporting courses.) Students must apply to the department for admission to the major.

This option will prepare students to apply various geophysical techniques to the study of the Earth. Completion of this concentration will prepare students for careers in environmental geophysics or graduate work in geotectonics and other quantitative aspects of Earth Science.

### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

### **Requirements**

#### **Core Program**

- CHEM 121 - General Chemistry I
- CHEM 122 - General Chemistry II
- CHEM 123 - General Chemistry III
- GEOL 211 - Physical Geology
- GEOL 212 - Historical Geology
- GEOL 213 - GIS in Geology
- GEOL 306 - Mineralogy
- GEOL 310 - Geomorphology
- GEOL 318 - Structural Geology
- GEOL 352 - Introduction to Geophysics
- GEOL 406 - Igneous and Metamorphic Petrology
- GEOL 409 - Field Methods and Theory
- GEOL 410 - Geologic Mapping
- GEOL 415 - Stratigraphy and Sedimentation
- PHYS 121 - Physics With Calculus I

- PHYS 122 - Physics With Calculus II
- Choose either:
- MATH 124 - Calculus and Analytic Geometry I
- MATH 125 - Calculus and Analytic Geometry II  
or
- MATH 134 - Calculus I Honors
- MATH 135 - Calculus II Honors  
or
- MATH 138 - Accelerated Calculus

#### **Geophysics Concentration — Thesis Option**

- GEOL 452 - Applied Geophysics
- At least one course from
- GEOL 449 - Geomechanics
- GEOL 450 - Advanced Topics in Structural Geology
- GEOL 451 - Active Tectonics Seminar
- GEOL 453 - Plate Tectonics
- GEOL 472 - Surface Water Hydrology
- GEOL 473 - Ground Water Hydrology
- or 4 additional credits from the math or physics courses listed below
- One of:
- MATH 203 - Linear Algebra and Differential Equations I
- MATH 204 - Elementary Linear Algebra
- MATH 224 - Multivariable Calculus and Geometry I
- MATH 225 - Multivariable Calculus and Geometry II
- MATH 331 - Ordinary Differential Equations
- PHYS 123 - Electricity and Magnetism
- PHYS 223 - Waves and Optics
- PHYS 233 - Waves and Optics Laboratory
- PHYS 363 - Classical Mechanics
- One of the following research methods courses:
- GEOL 454 - Magnetic Fabrics and Geologic Processes
- GEOL 456 - Principles of Orogeny Seminar
- GEOL 457 - Practical Paleomagnetism
- GEOL 463 - Introduction to Seismology
- Successful application to the department approving the thesis topic
- Complete at least 4 credits of:
- GEOL 490 - Senior Thesis

#### **Senior Thesis**

An undergraduate thesis is an excellent way to develop research skills, establish closer working relationships with faculty, and gain a more in-depth knowledge of geology. Completion of a thesis is also a notable achievement that highlights a student's ability to do research, providing tangible evidence of research ability to either graduate schools or potential employers. Thesis options are available for the BA and BS degrees in geology. Students interested in pursuing a senior thesis should contact potential advisors during their junior year to discuss possible thesis topics. A formal application to the department must be made, and accepted, prior to the start of the thesis project.

## **Departmental Honors**

BA or BS students and students in the University Honors program who have completed at least 4 credits of GEOL 490 and have a cumulative GPA of 3.50 or higher meet the requirements for departmental honors. Those students who have completed at least 4 credits of GEOL 490 and have a cumulative GPA higher than 3.20 meet the requirements for departmental distinction.

## **Geology — Thesis Option, BA**

**74-81 credits**

### **Introduction**

An accompanying minor in one of the sciences or in mathematics is recommended.

### **Admission and Declaration Process**

#### **Declaration of Major**

Some 300-level geology courses give preference to majors during Phase I of registration, so it is important to declare a major as early as possible.

Students are admitted to the BA or BS major once they have completed Geol 211. ( **NOTE:** Grades of D-, D, or D+ are not acceptable for major and supporting courses.) Students must apply to the department for admission to the major.

### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

### **Requirements**

- CHEM 121 - General Chemistry I
- GEOL 211 - Physical Geology
- GEOL 212 - Historical Geology
- GEOL 213 - GIS in Geology
- GEOL 306 - Mineralogy
- GEOL 310 - Geomorphology
- GEOL 318 - Structural Geology
- GEOL 406 - Igneous and Metamorphic Petrology
- MATH 124 - Calculus and Analytic Geometry I
  - 7 credits under advisement from geology courses 200 level and above
  - One of the following research methods courses in consultation with advisor:
- GEOL 411 - Field Geology of Western United States
- GEOL 413 - Fluvial Geomorphology
- GEOL 415 - Stratigraphy and Sedimentation
- GEOL 423 - Advanced Igneous Petrology
- GEOL 425 - Advanced Metamorphic Petrology
- GEOL 440 - Glacial Geology
- GEOL 450 - Advanced Topics in Structural Geology

- GEOL 451 - Active Tectonics Seminar
- GEOL 452 - Applied Geophysics
- GEOL 453 - Plate Tectonics
- GEOL 454 - Magnetic Fabrics and Geologic Processes
- GEOL 456 - Principles of Orogeny Seminar
- GEOL 457 - Practical Paleomagnetism
- GEOL 461 - Analytical Geochemistry
- GEOL 463 - Introduction to Seismology
- GEOL 472 - Surface Water Hydrology
- GEOL 473 - Ground Water Hydrology
- GEOL 474 - Ground Water Contamination
- Successful application to the department approving the thesis topic
- Complete at least 4 credits of:
- GEOL 490 - Senior Thesis
- Choose either:
- PHYS 114 - Principles of Physics I
- PHYS 115 - Principles of Physics II
- or
- PHYS 121 - Physics With Calculus I
- PHYS 122 - Physics With Calculus II  
(preferred and required for graduate programs)
- 10 additional credits selected from:
- MATH 125 - Calculus and Analytic Geometry II
- MATH 240 - Introduction to Statistics
- CHEM 122 - General Chemistry II
- CHEM 123 - General Chemistry III
- BIOL 204 - Introduction to Evolution, Ecology and Biodiversity

### **Departmental Honors**

BA or BS students and students in the University Honors program who have completed at least 4 credits of GEOL 490 and have a cumulative GPA of 3.50 or higher meet the requirements for departmental honors. Those students who have completed at least 4 credits of GEOL 490 and have a cumulative GPA higher than 3.20 meet the requirements for departmental distinction.

## **Geology — Thesis Option, BS**

**97-105 credits**

### **Introduction**

This program is recommended for students who are preparing to become professional geologists and intend to enter industry or enroll in a graduate program upon completion of the degree. Students intending to pursue graduate study are strongly advised to take Math 224 or 204, PHYS 123 and other science support courses appropriate to the specialty. Students must complete both the Core Program and one of the three concentrations.

## **Admission and Declaration Process**

### **Declaration of Major**

Some 300-level geology courses give preference to majors during Phase I of registration, so it is important to declare a major as early as possible.

Students are admitted to the BA or BS major once they have completed Geol 211. (NOTE: Grades of D-, D, or D+ are not acceptable for major and supporting courses.) Students must apply to the department for admission to the major.

This option is designed to provide students with a broad background in geology, with advanced preparation in earth materials, structural geology, and tectonics. Completion of this program will prepare students for a variety of careers in geology or graduate work in geology.

### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

### **Requirements**

#### **Core Program**

- CHEM 121 - General Chemistry I
- CHEM 122 - General Chemistry II
- CHEM 123 - General Chemistry III
- GEOL 211 - Physical Geology
- GEOL 212 - Historical Geology
- GEOL 213 - GIS in Geology
- GEOL 306 - Mineralogy
- GEOL 310 - Geomorphology
- GEOL 318 - Structural Geology
- GEOL 352 - Introduction to Geophysics
- GEOL 406 - Igneous and Metamorphic Petrology
- GEOL 409 - Field Methods and Theory
- GEOL 410 - Geologic Mapping
- GEOL 415 - Stratigraphy and Sedimentation
- PHYS 121 - Physics With Calculus I
- PHYS 122 - Physics With Calculus II
- Choose either:
- MATH 124 - Calculus and Analytic Geometry I
- MATH 125 - Calculus and Analytic Geometry II  
      or
- MATH 134 - Calculus I Honors
- MATH 135 - Calculus II Honors  
      or
- MATH 138 - Accelerated Calculus

## **Geology Concentration — Thesis Option**

- GEOL 316 - Research in Marine Paleontology
- GEOL 407 - Advanced Petrography
- One of
  - MATH 203 - Linear Algebra and Differential Equations I
  - MATH 204 - Elementary Linear Algebra
  - MATH 224 - Multivariable Calculus and Geometry I
  - MATH 341 - Probability and Statistical Inference
- One of the following research methods courses in consultation with advisor:
  - GEOL 411 - Field Geology of Western United States
  - GEOL 423 - Advanced Igneous Petrology
  - GEOL 424 - Advanced Sedimentary Petrology
  - GEOL 425 - Advanced Metamorphic Petrology
  - GEOL 450 - Advanced Topics in Structural Geology
  - GEOL 454 - Magnetic Fabrics and Geologic Processes
  - GEOL 456 - Principles of Orogeny Seminar
  - GEOL 463 - Introduction to Seismology
- Successful application to the department approving the thesis topic
- Complete at least 4 credits of:
- GEOL 490 - Senior Thesis

### **Senior Thesis**

An undergraduate thesis is an excellent way to develop research skills, establish closer working relationships with faculty, and gain a more in-depth knowledge of geology. Completion of a thesis is also a notable achievement that highlights a student's ability to do research, providing tangible evidence of research ability to either graduate schools or potential employers. Thesis options are available for the BA and BS degrees in geology. Students interested in pursuing a senior thesis should contact potential advisors during their junior year to discuss possible thesis topics. A formal application to the department must be made, and accepted, prior to the start of the thesis project.

### **Departmental Honors**

BA or BS students and students in the University Honors program who have completed at least 4 credits of GEOL 490 and have a cumulative GPA of 3.50 or higher meet the requirements for departmental honors. Those students who have completed at least 4 credits of GEOL 490 and have a cumulative GPA higher than 3.20 meet the requirements for departmental distinction.

## **Geology, BA**

**75 credits**

### **Introduction**

An accompanying minor in one of the sciences or in mathematics is recommended.

### **Admission and Declaration Process**

Some 300-level geology courses give preference to majors during Phase I of registration, so it is important to declare a major as early as possible.

Students are admitted to the BA or BS major once they have completed Geol 211. ( **NOTE:** Grades of D-, D, or D+ are not acceptable for major and supporting courses.) Students must apply to the department for admission to the major.

### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

### **Requirements**

- CHEM 121 - General Chemistry I
- GEOL 211 - Physical Geology
- GEOL 212 - Historical Geology
- GEOL 213 - GIS in Geology
- GEOL 306 - Mineralogy
- GEOL 310 - Geomorphology
- GEOL 318 - Structural Geology
- GEOL 406 - Igneous and Metamorphic Petrology
- MATH 124 - Calculus and Analytic Geometry I
  - 15 credits under advisement from geology courses 200 level and above
  - Choose either:
    - PHYS 114 - Principles of Physics I
    - PHYS 115 - Principles of Physics II
      - or
    - PHYS 121 - Physics With Calculus I
    - PHYS 122 - Physics With Calculus II
      - (preferred and required for graduate programs)
  - 10 additional credits selected from:
    - MATH 125 - Calculus and Analytic Geometry II
    - MATH 240 - Introduction to Statistics
    - CHEM 122 - General Chemistry II
    - CHEM 123 - General Chemistry III
    - BIOL 204 - Introduction to Evolution, Ecology and Biodiversity

## **Departmental Honors and Distinctions**

BA or BS students and students in the University Honors program who have completed at least 4 credits of GEOL 490 and have a cumulative GPA of 3.50 or higher meet the requirements for departmental honors. Those students who have completed at least 4 credits of GEOL 490 and have a cumulative GPA higher than 3.20 meet the requirements for departmental distinction.

## **Geology, BS**

**96-106 credits**

### **Introduction**

This program is recommended for students who are preparing to become professional geologists and intend to enter industry or enroll in a graduate program upon completion of the degree.

Students intending to pursue graduate study are strongly advised to take Math 224 or 204, PHYS 123 and other science support courses appropriate to the specialty.

Students must complete both the Core Program and one of the three concentrations.

### **Admission and Declaration Process**

Some 300-level geology courses give preference to majors during Phase I of registration, so it is important to declare a major as early as possible.

Students are admitted to the BA or BS major once they have completed Geol 211. (**NOTE:** Grades of D-, D, or D+ are not acceptable for major and supporting courses.) Students must apply to the department for admission to the major.

This option is designed to provide students with a broad background in geology, with advanced preparation in earth materials, structural geology, and tectonics. Completion of this program will prepare students for a variety of careers in geology or graduate work in geology.

### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

### **Requirements**

#### **Core Program**

- CHEM 121 - General Chemistry I
- CHEM 122 - General Chemistry II
- CHEM 123 - General Chemistry III
- GEOL 211 - Physical Geology
- GEOL 212 - Historical Geology
- GEOL 213 - GIS in Geology
- GEOL 306 - Mineralogy
- GEOL 310 - Geomorphology
- GEOL 318 - Structural Geology
- GEOL 352 - Introduction to Geophysics

- GEOL 406 - Igneous and Metamorphic Petrology
- GEOL 409 - Field Methods and Theory
- GEOL 410 - Geologic Mapping
- GEOL 415 - Stratigraphy and Sedimentation
- PHYS 121 - Physics With Calculus I
- PHYS 122 - Physics With Calculus II
- Choose either:
- MATH 124 - Calculus and Analytic Geometry I
- MATH 125 - Calculus and Analytic Geometry II  
or
- MATH 134 - Calculus I Honors
- MATH 135 - Calculus II Honors  
or
- MATH 138 - Accelerated Calculus

**Geology Concentration courses:**

- GEOL 316 - Research in Marine Paleontology
- GEOL 407 - Advanced Petrography
- One of:
  - MATH 203 - Linear Algebra and Differential Equations I
  - MATH 204 - Elementary Linear Algebra
  - MATH 224 - Multivariable Calculus and Geometry I
  - MATH 341 - Probability and Statistical Inference
- Two of the following, or substitute courses under advisement:
  - GEOL 411 - Field Geology of Western United States
  - GEOL 423 - Advanced Igneous Petrology
  - GEOL 424 - Advanced Sedimentary Petrology
  - GEOL 425 - Advanced Metamorphic Petrology
  - GEOL 428 - Depositional Environments
  - GEOL 430 - Image Interpretation
  - GEOL 449 - Geomechanics
  - GEOL 450 - Advanced Topics in Structural Geology
  - GEOL 451 - Active Tectonics Seminar
  - GEOL 454 - Magnetic Fabrics and Geologic Processes
  - GEOL 456 - Principles of Orogeny Seminar
  - GEOL 463 - Introduction to Seismology

**Departmental Honors**

BA or BS students and students in the University Honors program who have completed at least 4 credits of GEOL 490 and have a cumulative GPA of 3.50 or higher meet the requirements for departmental honors. Those students who have completed at least 4 credits of GEOL 490 and have a cumulative GPA higher than 3.20 meet the requirements for departmental distinction.

# **Geophysics, BS**

**93 to 101 credits**

## **Introduction**

This program is recommended for students who are interested in applications of physics as a means of understanding a range of geological processes. Geophysics is distinct from Geology in that a more intensive set of Math and Physics courses, and applications of these skills, are required. Students who complete this degree will be prepared to continue to graduate studies in geology, geophysics, planetary geology/geophysics, physics, or other related fields, or to enter into industry. Students are strongly encouraged to complete a senior thesis project as part of this degree, providing them with an excellent capstone experience. Declaration of this major requires Geol 211, and a completed advising session with a Geophysics faculty advisor.

## **Admission and Declaration Process**

Some 300-level geology courses give preference to majors during Phase I of registration, so it is important to declare a major as early as possible.

Students are admitted to the BA or BS major once they have completed Geol 211. (NOTE: Grades of D-, D, or D+ are not acceptable for major and supporting courses.) Students must apply to the department for admission to the major.

## **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

## **Requirements**

- CHEM 121 - General Chemistry I
- GEOL 211 - Physical Geology
- GEOL 213 - GIS in Geology
- GEOL 311 - Earth Materials
- GEOL 318 - Structural Geology
- GEOL 352 - Introduction to Geophysics
- GEOL 452 - Applied Geophysics
- PHYS 121 - Physics With Calculus I
- PHYS 122 - Physics With Calculus II
- PHYS 123 - Electricity and Magnetism
- PHYS 233 - Waves and Optics Laboratory
- PHYS 363 - Classical Mechanics
- PHYS 485 - Mathematical Physics
- Choose either:
  - MATH 124 - Calculus and Analytic Geometry I  
and
  - MATH 125 - Calculus and Analytic Geometry II  
or
  - MATH 138 - Accelerated Calculus
- Choose either:
  - MATH 203 - Linear Algebra and Differential Equations I

- MATH 303 - Linear Algebra and Differential Equations II
- MATH 224 - Multivariable Calculus and Geometry I  
or
- MATH 204 - Elementary Linear Algebra
- MATH 304 - Linear Algebra
- MATH 224
  - Three courses from the following electives:
- GEOL 306 - Mineralogy
- GEOL 314 - Engineering Geology
- GEOL 449 - Geomechanics
- GEOL 453 - Plate Tectonics
- GEOL 454 - Magnetic Fabrics and Geologic Processes
- GEOL 456 - Principles of Orogeny Seminar
- GEOL 457 - Practical Paleomagnetism
- GEOL 463 - Introduction to Seismology
- GEOL 473 - Ground Water Hydrology
- PHYS 397
- 8 credits from:
- GEOL 490 - Senior Thesis (Senior Thesis – 8 credits)  
or  
8 credits from the following:
- GEOL 451 - Active Tectonics Seminar
- GEOL 455 - Climate-Related Geologic Hazards
- GEOL 470 - Landslides and Slope Stability
- GEOL 472 - Surface Water Hydrology
- MATH 225 - Multivariable Calculus and Geometry II
- MATH 430 - Fourier Series and Applications to Partial Differential Equations
- PHYS 326 - Tools and Data Analysis in Physics
- PHYS 368 - Electromagnetism I
- PHYS 369 - Electromagnetism II

### **Senior Thesis**

An undergraduate thesis is an excellent way to develop research skills, establish closer working relationships with faculty, and gain a more in-depth knowledge of geology. Completion of a thesis is also a notable achievement that highlights a student's ability to do research, providing tangible evidence of research ability to either graduate schools or potential employers. Thesis options are available for the BA and BS degrees in geology. Students interested in pursuing a senior thesis should contact potential advisors during their junior year to discuss possible thesis topics. A formal application to the department must be made, and accepted, prior to the start of the thesis project.

### **Departmental Honors**

BA or BS students and students in the University Honors program who have completed at least 4 credits of GEOL 490 and have a cumulative GPA of 3.50 or higher meet the requirements for departmental honors. Those students who have completed at least 4 credits of GEOL 490 and have a cumulative GPA higher than 3.20 meet the requirements for departmental distinction.

## **Geology, Thesis, MS**

### **Graduate Faculty**

**Babcock, R. S.**, PhD, geochemistry, petrology.  
**Caplan-Auerbach, J.**, PhD, geophysics, seismology.  
**Clark, D.H.**, PhD, glacial geology.  
**Crider, J.G.**, PhD, neotectonics, structure.  
**DeBari, S.M.**, PhD, petrology, science education.  
**Engebretson, D.C.**, PhD, tectonics, paleomagnetism.  
**Hansen, T.A.**, PhD, paleontology.  
**Hirsch, D.M.**, PhD, metamorphic petrology, mineralogy.  
**Housen, B.A.**, PhD, geophysics.  
**Linneman, S.R.**, PhD, geomorphology, science education.  
**Mitchell, R.J.**, PhD, groundwater hydrology, environmental geology.  
**Schermer, E.R.**, PhD, tectonics, structural geology, geochronology.  
**Suczek, C.A.**, PhD, stratigraphy, sedimentary petrology, tectonics.

### *Emeritus Faculty*

**Beck, Myrl E., Jr.**, geophysics, paleomagnetism.  
**Brown, E.H.**, metamorphic petrology, geochemistry.  
**Easterbrook, Don**, geomorphology, glacial geology.  
**Schwartz, Maurice L.**, coastal geology.  
**Talbot, James L.**, structural geology, tectonics.

Program Advisor: Dr. R. Scott Babcock, Environmental Studies Center 240, 360-650-3581

### **Program Description and Goals**

The geology department offers an MS degree with a thesis and 45-48 credits of course work suitable for students wishing any of the geological specialties that can be supervised by its graduate faculty.

The program prepares students for a career as a licensed professional geologist or for K-16 earth science teaching. (K-12 teaching in public school settings requires an approved teaching credential.)

### **Prerequisites**

Students with a bachelor's degree and who meet the requirements of the Graduate School are invited to apply for admission to the graduate program in geology. Students with a BS degree in geology, which includes a recognized geology field course, generally will be offered full admittance the program. Prerequisite course work may be necessary, depending on the applicant's chosen field of study. Applicants without a BS degree in geology will need to take a minimum of 19 quarter credits, including physical geology, stratigraphy or historical geology, crystallography and mineralogy, geomorphology, structural geology and a recognized geology field camp, up to a maximum of 42 geology credits, which may include additional prerequisites in chemistry, physics and math, depending on each individual situation. Students who have not completed these courses before entering the geology MS program must do so and maintain an average of B or better in prerequisite courses before being advanced to candidacy. Courses taken to make up these deficiencies are not counted toward the MS degree.

### **Application Information**

**Specific Test Requirements:** Graduate Record Examination (GRE), General Test.

**Deadline:** The geology department prefers to admit students to enter in fall quarter. Admittance to the program also will depend on the availability of an advisor in the student's area of interest.

**TA Deadlines:** To be considered for a teaching assistantship, application and supporting materials must be on file by January 31.

**Supporting Materials:**

- A statement of the student's background and purpose
- Reference letters
- Official transcripts

[Graduate School Admission Link](#)

**Program Requirements (45 to 48 credits)**

**Required Coursework:**

- 35 or more credits of graduate level courses (500- and 600-level) including 6 credits of GEOL 595
- 10 or less credits from 400-level courses.
- The 600-level credits shall include 12-15 credits of Geol 690.

**Electives in Specialization**

Geology and supporting courses are selected under advisement through the department chair and the chair of the thesis committee. General courses plus specialty courses in economic geology, paleontology, geomorphology, applied geology, hydrogeology, igneous and metamorphic petrology, stratigraphy and sedimentary petrology, and in tectonics, geophysics and structural geology allow a choice of specialties; that choice should be made as soon as possible in the student's graduate career.

# Materials Science

## Introduction

The field of Materials Science addresses the challenges of creating, understanding, and using new materials to meet the technological needs of the 21st century. Materials such as alloys, polymers and composites, and semiconductors play important roles in the modern economy where they are used in a wide range of applications, from clean energy to medicine, and aerospace to microelectronics. Materials Science is an interdisciplinary area of study exploring the broad spectrum of materials from basic atomic and molecular scales through macroscopic engineered products. At Western Washington University Materials Science is represented through a diversified and collaborative program based on an interdisciplinary set of courses, faculty, research projects and facilities drawn from several departments.

The Materials Science minor at Western Washington University complements major degree programs such as chemistry, engineering technology, geology, and physics by providing an interdisciplinary perspective preparing graduates to work at the boundaries between disciplines. Students electing the minor begin their studies in a four course sequence teaching fundamental concepts and practical skills in materials preparation and characterization (MSCI 201, 320, 330 and 410). These courses are taught by faculty from several departments and involve a variety of facilities and instrumentation. Topics covered include: chemical, mechanical, electronic, and optical properties; polymers and composites, engineering alloys and ceramics, semiconductors and nanomaterials; and applications of materials in modern contexts such as photovoltaics, fuel cells, microelectronics, and geomaterials.

Culminating the minor is a capstone experience involving six credits of intensive research under the guidance of an AMSEC faculty mentor or an internship with a partner company. The research experience or internship is usually performed in the junior or senior year, although for students who become involved in research earlier, it may in some cases be part of a longer term project. Students should consult with the program advisor for assistance in arranging their experience. The capstone practicum is intended to provide opportunities to apply concepts learned in the classroom and laboratory, preparing professionals ready for graduate study or employment in industry.

## Faculty

**DAVID L. PATRICK** (1996) Director and Professor. BS, University of California-Davis; PhD, University of Utah.

**MARK E. BUSSELL** (1990) Professor. BA, Reed College; PhD, University of California-Berkeley

**STEVEN R. EMORY** (2001) Assistant Professor. BS, California Lutheran University; PhD, Indiana University

**SUSAN M. DeBARI** (1998) Associate Professor. BA, Cornell University; PhD, Stanford University

**STEVE H. DILLMAN** (1993) Professor. BS, Rice University; PhD, University of Washington

**MILTON FROM** (1998) Associate Professor. BSC, University of Manitoba; MSc, PhD, McGill University

**JOHN GILBERTSON** (2008) Assistant Professor. BA, Augustana College; MS, PhD, University of Oregon

**NICOLE HOEKSTRA** (1998) Professor. BSME, MSME, University of Minnesota, Institute of Technology

**BERNARD A. HOUSEN** (1997) Associate Professor. BS, University of Washington; MS, PhD, University of Michigan

**BRAD L. JOHNSON** (1997) Professor. BS, MSBS, University of Colorado- Colorado Springs; PhD, University of Colorado-Boulder

**NICOLE M. LARSON** (2005) Assistant Professor. BSME, Bradley University; MSME, University of Washington

**JANELLE LEGER** (2008) Assistant Professor. BS University of California Davis; PhD, University of California at Santa Cruz

**KATHLEEN L. KITTO** (1998) Professor and Associate Dean, College of Sciences and Technology. BS, MSME, Montana College of Mineral Science and Technology

**ELIZABETH A. RAYMOND** (2006) Assistant Professor. BA, Whitman College; PhD, University of Oregon

**P. CLINT SPIEGEL** (2007) Assistant Professor, BS, Oregon State University; PhD, University of Washington

**TAKELE SEDA** (2002) Assistant Professor. BS, Asmara University (Eritrea); MS, Addis Ababa University, Ethiopia; PhD, University of Witwatersrand, Johannesburg, South Africa

**ANDREAS RIEMANN** (2006) Assistant Professor. BS, MS, University Halle, Germany; PhD, Free University Berlin, Germany

**JAMES R. VYVYAN** (1997) Professor. BS, University of Wisconsin-Eau Claire; PhD, University of Minnesota

## **Research Associate**

**THOMAS K. PRATUM** (2004) BS, University of Puget Sound; PhD, University of California-Berkeley

## **Other Departmental Information**

### *Facilities and Resources*

The Materials Science minor at Western Washington University is administered by the Advanced Materials Science and Engineering Center (AMSEC), a collaborative, interdisciplinary program within the College of Sciences and Technology. In addition to its educational programs, AMSEC provides leadership in academic research and scholarship while maintaining strong relationships with regional companies. The Center includes faculty and students from across the College involved in researching a wide range of advanced materials, such as polymers and composites, geological and magnetic materials, organic and inorganic synthesis, materials for clean energy, theory and modeling, and nanomaterials. The Center also operates a shared, open access Materials Characterization Laboratory housing state-of-the-art x-ray diffraction, thin film preparation, and thermal analysis equipment.

## **Undergraduate Programs**

Materials Science Minor

### **Materials Science Minor**

**39-42 credits**

#### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

#### **Requirements**

##### **Core Requirements – 37 credits**

- MSCI 320 - Introduction to Materials Science I \*
- MSCI 330 - Introduction to Materials Science II
- MSCI 410 - Characterization of Materials
- MSCI 491 - Independent Research or Internship in Materials Science I
- MSCI 492 - Independent Research or Internship in Materials Science II
- One course from:
  - CHEM 121 - General Chemistry I
  - CHEM 125 - General Chemistry I, Honors
- One course from:
  - CHEM 122 - General Chemistry II
  - CHEM 126 - General Chemistry II, Honors
- One course from:
  - CHEM 123 - General Chemistry III
  - CHEM 225 - General Chemistry III, Honors
- One course from:
  - ETEC 220 - Introduction to Engineering Materials

- MSCI 201 - Introduction to Engineering Materials
  - ❑ Select at least one course from:
  - ETEC 333 - Polymer Technology
  - ETEC 334 - Reinforced Plastics/Composites
  - CHEM 308 - Introduction to Polymer Chemistry
  - CHEM 425R - Surface Chemistry
  - GEOL 306 - Mineralogy
  - GEOL 352 - Introduction to Geophysics
  - GEOL 454 - Magnetic Fabrics and Geologic Processes
  - GEOL 461 - Analytical Geochemistry
  - PHYS 475 - Physics of Solids and Materials I
  - PHYS 476 - Physics of Solids and Materials II
- \*ET majors may substitute ETEC 333 + 334 + CHEM 251

# Mathematics

## Introduction

The Department of Mathematics offers majors and minors in mathematics, applied mathematics and mathematics education. Combined majors are offered in mathematics and computer science, biology and mathematics, chemistry and mathematics, economics and mathematics, and physics and mathematics. The department also offers a Master of Science degree in which there is an emphasis on applied mathematics.

By taking a significant number of graduate math courses as an undergraduate, it is possible to earn both a Bachelor of Science and a Master of Science degree in mathematics within five years of study. Detailed requirements for this option are available from the Department of Mathematics.

The majors mentioned above will serve as components of a liberal education, but each one also prepares the recipient for a career in business, industry, government or education. Further information about career opportunities is available in the department office. Persons planning a career in almost any field will find their opportunities for interesting and challenging positions enhanced by the study of mathematics. A person who develops the ability to formulate and solve quantitative problems will be able to attack many of the complex problems of society.

## *Mathematics*

Mathematics has developed from attempts to find simple general laws governing the behavior of the phenomena we observe around us, phenomena as diverse as the motion of the planets, the evolution of biological systems and the movement of traffic.

These attempts have been remarkably successful, although many problems remain to be solved. The concepts involved are profound and exciting; their development and use require imagination and careful deductive reasoning.

Mathematics reveals hidden patterns that help us understand the world around us. Now much more than arithmetic and geometry, mathematics is a diverse discipline that deals with data, measurements, and observations from science, with inference, deduction, and proof; and with mathematical models of natural phenomena, of human behavior, and of social systems.

As a practical matter, mathematics is a science of pattern and order. Its domain is not molecules or cells, but numbers, chance, form, algorithms, and change. As a science of abstract objects, mathematics relies on logic rather than on observation as its standard of truth, yet employs observation, simulation, and even experimentation as means of discovering truth.

The special role of mathematics in education is a consequence of its universal applicability. The results of mathematics — theorems and theories — are both significant and useful; the best results are also elegant and deep. Through its theorems, mathematics offers science both a foundation of truth and a standard of certainty.

In addition to theorems and theories, mathematics offers distinctive modes of thought which are both versatile and powerful, including modeling, abstraction, optimization, logical analysis, inference from data, and use of symbols. Experience with mathematical modes of thought builds mathematical power — a capacity of mind of increasing value in this technological age that enables one to read critically, to identify fallacies, to detect bias, to assess risk, and to suggest alternatives.

Mathematics empowers us to understand better the information-laden world in which we live.

— Excerpts from *Everyone Counts: A Report to the Nation on the Future of Mathematics Education*

© 1989, National Academy of Sciences

The purpose of the mathematics and applied mathematics majors is to acquaint the student with mathematical concepts; to provide the student with the tools needed to apply the concepts in other fields; and to continue to learn and develop new ideas.

A student primarily interested in the application of mathematical ideas in another field should elect the major in applied mathematics or mathematics and computer science. A student who is interested in some branch of mathematics itself, or who is considering graduate study in mathematics, should choose the mathematics major. A student considering a career as an actuary should consult the department for specific course suggestions. A student who is unsure about future plans should probably choose the mathematics major because of the greater flexibility it offers.

## Faculty

**TJALLING J. YPMA** (1987) Chair and Professor. BSc, University of Cape Town; MSc, DPhil, Oxford University.

**EDOH Y. AMIRAN** (1989) Associate Professor. BA, University of Chicago; PhD, Massachusetts Institute of Technology.

**AMY ANDERSON** (2007) Assistant Professor. BS, Central Washington University; MA, University of Oregon; PhD, University of Washington.

**ARPAD BENYI** (2005) Associate Professor. BS, MS, West University of Timisoara, Romania; MA, PhD, University of Kansas-Lawrence.

**DONALD R. CHALICE** (1967) Associate Professor. BA, University of Wisconsin; MA, PhD, Northwestern University.

**VICTOR CHAN** (2001) Associate Professor. BA, Whitman College; MS, State University of New York-Stony Brook; MS, PhD, Iowa State University.

**JESSICA S. COHEN** (2010) Assistant Professor. BS, Western Oregon University; MS, PhD, Oregon State University

**BRANKO CURGUS** (1988) Professor. BS, MS, PhD, University of Sarajevo.

**RICHARD J. GARDNER** (1991) Professor. BSc, PhD, University College, London; DSc, University of London.

**TILMANN E.C. GLIMM** (2005) Associate Professor. First Degree, Technische Universitat, Berlin; MS, PhD, Emory University.

**DAVID A. HARTENSTINE** (2004) Associate Professor. BA, University of Pennsylvania; PhD, Temple University, Philadelphia.

**NORA HARTSFIELD** (1984) Professor. BA, Humboldt State University; MA, PhD, University of California-Santa Cruz.

**ROBERT I. JEWETT** (1970) Professor. BS, California Institute of Technology; MS, PhD, University of Oregon.

**JERRY L. JOHNSON** (1984) Professor. BA, Augsburg College; MS, California Institute of Technology; MA, University of California-Los Angeles; PhD, University of Washington.

**MILLIE J. JOHNSON** (1991) Associate Professor. BS, University of Minnesota; MEd, University of Washington.

**STEPHEN R. McDOWALL** (2001) Associate Professor. BS, MS, University of Canterbury, New Zealand; PhD, University of Washington.

**KIMBERLY A. MARKWORTH** (2010) Assistant Professor. BA, Dartmouth; M.Ed. Harvard; PhD, University of North Carolina, Chapel Hill.

**MICHAEL NAYLOR** (1999) Associate Professor. BS, Michigan State University; MS, PhD, Florida State University.

**ADAM NYMAN** (2008) Assistant Professor. BS, Massachusetts Institute of Technology; PhD, University of Washington.

**THOMAS T. READ** (1967) Professor. BA, Oberlin College; MA, PhD, Yale University.

**AMITES SARKAR** (2007) Assistant Professor. BA, PhD, Cambridge University.

**YUN-QIU SHEN** (1988) Professor. BS, University of Science and Technology of China; MS, PhD, Michigan State University.

**STEPHANIE A. TRENEER** (2008) Assistant Professor. BA, Whitman College; PhD, University of Illinois at Urbana-Champaign.

**JIANYING ZHANG** (2006) Assistant Professor. BS, MS, Tsinghua University, China; PhD, University of California-Santa Barbara.

## Declaration Process

Students who intend to complete a major in the department are urged to declare the major formally at an early point in their Western career so that a program of study can be planned in collaboration with a departmental advisor. This does

not in any way decrease the opportunity to change plans, but does ensure an efficient program which is not subject to future catalog revisions.

### **Departmental Honors**

The mathematics department offers two means of recognition for outstanding students. One, Graduation with Merit in Mathematics, is an award which recognizes outstanding scholastic achievement in courses required for the major. The second, Graduation with Distinction in Mathematics, is a program which rewards exceptional achievement in mathematics as evidenced by meeting all the requirements for Graduation with Merit and completing certain additional requirements detailed below. While Graduation with Merit is automatically conferred on all students who qualify, students must apply to the Chair of the Department of Mathematics to participate in the program for Graduation with Distinction in Mathematics.

Students interested in these programs should also inquire into the possibility of earning both a Bachelor of Science and a Master of Science degree in mathematics within five years of study. Detailed requirements for this option are available from the Department of Mathematics.

#### *Graduation with Merit*

To graduate with merit in mathematics, a student must complete one of the majors or combined majors offered by mathematics alone or by mathematics in cooperation with another department.

The student's program must include at least 32 quarter hours of mathematics or math-computer science courses taken at Western, including MATH 225, 304 and 312 and at least 23 approved credits at the 400 level or above. The cumulative GPA for mathematics and math-computer science classes taken at Western must be at least 3.6.

#### *Graduation with Distinction*

To graduate with distinction in mathematics, a student must meet all the requirements for graduation with merit in mathematics.

Furthermore, the student must successfully complete:

- A comprehensive examination covering MATH 124, 125, 224, 225, 226, 204, 331
- An approved senior project

The comprehensive examination should be taken no later than the junior year. This examination may be retaken if necessary, but must be passed no later than fall of the senior year and before beginning the senior project.

The senior project is subject to approval of the Undergraduate Committee and is undertaken under the direction of a faculty member. It includes some independent work, the preparation of a report and a colloquium presentation. The senior project constitutes a course at the 400 level and is letter graded with 4 credits applicable towards the major.

Students interested in graduating with distinction in mathematics should declare their interest to the chair of the Department of Mathematics at an early point in their career at Western in order to receive appropriate advice and guidance.

### **Other Departmental Information**

#### *Mathematics Education*

The Bachelor of Arts in Education major may be completed with either of two concentrations; one prepares the graduate for teaching mathematics on the secondary level, the other concentrates on the elementary level. Those who intend to pursue one of these concentrations must complete certain courses in calculus, linear algebra, discrete mathematics,

statistics, number theory, geometry, history of mathematics, and computer science. Successful completion of these courses provides a good part of the training necessary for technical expertise in the classroom.

The elementary concentration emphasizes breadth in mathematics. Breadth of experience is important so that the teacher may expose elementary students to a wide variety of mathematical topics. The specialist in mathematics on the elementary level must be particularly skilled at transforming the material mastered in college to a form suitable for the level in question.

Secondary majors learn the methods of teaching mathematics in MATH 483; elementary majors learn such methods in MATH 381, 382, 383 and 491.

Students who wish to teach mathematics on the secondary level also can gain certification in mathematics by completing any one of the Bachelor of Science majors in mathematics, applied mathematics or mathematics-computer science. In addition to the requirements for the major, they are expected to complete these courses: MATH 302, MATH 360, MATH 419 and MATH 483.

Recommendation for teaching endorsement requires the completion of the major with a minimum grade point average of 2.50 in the courses required for the major. The state of Washington requires a minimum grade of C (2.0) or better for all courses used to meet major certification or endorsement requirements. To gain the Initial Teaching Certificate, students must also complete a program of studies in professional education, including student teaching. Early in their careers at Western, students should seek formal advisement on the appropriate program in education. It is essential that the interested reader consult the Elementary Education and Secondary Education sections of this catalog for further information.

#### *Academic Placement*

Initial placement in most mathematics courses at Western is on the basis of the results of an appropriate placement test, except for students who have successfully completed at least one quarter of calculus in college. Mathematics placement tests are administered throughout the state of Washington each year, and both freshmen and transfer students who are residents in Washington are advised to take the appropriate examination prior to arrival on campus. Full information on which test to take and how to take it is available from the admissions office or the mathematics department.

Students who have completed at least one year of high school calculus or at least one quarter of college calculus should consult a departmental advisor before registering.

Except by permission of the chair of the Department of Mathematics, a student may not receive credit for any of MATH 101, 106, 107, 112, 114, 115, 118, 156 or 157 if that course is completed after completion of any higher numbered course in this list or after completion of a course in calculus for which college credit has been received.

#### *Advice to Entering Students*

The Bachelor of Science degrees in mathematics, applied mathematics and mathematics-computer science are based on the following core:

- MATH 124, MATH 125, MATH 224, MATH 226 (calculus)
- MATH 204, MATH 304 (linear algebra)
- Either MATH 209 or MATH 302
- MATH 312 (proofs in elementary analysis)
- One of CSCI 139, CSCI 140, CSCI 141, MATH 207; (M/CS majors should complete ) CSCI 141

The Bachelor of Arts-Secondary Education degree has the same core except for

- MATH 312 and requires both MATH 209 and MATH 302

These courses, except for Math 312, represent the minimum that a student planning one of these majors should complete during the first two years. In addition, most students pursuing a Bachelor of Science degree in the department should complete Math 225, the second quarter of multivariable calculus. A well-prepared student will be able to build a

stronger program, possibly including some graduate-level courses in the senior year, by completing some 300-level work chosen under advisement in addition to the list above. In particular, Math 331 (differential equations) will be suitable for many students.

Transfer students, especially those intending to enter Western with an Associate of Arts degree, should normally complete as much as possible of the core program above, certainly including the entire calculus sequence and linear algebra. Students should be aware that 200-level differential equations courses may not transfer as equivalent to MATH 331, and that certain third quarter calculus courses also may not transfer as equivalent to either MATH 224 or 226.

The Bachelor of Arts major in mathematics provides exposure to a wide range of courses but, relative to the Bachelor of Science major, has fewer requirements for courses in analysis and other upper-division courses. A Bachelor of Science major in mathematics is generally more appropriate than a Bachelor of Arts major in mathematics for students intending to pursue graduate studies in any mathematically intensive discipline.

Instructors in many courses require that students use a graphing calculator. Students should contact the department for recommendations before purchasing a calculator.

#### *Accelerated BS-MS Program*

By taking a significant number of graduate math courses as an undergraduate, it is possible to earn both a Bachelor of Science and a Master of Science degree in mathematics within five years of study. Detailed requirements for this option are available from the Department of Mathematics.

#### *Enrollment Preference for Majors*

The department will give enrollment preference for certain high-demand courses to its majors.

#### *Information*

Those interested in the study of mathematics are welcome to write, phone or visit the Chair of the Department of Mathematics, Western Washington University, Bellingham WA 98225, phone 360-650-3785.

#### **Graduate Study**

For a concentration leading to the Master of Science degree, see the *Graduate School* section of this catalog.

By taking a significant number of graduate math courses as an undergraduate, it is possible to earn both a Bachelor of Science and a Master of Science degree in mathematics within five years of study. Detailed requirements for this option are available from the Department of Mathematics.

#### **Undergraduate Degrees and Programs**

Economics/Mathematics, BA

Mathematics, BA

Chemistry/Mathematics - Secondary, BAE

Mathematics — Elementary, BAE

Physics/Mathematics — Secondary, BAE

Mathematics — Secondary, BAE

Applied Mathematics, BS

Biology/Mathematics, BS

Mathematics, BS

Mathematics/Computer Science, BS

Mathematics Minor

Mathematics — Secondary Minor

### **Graduate Degrees and Programs**

Mathematics, Thesis, MS

Mathematics, Non-Thesis, MS

## **Applied Mathematics, BS**

**70 credits in mathematics plus 17-20 credits in supporting courses**

### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

### **Requirements**

- MATH 204 - Elementary Linear Algebra
- MATH 224 - Multivariable Calculus and Geometry I
- MATH 226 - Limits and Infinite Series
- MATH 304 - Linear Algebra
- MATH 312 - Proofs in Elementary Analysis
- MATH 331 - Ordinary Differential Equations
- M/CS 375 - Numerical Computation
- M/CS 475 - Numerical Analysis
- Choose either:
  - MATH 124 - Calculus and Analytic Geometry I
  - MATH 125 - Calculus and Analytic Geometry II
  - or
  - MATH 134 - Calculus I Honors
  - MATH 135 - Calculus II Honors
  - or
  - MATH 138 - Accelerated Calculus
- One course from:
  - MATH 209 - Discrete Mathematics
  - MATH 302 - Introduction to Proofs Via Number Theory
- Choose either:
  - MATH 341 - Probability and Statistical Inference
  - MATH 342 - Statistical Methods
  - or

- MATH 441 - Probability
- MATH 442 - Mathematical Statistics

**NOTE:** The pair MATH 203 and 303 may be substituted for MATH 204 and 331

One course from:

- CSCI 139 - Programming Fundamentals in Python
- CSCI 140 - Programming Fundamentals in C++
- CSCI 141 - Computer Programming I
- MATH 207 - Mathematical Computing

**NOTE:** If the supporting sequence from CSCI below is chosen, this requirement is fulfilled.

One of the following concentrations:

*Engineering Concentration:*

- MATH 225 - Multivariable Calculus and Geometry II
  - MATH 438 - Introduction to Complex Variables
- One course from:
- MATH 430 - Fourier Series and Applications to Partial Differential Equations
  - MATH 432 - Systems of Differential Equations

*Operations Research Concentration:*

- M/CS 335 - Linear Optimization
  - M/CS 435 - Nonlinear Optimization
  - MATH 410 - Mathematical Modeling
- No fewer than 3 additional credits from:
- 400- level MATH courses
  - 400- level M/CS courses
- CSCI 405 - Analysis of Algorithms and Data Structures II
  - CSCI 480 - Computer Graphics
- One of the following sequences:
- PHYS 121 - Physics With Calculus I
  - PHYS 122 - Physics With Calculus II
  - PHYS 123 - Electricity and Magnetism
- or
- CHEM 121 - General Chemistry I
  - CHEM 122 - General Chemistry II
  - CHEM 123 - General Chemistry III
- or
- CHEM 125 - General Chemistry I, Honors
  - CHEM 126 - General Chemistry II, Honors
  - CHEM 225 - General Chemistry III, Honors
- or
- CSCI 141
  - CSCI 145 - Computer Programming and Linear Data Structures
  - CSCI 211 - Discrete Structures and Functional Programming I
  - CSCI 241 - Data Structures
  - CSCI 401 - Formal Languages and Automata
- or
- ECON 206 - Introduction to Microeconomics
  - ECON 207 - Introduction to Macroeconomics
  - ECON 306 - Intermediate Microeconomics
- and one of:
- ECON 375 - Introduction to Econometrics

- ECON 470 - Economic Fluctuations and Forecasting
- ECON 475 - Econometrics

## Biology/Mathematics, BS (also see Biology Department)

Jointly offered by the Department of Biology, College of Sciences and Technology and the Department of Mathematics, College of Sciences and Technology

**104-105 credits**

### Introduction

Biology Phase II status required for admission into 300- and 400-level biology courses for biology majors.

Faculty Advisors: Biology: Merrill Peterson; Mathematics: Tilmann Glimm.

### Admission and Declaration Process

Declaration Process ([see Mathematics department page](#))

### Grade Requirements

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

### Requirements

- BIOL 204 - Introduction to Evolution, Ecology and Biodiversity
- BIOL 205 - Introduction to Cellular and Molecular Biology
- BIOL 206 - Introduction to Organismal Biology
- BIOL 321 - Genetics
- BIOL 323 - Cell and Molecular Biology
- BIOL 325 - Ecology
- BIOL 432 - Evolutionary Biology
- CHEM 251 - Elementary Organic Chemistry
- MATH 204 - Elementary Linear Algebra
- MATH 224 - Multivariable Calculus and Geometry I
- MATH 331 - Ordinary Differential Equations
- MATH 341 - Probability and Statistical Inference
- MATH 342 - Statistical Methods
- MATH 432 - Systems of Differential Equations

**NOTE:** The pair MATH 203 and 303 may be substituted for MATH 204 and 331.

- PHYS 121 - Physics With Calculus I
- PHYS 122 - Physics With Calculus II
- Choose either:
  - MATH 124 - Calculus and Analytic Geometry I
  - MATH 125 - Calculus and Analytic Geometry II

- or
- MATH 134 - Calculus I Honors
  - MATH 135 - Calculus II Honors
 

or
  - MATH 138 - Accelerated Calculus
 

One course from:

    - CSCI 139 - Programming Fundamentals in Python
    - CSCI 140 - Programming Fundamentals in C++
    - CSCI 141 - Computer Programming I
    - MATH 207 - Mathematical Computing
 

8 credits of approved upper-division electives from biology, math, or math/computer science

Choose one of the following series:

      - CHEM 121 - General Chemistry I
      - CHEM 122 - General Chemistry II
      - CHEM 123 - General Chemistry III
 

or
      - CHEM 125 - General Chemistry I, Honors
      - CHEM 126 - General Chemistry II, Honors
      - CHEM 225 - General Chemistry III, Honors

## **Chemistry/Mathematics - Secondary, BAE (also see Chemistry Department)**

Jointly offered by the Department of Chemistry, College of Sciences and Technology and the Department of Physics, College of Sciences and Technology

**102-121 credits plus supporting courses in physics**

### **Introduction**

This major must be accompanied by the professional education program in secondary education. This major meets the requirements for Washington state teaching endorsements in both chemistry and mathematics. See the Secondary Education section of this catalog for program admission, completion, and teacher certification requirements.

As certification to teach high school now requires more than four years of study, advisement prior to or at the beginning of the third year is absolutely necessary to avoid lengthening the program.

### **Grade Requirements**

Recommendation for teaching endorsement normally requires completion of the following major with a grade point of 2.50 or better in the required major courses.

Students must earn a grade of C (2.0) or better in the secondary education professional program and in all courses required for the endorsement.

### **Requirements**

- CHEM 461 - Physical Chemistry
- CHEM 462 - Physical Chemistry
- MATH 204 - Elementary Linear Algebra

- MATH 209 - Discrete Mathematics
  - MATH 224 - Multivariable Calculus and Geometry I
  - MATH 331 - Ordinary Differential Equations
  - MATH 360 - Euclidean and Non-Euclidean Geometry
  - MATH 419 - Historical Perspectives of Mathematics
  - MATH 483 - Methods of Teaching Secondary Mathematics
- NOTE:** The pair MATH 203 and 303 may be substituted for MATH 204 and 331
- PHYS 121 - Physics With Calculus I
  - PHYS 122 - Physics With Calculus II
  - PHYS 123 - Electricity and Magnetism
  - SCED 370 - Science and Society
  - SCED 481 - Fundamentals of Teaching Science
  - SCED 491 - Methods in Secondary Education for Science Teachers
  - Choose either:
    - CHEM 121 - General Chemistry I
    - CHEM 122 - General Chemistry II
    - CHEM 123 - General Chemistry III
    - CHEM 333 - Analytical Chemistry
 or
    - CHEM 125 - General Chemistry I, Honors
    - CHEM 126 - General Chemistry II, Honors
    - CHEM 225 - General Chemistry III, Honors
  - Option A or B:
    - A:
      - CHEM 251 - Elementary Organic Chemistry
      - CHEM 375 - Elements of Biochemistry
    - B:
      - CHEM 351 - Organic Chemistry
      - CHEM 352 - Organic Chemistry
      - CHEM 353 - Organic Chemistry
      - CHEM 354 - Organic Chemistry Laboratory I
      - CHEM 375
 or
      - CHEM 471 - Biochemistry I
      - CHEM 472 - Biochemistry II
      - CHEM 473 - Molecular Biology
  - Choose either:
    - MATH 124 - Calculus and Analytic Geometry I
    - MATH 125 - Calculus and Analytic Geometry II
 or
    - MATH 134 - Calculus I Honors
    - MATH 135 - Calculus II Honors
 or
    - MATH 138 - Accelerated Calculus
  - At least two of the following:
    - MATH 207 - Mathematical Computing
    - MATH 341 - Probability and Statistical Inference
    - MATH 410 - Mathematical Modeling

## **Additional Requirements**

### **Link to Woodring College of Education Secondary Teacher Education Program**

#### ***Secondary Education Professional Program Requirements***

- EDUC 301 - Educational Psychology I: Development and Individual Differences
- EDUC 302 - Educational Psychology II: Motivation, Learning and Assessment
- EDUC 310 - The Teacher and the Social Order
- IT 444 - Classroom Use of Instructional Technology (Secondary)
- SEC 410 - Dynamics of Teaching
- SEC 411 - Philosophical Foundations of Education
- SEC 425 - Developmental Reading, Writing and Learning in Secondary Schools
- SEC 430 - Secondary School Methods I - Instructional Strategies, Daily Planning, and Standards
- SEC 431 - Secondary School Methods II-Assessment and Long Term Planning
- SEC 432 - Secondary School Methods III - Management, Motivation and Discipline
- SEC 433 - Peer Teaching Laboratory
- SEC 435 - Middle Level Practicum
- SEC 436 - Secondary School Practicum
- SEC 495 - Internship - Secondary
- SPED 363 - Secondary Students With Special Needs

## **Economics/Mathematics, BA (also see Economics Department)**

**94-95 credits**

### **Introduction**

This major is for students who wish considerable depth in both disciplines, and it is particularly recommended as preparation for graduate study in economics.

### **Admission and Declaration Process**

Admission and Major Declaration ([see Mathematics department page](#))

### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

### **Requirements**

- ECON 206 - Introduction to Microeconomics
- ECON 207 - Introduction to Macroeconomics
- ECON 303 - The History of Economic Thought
- ECON 306 - Intermediate Microeconomics
- ECON 307 - Intermediate Macroeconomics
- ECON 475 - Econometrics
- MATH 204 - Elementary Linear Algebra

- MATH 224 - Multivariable Calculus and Geometry I
  - MATH 225 - Multivariable Calculus and Geometry II
  - MATH 226 - Limits and Infinite Series
  - MATH 304 - Linear Algebra
  - MATH 331 - Ordinary Differential Equations
  - M/CS 435 - Nonlinear Optimization
  - One course from:
    - CSCI 139 - Programming Fundamentals in Python
    - CSCI 140 - Programming Fundamentals in C++
    - CSCI 141 - Computer Programming I
    - MATH 207 - Mathematical Computing
  - One Course from:
    - ECON 406 - Topics in Microeconomics
    - ECON 407 - Topics in Macroeconomics
  - Choose one of the following options:
    - MATH 124 - Calculus and Analytic Geometry I
    - MATH 125 - Calculus and Analytic Geometry II

or
  - MATH 134 - Calculus I Honors
  - MATH 135 - Calculus II Honors

or

  - MATH 138 - Accelerated Calculus
  - Choose one of the following options:
    - MATH 341 - Probability and Statistical Inference
    - MATH 342 - Statistical Methods OR MATH 441
    - MATH 442 - Mathematical Statistics
  - 16 additional credits in upper-division courses in economics, under prior departmental advisement; 8 of these 16 credits must be at the 400 level
  - Take one Communication Focus (CF) course and a minimum of three writing proficiency points in approved upper-division writing proficiency courses (WP-3 points) at WWU with a minimum grade of C-. The CF course must be taken within the College of Business and Economics, while the WP requirement can be met with courses from any of the combined major departments. These requirements can be completed as part of the above required and elective credits. Consult the Timetable of Classes for the specific course sections that fulfill the CF and WP requirements.
- NOTE: The pair MATH 203 and 303 may be substituted for MATH 204 and 331

## **Mathematics Minor**

**34-35 credits**

### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

### **Admission and Declaration Process**

Declaration of Major ([see Mathematics Department page](#))

## Requirements

- Choose either:
    - MATH 124 - Calculus and Analytic Geometry I
    - MATH 125 - Calculus and Analytic Geometry II  
or
    - MATH 134 - Calculus I Honors
    - MATH 135 - Calculus II Honors  
or
    - MATH 138 - Accelerated Calculus
    - MATH 204 - Elementary Linear Algebra
    - MATH 224 - Multivariable Calculus and Geometry I
  - One course from:
    - CSCI 139 - Programming Fundamentals in Python
    - CSCI 140 - Programming Fundamentals in C++
    - CSCI 141 - Computer Programming I
    - MATH 207 - Mathematical Computing
  - 12 credits of approved electives from:
    - MATH 209 - Discrete Mathematics
    - MATH 225 - Multivariable Calculus and Geometry II
    - MATH 226 - Limits and Infinite Series
  - And upper-division courses except:
    - MATH 381 - Teaching K-8 Mathematics I
    - MATH 382 - Teaching K-8 Mathematics II
    - MATH 383 - Teaching K-8 Mathematics III
    - MATH 483 - Methods of Teaching Secondary Mathematics
    - MATH 491 - Internship Seminar - Teaching K-8 Mathematics
- NOTE: The pair MATH 203-303 may be substituted for MATH 204 and 4 credits of approved electives.

## Mathematics — Elementary, BAE

50 credits

### Introduction

This major satisfies the academic major requirements for teacher certification with an endorsement in elementary education and must be accompanied by the professional preparation program in elementary education. See the Elementary Education section of this catalog for program admission, completion, and teacher certification requirements.

### Admission and Declaration Process

Declaration of Major ([see Mathematics Department page](#))

### Grade Requirements

Recommendation for teaching endorsement normally requires completion of the major with a grade point of 2.50 or better in the required major courses. Students must earn a grade of C (2.0) or better in the elementary education professional program and in all courses required for the endorsement.

## **Requirements**

- MATH 204 - Elementary Linear Algebra
- MATH 207 - Mathematical Computing
- MATH 209 - Discrete Mathematics
- MATH 302 - Introduction to Proofs Via Number Theory
- MATH 341 - Probability and Statistical Inference
- MATH 360 - Euclidean and Non-Euclidean Geometry
- MATH 381 - Teaching K-8 Mathematics I
- MATH 382 - Teaching K-8 Mathematics II
- MATH 383 - Teaching K-8 Mathematics III
- MATH 419 - Historical Perspectives of Mathematics
- MATH 491 - Internship Seminar - Teaching K-8 Mathematics
  - Choose either:
  - MATH 124 - Calculus and Analytic Geometry I and
  - MATH 125 - Calculus and Analytic Geometry II  
or
  - MATH 134 - Calculus I Honors and
  - MATH 135 - Calculus II Honors  
or
  - MATH 138 - Accelerated Calculus

## **Additional Major Requirements**

### **Elementary Education Professional Program Requirements (106 credits)**

#### **Professional Studies Core (25 credits)**

- EDUC 301 - Educational Psychology I: Development and Individual Differences
- EDUC 302 - Educational Psychology II: Motivation, Learning and Assessment
- EDUC 310 - The Teacher and the Social Order
- ELED 370 - Introduction to Teaching
- IT 344 - Basic Instructional Technology Skills
- IT 442 - Classroom Use of Instructional Technology (Elementary)
- SPED 364 - Teaching All Students

#### **Elementary Program — Methods, Curriculum Content, and Field Experiences (81 credits)**

- ART 380 - Art Educating the Child
- ELED 470 - Developing Teaching
- ELED 471 - Documenting Teaching
- ELED 480 - Literacy: Beginning Communicators
- ELED 481 - Literacy: Fluent Communicators
- ELED 491 - September Experience
- ELED 492 - Practicum: Experience in Literacy Methods
- ELED 494 - Internship - Elementary
- HLED 455 - Health Education Grades K-8

- MATH 381 - Teaching K-8 Mathematics I
- MATH 382 - Teaching K-8 Mathematics II
- MATH 383 - Teaching K-8 Mathematics III
- MATH 491 - Internship Seminar - Teaching K-8 Mathematics
- MUS 361 - Music for Elementary Teachers
- PE 345 - Physical Education for Elementary School
- SCED 480 - Science Methods and Curriculum for the Elementary School
- SCED 490 - Laboratory/Field Experience in Elementary Science
- SPED 430 - Problem Solving for Diverse Needs

## **Mathematics — Secondary Minor**

**40 credits**

### **Introduction**

This minor leads to endorsement in secondary mathematics when accompanied by the professional program in secondary education and a qualifying endorsement in another content area. See the Secondary Education section of this catalog for program admission, completion, and teacher certification requirements.

### **Admission and Declaration Process**

Declaration of Major ([see Mathematics department page](#))

### **Grade Requirements**

Recommendation for teaching endorsement normally requires completion of the major with a grade point of 2.50 or better in the required major courses. Students must earn a grade of C (2.0) or better in the secondary education professional program and in all courses required for the endorsement.

### **Requirements**

- MATH 204 - Elementary Linear Algebra
- MATH 207 - Mathematical Computing
- MATH 209 - Discrete Mathematics
- MATH 302 - Introduction to Proofs Via Number Theory
- MATH 341 - Probability and Statistical Inference
- MATH 360 - Euclidean and Non-Euclidean Geometry
- MATH 419 - Historical Perspectives of Mathematics
- MATH 483 - Methods of Teaching Secondary Mathematics
- Choose either:
  - MATH 124 - Calculus and Analytic Geometry I
  - MATH 125 - Calculus and Analytic Geometry II
  - or
  - MATH 134 - Calculus I Honors
  - MATH 135 - Calculus II Honors
  - or
  - MATH 138 - Accelerated Calculus

## **Additional Requirements**

### **Woodring College of Education**

#### **Secondary Education Professional Program Requirements (68 credits)**

- EDUC 301 - Educational Psychology I: Development and Individual Differences
- EDUC 302 - Educational Psychology II: Motivation, Learning and Assessment
- EDUC 310 - The Teacher and the Social Order
- IT 444 - Classroom Use of Instructional Technology (Secondary)
- SEC 410 - Dynamics of Teaching
- SEC 411 - Philosophical Foundations of Education
- SEC 425 - Developmental Reading, Writing and Learning in Secondary Schools
- SEC 430 - Secondary School Methods I - Instructional Strategies, Daily Planning, and Standards
- SEC 431 - Secondary School Methods II-Assessment and Long Term Planning
- SEC 432 - Secondary School Methods III - Management, Motivation and Discipline
- SEC 433 - Peer Teaching Laboratory
- SEC 435 - Middle Level Practicum
- SEC 436 - Secondary School Practicum
- SEC 495 - Internship - Secondary
- SPED 363 - Secondary Students With Special Needs

## **Mathematics — Secondary, BAE**

**70 credits**

### **Introduction**

This major must be accompanied by the professional preparation program in secondary education and leads to an endorsement in secondary mathematics. Half of the required mathematics coursework must be completed to be eligible for admission to the Woodring College of Education. See the Secondary Education section of this catalog for program admission, completion, and teacher certification requirements.

### **Admission and Declaration Process**

Declaration of Major ([see Mathematics department page](#))

### **Grade Requirements**

Recommendation for teaching endorsement normally requires completion of the major with a grade point of 2.50 or better in the required major courses. Students must earn a grade of C (2.0) or better in the secondary education professional program and in all courses required for the endorsement.

### **Requirements**

- MATH 204 - Elementary Linear Algebra
- MATH 207 - Mathematical Computing

- MATH 209 - Discrete Mathematics
  - MATH 224 - Multivariable Calculus and Geometry I
  - MATH 226 - Limits and Infinite Series
  - MATH 302 - Introduction to Proofs Via Number Theory
  - MATH 331 - Ordinary Differential Equations
  - MATH 341 - Probability and Statistical Inference
  - MATH 360 - Euclidean and Non-Euclidean Geometry
  - MATH 419 - Historical Perspectives of Mathematics
  - MATH 483 - Methods of Teaching Secondary Mathematics
  - Choose either:
    - MATH 124 - Calculus and Analytic Geometry I and
    - MATH 125 - Calculus and Analytic Geometry II  
or
    - MATH 134 - Calculus I Honors and
    - MATH 135 - Calculus II Honors  
or
    - MATH 138 - Accelerated Calculus
  - At least four courses selected from the following:
    - MATH 304 - Linear Algebra
    - MATH 312 - Proofs in Elementary Analysis
    - MATH 401 - Introduction to Abstract Algebra
    - MATH 402 - Introduction to Abstract Algebra
    - MATH 410 - Mathematical Modeling
    - MATH 441 - Probability
    - M/CS 375 - Numerical Computation or by advisement from secondary mathematics educators.
- NOTE: The pair MATH 203 and 303 may be substituted for MATH 204 and 331

#### **Additional Requirements**

#### **Woodring College of Education**

#### **Secondary Education Professional Program Requirements (68 credits)**

- EDUC 301 - Educational Psychology I: Development and Individual Differences
- EDUC 302 - Educational Psychology II: Motivation, Learning and Assessment
- EDUC 310 - The Teacher and the Social Order
- IT 444 - Classroom Use of Instructional Technology (Secondary)
- SEC 410 - Dynamics of Teaching
- SEC 411 - Philosophical Foundations of Education
- SEC 425 - Developmental Reading, Writing and Learning in Secondary Schools
- SEC 430 - Secondary School Methods I - Instructional Strategies, Daily Planning, and Standards
- SEC 431 - Secondary School Methods II-Assessment and Long Term Planning
- SEC 432 - Secondary School Methods III - Management, Motivation and Discipline
- SEC 433 - Peer Teaching Laboratory
- SEC 435 - Middle Level Practicum
- SEC 436 - Secondary School Practicum
- SEC 495 - Internship - Secondary
- SPED 363 - Secondary Students With Special Needs

# **Mathematics, BA**

**70 credits in mathematics plus 17-20 credits in supporting courses**

## **Admission and Declaration Process**

Declaration of Major ([see Mathematics department page](#))

## **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

## **Requirements**

- MATH 204 - Elementary Linear Algebra
- MATH 224 - Multivariable Calculus and Geometry I
- MATH 226 - Limits and Infinite Series
- MATH 331 - Ordinary Differential Equations
- Choose either:
  - MATH 124 - Calculus and Analytic Geometry I
  - MATH 125 - Calculus and Analytic Geometry II
  - or
  - MATH 134 - Calculus I Honors
  - MATH 135 - Calculus II Honors
  - or
  - MATH 138 - Accelerated Calculus
- One course from:
  - MATH 341 - Probability and Statistical Inference
  - MATH 441 - Probability
- One course from:
  - MATH 419 - Historical Perspectives of Mathematics
  - MATH 420 - Topics in the History and Philosophy of Mathematics

**NOTE:** The pair MATH 203 and 303 may be substituted for MATH 204 and 331

- One course from:
  - CSCI 139 - Programming Fundamentals in Python
  - CSCI 140 - Programming Fundamentals in C++
  - CSCI 141 - Computer Programming I
  - MATH 207 - Mathematical Computing

**NOTE:** If the supporting sequence from CSCI below is chosen, this requirement is fulfilled.

- Three courses from:
  - MATH 209 - Discrete Mathematics
  - MATH 302 - Introduction to Proofs Via Number Theory
  - MATH 304 - Linear Algebra
  - MATH 312 - Proofs in Elementary Analysis
  - MATH 360 - Euclidean and Non-Euclidean Geometry
- Two courses from:
  - MATH 410 - Mathematical Modeling
  - M/CS 335 - Linear Optimization
  - M/CS 375 - Numerical Computation

- M/CS 435 - Nonlinear Optimization
  - M/CS 475 - Numerical Analysis
    - Sixteen additional approved credits in mathematics or math-computer science, which includes completion of two of the following pairs:
      - One course from:
  - MATH 303 - Linear Algebra and Differential Equations II  
MATH 331 - Ordinary Differential Equations
    - together with one of:
  - MATH 415 - Mathematical Biology
  - MATH 430 - Fourier Series and Applications to Partial Differential Equations
  - MATH 431 - Analysis of Partial Differential Equations
  - MATH 432 - Systems of Differential Equations
    - Only one of the pairs from the above group can be used
  - The following pair:  
MATH 341 - Probability and Statistical Inferences
  - MATH 342 - Statistical Methods
  - The following pair:  
MATH 401 - Introduction to Abstract Algebra
  - MATH 402 - Introduction to Abstract Algebra
  - The following pair:  
MATH 421 - Methods of Mathematical Analysis I
  - MATH 422 - Methods of Mathematical Analysis II
  - The following pair:  
MATH 441 - Probability
  - MATH 442 - Mathematical Statistics
  - The following pair:  
M/CS 335 - Linear Optimization  
M/CS 435 - Nonlinear Optimization
  - The following pair:  
M/CS 375 - Numerical Computation  
M/CS 475 - Numerical Analysis
- NOTE:** Courses counted toward the major in the preceding boxes do not count toward the 16 credits but can serve as part (or all) of the pair.
- One of the following sequences:
  - PHYS 121 - Physics With Calculus I
  - PHYS 122 - Physics With Calculus II
  - PHYS 123 - Electricity and Magnetism
    - or
  - CHEM 121 - General Chemistry I
  - CHEM 122 - General Chemistry II
  - CHEM 123 - General Chemistry III
    - or
  - CHEM 125 - General Chemistry I, Honors
  - CHEM 126 - General Chemistry II, Honors
  - CHEM 225 - General Chemistry III, Honors
    - or
  - CSCI 141
  - CSCI 145 - Computer Programming and Linear Data Structures
  - CSCI 211 - Discrete Structures and Functional Programming I
  - CSCI 241 - Data Structures

- CSCI 401 - Formal Languages and Automata  
or
- ECON 206 - Introduction to Microeconomics
- ECON 207 - Introduction to Macroeconomics
- ECON 306 - Intermediate Microeconomics  
and one of
- ECON 375 - Introduction to Econometrics
- ECON 470 - Economic Fluctuations and Forecasting
- ECON 475 - Econometrics

## **Mathematics, BS**

**70 credits in mathematics plus 17-20 credits in supporting courses**

### **Admission and Declaration Process**

Declaration of Major ([see Mathematics department page](#))

### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

### **Requirements**

- MATH 204 - Elementary Linear Algebra
- MATH 224 - Multivariable Calculus and Geometry I
- MATH 225 - Multivariable Calculus and Geometry II
- MATH 226 - Limits and Infinite Series
- MATH 304 - Linear Algebra
- MATH 312 - Proofs in Elementary Analysis

NOTE: The pair MATH 203 and 303 may be substituted for MATH 204 and 331.

Choose either:

- MATH 124 - Calculus and Analytic Geometry I
- MATH 125 - Calculus and Analytic Geometry II  
or
- MATH 134 - Calculus I Honors
- MATH 135 - Calculus II Honors  
or
- MATH 138 - Accelerated Calculus

One course from:

- MATH 209 - Discrete Mathematics
- MATH 302 - Introduction to Proofs Via Number Theory

No fewer than 31 approved credits in mathematics or math-computer science, including at least two of the following pairs:

One course from:

- MATH 303 - Linear Algebra and Differential Equations II
  - MATH 331 - Ordinary Differential Equations
- together with one of:
- MATH 415 - Mathematical Biology

- MATH 430 - Fourier Series and Applications to Partial Differential Equations
  - MATH 431 - Analysis of Partial Differential Equations
  - MATH 432 - Systems of Differential Equations  
Only one of the pairs from the above group can be used
- The following pair:
- MATH 341 - Probability and Statistical Inference
  - MATH 342 - Statistical Methods
- The following pair:
- MATH 401 - Introduction to Abstract Algebra
  - MATH 402 - Introduction to Abstract Algebra
- The following pair:
- MATH 421 - Methods of Mathematical Analysis I
  - MATH 422 - Methods of Mathematical Analysis II
- The following pair:
- MATH 441 - Probability
  - MATH 442 - Mathematical Statistics
- The following pair:
- M/CS 335 - Linear Optimization
  - M/CS 435 - Nonlinear Optimization
- The following pair:
- M/CS 375 - Numerical Computation
  - M/CS 475 - Numerical Analysis

#### **Supporting Courses:**

- At least 19 credits from 400-level courses in mathematics or math-computer science except MATH 483, and including at most one of MATH 419 or MATH 420.
- One of:
  - CSCI 139 - Programming Fundamentals in Python
  - CSCI 140 - Programming Fundamentals in C++
  - CSCI 141 - Computer Programming I
  - MATH 207 - Mathematical Computing

**NOTE:** If the supporting sequence from CSCI below is chosen, this requirement is fulfilled.

- One of the following sequences:
  - PHYS 121 - Physics With Calculus I
  - PHYS 122 - Physics With Calculus II
  - PHYS 123 - Electricity and Magnetism  
or
  - CHEM 121 - General Chemistry I
  - CHEM 122 - General Chemistry II
  - CHEM 123 - General Chemistry III  
or
  - CHEM 125 - General Chemistry I, Honors
  - CHEM 126 - General Chemistry II, Honors
  - CHEM 225 - General Chemistry III, Honors  
or
- CSCI 141
- CSCI 145 - Computer Programming and Linear Data Structures
- CSCI 211 - Discrete Structures and Functional Programming I

- CSCI 241 - Data Structures
- CSCI 401 - Formal Languages and Automata  
or
- ECON 206 - Introduction to Microeconomics
- ECON 207 - Introduction to Macroeconomics
- ECON 306 - Intermediate Microeconomics  
and one of
- ECON 375 - Introduction to Econometrics
- ECON 470 - Economic Fluctuations and Forecasting
- ECON 475 - Econometrics

Language competency in French, German or Russian is strongly recommended for those students who may go to graduate school.

Students who are interested in the actuarial sciences should complete: MATH 441 and 442, M/CS 335 and 435, M/CS 375 and 475 as part of their major programs.

## **Mathematics/Computer Science, BS**

**91 credits**

### **Admission and Declaration Process**

Declaration of Major ([see Mathematics Department page](#))

### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

### **Requirements**

- CSCI 141 - Computer Programming I
- CSCI 145 - Computer Programming and Linear Data Structures
- CSCI 211 - Discrete Structures and Functional Programming I
- CSCI 241 - Data Structures
- CSCI 245 - Object-Oriented Programming C++
- CSCI 305 - Analysis of Algorithms and Data Structures I
- CSCI 401 - Formal Languages and Automata
- CSCI 405 - Analysis of Algorithms and Data Structures II
- MATH 204 - Elementary Linear Algebra
- MATH 224 - Multivariable Calculus and Geometry I
- MATH 226 - Limits and Infinite Series
- MATH 302 - Introduction to Proofs Via Number Theory
- MATH 312 - Proofs in Elementary Analysis
- MATH 331 - Ordinary Differential Equations
- Choose either:
- MATH 124 - Calculus and Analytic Geometry I
- MATH 125 - Calculus and Analytic Geometry II  
or
- MATH 134 - Calculus I Honors

- MATH 135 - Calculus II Honors  
or
  - MATH 138 - Accelerated Calculus
    - One course from:
  - MATH 430 - Fourier Series and Applications to Partial Differential Equations
  - MATH 432 - Systems of Differential Equations
    - One course from:
  - MATH 341 - Probability and Statistical Inference
  - MATH 441 - Probability
    - One course from:
  - MATH 304 - Linear Algebra
  - MATH 401 - Introduction to Abstract Algebra
- NOTE:** The pair MATH 203-303 may be substituted for MATH 204 and 331
- Three courses from:
- M/CS 335 - Linear Optimization
  - M/CS 375 - Numerical Computation
  - M/CS 435 - Nonlinear Optimization
  - M/CS 475 - Numerical Analysis
- 3 additional upper-division credits in mathematics or computer science as advised

## Physics/Mathematics - Secondary, BAE (also see Physics Department)

### 106-107 credits

This major must be accompanied by the professional education program in secondary education. This major meets the requirements for Washington state teaching endorsements in both physics and mathematics. See the Secondary Education section of this catalog for program admission, completion, and teacher certification requirements.

#### Admission and Declaration Process

Declaration of Major ([see Mathematics department page](#))

#### Grade Requirements

A cumulative GPA of at least 2.50, plus a minimum grade of C (2.0) or better in the individual courses, must be maintained in the courses required by the major. Students must earn a grade of C (2.0) or better in the secondary education professional program and in all courses required for the endorsement.

#### Requirements

- ASTR 315 - The Solar System
  - MATH 204 - Elementary Linear Algebra
  - MATH 209 - Discrete Mathematics
  - MATH 224 - Multivariable Calculus and Geometry I
  - MATH 331 - Ordinary Differential Equations
  - MATH 360 - Euclidean and Non-Euclidean Geometry
  - MATH 419 - Historical Perspectives of Mathematics
  - MATH 483 - Methods of Teaching Secondary Mathematics
- NOTE:** The pair MATH 203 and 303 may be substituted for MATH 204 and 331.

- PHYS 121 - Physics With Calculus I
- PHYS 122 - Physics With Calculus II
- PHYS 123 - Electricity and Magnetism
- PHYS 223 - Waves and Optics
- PHYS 224 - Modern Physics I
- PHYS 225 - Modern Physics II
- PHYS 233 - Waves and Optics Laboratory
- PHYS 235 - Modern Physics Lab
- PHYS 322 - Fundamentals of Electronics
- PHYS 326 - Tools and Data Analysis in Physics
- PHYS 391 - Solids Junior Lab
- SCED 370 - Science and Society
- SCED 481 - Fundamentals of Teaching Science
- SCED 491 - Methods in Secondary Education for Science Teachers
  - 10 additional credits of upper-division physics or astronomy courses, including 2-3 credits of:
- PHYS 491 - Senior Project in Experimental Physics
- PHYS 492 - Senior Project in Theoretical Physics
- ASTR 493 - Senior Project in Astronomy
- Choose either:
  - MATH 124 - Calculus and Analytic Geometry I and
  - MATH 125 - Calculus and Analytic Geometry II  
or
  - MATH 134 - Calculus I Honors and
  - MATH 135 - Calculus II Honors  
or
  - MATH 138 - Accelerated Calculus
- At least two of the following:
  - MATH 207 - Mathematical Computing
  - MATH 341 - Probability and Statistical Inference
  - MATH 410 - Mathematical Modeling

#### **Additional Requirements**

#### **Link to Woodring College of Education Secondary Teacher Education Program**

#### **Secondary Education Professional Program Requirements(68 credits)**

- EDUC 301 - Educational Psychology I: Development and Individual Differences
- EDUC 302 - Educational Psychology II: Motivation, Learning and Assessment
- EDUC 310 - The Teacher and the Social Order
- IT 444 - Classroom Use of Instructional Technology (Secondary)
- SEC 410 - Dynamics of Teaching
- SEC 425 - Developmental Reading, Writing and Learning in Secondary Schools
- SEC 430 - Secondary School Methods I - Instructional Strategies, Daily Planning, and Standards
- SEC 431 - Secondary School Methods II-Assessment and Long Term Planning
- SEC 432 - Secondary School Methods III - Management, Motivation and Discipline
- SEC 433 - Peer Teaching Laboratory

- SEC 435 - Middle Level Practicum
- SEC 436 - Secondary School Practicum
- SEC 495 - Internship - Secondary
- SPED 363 - Secondary Students With Special Needs

## **Mathematics, Non-Thesis, MS**

### **Graduate Faculty**

**Amiran, Edoh Y.**, PhD, differential geometry, smooth dynamical systems.

**Anderson, Amy D.**, PhD, statistical genetics.

**Benyi, Arpad**, PhD, harmonic analysis, partial differential equations.

**Chalice, Donald R.**, PhD, Banach algebras, complex dynamics.

**Chan, Victor**, PhD, reliability, applied statistics.

**Curgus, Branko**, PhD, differential equations, operator theory.

**Gardner, Richard J.**, DSc, geometry, tomography.

**Glimm, Tilmann**, PhD, mathematical biology, geometric optics.

**Hartenstine, David A.**, PhD, partial differential equations.

**Hartsfield, Nora**, PhD, graph theory.

**Jewett, Robert I.**, PhD, harmonic analysis.

**Johnson, Jerry L.**, PhD, mathematics education.

**Johnson, Millie J.**, MEd, mathematics education.

**McDowall, Stephen R.**, PhD, inverse problems.

**Naylor, Michael E.**, PhD, mathematics education.

**Nyman, Adam**, PhD, algebraic geometry, ring theory.

**Read, Thomas T.**, PhD, ordinary and partial differential equations.

**Sarkar, Amites**, PhD, combinatorics, probability theory, graph theory.

**Shen, Yun-Qiu**, PhD, nonlinear differential equations, numerical analysis.

**Treeneer, Stephanie**, PhD, modular forms, number theory.

**Ypmal, Tjalling J.**, DPhil, numerical analysis.

**Zhang, Jianying**, PhD, numerical partial differential equations.

Program Advisor: Dr. Arpad Benyi, Bond Hall 218 360-650-3710

### **Program Description**

The graduate program in mathematics is designed to meet the requirements of subsequent professional and academic work in advanced mathematics. Students are prepared to continue to further graduate studies or for professional employment in industry or in college teaching. The focus is on providing a strong and broad analytical foundation, together with sufficient flexibility to pursue particular interests and areas of application in greater depth.

### **Goals**

The program prepares students for:

- Continuing further graduate studies, or
- Professional employment in industry, or
- College teaching.

## **Prerequisites/Qualification Examination**

To be eligible for admission to the MS program in mathematics, a student should have completed at least the following courses or the equivalent with grades of B or better: Math 224, 304, 312, 331, CS 141 or Math 207, and two math courses at the 400 level.

A student who has not completed all of these courses but who can demonstrate strong promise of the ability to succeed in the program may be admitted with special stipulations. In such cases, the graduate advisor will, in consultation with the student, specify the conditions to be satisfied by the student in order to fully qualify for the program.

## **Program Application/Admission Requirements**

**Deadline:** Please see Graduate School deadlines.

**TA Deadline:** Preferred consideration will be given to applicants who have completed files by March 1.

**Specific Test Requirements:** Graduate Record Exam, General Test.

Contact the mathematics department, 360-650-3785, or see its website at [www.ac.wwu.edu/~mathweb/](http://www.ac.wwu.edu/~mathweb/) for specifics.

**Graduate School Admission Link**

## **Program Requirements**

In most cases the student's program must include at least 48 credits for the non-thesis option. At most 10 credits at the 400 level can be included in this total.

Students who have taken a significant number of graduate math courses as undergraduates at WWU may complete the graduate program with only 36 additional 500-level credits (details of this program are available from the Department of Mathematics).

The following mathematics courses or their equivalents must be completed before graduation: Math 504, 521, 522, 691 and at least one course or its equivalent from each of the following four lists

- Algebra:
  - MATH 502 - Abstract Algebra
  - MATH 503 - Topics in Abstract Algebra
  - MATH 560 - Topics in Geometry
  - MATH 564 - Graph Theory
  - MATH 566 - Topics in Combinatorics
- Analysis:
  - MATH 523 - Advanced Calculus of Several Variables
  - MATH 524 - Topics in Analysis
  - MATH 525 - Topology
  - MATH 527 - Real Analysis
  - MATH 528 - Functional Analysis
  - MATH 539 - Topics in Complex Analysis
  - MATH 562 - Differential Geometry
- Decisions:
  - MATH 535 - Nonlinear Optimization
  - MATH 542 - Mathematical Statistics
  - MATH 543 - Linear Statistical Models

**MATH 545**

- MATH 570 - Topics in Optimization
  - Applied:
- MATH 510 - Mathematical Modeling
- MATH 511 - Advanced Modeling
- MATH 573 - Numerical Linear Algebra
- MATH 575 - Numerical Analysis
- MATH 577 - Topics in Numerical Analysis

The student's program must also include at least four of the following courses: Math 503, 511, 523, 525, 527, 528, 533, 539, 545, 560, 562, 564, 566, 570, 573, 577.

A student who has not completed a senior-level course in each of the following areas will also be required to include the indicated course or courses as part of his or her program: abstract algebra (401), second course in ordinary differential equations (432), complex analysis (538), probability or statistics (541).

Graduate teaching assistants are required to take MATH 595 during their first year of study.

**Other Requirements****Qualifying Examination for Candidacy**

Each student must pass a qualifying exam before being advanced to candidacy.

**Advancement to Candidacy**

Students are advanced to candidacy when they have completed at least 12 credits of approved course work with a B or better GPA, including at least one course numbered 500 or above, and have passed the qualifying exam.

**Project**

Every student is required to complete a project (MATH 691). The project will involve both an oral exam on the subject of the project and a colloquium presentation to the mathematical community. The project must be completed before a student may elect the thesis option. See the departmental graduate handbook for additional details.

**Further Information and Advice**

Each student is urged to prepare a program of courses in consultation with his or her advisor as soon as possible after beginning work toward a degree. Deviations from the requirements above may be approved by the department's Graduate Committee upon request of the student's advisor. For the student's protection, such approval should be obtained before any deviations are made.

A student who wishes to include a course numbered 400, 499, 500 or 599 as part of his or her graduate degree program must obtain approval in advance from the Graduate Committee. The Graduate Committee will consider approval on the basis of a detailed written description submitted by the student not later than three weeks before the date of registration. If the course is approved for graduate credit, the description will be retained in the student's file.

# **Mathematics, Thesis, MS**

## **Graduate Faculty**

**Amiran, Edoh Y.**, PhD, differential geometry, smooth dynamical systems.  
**Anderson, Amy D.**, PhD, statistical genetics.  
**Benyi, Arpad**, PhD, harmonic analysis, partial differential equations.  
**Chalice, Donald R.**, PhD, Banach algebras, complex dynamics.  
**Chan, Victor**, PhD, reliability, applied statistics.  
**Curgus, Branko**, PhD, differential equations, operator theory.  
**Gardner, Richard J.**, DSc, geometry, tomography.  
**Glimm, Tilmann**, PhD, mathematical biology, geometric optics.  
**Hartenstine, David A.**, PhD, partial differential equations.  
**Hartsfield, Nora**, PhD, graph theory.  
**Jewett, Robert I.**, PhD, harmonic analysis.  
**Johnson, Jerry L.**, PhD, mathematics education.  
**Johnson, Millie J.**, MEd, mathematics education.  
**McDowall, Stephen R.**, PhD, inverse problems.  
**Naylor, Michael E.**, PhD, mathematics education.  
**Nyman, Adam**, PhD, algebraic geometry, ring theory.  
**Read, Thomas T.**, PhD, ordinary and partial differential equations.  
**Sarkar, Amites**, PhD, combinatorics, probability theory, graph theory.  
**Shen, Yun-Qiu**, PhD, nonlinear differential equations, numerical analysis.  
**Treneer, Stephanie**, PhD, modular forms, number theory.  
**Ypma, Tjalling J.**, DPhil, numerical analysis.  
**Zhang, Jianying**, PhD, numerical partial differential equations.

Program Advisor: Dr. Arpad Benyi, Bond Hall 218 360-650-3710

## **Program Description**

The graduate program in mathematics is designed to meet the requirements of subsequent professional and academic work in advanced mathematics. Students are prepared to continue to further graduate studies or for professional employment in industry or in college teaching. The focus is on providing a strong and broad analytical foundation, together with sufficient flexibility to pursue particular interests and areas of application in greater depth.

## **Goals**

The program prepares students for:

- Continuing further graduate studies, or
- Professional employment in industry, or
- College teaching.

## **Prerequisites/Qualification Examination**

To be eligible for admission to the MS program in mathematics, a student should have completed at least the following courses or the equivalent with grades of B or better: Math 224, 304, 312, 331, CS 141 or Math 207, and two math courses at the 400 level.

A student who has not completed all of these courses but who can demonstrate strong promise of the ability to succeed in the program may be admitted with special stipulations. In such cases, the graduate advisor will, in consultation with the student, specify the conditions to be satisfied by the student in order to fully qualify for the program.

## **Program Application/Admission Requirements**

**Deadline:** Please see Graduate School deadlines.

**TA Deadline:** Preferred consideration will be given to applicants who have completed files by March 1.

**Specific Test Requirements:** Graduate Record Exam, General Test.

Contact the mathematics department, 360-650-3785, or see its website at [www.ac.wwu.edu/~mathweb/](http://www.ac.wwu.edu/~mathweb/) for specifics.

**Graduate School Admission Link**

## **Program Requirements**

In most cases the student's program must include at least 45 credits (thesis option). At most 10 credits at the 400 level can be included in this total.

Students who have taken a significant number of graduate math courses as undergraduates at WWU may complete the graduate program with only 36 additional 500-level credits (details of this program are available from the Department of Mathematics).

The following mathematics courses or their equivalents must be completed before graduation: Math 504, 521, 522, 691 and 690 (for thesis) and at least one course or its equivalent from each of the following four lists

**Algebra:**

- MATH 502 - Abstract Algebra
- MATH 503 - Topics in Abstract Algebra
- MATH 560 - Topics in Geometry
- MATH 564 - Graph Theory
- MATH 566 - Topics in Combinatorics

**Analysis:**

- MATH 523 - Advanced Calculus of Several Variables
- MATH 524 - Topics in Analysis
- MATH 525 - Topology
- MATH 527 - Real Analysis
- MATH 528 - Functional Analysis
- MATH 539 - Topics in Complex Analysis
- MATH 562 - Differential Geometry

**Decisions:**

- MATH 535 - Nonlinear Optimization
- MATH 542 - Mathematical Statistics
- MATH 543 - Linear Statistical Models
- MATH 545
- MATH 570 - Topics in Optimization

**Applied:**

- MATH 510 - Mathematical Modeling
- MATH 511 - Advanced Modeling
- MATH 573 - Numerical Linear Algebra
- MATH 575 - Numerical Analysis
- MATH 577 - Topics in Numerical Analysis

The student's program must also include at least four of the following courses: Math 503, 511, 523, 525, 527, 528, 533, 539, 545, 560, 562, 564, 566, 570, 573, 577.

A student who has not completed a senior-level course in each of the following areas will also be required to include the indicated course or courses as part of his or her program: abstract algebra (401), second course in ordinary differential equations (432), complex analysis (538), probability or statistics (541). Graduate teaching assistants are required to take MATH 595 during their first year of study.

#### Other Requirements

##### **Qualifying Examination for Candidacy**

Each student must pass a qualifying exam before being advanced to candidacy.

##### **Advancement to Candidacy**

Students are advanced to candidacy when they have completed at least 12 hours of approved course work with a B or better GPA, including at least one course numbered 500 or above, and have passed the qualifying exam.

##### **Project**

Every student is required to complete a project (MATH 691). The project will involve both an oral exam on the subject of the project and a colloquium presentation to the mathematical community. The project must be completed before a student may elect the thesis option. See the departmental graduate handbook for additional details.

##### **Further Information and Advice**

Each student is urged to prepare a program of courses in consultation with his or her advisor as soon as possible after beginning work toward a degree. Deviations from the requirements above may be approved by the department's Graduate Committee upon request of the student's advisor. For the student's protection, such approval should be obtained before any deviations are made.

A student who wishes to include a course numbered 400, 499, 500 or 599 as part of his or her graduate degree program must obtain approval in advance from the Graduate Committee. The Graduate Committee will consider approval on the basis of a detailed written description submitted by the student not later than three weeks before the date of registration. If the course is approved for graduate credit, the description will be retained in the student's file.

# **Physics and Astronomy**

## **Introduction**

The Department of Physics and Astronomy offers a BS degree in physics and a BA in Education degree in physics/mathematics and chemistry/physics education. The physics BS is based on a core curriculum that covers the five fundamental theories of physics: mechanics, thermodynamics, electromagnetism, relativity and quantum mechanics. Laboratory work forms an important part of many of the core courses, and more sophisticated upper-division laboratories are offered in electronics, optics, and lasers. Students graduating with a Bachelor of Science degree in physics are well prepared for graduate school in physics, astronomy, optics and several fields of engineering or a variety of industrial jobs.

Physics majors are encouraged to work for the department as laboratory teaching assistants and as co-workers in the technical work of the department. Such employment provides valuable experience as well as financial support. It also promotes close association between faculty and students.

### *Physics*

Physics is the fundamental science. It is the study of matter and energy and the interaction between the two. Astronomy, biology, chemistry, geology and engineering apply the principles of physics to specific problems. Almost all areas of modern technology involve applications of physics. An undergraduate major in physics provides a solid foundation upon which to build later work in astronomy, optics and engineering, applied mathematics, as well as physics itself. Students planning careers in physics should select the physics Bachelor of Science program, since this will give them the extensive background required for success in graduate school or a variety of job possibilities.

Computers are playing an increasingly important role in physics research and work in applied physics. The department manages a laboratory/classroom equipped with 20 modern microcomputers running sophisticated physics, mathematics and astronomy software packages, as well as Web browsers. Students can expect to make use of the computers in the majority of their physics courses. The computers are available to physics majors 24 hours a day, seven days a week. In addition, for theoretical research projects, there are a number of Linux-based microcomputers.

The department also offers a variety of research opportunities in experimental condensed-matter physics.

### *Astronomy*

Astronomy is the study of the planets, stars, galaxies, and the universe as a whole. Our current understanding of the basic physical processes that underlie the universe continues to evolve as new discoveries are made with advanced data analysis and sophisticated electronic instrumentation on both ground-based telescopes and space-based missions. Professional astronomers usually are university faculty members or are scientists with national observatories and government laboratories, but a background in astronomy can also be useful for research careers in business and private industry where knowledge of instrumentation and remote sensing is valued. Students planning professional careers in astronomy should select the Bachelor of Science program in physics and the minor in astronomy. Together, these programs provide a solid preparation for graduate work.

Although the department does not have an observatory, it does have astronomical imaging facilities equipped with computers, professional image analysis software, and a computer-controlled 12-inch Schmidt-Cassegrain telescope with a CCD camera. In addition, much of modern research in astronomy in this department and throughout the astronomical community uses the Internet, with large new databases of astronomical data and remote access to telescopes around the world. Students who complete courses in astronomy are encouraged to work with faculty on astronomy research and take the senior project course in astronomy.

## *Optics*

Optical science deals with light and its interaction with matter. Optoelectronics extends this science to the design and construction of useful devices and systems that generate, manipulate, or detect light in the visible and other adjacent ranges of the electromagnetic spectrum (e.g., LEDs, lasers, photo detectors). Students interested in careers in the latter areas should select the physics Bachelor of Science degree and these optional courses: PHYS 339 (Optics), PHYS 475 (Physics of Solids and Materials I), and PHYS 476 (Physics of Solids and Materials II). Students may also do related project work in the department's laboratories under PHYS 400 (Directed Independent Study) and/or PHYS 491 (Senior Project in Experimental Physics).

Optical science and optical engineering have become important fields for both industry and government in recent years. Major international meetings in optics and related topics are organized and held several times a year by SPIE (the International Society for Optical Engineering). This organization has its headquarters in Bellingham, and the department has benefited in a variety of ways through its interaction with the SPIE organization.

## **Faculty**

**BRAD JOHNSON** (1997) Chair and Professor. BS, MSBS, University of Colorado-COLORADO SPRINGS; PhD, University of Colorado-Boulder.

**W. LOUIS BARRETT** (1968) Professor. BS, University of Idaho; MS, PhD, University of Washington.

**ANDREW BOUDREAUX** (2008) Assistant Professor. BS, University of California-Berkeley; PhD, University of Washington.

**MILTON FROM** (1998) Associate Professor. BSC, University of Manitoba; MSc, PhD, McGill University.

**KRISTEN LARSON** (2002) Associate Professor. BS, University of California-San Diego; MS, PhD, Rensselaer Polytechnic Institute.

**JANELLE LEGER** (2008) Assistant Professor. BS, University of California-Davis; PhD, University of California at Santa Cruz

**GEORGE NELSON** (2002) Associate Professor. BS, Harvey Mudd College; MS, PhD, University of Washington.

**ANDREAS RIEMANN** (2006) Assistant Professor. BS, MS, University Halle, Germany; PhD, Free University Berlin, Germany.

**KENNETH RINES** (2008) Assistant Professor. BA, Rice University; AM, PhD, Harvard University

**TAKELE SEDA** (2002) Associate Professor. BS, Asmara University (Eritrea); MS, Addis Ababa University (Ethiopia); PhD, University of the Witwatersrand, Johannesburg, South Africa.

**JAMES STEWART** (1987) Professor. BA, BS, University of North Dakota; MS, PhD, University of New Mexico.

**RICHARD VAWTER** (1968) Associate Professor. BS, Texas Technological University; MS, State University of Iowa; PhD, State University of New York.

## **Adjunct Faculty**

**KATHLEEN SANDELIN**, BS, Western Washington University; MS, College of William and Mary.

**JOHN WILLS**, BA, San Diego State University; PhD, University of Washington.

## **Declaration Process**

Contact the Physics/Astronomy Advisor at any time throughout the year to declare in person or by mail. Be sure to provide unofficial copies of your transcript(s). We will determine which courses you have already taken will be applied toward the major, and develop a plan of study for coursework remaining. If you're not sure which program option is for you, we can help.

It is to your best advantage to declare the major as soon as you can, ideally no later than the end of your freshman year or as soon as you transfer to Western, in order to establish a plan of study, receive important information from the department, and get priority enrollment into required courses. The department also offers certain benefits to majors that are not available to other students, such as accounts on department computers, after-hours access to laboratory equipment, employment by the department and, in some cases, office space.

## **Other Departmental Information**

### *Academic Placement*

#### *Advice to Freshman*

The physics curriculum that forms the core of the physics BS program is arranged in a logical sequence, so that earlier courses are usually prerequisites for later courses. This means that it is important to start the core sequence as early as possible, since any substantial delay will result in the student needing more than four years to complete the degree. All physics major courses require mathematics, and calculus is particularly important. For this reason, *a freshman considering a major in physics should take MATH 124 (Calculus and Analytic Geometry) or 134 (Honors Calculus I) or 138 (Accelerated Calculus) his or her very first quarter at Western.* Freshmen who have had calculus in high school are advised to take PHYS 121 (Physics with Calculus I) that same first quarter, along with the appropriate level calculus course. Freshmen who have had no calculus at all should postpone PHYS 121 until their second quarter at Western, so that they may first complete MATH 124 or 134 or 138. The physics course sequence has been arranged so that this delay of one quarter will not cause problems later, so long as MATH 124 or 134 or 138 is still taken the first quarter.

#### *Advice to Transfer Students*

The first two years of the physics BS program is based on the following core courses:

- PHYS 121, PHYS 122, PHYS 123; MATH 124 or MATH 134, MATH 125 or MATH 135, or MATH 138, MATH 224; CSCI 140
- PHYS 223, PHYS 224, PHYS 225, PHYS 233, PHYS 235, PHYS 322; PHYS 326, MATH 203, MATH 303

Students planning to transfer to Western from a community college should strive to take as many equivalents of the courses above as possible. The community college sequence equivalent to PHYS 121-122-123 will usually be called introductory physics with calculus and will probably include labs. MATH 124 or 134, MATH 125 or 135, or 138, 224 is the first year of college calculus. MATH 203 and 303 is a two-quarter sequence in linear algebra and differential equations. Students should be aware that like-named 200-level community college courses may not transfer as equivalent.

#### *Mid-Program Checkpoint*

A student seeking to complete a BS degree in physics within a four-year time span should have completed the following courses by the start of his/her junior year. Major omissions from this list will make it difficult or impossible to complete this degree within two additional years.

- PHYS 121, PHYS 122, PHYS 123, PHYS 223, PHYS 224, PHYS 225, PHYS 233, PHYS 235, PHYS 322, PHYS 326
- MATH 124 or MATH 134, MATH 125 or MATH 135, or MATH 138, MATH 203, MATH 224, MATH 303
- CSCI 140

A student seeking to complete a BA in Education degree in physics/mathematics within a four-year time span should have completed the following courses by the start of his/her junior year. Major omissions from this list will make it difficult or impossible to complete this degree within two additional years.

- PHYS 121, PHYS 122, PHYS 123, PHYS 223, PHYS 224, PHYS 225, PHYS 233, PHYS 235, PHYS 322, PHYS 326
- MATH 124 or MATH 134, MATH 125 or MATH 135, or MATH 138, MATH 203, MATH 209, MATH 224, MATH 303

#### *Information*

Anyone interested in learning more about the study of physics, astronomy and optics at Western is invited to write, phone, e-mail, fax or visit the chair of the Department of Physics and Astronomy, Western Washington University, Bellingham, WA 98225-9164. Telephone: 360-650-3818, fax: 360-650-6505. Information about Western's physics and

astronomy programs is also available through the World Wide Web at [www.wwu.edu/depts/physics](http://www.wwu.edu/depts/physics). The department is in Communications Facility 385.

### **Undergraduate Degrees and Programs**

Physics, BS

Chemistry/Physics - Secondary, BAE

Physics/Mathematics — Secondary, BAE

Astronomy Minor

Physics Minor

## **Astronomy Minor**

**24 credits**

### **Admission and Declaration Process**

Admission to the Major (see Physics department page)

### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

### **Requirements**

- Choose one of the following series:
  - PHYS 114 - Principles of Physics I
  - PHYS 115 - Principles of Physics II
  - PHYS 116 - Principles of Physics III
  - or
  - PHYS 121 - Physics With Calculus I
  - PHYS 122 - Physics With Calculus II
  - PHYS 123 - Electricity and Magnetism
  - ASTR 315 - The Solar System
  - ASTR 316 - Stars and Galaxies
  - ASTR 320 - Cosmology

## **Chemistry/Physics - Secondary, BAE (also see Chemistry Department)**

Jointly offered by the Department of Chemistry, College of Sciences and Technology and the Department of Physics, College of Sciences and Technology

**97-117 credits**

### **Introduction**

This major must be accompanied by the professional preparation program in secondary education. See the Secondary Education section of this catalog for program admission, completion, and teacher certification requirements.

As certification to teach high school now requires more than four years of study, advisement prior to or at the beginning of the third year is absolutely necessary to avoid lengthening the program.

### **Grade Requirements**

A cumulative GPA of at least 2.50, plus a minimum grade of C (2.0) or better in the individual courses, must be maintained in the courses required by the major. Students must also earn a grade of c (2.0) or better in the secondary education professional program.

### **Requirements**

- ASTR 315 - The Solar System
- CHEM 461 - Physical Chemistry
- CHEM 462 - Physical Chemistry
- MATH 224 - Multivariable Calculus and Geometry I
- PHYS 121 - Physics With Calculus I
- PHYS 122 - Physics With Calculus II
- PHYS 123 - Electricity and Magnetism
- PHYS 223 - Waves and Optics
- PHYS 224 - Modern Physics I
- PHYS 225 - Modern Physics II
- PHYS 233 - Waves and Optics Laboratory
- PHYS 235 - Modern Physics Lab
- PHYS 326 - Tools and Data Analysis in Physics
- SCED 370 - Science and Society
- SCED 481 - Fundamentals of Teaching Science
- SCED 491 - Methods in Secondary Education for Science Teachers
- Choose either:
  - CHEM 121 - General Chemistry I
  - CHEM 122 - General Chemistry II
  - CHEM 123 - General Chemistry III
  - CHEM 333 - Analytical Chemistry
- or
- CHEM 125 - General Chemistry I, Honors
  - CHEM 126 - General Chemistry II, Honors
  - CHEM 225 - General Chemistry III, Honors
- Choose either option A or B:

Option A:

- CHEM 251 - Elementary Organic Chemistry
- CHEM 375 - Elements of Biochemistry

Option B:

The following:

- CHEM 351 - Organic Chemistry
- CHEM 352 - Organic Chemistry
- CHEM 353 - Organic Chemistry
- CHEM 354 - Organic Chemistry Laboratory I
- CHEM 375  
or

The following:

- CHEM 471 - Biochemistry I
  - CHEM 472 - Biochemistry II
  - CHEM 473 - Molecular Biology
- 6 upper-division credits in physics and/or astronomy under advisement, to include 2-3 credits of:
- PHYS 491 - Senior Project in Experimental Physics
  - PHYS 492 - Senior Project in Theoretical Physics
  - ASTR 493 - Senior Project in Astronomy
- Choose either:
- MATH 124 - Calculus and Analytic Geometry I
  - MATH 125 - Calculus and Analytic Geometry II  
or
  - MATH 134 - Calculus I Honors
  - MATH 135 - Calculus II Honors  
or
  - MATH 138 - Accelerated Calculus

### **Additional Requirements**

#### **Link to Woodring College of Education Secondary Teacher Education Program**

##### ***Secondary Education Professional Program Requirements***

- EDUC 301 - Educational Psychology I: Development and Individual Differences
- EDUC 302 - Educational Psychology II: Motivation, Learning and Assessment
- EDUC 310 - The Teacher and the Social Order
- IT 444 - Classroom Use of Instructional Technology (Secondary)
- SEC 410 - Dynamics of Teaching
- SEC 425 - Developmental Reading, Writing and Learning in Secondary Schools
- SEC 430 - Secondary School Methods I - Instructional Strategies, Daily Planning, and Standards
- SEC 431 - Secondary School Methods II-Assessment and Long Term Planning
- SEC 432 - Secondary School Methods III - Management, Motivation and Discipline
- SEC 433 - Peer Teaching Laboratory
- SEC 435 - Middle Level Practicum
- SEC 436 - Secondary School Practicum
- SEC 495 - Internship - Secondary
- SPED 363 - Secondary Students With Special Needs

## **Physics Minor**

**41-42 credits**

### **Admission and Declaration Process**

Admission to the Major ([see Physics department page](#))

### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

### **Requirements**

- MATH 224 - Multivariable Calculus and Geometry I
- PHYS 121 - Physics With Calculus I
- PHYS 122 - Physics With Calculus II
- PHYS 123 - Electricity and Magnetism
- PHYS 223 - Waves and Optics
- PHYS 233 - Waves and Optics Laboratory
  - At least two courses selected from:
  - PHYS 224 - Modern Physics I
  - PHYS 225 - Modern Physics II
  - PHYS 322 - Fundamentals of Electronics
- Choose either:
  - MATH 124 - Calculus and Analytic Geometry I and
  - MATH 125 - Calculus and Analytic Geometry II
    - or
  - MATH 134 - Calculus I Honors and
  - MATH 135 - Calculus II Honors
    - or
  - MATH 138 - Accelerated Calculus

## **Physics, BS**

**110 credits**

### **Admission and Declaration Process**

Admission to the Major ([see Physics department page](#))

### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

A cumulative GPA of at least 2.50 must be maintained in the courses required by the major.

## Requirements

- CSCI 140 - Programming Fundamentals in C++
- MATH 224 - Multivariable Calculus and Geometry I
- PHYS 121 - Physics With Calculus I
- PHYS 122 - Physics With Calculus II
- PHYS 123 - Electricity and Magnetism
- PHYS 223 - Waves and Optics
- PHYS 224 - Modern Physics I
- PHYS 225 - Modern Physics II
- PHYS 233 - Waves and Optics Laboratory
- PHYS 235 - Modern Physics Lab
- PHYS 322 - Fundamentals of Electronics
- MATH 203 - Linear Algebra and Differential Equations I
- MATH 303 - Linear Algebra and Differential Equations II
- PHYS 326 - Tools and Data Analysis in Physics
- PHYS 335 - Statistical and Thermal Physics
- PHYS 339 - Optics
- PHYS 363 - Classical Mechanics
- PHYS 368 - Electromagnetism I
- PHYS 369 - Electromagnetism II
- ASTR 315 - The Solar System
- PHYS 419 - Topics in Physics
- PHYS 455 - Quantum Mechanics I
- PHYS 456 - Quantum Mechanics II
- PHYS 475 - Physics of Solids and Materials I
- PHYS 485 - Mathematical Physics
- PHYS 486 - Computational Physics
- Two courses selected from:
  - ASTR 390 - Astronomy Junior Lab
  - PHYS 391 - Solids Junior Lab
  - PHYS 392 - Optics Junior Lab
  - Choose either:
    - MATH 124 - Calculus and Analytic Geometry I and
    - MATH 125 - Calculus and Analytic Geometry II  
or
    - MATH 134 - Calculus I Honors and
    - MATH 135 - Calculus II Honors  
or
    - MATH 138 - Accelerated Calculus
  - One course selected from:
    - PHYS 444 - Special Topics in Physics
    - PHYS 476 - Physics of Solids and Materials II
    - ASTR 316 - Stars and Galaxies
    - ASTR 320 - Cosmology
    - ASTR 416 - Astrophysics  
or other courses under advisement

## **Physics/Mathematics — Secondary, BAE**

**106-107 credits**

This major must be accompanied by the professional education program in secondary education. This major meets the requirements for Washington state teaching endorsements in both physics and mathematics. See the Secondary Education section of this catalog for program admission, completion, and teacher certification requirements.

### **Admission and Declaration Process**

Declaration of Major ([see Physics department page](#))

### **Grade Requirements**

A cumulative GPA of at least 2.50, plus a minimum grade of C (2.0) or better in the individual courses, must be maintained in the courses required by the major. Students must earn a grade of C (2.0) or better in the secondary education professional program and in all courses required for the endorsement.

### **Requirements**

- ASTR 315 - The Solar System
  - MATH 204 - Elementary Linear Algebra
  - MATH 209 - Discrete Mathematics
  - MATH 224 - Multivariable Calculus and Geometry I
  - MATH 331 - Ordinary Differential Equations
  - MATH 360 - Euclidean and Non-Euclidean Geometry
  - MATH 419 - Historical Perspectives of Mathematics
  - MATH 483 - Methods of Teaching Secondary Mathematics
- NOTE:** The pair MATH 203 and 303 may be substituted for MATH 204 and 331.
- PHYS 121 - Physics With Calculus I
  - PHYS 122 - Physics With Calculus II
  - PHYS 123 - Electricity and Magnetism
  - PHYS 223 - Waves and Optics
  - PHYS 224 - Modern Physics I
  - PHYS 225 - Modern Physics II
  - PHYS 233 - Waves and Optics Laboratory
  - PHYS 235 - Modern Physics Lab
  - PHYS 322 - Fundamentals of Electronics
  - PHYS 326 - Tools and Data Analysis in Physics
  - PHYS 391 - Solids Junior Lab
  - SCED 370 - Science and Society
  - SCED 481 - Fundamentals of Teaching Science
  - SCED 491 - Methods in Secondary Education for Science Teachers
  - 10 additional credits of upper-division physics or astronomy courses, including 2-3 credits of:
    - PHYS 491 - Senior Project in Experimental Physics
    - PHYS 492 - Senior Project in Theoretical Physics
    - ASTR 493 - Senior Project in Astronomy
  - Choose either:

- MATH 124 - Calculus and Analytic Geometry I and
- MATH 125 - Calculus and Analytic Geometry II  
or
- MATH 134 - Calculus I Honors and
- MATH 135 - Calculus II Honors  
or
- MATH 138 - Accelerated Calculus  
 At least two of the following:
- MATH 207 - Mathematical Computing
- MATH 341 - Probability and Statistical Inference
- MATH 410 - Mathematical Modeling

#### **Additional Requirements**

**Link to Woodring College of Education Secondary Teacher Education Program**

#### **Secondary Education Professional Program Requirements(68 credits)**

- EDUC 301 - Educational Psychology I: Development and Individual Differences
- EDUC 302 - Educational Psychology II: Motivation, Learning and Assessment
- EDUC 310 - The Teacher and the Social Order
- IT 444 - Classroom Use of Instructional Technology (Secondary)
- SEC 410 - Dynamics of Teaching
- SEC 425 - Developmental Reading, Writing and Learning in Secondary Schools
- SEC 430 - Secondary School Methods I - Instructional Strategies, Daily Planning, and Standards
- SEC 431 - Secondary School Methods II-Assessment and Long Term Planning
- SEC 432 - Secondary School Methods III - Management, Motivation and Discipline
- SEC 433 - Peer Teaching Laboratory
- SEC 435 - Middle Level Practicum
- SEC 436 - Secondary School Practicum
- SEC 495 - Internship - Secondary
- SPED 363 - Secondary Students With Special Needs

# Science Education

## Introduction

The Science, Mathematics and Technology Education Program is a visionary and practical program designed to enrich the training and education of K-12 pre-service and in-service teachers and, through them, their students. From a collaboration of the disciplines of education, chemistry, geology, biology, physics/astronomy, mathematics and engineering technology, the Science, Mathematics and Technology Education Program (SMATE) offers an opportunity for teachers and future teachers to gain specific skills and broaden talents within their chosen discipline.

The General Science major is offered at three levels: Elementary for students intending to teach grades K-8, Middle School for students intending to teach science in grades 4-9, and Secondary for students intending to teach science in middle or high school. Students planning to be teachers and major in one of the sciences or mathematics should consult with the appropriate science education advisor in the appropriate science or mathematics department or with the director of science education regarding the General Science major.

For further information and advisement, consult with an advisor or the director of Science, Mathematics and Technology Education, Dr. George Nelson, phone 360-650-3637, Science, Math and Technology Education Building, SL 250D, e-mail [George.Nelson@wwu.edu](mailto:George.Nelson@wwu.edu). or Lori Torres, Program Manager, SL 220, phone 360.660.7605, e-mail [Lori.Torres@wwu.edu](mailto:Lori.Torres@wwu.edu)

## Faculty

**ALEJANDRO ACEVEDO-GUTIÉRREZ** (2002) Assistant Professor. BSc, Universidad Autonoma de Baja California Sur, Mexico; PhD, Texas A&M University.

**EMILY BORDA** (2005) Assistant Professor. BS-Chemistry, Gonzaga University; MEd-Educational Leadership and Policy, MS, PhD-Chemistry, University of Washington.

**ANDREW BOUDREAUX** (2008) Associate Professor, BS, University of California Berkeley (1993), PhD, University of Washington.

**DONALD BURGESS** (2004) Associate Professor. MS Education-Biology, State University of New York, Cortland.

**SUSAN M. DEBARI** (1998) Associate Professor. BA, Cornell University; PhD, Stanford University.

**DEBORAH A. DONOVAN** (1998) Associate Professor. BSc, MSc, University of California-Davis; PhD, University of British Columbia.

**STEVEN GAMMON** (2002) Professor. BA, Bowdoin College; PhD, University of Illinois at Urbana-Champaign.

**MOLLY LAWRENCE** (2007) Assistant Professor, MS, PhD, Science Education, University of Georgia

**SCOTT R. LINNEMAN** (2000) Associate Professor. BA, Carleton College; PhD, University of Wyoming.

**GEORGE D. NELSON** (2002) Professor. BS, Harvey Mudd College; MS, PhD, University of Washington.

**CHRIS OHANA** (1999) Associate Professor. BA, University of California- Berkeley; MA, University of Oregon; PhD, Iowa State University.

**JAMES E. STEWART** (1987) Professor. BA, BS, University of North Dakota; MS, PhD, University of New Mexico.

## Other Departmental Information

### *Facilities and Resources*

Pivotal to this program is a facility designed to accommodate this academic vision. The 15,000 square foot facility contains our state-of-the-art classrooms and laboratories, one each specifically tailored to elementary and secondary education. They surround a Learning Resource Center with more than 15,000 books on standards, assessment, curriculum and activities. It also contains collections of classic and current materials, laboratory resources, educational technology, and expertise that students, faculty, the local community and teachers from around the state can draw upon either on site or in the schools. In both its approach and facilities, the SMATE Program is a national model for teacher training in undergraduate mathematics, science and technology education. Additionally, the SMATE faculty are engaged in a number of research projects that connect the preservice program to the K-12 schools and offer students the

opportunity to gain unique experiences. Numerous scholarships and paid research experiences are available each year for future teachers of science.

To find out more about the Learning Resource Center and SMATE facilities, contact Jamie Harrington, assistant director of the SMATE program, at 360-650-3647, by e-mail at [Jamie.Harrington@wwu.edu](mailto:Jamie.Harrington@wwu.edu), visit the website, <http://www.smate.wwu.edu/smate/>, or stop by the Science, Math and Technology Education Building, Science Lecture 220.

### **Undergraduate Degrees and Programs**

General Science — Elementary, BAE

General Science — Middle Level (Pending HEC Board Approval), BAE

General Science — Secondary, BAE

### **Graduate Degrees and Programs**

Natural Science/Science Education, Thesis, MEd

Natural Science/Science Education, Non-Thesis, MEd

## **General Science — Elementary, BAE**

**50-51 credits**

### **Introduction**

This major satisfies the academic major requirement for teacher certification with an endorsement in elementary education and must be accompanied by the professional preparation program in elementary education. It does not result in a science endorsement. See the Elementary Education section of this catalog for program admission, completion, and teacher certification requirements.

### **Grade Requirements**

A grade of C (2.0) or better is required for courses in the elementary education professional program and all courses required for the endorsement.

### **Requirements**

One course from:

- ASTR 103 - Introduction to Astronomy
- ASTR 113 - Sun, Moon, and Planets
- BIOL 204 - Introduction to Evolution, Ecology and Biodiversity
- CHEM 121 - General Chemistry I
- GEOL 211A - Physical Geology Review
- GEOL 212 - Historical Geology
- GEOL 311 - Earth Materials
- MATH 114 - Precalculus I
- SCED 201 - Matter and Energy in Physical Systems
- SCED 202 - Matter and Energy in Earth Systems

- SCED 203 - Matter and Energy in Life Systems
- SCED 294 - Investigative Science
- SCED 370 - Science and Society
- One course from:
  - PHYS 101 - Physics Analysis
  - PHYS 104 - Physics Applications

#### **Additional Requirements**

##### **Link to Woodring College of Education**

##### **Elementary Education Professional Program Requirements (106 credits)**

###### **Professional Studies Core (25 credits)**

- EDUC 301 - Educational Psychology I: Development and Individual Differences
- EDUC 302 - Educational Psychology II: Motivation, Learning and Assessment
- EDUC 310 - The Teacher and the Social Order
- ELED 370 - Introduction to Teaching
- IT 344 - Basic Instructional Technology Skills
- IT 442 - Classroom Use of Instructional Technology (Elementary)
- SPED 364 - Teaching All Students

###### **Elementary Program — Methods, Curriculum Content, and Field Experiences (81 credits)**

- ART 380 - Art Educating the Child
- ELED 425 - Social Studies for the Elementary School
- ELED 470 - Developing Teaching
- ELED 471 - Documenting Teaching
- ELED 480 - Literacy: Beginning Communicators
- ELED 481 - Literacy: Fluent Communicators
- ELED 491 - September Experience
- ELED 492 - Practicum: Experience in Literacy Methods
- ELED 494 - Internship - Elementary
- HLED 455 - Health Education Grades K-8
- MATH 381 - Teaching K-8 Mathematics I
- MATH 382 - Teaching K-8 Mathematics II
- MATH 383 - Teaching K-8 Mathematics III
- MATH 491 - Internship Seminar - Teaching K-8 Mathematics
- MUS 361 - Music for Elementary Teachers
- PE 345 - Physical Education for Elementary School
- SCED 480 - Science Methods and Curriculum for the Elementary School
- SCED 490 - Laboratory/Field Experience in Elementary Science
- SPED 430 - Problem Solving for Diverse Needs

## **General Science — Middle Level (Pending HEC Board Approval), BAE**

**88 credits**

*(Pending HEC Board Approval)*

### **Introduction**

This major satisfies the academic major requirement for teacher certification with an endorsement in elementary education and leads to a middle level science endorsement. It must be accompanied by the professional preparation program in elementary education. See the Elementary Education section of this catalog for program admission, completion, and teacher certification requirements.

### **Grade Requirements**

A grade of C (2.0) or better is required for courses in the elementary education professional program and all courses required for the endorsement.

### **Requirements**

- One course from:
  - ASTR 103 - Introduction to Astronomy
  - ASTR 113 - Sun, Moon, and Planets
  - □ BIOL 204 - Introduction to Evolution, Ecology and Biodiversity
  - □ BIOL 205 - Introduction to Cellular and Molecular Biology
  - □ BIOL 206 - Introduction to Organismal Biology
  - □ CHEM 121 - General Chemistry I
  - □ CHEM 122 - General Chemistry II
  - □ CHEM 123 - General Chemistry III
  - □ GEOL 211 - Physical Geology
  - □ GEOL 212 - Historical Geology
  - □ GEOL 252 - The Earth and Its Weather
  - □ MATH 115 - Precalculus II
  - □ PHYS 101 - Physics Analysis
  - □ PHYS 102 - Physics and Society
  - □ PHYS 104 - Physics Applications
  - □ SCED 201 - Matter and Energy in Physical Systems
  - □ SCED 202 - Matter and Energy in Earth Systems
  - □ SCED 203 - Matter and Energy in Life Systems
  - □ SCED 294 - Investigative Science
  - □ SCED 370 - Science and Society
  - □ SEC 450 - Introduction to Middle Schools
- Plus 1 course at the 300-level for 4 credits

### **Additional Requirements**

**Link to Woodring College of Education**

## **Elementary Education Professional Program Requirements (106 credits)**

### **Professional Studies Core (25 credits)**

- EDUC 301 - Educational Psychology I: Development and Individual Differences
- EDUC 302 - Educational Psychology II: Motivation, Learning and Assessment
- EDUC 310 - The Teacher and the Social Order
- ELED 370 - Introduction to Teaching
- IT 344 - Basic Instructional Technology Skills
- IT 442 - Classroom Use of Instructional Technology (Elementary)
- SPED 364 - Teaching All Students

### **Elementary Program — Methods, Curriculum Content, and Field Experiences (81 credits)**

- ART 380 - Art Educating the Child
- ELED 425 - Social Studies for the Elementary School
- ELED 470 - Developing Teaching
- ELED 471 - Documenting Teaching
- ELED 480 - Literacy: Beginning Communicators
- ELED 481 - Literacy: Fluent Communicators
- ELED 491 - September Experience
- ELED 492 - Practicum: Experience in Literacy Methods
- ELED 494 - Internship - Elementary
- HLED 455 - Health Education Grades K-8
- MATH 381 - Teaching K-8 Mathematics I
- MATH 382 - Teaching K-8 Mathematics II
- MATH 383 - Teaching K-8 Mathematics III
- MATH 491 - Internship Seminar - Teaching K-8 Mathematics
- MUS 361 - Music for Elementary Teachers
- PE 345 - Physical Education for Elementary School
- SCED 480 - Science Methods and Curriculum for the Elementary School
- SCED 490 - Laboratory/Field Experience in Elementary Science
- SPED 430 - Problem Solving for Diverse Needs

## **General Science — Secondary, BAE**

**93-103 credits**

### **Introduction**

This major must be accompanied by the professional preparation program in secondary education. Courses required for a state teaching endorsement must be completed with a grade of C (2.0) or better. See the Secondary Education section of this catalog for program admission, completion, and teacher certification requirements.

### **Grade Requirements**

A grade of C (2.0) or better is required for courses in the secondary education professional program and all courses required for the endorsement.

## Requirements

- MATH 240 - Introduction to Statistics
- CHEM 121 - General Chemistry I
- CHEM 122 - General Chemistry II
- CHEM 251 - Elementary Organic Chemistry
- BIOL 204 - Introduction to Evolution, Ecology and Biodiversity
- BIOL 205 - Introduction to Cellular and Molecular Biology
- BIOL 206 - Introduction to Organismal Biology
- GEOL 211 - Physical Geology
- GEOL 212 - Historical Geology
- SCED 370 - Science and Society or equivalent
- SCED 481 - Fundamentals of Teaching Science
- SCED 491 - Methods in Secondary Education for Science Teachers
  - Choose one of the following series:
  - PHYS 114 - Principles of Physics I
  - PHYS 115 - Principles of Physics II
  - PHYS 116 - Principles of Physics III
    - or
  - PHYS 121 - Physics With Calculus I
  - PHYS 122 - Physics With Calculus II
  - PHYS 123 - Electricity and Magnetism with lab
    - One course from:
    - ASTR 103 - Introduction to Astronomy
    - ASTR 113 - Sun, Moon, and Planets
- Electives in a single scientific discipline, under advisement to meet state endorsement standards for that discipline: 22-32 additional credits from single science discipline.

## Additional Requirements

### Woodring College of Education

#### Secondary Education Professional Program Requirements (68 credits)

- EDUC 301 - Educational Psychology I: Development and Individual Differences
- EDUC 302 - Educational Psychology II: Motivation, Learning and Assessment
- EDUC 310 - The Teacher and the Social Order
- IT 444 - Classroom Use of Instructional Technology (Secondary)
- SEC 410 - Dynamics of Teaching
- SEC 411 - Philosophical Foundations of Education
- SEC 425 - Developmental Reading, Writing and Learning in Secondary Schools
- SEC 430 - Secondary School Methods I - Instructional Strategies, Daily Planning, and Standards
- SEC 431 - Secondary School Methods II-Assessment and Long Term Planning
- SEC 432 - Secondary School Methods III - Management, Motivation and Discipline
- SEC 433 - Peer Teaching Laboratory
- SEC 435 - Middle Level Practicum
- SEC 436 - Secondary School Practicum
- SEC 495 - Internship - Secondary (24 credits)

- SPED 363 - Secondary Students With Special Needs

## Natural Science/Science Education, Non-Thesis, MEd

### Graduate Faculty

**Acevedo-Gutierrez, Alejandro**, PhD, biology.  
**DeBari, Susan**, PhD, geology.  
**Donovan, Deborah**, PhD, biology.  
**Gammon, Steve**, PhD, chemistry.  
**Linneman, Scott**, PhD, geology.  
**Miles, John**, PhD, Huxley College of the Environment.  
**Myers, O. Eugene**, PhD, Huxley College of the Environment.  
**Nelson, George**, PhD, physics.  
**Ohana, Chris**, PhD, elementary education.  
**Stewart, James E.**, PhD, physics.

Program Advisor: Dr. George P. Nelson

### Goals

This program is focused on helping practicing teachers of science at all levels P-12 advance their careers by:

- Improving their instruction through advanced study, research and field work;
- Gaining familiarity with current research on student learning and new developments in curriculum assessment; and developing their leadership skills.

### Prerequisites

Students applying for admission are normally expected to have a teaching certificate and to have completed at least one year of teaching in the P-12 system prior to entering the program. Elementary endorsed teachers are expected to have completed at least one course in each of the science areas (biology, chemistry, earth science, and physics). Secondary teachers are expected to have an undergraduate major or minor and a subject endorsement in their area of specialization. (General science teachers should have an endorsement in one or more of the natural sciences. A major in a science field is highly desirable.)

### Application Information

In addition to the Graduate School-required materials for admission, each student is required to take the Graduate Record Exam (GRE), and submit a résumé and a statement of personal career goals and reasons for seeking admissions to the program. An on-campus interview may be requested by the program faculty.

### Program Requirements (48 credits)

The Non-Thesis option involves an action research project culminating in an oral presentation and written summary.

Comprehensive assessment

Student achievement in the program will be assessed by faculty through the action research proposal, summary document and presentation.

#### Core requirements (22 credits)

- EDUC 501 - Introduction to Educational Research
- EDUC 506
- IT 503 - Designing Instruction and Selecting Technologies for Learning
- SCED 501 - Advanced Studies in Science Education
- SCED 513 - Science Curriculum Grades K-12
- SCED 515 - Assessment for Science Understanding

#### Focus (electives) under advisement (20 credits)

Emphasis in specific disciplines, pedagogy, assessment or science education research. At least 11 credits must be taken at the 500 level.

#### Non-Thesis Research Project (6 credits)

- SCED 598 - Research Project

## **Natural Science/Science Education, Thesis, MEd**

### **Graduate Faculty**

**Acevedo-Gutierrez, Alejandro**, PhD, biology.

**DeBari, Susan**, PhD, geology.

**Donovan, Deborah**, PhD, biology.

**Gammon, Steve**, PhD, chemistry.

**Linneman, Scott**, PhD, geology.

**Miles, John**, PhD, Huxley College of the Environment.

**Myers, O. Eugene**, PhD, Huxley College of the Environment.

**Nelson, George**, PhD, physics.

**Ohana, Chris**, PhD, elementary education.

**Stewart, James E.**, PhD, physics.

Program Advisor: Dr. George P. Nelson

### **Goals**

This program is focused on helping practicing teachers of science at all levels P-12 advance their careers by:

- Improving their instruction through advanced study, research and field work;
- Gaining familiarity with current research on student learning and new developments in curriculum assessment; and developing their leadership skills.

### **Prerequisites**

Students applying for admission are normally expected to have a teaching certificate and to have completed at least one year of teaching in the P-12 system prior to entering the program. Elementary endorsed teachers are expected to have completed at least one course in each of the science areas (biology, chemistry, earth science, and physics). Secondary teachers are expected to have an undergraduate major or minor and a subject endorsement in their area of specialization. (General science teachers should have an endorsement in one or more of the natural sciences. A major in a science field is highly desirable.)

## **Application Information**

In addition to the Graduate School-required materials for admission, each student is required to take the Graduate Record Exam (GRE), and submit a résumé and a statement of personal career goals and reasons for seeking admissions to the program. An on-campus interview may be requested by the program faculty.

### **Program Requirements (48 credits)**

This option requires students to submit a proposal for a Thesis (690a) or a Field Project (690b) for approval by the student's committee prior to registering for 690a or b. A thesis involves original research. A field project is a formal study carried out in a school setting. Both require the preparation of a formal document.

### **Program Requirements**

#### **Comprehensive assessment**

Student achievement in the program will be assessed by faculty through either the thesis (field project) proposal or the thesis (field project) and the oral defense (option I); or the action research proposal, summary document and presentation (option II)

#### **Core requirements [22 credits]**

- EDUC 501 - Introduction to Educational Research
- EDUC 506
- IT 503 - Designing Instruction and Selecting Technologies for Learning
- SCED 501 - Advanced Studies in Science Education
- SCED 513 - Science Curriculum Grades K-12
- SCED 515 - Assessment for Science Understanding

#### **Focus (electives) under advisement [20 credits]**

Emphasis in specific disciplines, pedagogy, assessment or science education research. At least 11 credits must be taken at the 500 level.

#### **Thesis [6-12 credits]**

- Thesis or Field Project
- SCED 690A - Research
- SCED 690B - Field Project

# Woodring College of Education

- Academic Programs Leading to Undergraduate and Graduate Degrees
- Division of Teacher Education
- Division of Educational and Community Leadership
- Other College Information

## Introduction

*Dr. Stephanie Salzman, Dean*

*Mission and Vision Statement of the College*

**Mission:** *The Woodring College of Education mission statement provides context and purpose for our actions.*

Woodring College of Education facilitates learning that prepares and advances quality educators and human services professionals throughout their careers. As academic leaders, educators, mentors, and scholars, we seek to:

- Model best practices in teaching and learning which, in turn, lead graduates to use best practices in their professions
- Cultivate student competence through extensive field experiences with exemplary practicing professionals
- Construct, transform, and convey knowledge by integrating research, theory, and practice
- Act with respect for individual differences
- Develop collaborative partnerships that promote the learning and well-being of individuals, families and the community
- Evaluate processes and outcomes to assure continual program improvements

**Vision:** *The vision of Woodring College of Education frames our future.*

Woodring College of Education fosters community relationships and a culture of learning that advances knowledge, embraces diversity and promotes social justice.

*Teacher and School Administrator Programs*

Professional preparation programs in the Woodring College of Education are accredited by the National Council for Accreditation of Teacher Education and the Washington State Professional Educator Standards Board. These programs are designed to prepare graduates to be thoughtful, knowledgeable, and effective educators for a diverse society.

*Function and Organization of the College*

The Woodring College of Education is responsible for developing and implementing those professional education programs which lead to teacher certification, credentialing of school administrators, and professional training of leaders in human services and various areas of educational leadership. It serves as a clearinghouse for the exchange of information and as a coordinating agency for programs at both the undergraduate and graduate levels. Woodring College of Education is responsible for coordinating programs which involve a wide variety of departments throughout the University that support the preparation of educators.

The Departments of Elementary Education, Secondary Education, Special Education, and Teacher Education Outreach Programs offer teacher education programs which lead to Washington state teaching certificates in P-12 education. An undergraduate certificate program in Teaching English to Speakers of Other Languages with the option for a certificate in Bilingual Education is also available.

The Department of Educational Leadership offers programs leading to certification for school administrators and graduate programs in educational administration, continuing and college education, and student affairs administration. The Department of Human Services and Rehabilitation offers programs for the preparation of human services professional and rehabilitation counselors.

Professional education programs are developed and reviewed with the assistance of professional education advisory boards with representatives from cooperating school districts and professional associations.

The Department of Human Services and Rehabilitation offers programs for the preparation of human services professionals and rehabilitation counselors.

Details about all of the Woodring College of Education programs may be found in the departmental and program area sections. Students should consult with an advisor in the appropriate area of the Woodring College of Education for more information regarding curricula, admission requirements, and other important factors. Current program office materials will be final in these matters.

### **Academic Programs Leading to Undergraduate and Graduate Degrees**

Elementary Education	BAE, MEd
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Secondary Education	MIT
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*(For information regarding academic majors and endorsements for elementary and secondary education, see departmental listings)*

Special Education	BAE, MEd
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Human Services	BA
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Education Administration	MEd
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*(Principal and Superintendent administrator certificate programs offered)*

Continuing and College Education	MEd
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Student Affairs Administration	MEd
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Rehabilitation Counseling	MA
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### **Overview: Departments and Programs**

#### *Division of Teacher Education*

##### **Department of Elementary Education**

Dr. Joanna Carney, Chair

##### *Programs Offered*

- Elementary Education/Certification — Undergraduate and Post-Baccalaureate
- Early Childhood Education (P-3)/Certification- Undergraduate
- Reading (P-12) Endorsement
- Teaching English to Speakers of Other Languages (TESOL)

## **Department of Secondary Education**

Dr. Ray Wolpow, Chair

### *Programs Offered*

- Secondary Education/Certification — Undergraduate, Post Baccalaureate and Master's
- P-12 Education/Certification — Undergraduate, Post-Baccalaureate and Master's
- Middle Level — Humanities Endorsement

## **Department of Special Education**

Dr. M. Chuck Lambert, Chair

### *Programs Offered*

- Early Childhood Special Education (P-3)/Certification
- Special Education (P-12) with Elementary Education/ Certification
- Special Education (P-12) with Secondary Education/ Certification
- Special Education (P-12)/Certification

## **Teacher Education Outreach Programs**

### *Programs Offered*

- Elementary Education/Certification with Special Education (P-12) Major - Undergraduate
- Elementary Education/Certification - Post-baccalaureate
- Special Education (P-12) Endorsement for Teachers
- Elementary Education Endorsement for Teachers
- Elementary Educational Professional Program - Outreach Program

## **Teacher Education**

### *Advanced Programs Offered*

- Professional Certification Support Program
- National Board Certification Support Program
- Special Education — Master's (not accepting applications at this time)
- Literacy – Master's

## *Division of Educational and Community Leadership*

### **Department of Educational Leadership**

Dr. Anthony Jongejan, Chair

### *Programs Offered*

- Continuing and College Education
- Educational Administration
- Student Affairs Administration

## **Department of Human Services and Rehabilitation**

Dr. Elizabeth Boland, Chair

### *Programs Offered*

- Human Services
- Rehabilitation Counseling

## **Other College Information**

### *Educator Certification Requirements*

Teacher certification requirements are outlined in the Elementary Education, Secondary Education, Special Education and Teacher Education Outreach Programs sections of this catalog. Administrator certification requirements are outlined in the Graduate School section of this catalog.

### **Reasonable Accommodation Policy**

It is the policy of Western Washington University to provide reasonable accommodation to the known physical or mental limitations of otherwise qualified individuals except where such accommodation would impose undue hardship on the institution. Students with documented disabilities who are enrolled at the University and seek reasonable accommodation should contact Disability Resources for Students for assistance and advice. Students with disabilities who are covered under this policy include those who, with or without auxiliary aids or removal of barriers, can meet the essential eligibility requirements of the program.

## **Administrative Services**

- Dr. Michael Henniger, Associate Dean
- Dana Edward, Director, Certification and Accreditation
- Dr. Jennifer McCleery, Director, Teacher Education Admissions and Field Experiences
- Center for Education, Equity, and Diversity
- Center for Family Supportive Schools and Communities
- Northwest Center for Holocaust, Genocide and Ethnocide Education
- Pacific Northwest Children's Literature Clearinghouse
- Professional Development Resource Center
- Service Learning Programs

## **Graduate Programs in Education**

The Woodring College of Education offers various master's degrees. For a complete description of these programs, see the *Graduate School* section of this catalog.

### *EDUC Courses*

Education (EDUC) courses are offered through the Woodring College of Education as classes for the preparation of teachers, and for the advanced professional development of educators as continuing education or as requirements for the MEd degree. Go to information on EDUC courses.

## **Education**

Education (EDUC) courses are offered through the Woodring College of Education as classes for the preparation of teachers, and for the advanced professional development of educators as continuing education or as requirements for the MEd degree.

# Educational Leadership

## Introduction

The Department of Educational Leadership is composed of 4 programs: **Continuing and College Education, Educational Administration, Instructional Technology, and Student Affairs Administration**. It provides Master's degree programs in educational administration (**EdAd**), student affairs administration in higher education (**SAA**), and continuing and college education (**CCE**) as well as administrator certification (residency, professional or superintendent) and a certificate in community and technical college teaching. The department is also home to the ever-growing field of instructional technology (**IT**) and administers the minor in Diversity in Higher Education. Candidates for degrees or certification in all of these fields share a commitment to advancing their knowledge and skills to better serve their students and their communities.

### *Continuing and College Education*

The Continuing and College Education program is designed to prepare both entry-level and advanced practitioners as teachers, trainers, educators and administrators, particularly in community college and continuing education settings. Upon graduation, competence is expected in such areas as leadership, instructional technology, teaching, training, project management, curriculum development, assessment and program planning.

For additional information, refer to the Continuing and College Education program in the Graduate School of this catalog. The program office is located in Miller Hall 419 and the phone number is 360-650-3190.

### Degrees Granted :

- Masters of Education in Continuing and College Education
- Certificate in Community and Technical College Teaching

### *Educational Administration*

The Educational Administration program is designed to prepare principals, superintendents, and district-level leaders effective P-12 leaders for a diverse society. Upon successful completion of the program, candidates are recommended for the master's degree and/or residency administrator certificate (principal), the professional administrator certificate, or the initial administrator certificate (superintendent). Consistent with national and state standards for P-12 school administrators, the program emphasizes leadership and management related to curriculum, school instruction, personnel, staff/community relations, financial and legal matters. Master's and residency administrator certificate (principal) programs are offered in Bellingham, Bremerton and Seattle; the professional administrator certificate and initial administrator certificate (superintendent) programs are offered in Everett. Candidates are directed to the Graduate School section of this catalog for more information; the program office is located in Miller Hall 419, phone 360-650-3708, toll-free 866-913-3323, e-mail EdAdmin@wwu.edu.

NOTE: Verification of good moral character and personal fitness forms available in the Educational Administration Office, Miller Hall 419, 360-650-3708, are required if the applicant does not hold a valid Washington certificate at the time of application.

### Degrees Granted :

- Masters of Education in Educational Administration (Elementary/Secondary or Instructional Technology; the Instructional Technology is not available at this time.)
- Residency Administrator Certificate (Principal)
- Professional Administrator Certificate
- Initial Administrator Certificate (Superintendent)

NOTE: Verification of good moral character and personal fitness forms available in the Educational Administration Office, Miller Hall 419, 360-650-3708, are required if the applicant does not hold a valid Washington certificate at the time of application.

#### *Instructional Technology*

The instructional technology program offers instruction and research opportunities in the use of instructional technology in education and training, including effective use of technology, interactive multimedia, distance delivery of information, and instructional design involving computer technology. The program's offerings are designed for those who wish to improve or develop their abilities to select, use, adapt, and create learning materials incorporating technology. This program provides teachers and trainers with background necessary to integrate instructional technology into their lessons.

For further information, contact the program advisement office, Miller Hall 419, phone 360-650-3090, e-mail [Tony.Jongejan@wwu.edu](mailto:Tony.Jongejan@wwu.edu)

#### *Student Affairs Administration in Higher Education*

The Student Affairs Administration in Higher Education program prepares professionals for work in student affairs in higher education. Consistent with national standards for the profession, the program emphasizes competence in the areas of student learning and development theory and practice, leadership and management, advising/counseling, multicultural competence, and approaches to addressing current and persistent problems facing student affairs and higher education. Students customarily obtain positions in public or private universities or community colleges.

#### **Degrees Granted :**

- Masters of Education in Student Affairs Administration in Higher Education

For additional information, refer to the Student Affairs Administration in Higher Education program in the Graduate School section of this catalog. The program office is located in Miller Hall 419 and the phone number is 360-650-3190.

#### **Faculty**

**WARREN ALLER** (1996) Lecturer. BS, University of Idaho; MEd, Western Washington University.

**JOANNE CARNEY** (2003) Associate Professor. BA, MA, Gannon University; PhD, University of Washington.

**SANDRA DAFFRON** (2002) Associate Professor. BS, Eastern Illinois University; MS, Southern Illinois University; EdD, Northern Illinois University.

**MARY LYNNE DERRINGTON** (2006) Assistant Professor. BS, Southern Illinois University; MS, Portland State University; EdD, University of Washington.

**STANFORD GOTO** (2004) Associate Professor. BA, MA, PhD, University of California-Berkeley.

**ANTHONY JONGEJAN** (1983) Associate Professor. BA, MS, Western Washington University; MS, PhD, University of Oregon.

**TIMOTHY KEIPER** (1997) Associate Professor. BA, University of Northern Colorado; MA, EdS, PhD, University of Missouri-Columbia.

**DONALD E. LARSEN** (2005) Associate Professor. BA, Seattle Pacific University; MA, Pacific Lutheran University; PhD, Washington State University.

**SUSAN MANCUSO** (1995) Associate Professor. BA, University of California-Los Angeles; MA, Western Washington University; EdD, University of Washington.

**LAWRENCE W. MARRS** (1984) Professor. BS, MS, University of Utah; PhD, University of Texas.

**LEANNE ROBINSON** (2002) Associate Professor. BAE, Western Washington University; MAEd, Central Washington University; PhD, Washington State University.

#### *Non-Tenured Track Faculty*

**EILEEN COUGHLIN** (1995) Adjunct Professor. BS, MA, Central Michigan University; EdD, Northern Arizona University.

**LAWRENCE ESTRADA** (1989) Associate Professor. BA, University of California-Santa Barbara; MA in Ed, Whittier College; PhD, University of California-Los Angeles.

**PAT FABIANO** (1991) Lecturer. BA, University of Pittsburgh; MA, University of Wisconsin; MS, Southern Illinois University; PhD, Union Institute and University, Cincinnati.

#### **Departmental Mission**

The Department of Educational Leadership cultivates educational leaders for the future by providing a diverse array of undergraduate and graduate degrees and professional programs. Educational transformation requires leaders who can envision a better future and improved practices, and who have leadership qualities and educational skills to facilitate and sustain meaningful learning and change. We collaboratively prepare and empower these highly skilled and knowledgeable leaders to teach adults and children, train adults in the public and private sector, and/or administer superior educational programs. Up-to-date curriculum and teaching practices are student-centered and standards driven with an emphasis on the integration of theory and practice.

#### **Declaration Process**

Varies by program. Contact the appropriate program as listed above.

#### **Other Departmental Information**

##### *Competency in the Use of Instructional Technology in Education:*

Students admitted to programs in the Woodring College of Education are required to possess competence in the use of instructional technology in education prior to completion of their program and, when applicable, prior to being recommended for certification. Completion of IT 442, 443, 444, 544, 546 or equivalent with a grade of C or higher demonstrates this competency. Entrance into IT 442, 443, or 444 requires the completion of a portfolio of basic instructional technology skills. IT 344 can be used to help complete this portfolio. Procedures for completing this portfolio are available in Miller Hall 419 or on the Web at <http://it.wce.wwu.edu/344/>.

#### **Graduate Study**

For additional graduate program information leading to the Master of Education degrees, see the Graduate School section of this catalog.

#### **Graduate Degrees and Programs**

Continuing and College Education, Thesis, MEd

Continuing and College Education, Non-Thesis, MEd

Certificate In Community And Technical College Teaching

Educational Administration, Thesis, MEd

Educational Administration, With Comprehensive Assessment, Non-Thesis, MEd

Educational Administration, With Field Study and Comprehensive Assessment, Non-Thesis, MEd

Educational Administration, Instructional Technology, MEd

Student Affairs Administration in Higher Education, Non-Thesis, MEd

## **Education Administration Certificate Programs**

Residency Administrator Certificate (Principal)  
Professional Administrator Certificate  
Initial Administrator Certificate (Superintendent)

## **Certificate In Community And Technical College Teaching**

Program Advisor: Dr. Stan Goto, Stan.Goto@wwu.edu.

### **Application Information**

For application information, contact Stan.Goto@wwu.edu.

### **Program Information**

The Certificate in Community and Technical College Teaching program is designed for individuals interested in a professional career in community or technical college teaching and who have completed, or are nearing completion, of a discipline-based graduate degree. The philosophy of the program is to prepare educators who foster student-centered learning. The program consists of five courses plus a teaching internship at a community or technical college. Through the course work and internship, students gain knowledge and skills about ways in which adults learn, practical teaching and assessment strategies, approaches to classroom management and motivation, and the unique role and components of community colleges. The certificate is not required for teaching but will be a valuable asset to those seeking positions in a community or technical college.

### **Program Requirements (20 credits)**

- CCE 542 - Classroom Management
- CCE 556 - The Community College
- CCE 577 - Learning in Adulthood
- CCE 580 - Effective Teaching
- CCE 586 - Teaching in E-Learning and Hybrid Environments
- Internship: CCE 592 - Field Experience

## **Continuing and College Education, Non-Thesis, MEd**

### **Graduate Faculty**

Daffron, Sandra, EdD.  
Goto, Stanford, PhD.  
Jongejan, Anthony, PhD.  
Mancuso, Susan, EdD.

Program Advisor: Dr. Sandra Daffron, Miller Hall 417D, 360-650-2977, Sandra.Daffron@wwu.edu

### **Program Information**

The Master's in Continuing and College Education program is designed for those who desire to teach, train, and administer education programs targeted to adult populations. The Continuing and College Education curriculum prepares students for competency in the areas of instructional technology, teaching, training, curriculum development, leadership and management, project management, assessment and program planning. Graduates will work in settings

such as business and industry, community/technical colleges, universities, government agencies, and not-for-profit organizations.

Course work is available at the main campus in Bellingham and through distance learning courses.

The program is designed for working adults, therefore the majority of students enroll for part-time study. Completion time for the program is normally two years. All students must complete at least one field experience.

Some students may not choose to do a specialization; certificates are available in two optional areas:

- Community and Technical College Teaching [20 credits]
- Teaching English to Speakers of Other Languages (TESOL) [26 credits]

For more information, see the Continuing and College Education website at [www.wce.wwu.edu/depts/cce](http://www.wce.wwu.edu/depts/cce).

## **Goals**

The program prepares both entry-level and advanced practitioners as teachers, trainers, educators, and administrators, particularly in community college and continuing education settings.

## **Application Information**

**Admit Quarters:** Fall, winter, spring, summer.

**Deadline:** Application deadlines are June 1, October 1, February 1, May 1.

**Supporting Materials:**

- A completed application and fee
- A baccalaureate degree from an accredited college or university — two sets of official transcripts from each school attended. (A 3.0 GPA in the last 90 quarter or 60 semester hours of study is required)
- Three current references
- A current résumé
- Miller Analogies Test (MAT) is preferred or the Graduate Record Exam, General Test; test scores are not required if an applicant holds an advanced degree
- A two-page statement which addresses relevant experiences, interests, learning objectives, and career goals
- Computer competence is expected

Please collect all application materials, then forward the packet directly to the Graduate School, Old Main 530.

## **Program Requirements (51 credits)**

- Core courses: [27 credits]
  - CCE 501 - Introduction to Research in Education
  - IT 546 - Instructional Technology and Education - CCE
  - CCE 554 - Foundations of Continuing Education
  - CCE 571 - Curriculum Development and Assessment
  - CCE 576 - Leadership and Management of Educational Programs
  - CCE 577 - Learning in Adulthood
  - CCE 586 - Teaching in E-Learning and Hybrid Environments
  - CCE 591 - Applied Research Proposal (2 credits)
  - CCE 592 - Field Experience (2 minimum-8 maximum)
  - Electives under advisement: (19-22)

- CCE 599 - Graduation Seminar (1 credit)

#### Additional Information

##### **Competency in Instructional Technology**

Students admitted to programs in the Woodring College of Education are required to possess competence in the use of instructional technology in education prior to completion of their program and, when applicable, prior to being recommended for certification. Procedures for demonstrating or developing competence are available in Miller Hall 419.

##### **Comprehensive Assessment**

Woodring College of Education students in Option II are required to complete a comprehensive assessment. The format, timeline and criteria are defined by specific departments. For procedures, students should see their graduate advisors.

##### **Second Master's Degree**

Enrollment must be for a single MEd, MA or MIT program. Students who have earned an MEd or MIT may apply for admission to another MEd program but all requirements of the second program must be met (with possible allowance for some course work taken in the first program). However, all programs must be completed with the minimum number of required credits.

**NOTE:** Due to a review and revision process which may affect Woodring College of Education programs and courses, the information contained in the Education section of this catalog is subject to change.

#### **Continuing and College Education, Thesis, MEd**

##### **Graduate Faculty**

Daffron, Sandra, EdD.

Goto, Stanford, PhD.

Jongejan, Anthony, PhD.

Mancuso, Susan, EdD.

Program Advisor: Dr. Sandra Daffron, Miller Hall 417D, 360-650-2977, Sandra.Daffron@wwu.edu

##### **Program Information**

The Master's in Continuing and College Education program is designed for those who desire to teach, train, and administer education programs targeted to adult populations. The Continuing and College Education curriculum prepares students for competency in the areas of instructional technology, teaching, training, curriculum development, leadership and management, project management, assessment and program planning. Graduates will work in settings such as business and industry, community/technical colleges, universities, government agencies, and not-for-profit organizations.

Course work is available at the main campus in Bellingham and through distance learning courses.

The program is designed for working adults, therefore the majority of students enroll for part-time study. Completion time for the program is normally two years. All students must complete at least one field experience.

Some students may not choose to do a specialization; certificates are available in two optional areas:

- Community and Technical College Teaching [20 credits]
- Teaching English to Speakers of Other Languages (TESOL) [26 credits]

For more information, see the Continuing and College Education website at [www.wce.wwu.edu/depts/cce](http://www.wce.wwu.edu/depts/cce).

## Goals

The program prepares both entry-level and advanced practitioners as teachers, trainers, educators, and administrators, particularly in community college and continuing education settings.

## Application Information

**Admit Quarters:** Fall, winter, spring, summer.

**Deadline:** Application deadlines are June 1, October 1, February 1, May 1.

Supporting Materials:

- A completed application and fee
- A baccalaureate degree from an accredited college or university — two sets of official transcripts from each school attended. (A 3.0 GPA in the last 90 quarter or 60 semester hours of study is required)
- Three current references
- A current résumé
- Miller Analogies Test (MAT) is preferred or the Graduate Record Exam, General Test; test scores are not required if an applicant holds an advanced degree
- A two-page statement which addresses relevant experiences, interests, learning objectives, and career goals
- Computer competence is expected

Please collect all application materials, then forward the packet directly to the Graduate School, Old Main 530.

## Program Requirements (51 credits)

- Core courses: [27 credits]
- CCE 501 - Introduction to Research in Education
- I T 546 - Instructional Technology and Education - CCE
- CCE 554 - Foundations of Continuing Education
- CCE 571 - Curriculum Development and Assessment
- CCE 576 - Leadership and Management of Educational Programs
- CCE 577 - Learning in Adulthood
- CCE 586 - Teaching in E-Learning and Hybrid Environments
- CCE 592 - Field Experience [2 minimum-8 maximum]
- CCE 690 - Thesis [6-9 credits]
- Electives under advisement [16-19 credits]

## Additional Information

### Competency in Instructional Technology

Students admitted to programs in the Woodring College of Education are required to possess competence in the use of instructional technology in education prior to completion of their program.

## **Comprehensive Assessment**

Woodring College of Education students in Option II are required to complete a comprehensive assessment. The format, timeline and criteria are defined by specific departments. For procedures, students should see their graduate advisors.

## **Second Master's Degree**

Enrollment must be for a single MEd, MA or MIT program. Students who have earned an MEd or MIT may apply for admission to another MEd program but all requirements of the second program must be met (with possible allowance for some course work taken in the first program). However, all programs must be completed with the minimum number of required credits.

**NOTE:** Due to a review and revision process which may affect Woodring College of Education programs and courses, the information contained in the Education section of this catalog is subject to change.

## **Educational Administration, Instructional Technology, MEd**

### *Woodring College of Education*

This program is not currently accepting new students. For further information contact the Graduate School, Western Washington University, 516 High St., Bellingham, WA 98225-9037, 360-650-3170, [gradschool@wwu.edu](mailto:gradschool@wwu.edu).

## **Educational Administration, Thesis, MEd**

### **Graduate Faculty**

**Jongejan, Anthony**, PhD.

**Derrington, Mary Lynne**, EdD.

**Larsen, Donald E.**, PhD.

**Marrs, Lawrence W.**, PhD.

**Graduate Advisor:** Dr. Donald Larsen, Miller Hall 419, 360-650-4336, [Donald.Larsen@wwu.edu](mailto:Donald.Larsen@wwu.edu)

**Program Manager:** Judy Gramm, Miller Hall 419, 360-650-3708, [Judy.Gramm@wwu.edu](mailto:Judy.Gramm@wwu.edu)

**Instructional Technology:** Dr. Tony Jongejan, 360-650-3381, [Tony.Jongejan@wwu.edu](mailto:Tony.Jongejan@wwu.edu)

### **Program Goals**

The Educational Administration program is designed to prepare elementary and secondary school teachers to assume leadership roles as principals, vice principals, program and department leaders, or instructional technology specialists. Candidates are recommended for the master's degree and/or principal certification. Satisfactory completion of the Superintendent Certificate qualifies candidates for the superintendency as well as other district-level leadership roles.

The Educational Administration program is offered at four sites — Bellingham, Bremerton, Seattle, and Everett (professional administrator certification).

### **Application Information**

#### **Prerequisite/Supporting Materials:**

- Course background appropriate to level of specialization
- One year (180 days) of successful school-based instructional experience with students (e.g., teaching or ESA employment) — three years preferred

- Application for admission to Graduate School
- Candidate Information Form
- Photocopy of your valid Washington State teacher or ESA certificate. If submitting an ESA certificate, include a letter from your supervisor describing your assignment and service that supports successful school-based instructional experience with students
- A current résumé outlining your education and professional history
- Professional Reference forms (3): one each from two building-level administrators, and one from a district-level administrator
- Official transcript(s) showing all previous course work
- Satisfactory Graduate Record Exam (GRE) or Miller Analogies Test (MAT) scores
- Letter of application stating (a) why you want to become a school administrator and (b) defining your goals and objectives as an education leader
- Prerequisite Experience for a Principal's Certificate (Form SPI/CERT 4001F-C) if you are also pursuing your principal's certificate
- An interview with a program advisor may be required

Please collect all admission materials, then forward the packet directly to the Graduate School, Old Main 530.

### **Program Requirements**

#### **Thesis— 52 credits**

— Core courses: [20 credits]

- EDAD 501 - Introduction to Educational Research
  - EDAD 512 - Policy Studies in Educational Administration
  - EDAD 541 - Theory in Educational Administration
  - EDAD 543 - Supervision in the Public Schools
  - EDAD 552 - Planning for Curriculum Administration
- Thesis: (9 credits). One course from:
- EDAD 690 - Thesis or
  - IT 690 - Thesis

Electives selected under advisement, e.g., law, finance, personnel, staff/community relations, instructional technology [23 credits]

### **Additional Information**

#### **Competency in Instructional Technology**

Students admitted to programs in the Woodring College of Education are required to possess competence in the use of instructional technology in education prior to completion of their program.

#### **Comprehensive Assessment**

Woodring College of Education students in Option II are required to complete a comprehensive assessment. The format, timeline and criteria are defined by specific departments. For procedures, students should see their graduate advisors.

#### **Second Master's Degree**

Enrollment must be for a single MEd, MA or MIT program. Students who have earned an MEd or MIT may apply for admission to another MEd program but all requirements of the second program must be met (with possible allowance for some course work taken in the first program). However, all programs must be completed with the minimum number of required credits.

**NOTE:** Due to a review and revision process which may affect Woodring College of Education programs and courses, the information contained in the Education section of this catalog is subject to change.

## **Educational Administration, With Comprehensive Assessment, Non-Thesis, MEd**

### **Graduate Faculty**

**Jongejan, Anthony**, PhD.  
**Derrington, Mary Lynne**, EdD.  
**Larsen, Donald E.**, PhD.  
**Marrs, Lawrence W.**, PhD.

**Graduate Advisor:** Dr. Donald Larsen, Miller Hall 419, 360-650-4336, Donald.Larsen@wwu.edu

**Program Manager:** Judy Gramm, Miller Hall 419, 360-650-3708, Judy.Gramm@wwu.edu

**Instructional Technology:** Dr. Tony Jongejan, 360-650-3381, Tony.Jongejan@wwu.edu

### **Program Goals**

The Educational Administration program is designed to prepare elementary and secondary school teachers to assume leadership roles as principals, vice principals, program and department leaders, or instructional technology specialists. Candidates are recommended for the master's degree and/or principal certification. Satisfactory completion of the Superintendent Certificate qualifies candidates for the superintendency as well as other district-level leadership roles.

The Educational Administration program is offered at four sites — Bellingham, Bremerton, Seattle, and Everett (professional administrator certification).

### **Application Information**

#### **Prerequisite/Supporting Materials:**

- Course background appropriate to level of specialization
- One year (180 days) of successful school-based instructional experience with students (e.g., teaching or ESA employment) — three years preferred
- Application for admission to Graduate School
- Candidate Information Form
- Photocopy of your valid Washington State teacher or ESA certificate. If submitting an ESA certificate, include a letter from your supervisor describing your assignment and service that supports successful school-based instructional experience with students
- A current résumé outlining your education and professional history
- Professional Reference forms (3): one each from two building-level administrators, and one from a district-level administrator
- Official transcript(s) showing all previous course work
- Satisfactory Graduate Record Exam (GRE) or Miller Analogies Test (MAT) scores
- Letter of application stating (a) why you want to become a school administrator and (b) defining your goals and objectives as an education leader
- Prerequisite Experience for a Principal's Certificate (Form SPI/CERT 4001F-C) if you are also pursuing your principal's certificate
- An interview with a program advisor may be required

Please collect all admission materials, then forward the packet directly to the Graduate School, Old Main 530.

## **Program Requirements**

- Non-Thesis with Comprehensive Assessment— 52 credits
- EDAD 501 - Introduction to Educational Research
- EDAD 512 - Policy Studies in Educational Administration
- EDAD 541 - Theory in Educational Administration
- EDAD 542 - Public School Organization and Administration
- EDAD 552 - Planning for Curriculum Administration
- Electives selected under advisement, e.g., law, finance, personnel, staff/community relations, instructional technology [32 credits]
- Comprehensive assessment

## **Additional Information**

### **Competency in Instructional Technology**

Students admitted to programs in the Woodring College of Education are required to possess competence in the use of instructional technology in education prior to completion of their program.

### **Comprehensive Assessment**

Woodring College of Education students in Option II are required to complete a comprehensive assessment. The format, timeline and criteria are defined by specific departments. For procedures, students should see their graduate advisors.

### **Second Master's Degree**

Enrollment must be for a single MEd, MA or MIT program. Students who have earned an MEd or MIT may apply for admission to another MEd program but all requirements of the second program must be met (with possible allowance for some course work taken in the first program). However, all programs must be completed with the minimum number of required credits.

**NOTE:** Due to a review and revision process which may affect Woodring College of Education programs and courses, the information contained in the Education section of this catalog is subject to change.

## **Educational Administration, With Field Study and Comprehensive Assessment, Non-Thesis, MEd**

### **Graduate Faculty**

**Jongejan, Anthony, PhD.**

**Derrington, Mary Lynne, EdD.**

**Larsen, Donald E., PhD.**

**Marrs, Lawrence W., PhD.**

**Graduate Advisor:** Dr. Donald Larsen, Miller Hall 419, 360-650-4336, Donald.Larsen@wwu.edu

**Program Manager:** Judy Gramm, Miller Hall 419, 360-650-3708, Judy.Gramm@wwu.edu

**Instructional Technology:** Dr. Tony Jongejan, 360-650-3381, Tony.Jongejan@wwu.edu

## **Program Goals**

The Educational Administration program is designed to prepare elementary and secondary school teachers to assume leadership roles as principals, vice principals, program and department leaders, or instructional technology specialists. Candidates are recommended for the master's degree and/or principal certification. Satisfactory completion of the Superintendent Certificate qualifies candidates for the superintendency as well as other district-level leadership roles.

## **Application Information**

### **Prerequisite/Supporting Materials:**

- Course background appropriate to level of specialization
- One year (180 days) of successful school-based instructional experience with students (e.g., teaching or ESA employment) — three years preferred
- Application for admission to Graduate School
- Candidate Information Form
- Photocopy of your valid Washington State teacher or ESA certificate. If submitting an ESA certificate, include a letter from your supervisor describing your assignment and service that supports successful school-based instructional experience with students
- A current résumé outlining your education and professional history
- Professional Reference forms (3): one each from two building-level administrators, and one from a district-level administrator
- Official transcript(s) showing all previous course work
- Satisfactory Graduate Record Exam (GRE) or Miller Analogies Test (MAT) scores
- Letter of application stating (a) why you want to become a school administrator and (b) defining your goals and objectives as an education leader
- Prerequisite Experience for a Principal's Certificate (Form SPI/CERT 4001F-C) if you are also pursuing your principal's certificate
- An interview with a program advisor may be required

Please collect all admission materials, then forward the packet directly to the Graduate School, Old Main 530.

## **Program Requirements**

### **Non-Thesis with Field Study and Comprehensive Assessment — 54 credits**

- Core courses: (20 credits)
- EDAD 501 - Introduction to Educational Research
- EDAD 512 - Policy Studies in Educational Administration
- EDAD 541 - Theory in Educational Administration
- EDAD 543 - Supervision in the Public Schools
- EDAD 552 - Planning for Curriculum Administration
- □ Field study: (6 credits) - EDAD 556 - Field Study in Educational Administration
  - Electives selected under advisement, e.g., law, finance, personnel, staff/community relations, instructional technology (28 credits)
  - Comprehensive Assessment

## Additional Information

### **Competency in Instructional Technology**

Students admitted to programs in the Woodring College of Education are required to possess competence in the use of instructional technology in education prior to completion of their program.

### **Comprehensive Assessment**

Woodring College of Education students in Option II are required to complete a comprehensive assessment. The format, timeline and criteria are defined by specific departments. For procedures, students should see their graduate advisors.

### **Second Master's Degree**

Enrollment must be for a single MEd, MA or MIT program. Students who have earned an MEd or MIT may apply for admission to another MEd program but all requirements of the second program must be met (with possible allowance for some course work taken in the first program). However, all programs must be completed with the minimum number of required credits.

**NOTE:** Due to a review and revision process which may affect Woodring College of Education programs and courses, the information contained in the Education section of this catalog is subject to change.

### **Initial Administrator Certificate (Superintendent)**

Candidates for the Washington State Initial Administrator Certificate (Superintendent) must hold a valid\* teacher, educational staff associate, or administrator certificate (principal or program administrator); excluding certificates issued under WAC 181-79A-231 (limited certificates), or comparable out-of-state certificates. The candidate shall hold an approved master's degree and have completed subsequent to the baccalaureate degree at least 45 quarter credit hours (30 semester credit hours) of graduate-level course work in education. Western Washington University's program specifically requires a minimum of 26 quarter credit hours of approved superintendent certificate course work as well as a six-credit, two-year internship with a mentoring superintendent. Admission to the internship is separate from admission to the certificate program and is based on an individual evaluation of the candidate's preparation and experience.

Prior to submitting an application, interested applicants to this program should contact the educational administration office, Miller Hall 204.

*\*NOTE : Verification of good moral character and personal fitness (forms available in the educational administration office, Miller Hall 204, 360-650-3708) are required if the applicant does not hold a valid Washington certificate at the time of application and recommendation.*

### **Professional Administrator Certificate**

For the Washington State Professional Administrator Certificate, candidates must (1) hold a valid Washington state residency administrator certificate (principal or program administrator), (2) complete a professional administrator certificate program (through a PESB-approved program at a college/university) based on the ISLLC Standards, (3) complete two years (360 days) experience in a certificated administrator's position, and (4) have a current contract for which the certificate is appropriate as a school or district administrator. Course work must be done under advisement and after proper application has been made to the Educational Administration office in Bellingham. For further information, see the Educational Administration Program website at <http://www.wce.wwu.edu/Depts/EDAD/>.

## **Residency Administrator Certificate (Principal)**

Individuals who have a valid\* Washington state teaching or ESA certificate; one year (180 days) of successful school-based instructional experience with students (e.g., teaching or ESA employment), although three years is preferred; and have a master's degree in a field other than educational administration may become eligible for the residency administrator certificate (principal) by completing 36 credits of required course work under advisement and a 12-credit, one-year internship with a mentoring principal. Admission to the internship is separate from admission to the master's or certificate program and is based on an individual evaluation of the candidate's preparation and experience.

Applicants for admission to this program should contact the Educational Administration Office, Miller Hall 419.

*\*NOTE: Verification of good moral character and personal fitness (forms available in the educational administration office, Miller Hall 419, 360-650-3708) are required if the applicant does not hold a valid Washington certificate at the time of application and recommendation.*

## **Student Affairs Administration in Higher Education, Non-Thesis, MEd**

### **Graduate Faculty**

**Mancuso, Susan, EdD.**

Program Advisor: Dr. Susan Mancuso, Miller Hall 418B, 360-650-6552, [Susan.Mancuso@wwu.edu](mailto:Susan.Mancuso@wwu.edu)

### **Program Information**

The Student Affairs Administration program prepares professionals for work in student affairs in higher education. The program emphasizes competence in the areas of student learning, student development theory and practice, leadership and management, advising/counseling, group process, assessment, cultural pluralism, collaboration, and program development. Further, it develops abilities necessary to navigate current problems and issues facing student affairs in higher education.

The program of study and supervised internship meets the guidelines of the Council for Advancement of Standards for Student Services/Development programs (CAS preparation standards). The professional skill development, theoretical concepts, research and assessment activities, and experiential opportunities provided by the program are often applied to a broad array of leadership and/or helping relationship roles in higher education.

A three-quarter, in-depth internship in a student affairs office is an integral component of the program. The research and assessment requirement is an applied practitioner research and assessment project, though students may choose a thesis option.

For more information, see the Student Affairs Administration program website at [www.wce.wwu.edu/depts/saa](http://www.wce.wwu.edu/depts/saa).

### **Goals**

The program prepares professionals for leadership positions in student affairs in higher education.

### **Application Information**

**Admit Quarters:** Summer (each cohort begins summer quarter).

**Deadline:** Application deadline is January 15th for priority consideration.

**Graduate Assistant Deadline:** Deadline to apply for a graduate assistantship is January 15th for priority consideration.

**Supporting materials:**

- A completed application and fee
- A baccalaureate degree from an accredited college or university
- Two sets of official transcripts from each school attended (A 3.0 GPA in the last 90 quarter hours or 60 semester hours of study is required)
- Three current references
- Miller Analogies Test (MAT) preferred or the Graduate Record Exam (GRE), General Test; test scores are not required if an applicant holds an advanced degree
- A current résumé
- A two-page statement which addresses relevant experiences, interests, learning objectives, and career goals
- Computer competence is expected

Please submit all application directly to the Graduate School, Old Main 530.

**Interview:** An interview with the admissions committee will take place in late February or early March for selected applicants.

**Program Requirements (55 credits)**

- Core courses (34)
  - SAA 501 - Assessment and Research in Student Affairs
  - SAA 555 - Foundations of Higher Education
  - SAA 557 - Student Learning and Development Theories
  - SAA 558 - Interviewing and Interpersonal Effectiveness
  - SAA 559 - Leadership and Organizational Management
  - SAA 560 - Student Affairs Practice and the College Student
  - SAA 561 - Collaboration and Group Dynamics
  - SAA 562 - Cultural Pluralism and Higher Education
  - SAA 563 - Teaching, Learning and Programming
  - SAA 564 - Current Issues and Trends in Higher Education
  - CCE 556 - The Community College
- Research:
  - SAA 691 - Assessment and Research Seminar (6)
  - SAA 592 - Internship in Student Affairs Administration (9)
  - SAA 599 - Graduation Seminar (2)
- Comprehensive assessment

**Additional Information**

**Competency in Instructional Technology**

Students admitted to programs in the Woodring College of Education are required to possess competence in the use of instructional technology in education prior to completion of their program.

**Comprehensive Assessment**

Woodring College of Education students in Option II are required to complete a comprehensive assessment. The format, timeline and criteria are defined by specific departments. For procedures, students should see their graduate advisors.

## **Second Master's Degree**

Enrollment must be for a single MEd, MA or MIT program. Students who have earned an MEd or MIT may apply for admission to another MEd program but all requirements of the second program must be met (with possible allowance for some course work taken in the first program). However, all programs must be completed with the minimum number of required credits.

**NOTE:** Due to a review and revision process which may affect Woodring College of Education programs and courses, the information contained in the Education section of this catalog is subject to change.

## **Elementary Education**

- Elementary Education Programs
- Certification
- Choosing an Academic Major
- Professional Program Requirements
- Other Departmental Information
- Teaching English to Speakers of Other Languages

### **Introduction**

The Department of Elementary Education offers professional education programs that lead to recommendation to the Office of the Superintendent of Public Instruction for residency teacher certification in the state of Washington. Students are encouraged to visit the departmental offices in Miller Hall 262 for information on program offerings that meet their individual needs.

The programs in elementary education are designed to *prepare thoughtful, knowledgeable, and effective educators for a diverse society*. Consistent with national and state standards for what teachers should know and be able to do, the elementary education curriculum offers carefully sequenced professional programs that are firmly backed by current research on effective teaching and learning.

### *Information*

Individuals interested in teacher education can obtain information from the Website at [www.wce.wwu.edu/Admiss](http://www.wce.wwu.edu/Admiss). Inquiries should be directed to Woodring College Teacher Education Admissions, Student Services, Miller Hall 250, phone 360-650-3313, e-mail address [TeacherEdAdmissions@wwu.edu](mailto:TeacherEdAdmissions@wwu.edu). Written inquiries may be addressed to Teacher Education Admissions, Western Washington University, MS-9090, 516 High St., Bellingham, WA 98225-9090.

Information about elementary education programs may be obtained by visiting the department Website at [www.wce.wwu.edu/Depts/ELED](http://www.wce.wwu.edu/Depts/ELED). Applicants who wish to speak with a faculty advisor may request an appointment through the elementary education department office in Miller Hall 262, phone 360-650-3336, e-mail address [Ellen.Kreider@wwu.edu](mailto:Ellen.Kreider@wwu.edu).

Those persons interested in graduate programs should consult the Graduate School section of this catalog or contact the Graduate School directly, phone 360-650-3170, e-mail [gradschl@wwu.edu](mailto:gradschl@wwu.edu). Written inquiries may be addressed to the Graduate School, Old Main 530, MS-9037, Western Washington University, 516 High St., Bellingham, WA 98225-9037.

### **Faculty**

**CHRIS OHANA** (1999) Associate Professor. BA, University of California-Berkeley; MA, University of Oregon; PhD, Iowa State University.

**CARMEN LUCIA AVILA CERVERA** (2008) Instructor. BA Instituto Michoacano de Ciencias de la Educacion, Morelia, Mexico; MS Western Washington University.

**JOANNE CARNE Y** (2003) Chair and Associate Professor. BA, MA, Gannon University; PhD, University of Washington.

**DAVID CARROLL** (2001) Associate Professor. BA, Antioch College; MA, Leslie College; PhD, Michigan State University.

**MARILYN CHU** (2008) Assistant Professor. BA, University of Michigan- Ann Arbor; MA, Western Washington University; EdD, Nova Southeastern University, Florida.

**CATHERINE COLLIER** (2003) Instructor, Director CIRCLE Grant, BA, Reed College; BS, Utah State University; MED, Utah State University; PhD, University of Colorado.

**TRACY COSKIE** (2003) Associate Professor. BA, University of Rochester; MEd, PhD, University of Washington.

**MARIA TIMMONS FLORES** (2008) Associate Professor. MED, Western Washington University; PhD, University of Colorado Boulder.

**KRISTEN FRENC H** (2007) Assistant Professor, BA, Western Washington University; MA, University of Massachusetts-Amherst; EdD, University of Massachusetts-Amherst.

**DIANE MAJORS** (1994) Instructor. MA, University of Oregon.

**MICHAEL L. HENNIGER** (1991) Professor. BA, Whitman College; PhD, University of Texas.

**KAREN J. HOELSCHER** (1992) Professor. BS, Bemidji State University; MS, Mankato State University; EdD, Harvard University.

**EILEEN HUGHES** (2005) Assistant Professor. BS, Whittier College; MS, University of Madison; PhD, University of Oregon.

**MITCHELL JANCIC** (2006) Instructor. MA, California State University; PhD, University of California-Santa Barbara.

**PAULA JOHNSON** (2007) Assistant Professor, BA Whitman College, MA Univ. of Connecticut, Storrs, PhD University of Connecticut, Storrs.

**SUZANNE KROGH** (1990) Professor. BA, Florida State University; MEd, University of Maryland; PhD, University of Oregon.

**MATTHEW MILLER** (2005) Associate Professor. BA, St. Olaf College; MA, University of Arizona; MEd, University of Minnesota; PhD, University of Washington.

**MARSHA RIDDLE BULY** (1999) Professor. BA, Western Washington University; MA, California State University; PhD, University of Washington.

**PATRICIA SKILLMAN** (1988) Instructor. Director TESOL Program. BA, Stanford University; MED, Western Washington University.

**KATHRYN WAYNE** (1992) Associate Professor. BA University of Oregon; PhD, University of Oregon, Stanford.

**ROSEMARY VOHS** (1994) Instructor. BA, Northwest College; MA, Western Washington University.

## **Elementary Education Programs**

The Department of Elementary Education offers the following programs:

- **Elementary Education (Undergraduate and Post-Baccalaureate)** – This program leads to a recommendation to the state of Washington for a teaching certificate with an Elementary Education endorsement. Requirements include completion of the Elementary Education Professional Program, a major in an approved area, and a one-year internship experience that includes one quarter of full-time teaching.
- **Elementary Education Studies Major and Language, Literacy, and Cultural Studies Major** – These departmental majors are two of twenty approved academic majors that students may choose from to accompany the Elementary Education Professional Program.
- **Reading Endorsement** – The Reading Endorsement is offered for students who wish to have the opportunity to further their knowledge and skills for literacy instruction. Students will deepen their knowledge of language and literacy learning, while building their capacity to help all children achieve as readers and writers.
- **Early Childhood Education (P-3) (Undergraduate)** — This program leads to a recommendation to the state of Washington for a teaching certificate with an Early Childhood Education (P-3) endorsement. Requirements include the Early Childhood Education (P-3) Major and the Early Childhood Education Professional Program. Upon completion of the program, candidates can work in childcare centers, preschools, Head Start programs, and primary grades in public schools.
- **Teaching English to Speakers of Other Languages** – This program prepares students to teach non-native English speakers. Students with advanced proficiency in a second language may prepare to teach content and provide language development in two languages. Upon completion of the program, candidates earn a certificate of achievement and may earn a minor or teaching endorsement.

The special education department offers the following integrated dual endorsement program:

- **Special Education and Elementary Education** — This program leads to a recommendation to the state of Washington for a teaching certificate endorsed in Special Education and Elementary Education. Requirements include completion of the professional studies core, major in special education, and elementary program curriculum and methods, and two internships, each one quarter in length. See the Special Education section of this catalog for further information.

The No Child Left Behind (NCLB) "highly qualified teacher" requirement may impact eligibility for certain middle school teaching assignments in a core academic subject(s). Students are responsible for consulting with an advisor for further information on NCLB.

## Certification

The Washington Administrative Code specifies the requirements for earning a Washington state teacher certificate. State-approved preparation programs and certification requirements align with state learning goals and essential academic learning requirements, and require candidates to demonstrate that they have made a positive impact on student learning. First-level residency certification programs are designed around the standards of foundational knowledge, effective teaching, and professionalism. Second-level professional certification programs are designed around the standards of effective teaching, professional development, and professional contributions. Teacher certificates are issued by the state, upon the recommendation of the regionally accredited college or university where the candidate completed a state-approved preparation program.

**State requirements for teacher certification at the time of completion of a student's program will supersede those outlined in this catalog.** These changes may affect the time it takes for a student to complete the teacher education program.

### *Residency Teacher Certification*

The first-level residency certificate is awarded to new teachers upon the completion of these general requirements:

- A baccalaureate or higher-level degree from a regionally accredited college or university
- A state-approved, performance-based teacher preparation program that includes preparation in an endorsable subject area, teaching methodology, and an internship
- Evidence of good moral character and personal fitness

Candidates for residency certification must pass a subject knowledge assessment, the Washington Educator Skills Test — Endorsements (WEST-E), to receive an endorsement for certification. WWU requires submission of a passing WEST-E score for each endorsement to be earned, before commencement of the student teaching internship. For current information on test requirements, registration, fees, and test dates and locations, refer to the WEST-E Resource Website, [www.wce.wwu.edu/Resources/Endorsements/WEST-E.shtml](http://www.wce.wwu.edu/Resources/Endorsements/WEST-E.shtml). Candidates for residency certification must also complete the state of Washington Performance-based Pedagogy Assessment during the student teaching internship. Application for the residency certificate is made to Woodring College Teacher Certification, Student Services, Miller Hall 250, phone 360-650-4930, no later than three months prior to the start of the internship.

The first-issue residency certificate is valid until completion of two consecutive years of certificated employment and acceptance of a third year contract with a Washington State public school district or a state-approved private school. Application is then made for a reissued residency certificate, valid for an additional five-year term.

### *Professional Teacher Certification*

The second-level professional certificate is awarded to experienced teachers who hold a valid residency certificate, and who pass the Washington ProTeach Portfolio assessment or earn national board certification through the National Board for Professional Teaching Standards. For further information, contact the Woodring College of Education certification officer at 360-650-4630, Miller Hall 250.

### *Endorsements*

An endorsement identifies the subject matter in which a teacher is prepared and authorized by the state to teach. One qualifying endorsement is required for residency certification. Courses required for a teaching endorsement and the professional education sequence must be completed with a grade of C (2.0) or better. Elementary education students complete the professional program and an approved major designed specifically for elementary education candidates to earn a residency certificate endorsed in Elementary Education. Approved academic majors are listed below under *Choosing an Academic Major*. Early childhood education students complete the professional program and the Early Childhood Education (P-3) Major to earn a residency certificate endorsed in Early Childhood Education (P-3). Students may also earn an additional endorsement in Reading through the Department of Elementary Education.

For information on additional endorsement programs offered throughout the University, contact the Woodring College of Education certification officer at 360-650-4630, Miller Hall 250.

### **Choosing an Academic Major**

Students who wish to earn a teacher certificate endorsed in Early Childhood Education must also complete the early childhood education major.

Students who wish to earn a teacher certificate endorsed in Elementary Education must also complete one of the approved academic majors for elementary education. They include anthropology; art; communication; elementary education studies; English; environmental studies; foreign language (French, German, and Spanish); general science; general science-middle level; geography; geology (earth science); history; liberal studies (humanities); language, literacy, and cultural studies; mathematics; music; psychology (human development); social studies; sociology; special education; student/faculty designed major. While information on each of these majors is available throughout this catalog, it is important to seek advisement from faculty in the appropriate department before beginning work on an academic major.

### *Professional Program Requirements*

#### *Program Length*

While it is possible to earn a bachelor's degree and initial teaching certificate with certain majors in four academic years, most students require slightly longer. Following acceptance by the College of Education, which requires at least sophomore status, the student should expect to take seven to eight quarters to complete the teacher certification program. During these remaining quarters, the student has time to work on the academic major and General University Requirements (GURs). Students who enter the College of Education as juniors (e.g., many transfer students) should have satisfied nearly all of the GURs and should have a good start on their academic major.

### **Declaration Process**

All applicants to the Woodring College of Education undergraduate and post-baccalaureate teacher education programs must be formally admitted to and currently enrolled at Western Washington University or must apply to Western for the same quarter they apply to teacher education. Woodring College teacher education program application materials are available in Miller Hall 250 and are also printable from [www.wce.wwu.edu/Admiss](http://www.wce.wwu.edu/Admiss).

The requirements listed below are minimum application criteria. Enrollment restrictions apply to teacher education programs. Meeting the following requirements makes the applicant eligible for admission consideration but does not guarantee admission. Students who meet all criteria are further evaluated to determine the most qualified applicants. Students will be evaluated on all information provided with the application, including required copies of transcripts from all prior colleges.

#### *Application criteria :*

- Completion of at least 45 quarter credits of college-level course work
- Cumulative grade point average of 2.75 or higher overall college-level work or over the last 45 credits
- Passing scores on all three subtests (reading, mathematics, writing) of the Washington Educator Skills Test-Basic (WEST-B); visit the WEST-B Website at [www.west.nesinc.com](http://www.west.nesinc.com) for more information
- Completion of an English composition course with a grade of B- (2.7) or higher
- Experiences with children, strong interpersonal communication skills, and other skills helpful in teaching are given special emphasis. An essay, to be written on site, is required at the time of application.

### *Program Continuation*

Students admitted to the Woodring College of Education must meet specified requirements throughout the course of their teacher education program in order to remain in the program.

### *Requirements upon Program Admission*

- Completion of an *Institutional Application for a Teacher's Certificate and Character and Fitness Supplement*, and background checks as described below under *Character and Fitness*
- Completion of the Woodring College of Education Prevention of Sexual Harassment Training I
- Completion of the Woodring College of Education Blood-Borne Pathogens Training I

### *Character and Fitness*

The Washington Administrative Code requires applicants for teacher certification to give evidence of "good moral character and personal fitness." Students provide evidence of character and fitness through two separate but related processes:

- An Institutional Application for a *Teacher's Certificate and Character and Fitness Supplement*, provided to students upon acceptance into the program. The application for certification requires candidates to answer questions regarding professional fitness, criminal history and personal conduct. Students with "yes" responses must report to the certification officer in Miller Hall 250 before registering for classes
- Washington State Patrol and FBI background checks through a fingerprinting process. Procedures and fee information are provided to students upon acceptance into the program

No student in a teacher education program may participate in a University-sponsored activity in the public schools until cleared by the Washington State Patrol, or in some cases, investigated and then cleared by the Washington State Office of Superintendent of Public Instruction. Clearances are valid for specified time frames. Students must maintain character and fitness clearance until they have been recommended for a residency teacher certificate following completion of the teacher education program.

In addition to the Washington state character and fitness requirements noted above, students must abide by the Woodring College of Education conduct policies acknowledged in the *Student Conduct Requirements and Agreement*, which is submitted with program application materials.

### *General Retention Requirements*

- Students must maintain at least a 2.75 GPA, beginning with the quarter they are notified of admission to Elementary Education. This requirement applies even to quarters where no education courses are being taken. Students who fail to meet this standard will receive a letter advising them that they have been dropped from the program. Grade point average for the academic major or minor may differ among academic departments
- Students must earn a grade of C (2.0) or better in both the professional education sequence and in all courses required for the endorsement
- Students must understand and demonstrate a high level of competence in the English language. Those who have difficulty in their verbal and/or written communications should expect to seek remediation before beginning the internship
- Completion of the Woodring College of Education Prevention of Sexual Harassment Training II
- Students who interrupt enrollment in a teacher education program for more than two consecutive quarters (summer quarter not included) must meet all program admission, completion and certification requirements in place for the quarter in which they expect to return.

## **Other Departmental Information**

### *Certification*

The Washington Administrative Code specifies the requirements for earning a Washington state teacher certificate. State-approved preparation programs and certification requirements align with state learning goals and essential academic learning requirements, and require candidates to demonstrate that they have made a positive impact on student learning. First-level residency certification programs are designed around the standards of foundational knowledge, effective teaching, and professionalism. Second-level professional certification programs are designed around the standards of effective teaching, professional development, and professional contributions. Teacher certificates are issued by the state, upon the recommendation of the regionally accredited college or university where the candidate completed a state-approved preparation program.

**State requirements for teacher certification at the time of completion of a student's program will supersede those outlined in this catalog.** These changes may affect the time it takes for a student to complete the teacher education program.

### *Residency Teacher Certification*

The first-level residency certificate is awarded to new teachers upon the completion of these general requirements:

- A baccalaureate or higher-level degree from a regionally accredited college or university
- A state-approved, performance-based teacher preparation program that includes preparation in an endorsable subject area, teaching methodology, and an internship
- Evidence of good moral character and personal fitness

Candidates for residency certification must pass a subject knowledge assessment, the Washington Educator Skills Test — Endorsements (WEST-E), to receive an endorsement for certification. WWU requires submission of a passing WEST-E score for each endorsement to be earned, before commencement of the student teaching internship. For current information on test requirements, registration, fees, and test dates and locations, refer to the WEST-E Resource Website, [www.wce.wwu.edu/Resources/Endorsements/WEST-E.shtml](http://www.wce.wwu.edu/Resources/Endorsements/WEST-E.shtml). Candidates for residency certification must also complete the state of Washington Performance-based Pedagogy Assessment during the student teaching internship. Application for the residency certificate is made to Woodring College Teacher Certification, Student Services, Miller Hall 250, phone 360-650-4930, no later than three months prior to the start of the internship.

The first-issue residency certificate is valid until completion of two consecutive years of certificated employment and acceptance of a third year contract with a Washington State public school district or a state-approved private school. Application is then made for a reissued residency certificate, valid for an additional five-year term.

### *Professional Teacher Certification*

The second-level professional certificate is awarded to experienced teachers who hold a valid residency certificate, and who complete a state-approved, performance-based professional certification program or earn national board certification through the National Board for Professional Teaching Standards. For further information, contact the Woodring College of Education certification officer at 360-650-4630, Miller Hall 250.

### *Endorsements*

An endorsement identifies the subject matter in which a teacher is prepared and authorized by the state to teach. One qualifying endorsement is required for residency certification. Courses required for a teaching endorsement and the professional education sequence must be completed with a grade of C (2.0) or better. Elementary education students complete the professional program and an approved major designed specifically for elementary education candidates to earn a residency certificate endorsed in Elementary Education. Approved academic majors are listed below under *Choosing an Academic Major*. Early childhood education students complete the professional program and the Early

Childhood Education (P-3) Major to earn a residency certificate endorsed in Early Childhood Education (P-3). Students may also earn an additional endorsement in Reading through the Department of Elementary Education.

For information on additional endorsement programs offered throughout the University, contact the Woodring College of Education certification officer at 360-650-4630, Miller Hall 250.

#### *Choosing an Academic Major*

Students who wish to earn a teacher certificate endorsed in elementary education must also complete one of the approved academic majors for elementary education. They include anthropology; art; communication; elementary education studies; English; environmental studies; foreign language (french, german, and spanish); general science; general science-middle level; geography; geology (earth science); history; liberal studies (humanities); language, literacy, and cultural studies; mathematics; music; psychology (human development); social studies; sociology; special education; student/faculty designed major.

While information on each of these majors is available throughout this catalog, it is important to seek advisement from faculty in the appropriate department before beginning work on an academic major.

#### *Program Length*

While it is possible to earn a bachelor's degree and initial teaching certificate with certain majors in four academic years, most students require slightly longer. Following acceptance by the College of Education, which requires at least sophomore status, the student should expect to take seven to eight quarters to complete the teacher certification program. During these remaining quarters, the student has time to work on the academic major and General University Requirements (GURs). Students who enter the College of Education as juniors (e.g., many transfer students) should have satisfied nearly all of the GURs and should have a good start on their academic major.

#### **Admission Requirements**

All applicants to the Woodring College of Education undergraduate and post-baccalaureate teacher education programs must be formally admitted to and currently enrolled at Western Washington University or must apply to Western for the same quarter they apply to teacher education. Woodring College teacher education program application materials are available in Miller Hall 250 and are also printable from [www.wce.wwu.edu/Admiss](http://www.wce.wwu.edu/Admiss).

The requirements listed below are minimum application criteria. Enrollment restrictions apply to teacher education programs. Meeting the following requirements makes the applicant eligible for admission consideration but does not guarantee admission. Students who meet all criteria are further evaluated to determine the most qualified applicants. Students will be evaluated on all information provided with the application, including required copies of transcripts from all prior colleges.

#### *Application Criteria :*

- Completion of at least 45 quarter credits of college-level course work
- Cumulative grade point average of 2.75 or higher overall college-level work or over the last 45 credits
- Passing scores on all three subtests (reading mathematics, writing) of the Washington Educator Skills Test-Basic (WEST-B); visit the WEST-B website at [www.west.nesinc.com](http://www.west.nesinc.com) for more information
- Completion of an English composition course with a grade of B- (2.7) or higher
- Experiences with children, strong interpersonal communication skills, and other skills helpful in teaching are given special emphasis. An essay, to be written on site, is required at the time of application.

### *Advisement and Orientation*

Upon acceptance, each student is assigned an advisor. Additionally, all accepted students must attend a required orientation. Students may be dropped from the Elementary program for failing to attend the required orientation.

### *Program Continuation*

Students admitted to the Woodring College of Education must meet specified requirements throughout the course of their teacher education program in order to remain in the program.

### *Requirements upon Program Admission*

- Completion of an *Institutional Application for a Teacher's Certificate and Character and Fitness Supplement*, and background checks as described below under *Character and Fitness*
- Completion of the Woodring College of Education Prevention of Sexual Harassment Training
- Completion of the Woodring College of Education Blood-Borne Pathogens Training

### *Character and Fitness*

The Washington Administrative Code requires applicants for teacher certification to give evidence of "good moral character and personal fitness." Students provide evidence of character and fitness through two separate but related processes:

- An Institutional Application for a *Teacher's Certificate and Character and Fitness Supplement*, provided to students upon acceptance into the program. The application for certification requires candidates to answer questions regarding professional fitness, criminal history and personal conduct. Students with "yes" responses must report to the certification officer in Miller Hall 250 before registering for classes
- Washington State Patrol and FBI background checks through a fingerprinting process. Procedures and fee information are provided to students upon acceptance into the program

No student in a teacher education program may participate in a University-sponsored activity in the public schools until cleared by the Washington State Patrol, or in some cases, investigated and then cleared by the Washington State Office of Superintendent of Public Instruction. Clearances are valid for specified time frames. Students must maintain character and fitness clearance until they have been recommended for a residency teacher certificate following completion of the teacher education program.

In addition to the Washington state character and fitness requirements noted above, students must abide by the Woodring College of Education conduct policies acknowledged in the *Student Conduct Requirements and Agreement*, which is submitted with program application materials.

### *General Retention Requirements*

- Students must maintain at least a 2.75 GPA, beginning with the quarter they are notified of admission to Elementary Education. This requirement applies even to quarters where no education courses are being taken. Students who fail to meet this standard will receive a letter advising them that they have been dropped from the program. Grade point average for the academic major or minor may differ among academic departments
- Students must earn a grade of C (2.0) or better in both the professional education sequence and in all courses required for the endorsement
- Students must understand and demonstrate a high level of competence in the English language. Those who have difficulty in their verbal and/or written communications should expect to seek remediation before beginning the internship
- Completion of the Woodring College of Education Prevention of Sexual Harassment Training II

- Students who interrupt enrollment in a teacher education program for more than two consecutive quarters (summer quarter not included) must meet all program admission, completion and certification requirements in place for the quarter in which they expect to return.

#### *Program Completion*

To qualify for program completion and recommendation for state of Washington residency certification, students must complete the following requirements and assessments:

- A baccalaureate or higher-level degree from a regionally accredited college or university
- A state-approved, performance-based teacher preparation program that includes preparation in an endorsable subject area, teaching methodology, and an internship
- Evidence of good moral character and personal fitness
- Minimum scores set by the state of Washington on the Washington Educator Skills Test (WEST-E) for the qualifying endorsement area(s)
- Completion of the Washington Performance-Based Pedagogy Assessment
- Completion of Woodring College of Education Prevention of sexual harassment training II
- Successful completion of the student teaching internship as shown by performance on the WWU Intern Development and Evaluation System (IDES)

#### **Other Departmental Information**

##### *Internship*

An important experience for teacher certification candidates is the student teaching internship. Students spend two quarters taking final classes in the program along with time in their assigned classroom preparing for quarter three when they are full-time teaching under the direct supervision of a certificated teacher in a school setting. This internship involves intensive practice in integrating methods, content area knowledge, and classroom organizational strategies.

Students will be able to work part time during two quarters of the three quarter internship. However, one quarter of the internship involves full-time teaching responsibilities and students will find that trying to work will prove impossible. Because the internship should be completed in a single classroom for all three quarters, it is likely that internship placement will be in a school site within Whatcom and Skagit counties. Exceptions to this rule will be made for students approved by the department to enroll in the Global Student Teaching Program.

The Office of Field Experiences (OFE) is the service agency of the Woodring College of Education that seeks placement for prospective interns. Students apply for their internship around January prior to a fall internship start quarter, or April prior to a winter or spring internship start quarter. Specific dates for informational meetings and application deadlines are published on the OFE Website, [www.wce.wwu.edu/Resources/OFE](http://www.wce.wwu.edu/Resources/OFE).

Students must have completed Prevention of Sexual Harassment Training I and II, blood-borne pathogens training, a residency teacher certificate application packet including credit evaluation, and Washington State Patrol/FBI fingerprinting before OFE will seek an internship placement.

Before commencement of the internship, passing scores on the WEST-E for each endorsement must be submitted, all educational endorsement course work and practica must be completed, and fingerprint/character and fitness clearance must be valid. Students who interrupt enrollment for a quarter or more must meet the deadline for filing a returning student application.

OFE does not guarantee placements. Placement in a school is contingent upon:

- Fulfillment of all program requirements (satisfactory academic work, education and endorsement program course work and training, practica, and faculty recommendations)
- Submission of passing scores on the WEST-E test(s) for each endorsement

- Availability of placements and supervision in specific subjects and grade levels
- Acceptance by P-12 school personnel
- Fingerprint/character and fitness clearance through the point of certification

Students are required to interview with the public school teacher to whom they will be assigned, for final approval of placement. OFE will make every effort to arrange up to three initial interviews but does not guarantee an interview.

Any subsequent placement after a voluntary or nonvoluntary withdrawal from an internship will be granted only by faculty recommendation following a case conference.

For further information, contact the Woodring College Office of Field Experiences, Student Services, phone 360-650-3310, Miller Hall 206.

### **Teaching English to Speakers of Other Languages**

The Teaching English to Speakers of Other Languages (TESOL) program prepares future instructors to teach English and to support heritage language development. The TESOL track prepares graduates to teach English to non-native speakers both in the United States and abroad. The Bilingual Education (BE) track prepares teachers to teach content and provide language development in two languages. There is a great need for trained instructors, not only in our school systems, but also in many areas of the public and private sectors. Additionally, English is increasingly used as the language of world communication, creating many opportunities for trained instructors to teach English internationally.

The TESOL program is interdisciplinary in nature, providing training in the core areas vital to the profession, including linguistics, grammar, second language acquisition, and several methods courses in TESOL and BE. Hands-on classroom experience with language learners is an essential part of all program courses, culminating in the final course — a mentored teaching practicum in TESOL or BE, which students can complete in their own home community or internationally.

Developing effective skills to work cross-linguistically and cross-culturally is a central objective of the program course work. Non-native speakers of English are required to have a TOEFL score of 550 or higher prior to beginning the program. Completion of any certificate, minor, or endorsement requires cross-cultural study and study of a foreign language. The cross-cultural and foreign language requirements may be satisfied through previous course work or experience, or concurrently with the program, at the discretion of the program director.

Completion of a certificate, minor, or endorsement through the TESOL track requires cross-cultural study (gained through experience, or the minimum of 3 credits of approved course work) and the equivalent of one year of college-level foreign language study. Completion of a certificate, minor or endorsement through the Bilingual Education track requires a cultural studies course taught in the language of that culture, or demonstration of equivalent experience. Bilingual Education candidates must also be recommended by the department of Modern and Classical Languages with proficiency equivalent to a major in the language other than English, and oral proficiency at the ACTFL mid-advanced level, prior to enrolling in the seminar and practicum in Bilingual Education.

The program course work is offered in two formats: the annual option offers late afternoon courses during fall, winter and spring quarters; the summer option offers one or two courses before summer quarter, followed by intensive summer courses, and the practicum course after summer quarter. Students fully admitted to Western may integrate a concentration in TESOL into the course work of several majors, such as linguistics and American cultural studies, as well as within the master's program in continuing and college education

All applicants should contact the TESOL office for advising on the admissions process, which will include an application to the TESOL program, and formal admission to the University. The TESOL program follows University admissions priority guidelines. Individuals interested in taking TESOL course work must be admitted to the program and are encouraged to visit the TESOL program in Miller Hall 251E, phone 360-650-4949, or visit the website at [www.wce.wwu.edu/TESOL](http://www.wce.wwu.edu/TESOL).

## **Graduate Study**

The Department of Elementary Education offers a Master of Education in Literacy designed for educators who want to deepen their knowledge and practice in literacy instruction. See the Graduate School section of this catalog.

### **Undergraduate Degrees and Programs**

Early Childhood Education P-3, BAE

Early Childhood Education Professional Program

Elementary Education Professional Program

Elementary Education Professional Program - Outreach Program

Reading – P-12 Additional Endorsement

Elementary Education Studies, BAE

Language, Literacy, and Cultural Studies, BAE

Certificate of Achievement - Bilingual Education

Bilingual Education - Endorsement

Bilingual Education Minor

Certificate of Achievement TESOL

Teaching English Language Learners, Endorsement

Teaching English to Speakers of Other Languages Minor

### **Graduate Degrees and Programs**

Literacy, Thesis, MEd

Literacy, Non-Thesis, MEd

## **Bilingual Education - Endorsement**

**33 credits**

### **Introduction**

This program leads to an additional endorsement in Bilingual Education based on Washington state Bilingual endorsement competencies; when accompanied by a professional teacher education program and a first endorsement in another content area. Also required is a cultural studies course taught in the language of that culture or demonstration of equivalent experience. Expected proficiency is equivalent to a major in the language other than English, and oral proficiency at the ACTFL mid-advanced level. Each required course must be completed with a grade of B- (2.7) or better. A passing score on the Bilingual WEST-E and an assessment in the non-English language of instruction is required by the state.

## **Admission and Declaration Process**

Admission Requirements ([see TESOL program page](#))

### **Grade Requirements**

Each required course must be completed with a grade of B- (2.7) or better.

The state of Washington requires a minimum grade of C (2.0) or better for courses used to meet the endorsement requirements.

### **Requirements**

- TESL 401 - Introduction to English Linguistics for TESOL
- TESL 404 - Understanding English Grammar for TESOL
- TESL 405 - Methods for Teaching English Grammar
- TESL 410 - Second Language Acquisition Theory for TESOL
- TESL 420 - Methods and Materials for Basic Communication
- TESL 421 - Methods and Materials for Academic Language Proficiency
- TESL 425 - Methods and Programming for the Bilingual Classroom
- TESL 432 - Seminar in TESOL and Bilingual Education
- TESL 434 - Bilingual Practicum

## **Bilingual Education Minor**

**33 credits**

### **Introduction**

Undergraduates may choose to complete either a 27-credit minor in TESOL or a 33-credit minor in Bilingual Education, but not both. To declare the Bilingual Education minor, students must complete a cultural studies course taught in the language of that culture, or demonstrate the equivalent in experience. Students must also be recommended by the department of Modern and Classical Languages prior to enrolling in the seminar and practicum in Bilingual Education or declaring the minor. Students must complete the minor with a minimum GPA of 2.7 in minor course work.

## **Admission and Declaration Process**

Admission Requirements ([see TESOL program page](#))

### **Grade Requirements**

Students must complete the minor with a minimum GPA of 2.7 in minor course work.

### **Requirements**

- TESL 401 - Introduction to English Linguistics for TESOL
- TESL 404 - Understanding English Grammar for TESOL
- TESL 405 - Methods for Teaching English Grammar
- TESL 410 - Second Language Acquisition Theory for TESOL

- TESL 420 - Methods and Materials for Basic Communication
- TESL 421 - Methods and Materials for Academic Language Proficiency
- TESL 425 - Methods and Programming for the Bilingual Classroom
- TESL 432 - Seminar in TESOL and Bilingual Education
- TESL 434 - Bilingual Practicum

## Certificate of Achievement - Bilingual Education

**33 credits**

### Introduction

In order to earn a certificate of achievement in Bilingual Education, which can be used both domestically and internationally as proof of in-depth training, students must successfully complete Bilingual Education coursework with a minimum GPA of 2.7. Also required is a cultural studies course taught in the language of that culture or demonstration of equivalent experience. Expected proficiency is equivalent to a major in the language other than English, and oral proficiency at the ACTFL mid-advanced level. Students meeting the requirements for the Bilingual Education certificate of achievement may also request a TESOL certificate of achievement.

### Admission and Declaration Process

Admission Requirements (see TESOL program page)

### Grade Requirements

Students must successfully complete Bilingual Education coursework with a minimum GPA of 2.7.

### Requirements

- TESL 401 - Introduction to English Linguistics for TESOL
- TESL 404 - Understanding English Grammar for TESOL
- TESL 405 - Methods for Teaching English Grammar
- TESL 410 - Second Language Acquisition Theory for TESOL
- TESL 420 - Methods and Materials for Basic Communication
- TESL 421 - Methods and Materials for Academic Language Proficiency
- TESL 425 - Methods and Programming for the Bilingual Classroom
- TESL 432 - Seminar in TESOL and Bilingual Education
- TESL 434 - Bilingual Practicum

## Certificate of Achievement TESOL

**27-33 credits**

### Introduction

In order to earn a certificate of achievement in TESOL, which can be used both domestically and internationally as proof of in-depth training, TESOL students must successfully complete TESOL track coursework with a minimum GPA of 2.7 and demonstrate study of another culture (gained through experience, or the minimum of 3 credits of approved course work) and the equivalent of one year of college-level foreign language study.

## **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

## **Requirements**

- TESL 401 - Introduction to English Linguistics for TESOL
- TESL 404 - Understanding English Grammar for TESOL
- TESL 405 - Methods for Teaching English Grammar
- TESL 410 - Second Language Acquisition Theory for TESOL
- TESL 420 - Methods and Materials for Basic Communication
- TESL 421 - Methods and Materials for Academic Language Proficiency
- Choose either:
  - TESL 432 - Seminar in TESOL and Bilingual Education
  - TESL 433 - TESOL Practicum  
OR
  - TESL 425 - Methods and Programming for the Bilingual Classroom
  - TESL 434 - Bilingual Practicum

## **Early Childhood Education P-3, BAE**

**122-124 credits (major and professional program)**

### **Introduction**

Students seeking a bachelor's degree with teacher certification and an endorsement in early childhood education (P-3) must complete the General University Requirements, the Early Childhood Education (P-3) Major, and the professional education course work below.

### **Admission and Declaration Process**

Admission Requirements ([see Elementary Education department page](#))

## **Grade Requirements**

Students must earn a grade of C (2.0) or better in the early childhood education professional program and in all courses required for the endorsement.

## **Requirements**

### **Required courses**

#### **44 credits**

- ECE 390 - Infant and Toddler Practicum and Seminar
- ECE 391 - Preschool Practicum and Seminar
- ECE 431 - Fundamentals of Early Childhood Education
- ECE 438 - Family and Community Relationships
- ECE 435 - Child Abuse and Neglect

- ECE 434 - Environments for Early Learning
- ECE 439 - Curriculum Planning in Early Childhood Education
- ECE 430 - Creativity & Play in ECE
- ECE 432 - Social Studies for Early Childhood Education
- SPED 443 - Early Development Variations
- SPED 444 - Assessment and Intervention in Early Childhood Special Education

#### **Elective courses (3-5 credits)**

- Select one elective course from the following:
- ANTH 481 - Childhood and Culture
- CSD 251 - Introduction to Communication Disorders
- CSD 354 - Speech and Language Development in Children
- EDUC 309 - Storytelling: Oral Narrative in History, Culture, and Society
- ENG 441 - Children's Literature for the Elementary and Middle School Teacher
- ENG 442 - Studies in Literacy and Learning
- HSP 315 - Human Development and Human Services
- TESL 401 - Introduction to English Linguistics for TESOL

#### **Additional Requirements**

#### **Early Childhood Education Professional Program (75 credits)**

##### **Required Courses**

- ECE 380 - Foundations of Literacy for Early Childhood Education
- ECE 495 - Internship - Preschool
- ECE 496 - Internship - Primary
- ECE 498 - Seminar in Early Childhood Education (2 credits with ECE 495; 2 credits with ECE 496)
- EDUC 301 - Educational Psychology I: Development and Individual Differences
- EDUC 302 - Educational Psychology II: Motivation, Learning and Assessment
- EDUC 310 - The Teacher and the Social Order
- ELED 480 - Literacy: Beginning Communicators
- IT 344 - Basic Instructional Technology Skills
- IT 442 - Classroom Use of Instructional Technology (Elementary)
- MATH 381 - Teaching K-8 Mathematics I
- MATH 382 - Teaching K-8 Mathematics II
- MATH 383 - Teaching K-8 Mathematics III
- PE 345 - Physical Education for Elementary School
- SCED 480 - Science Methods and Curriculum for the Elementary School
- SCED 490 - Laboratory/Field Experience in Elementary Science
- SPED 364 - Teaching All Students
- SPED 430 - Problem Solving for Diverse Needs

# **Early Childhood Education Professional Program**

**75 credits**

## **Introduction**

Students seeking a bachelor's degree with teacher certification and an endorsement in early childhood education (P-3) must complete the General University Requirements, the Early Childhood Education (P-3) Major, and the professional education course work below.

## **Admission and Declaration Process**

Admission Requirements ([see Elementary Education department page](#))

## **Grade Requirements**

Recommendation for teaching endorsement normally requires completion of the major with a grade point of 2.50 or better in the required major courses. The state of Washington requires a minimum grade of C (2.0) or better for courses used to meet the endorsement requirements.

## **Requirements**

- ECE 380 - Foundations of Literacy for Early Childhood Education
- ECE 495 - Internship - Preschool
- ECE 496 - Internship - Primary
- ECE 498 - Seminar in Early Childhood Education
- EDUC 301 - Educational Psychology I: Development and Individual Differences
- EDUC 302 - Educational Psychology II: Motivation, Learning and Assessment
- EDUC 310 - The Teacher and the Social Order
- ELED 480 - Literacy: Beginning Communicators
- IT 344 - Basic Instructional Technology Skills
- IT 442 - Classroom Use of Instructional Technology (Elementary)
- MATH 381 - Teaching K-8 Mathematics I
- MATH 382 - Teaching K-8 Mathematics II
- MATH 383 - Teaching K-8 Mathematics III
- PE 345 - Physical Education for Elementary School
- SCED 480 - Science Methods and Curriculum for the Elementary School
- SCED 490 - Laboratory/Field Experience in Elementary Science
- SPED 364 - Teaching All Students
- SPED 430 - Problem Solving for Diverse Needs

# **Elementary Education Professional Program**

**106 credits**

## **Introduction**

Students seeking a bachelor's degree with teacher certification and an endorsement in elementary education must complete the GURs, an approved academic major, and the professional education course work listed below.

## **Admission and Declaration Process**

Admission Requirements ([see Elementary Education department page](#))

## **Grade Requirements**

Students must earn a grade of C (2.0) or better in the elementary education professional program and in all courses required for the endorsement.

## **Requirements**

### **Professional Studies Core: 25 credits**

- EDUC 301 - Educational Psychology I: Development and Individual Differences
- EDUC 302 - Educational Psychology II: Motivation, Learning and Assessment
- EDUC 310 - The Teacher and the Social Order
- ELED 370 - Introduction to Teaching
- IT 344 - Basic Instructional Technology Skills
- IT 442 - Classroom Use of Instructional Technology (Elementary)
- SPED 364 - Teaching All Students

### **Elementary Program — Methods, Curriculum Content, and Field Experiences: 81 credits**

- ART 380 - Art Educating the Child
- ELED 425 - Social Studies for the Elementary School
- ELED 470 - Developing Teaching
- ELED 471 - Documenting Teaching
- ELED 480 - Literacy: Beginning Communicators
- ELED 481 - Literacy: Fluent Communicators
- ELED 491 - September Experience
- ELED 492 - Practicum: Experience in Literacy Methods
- ELED 494 - Internship - Elementary
- HLED 455 - Health Education Grades K-8
- MATH 381 - Teaching K-8 Mathematics I
- MATH 382 - Teaching K-8 Mathematics II
- MATH 383 - Teaching K-8 Mathematics III
- MATH 491 - Internship Seminar - Teaching K-8 Mathematics
- MIUS 361 - Music for Elementary Teachers
- PE 345 - Physical Education for Elementary School

- SCED 480 - Science Methods and Curriculum for the Elementary School
- SCED 490 - Laboratory/Field Experience in Elementary Science
- SPED 430 - Problem Solving for Diverse Needs

## **Elementary Education Professional Program - Outreach Program**

**99 credits**

### **Introduction**

Students who have completed a bachelor's degree in an approved academic major and are seeking teacher certification with an endorsement in elementary education through Teacher Education Outreach Programs, complete the Elementary Education Professional Program. Program coursework listed below includes some special education content and is delivered through a cohort-based integrated model designed specifically for outreach program sites.

### **Admission and Declaration Process**

Admission Requirements ([see Elementary Education department page](#))

### **Grade Requirements**

Students must earn a grade of C (2.0) or better in the elementary education professional program and in all courses required for the endorsement.

### **Requirements**

- ART 380 - Art Educating the Child
- EDUC 301 - Educational Psychology I: Development and Individual Differences
- EDUC 302 - Educational Psychology II: Motivation, Learning and Assessment
- EDUC 310 - The Teacher and the Social Order
- ELED 372 - Introduction to Teaching Seminar
- ELED 373 - Introduction to Teaching - Practicum
- ELED 380 - Literacy I: Foundations
- ELED 386 - Practical Assessment in the Elementary Classroom I
- ELED 387 - Practical Assessment in the Elementary Classroom II
- ELED 426 - Social Studies Methods
- ELED 472 - Developing Teaching Seminar
- ELED 473 - Developing Teaching - Practicum
- ELED 474 - Documenting Teaching Seminar
- ELED 475 - Documenting Teaching - Practicum
- ELED 478 - Literacy: Fluent Communicators Seminar
- ELED 479 - Literacy: Fluent Communicators - Practicum
- ELED 494 - Internship - Elementary
- HLED 455 - Health Education Grades K-8
- IT 344 - Basic Instructional Technology Skills
- IT 442 - Classroom Use of Instructional Technology (Elementary)
- MATH 381 - Teaching K-8 Mathematics I
- MATH 382 - Teaching K-8 Mathematics II

- MATH 383 - Teaching K-8 Mathematics III
- MUS 361 - Music for Elementary Teachers
- SCED 480 - Science Methods and Curriculum for the Elementary School
- SCED 490 - Laboratory/Field Experience in Elementary Science
- SPED 360 - Introduction to Special Education
- SPED 440 - School Practicum

## **Elementary Education Studies, BAE**

**53-57 credits**

### **Introduction**

This major must be accompanied by the professional preparation program in elementary education. Program admission, completion, and teacher certification requirements are provided within this Elementary Education section of the catalog.

Several of the courses listed below will have different descriptions as they are altered to meet new Washington state endorsement requirements. See the Elementary Education department for updated information.

### **Grade Requirements**

Students must earn a grade of C (2.0) or better in the elementary education professional program and in all courses required for the endorsement.

### **Requirements**

- HIST 391 - History of the Pacific Northwest
- MATH 381 - Teaching K-8 Mathematics I
- MATH 382 - Teaching K-8 Mathematics II
- MATH 383 - Teaching K-8 Mathematics III
- PLSC 250 - The American Political System
- SCED 294 - Investigative Science
- SCED 370 - Science and Society
- SCED 480 - Science Methods and Curriculum for the Elementary School
- One course from:
  - ENG 202 - Writing About Literature
  - ENG 446 - Teaching Writing in the Elementary School
- One course from:
  - ENG 347 - Studies in Young Adult Literature
  - ENG 441 - Children's Literature for the Elementary and Middle School Teacher
  - ELED 405 - Books and Materials for Elementary Schools
- One course from:
  - MUS 202 - Jazz: Genesis and Evolution
  - MUS 205 - Survey of Non-Western Musical Cultures
  - PHIL 350 - Political Philosophy
  - PHIL 360 - Society, Law and Morality
  - THTR 351 - Creativity Across the Curriculum

- or a course in Art History
- ❑ One course from:
  - HIST 280 - Introduction to East Asian Civilizations
  - HIST 285 - Introduction to African Civilizations
  - HIST 287 - Introduction to Islamic Civilization
  - ❑ One course from:
  - ESTU 303 - Human Ecology and Sustainability
  - ESTU 304 - Environment and Resource Policy
  - ESTU 305 - Environmental History and Ethics
  - ECON 446 - Economics for the Teacher
  - PLSC 345 - Women and Politics
  - PLSC 346 - Politics of Inequality
  - PLSC 347 - Race, Politics and Public Policy
  - PLSC 353 - State and Local Politics
  - ELED 464 - Multicultural Education for Teachers

#### **Additional Requirements**

##### **Link to Woodring College of Education**

##### **Elementary Education Professional Program Requirements (106 credits)**

###### **Professional Studies Core (25 credits)**

- ❑ EDUC 301 - Educational Psychology I: Development and Individual Differences
- ❑ EDUC 302 - Educational Psychology II: Motivation, Learning and Assessment
- ❑ EDUC 310 - The Teacher and the Social Order
- ❑ ELED 370 - Introduction to Teaching
- ❑ IT 344 - Basic Instructional Technology Skills
- ❑ IT 442 - Classroom Use of Instructional Technology (Elementary)
- ❑ SPED 364 - Teaching All Students

###### **Elementary Program — Methods, Curriculum Content, and Field Experiences (81 credits)**

- ❑ ART 380 - Art Educating the Child
- ❑ ELED 425 - Social Studies for the Elementary School
- ❑ ELED 470 - Developing Teaching
- ❑ ELED 471 - Documenting Teaching
- ❑ ELED 480 - Literacy: Beginning Communicators
- ❑ ELED 481 - Literacy: Fluent Communicators
- ❑ ELED 491 - September Experience
- ❑ ELED 492 - Practicum: Experience in Literacy Methods
- ❑ ELED 494 - Internship - Elementary
- ❑ HLED 455 - Health Education Grades K-8
- ❑ MATH 381 - Teaching K-8 Mathematics I
- ❑ MATH 382 - Teaching K-8 Mathematics II
- ❑ MATH 383 - Teaching K-8 Mathematics III
- ❑ MATH 491 - Internship Seminar - Teaching K-8 Mathematics

- MUS 361 - Music for Elementary Teachers
- PE 345 - Physical Education for Elementary School
- SCED 480 - Science Methods and Curriculum for the Elementary School
- SCED 490 - Laboratory/Field Experience in Elementary Science
- SPED 430 - Problem Solving for Diverse Needs

## **Language, Literacy, and Cultural Studies, BAE**

**45-56 credits**

### **Introduction**

This major must be accompanied by the professional preparation program in elementary education. Program admission, completion, and teacher certification requirements are provided within this Elementary Education section of the catalog.

Satisfactory completion of the professional Elementary Education Sequence and this major include course requirements for recommendation for a qualifying endorsement in Elementary Education and additional endorsements in both English Language Learners (ELL) (or Bilingual Education) and Reading.

### **Grade Requirements**

Students must earn a grade of C (2.0) or better in the elementary education professional program and in all courses required for the endorsement.

### **Requirements**

- ELED 456 - Literacy Assessment
- ELED 486 - Literacy Difficulties in the K-12 Classroom
- ENG 446 - Teaching Writing in the Elementary School
- TESL 402
- TESL 410 - Second Language Acquisition Theory for TESOL
- TESL 420 - Methods and Materials for Basic Communication
- Two from the following (or quarter abroad/cultural experience with advising)
  - AMST 202 - The American Indian Experience
  - AMST 203 - The Hispano/a-American Experience
  - AMST 204 - The African-American Experience
  - AMST 205 - The Asian-American Experience
  - AMST 314 - Contemporary Latino/a Issues
  - AMST 315 - Contemporary American Indian Issues
  - AMST 316 - Contemporary African American Issues
  - AMST 362 - Asian-American History
  - ELED 464 - Multicultural Education for Teachers
- One course from:
  - ENG 370 - Introduction to Language
  - TESL 401 - Introduction to English Linguistics for TESOL
- One course from:
  - ELED 405 - Books and Materials for Elementary Schools
  - ENG 441 - Children's Literature for the Elementary and Middle School Teacher

- One of the following options:  
TESL 430 OR
- TESL 425 - Methods and Programming for the Bilingual Classroom (AND)
- TESL 431 - Seminar and Practicum in Bilingual Education (required for the bilingual endorsement)

#### **Additional Requirements**

**Link to Woodring College of Education**

#### **Elementary Education Professional Program Requirements (106 credits)**

##### **Professional Studies Core (25 credits)**

- EDUC 301 - Educational Psychology I: Development and Individual Differences
- EDUC 302 - Educational Psychology II: Motivation, Learning and Assessment
- EDUC 310 - The Teacher and the Social Order
- ELED 370 - Introduction to Teaching
- IT 344 - Basic Instructional Technology Skills
- IT 442 - Classroom Use of Instructional Technology (Elementary)
- SPED 364 - Teaching All Students

##### **Elementary Program — Methods, Curriculum Content, and Field Experiences (81 credits)**

- ART 380 - Art Educating the Child
- ELED 425 - Social Studies for the Elementary School
- ELED 470 - Developing Teaching
- ELED 471 - Documenting Teaching
- ELED 480 - Literacy: Beginning Communicators
- ELED 481 - Literacy: Fluent Communicators
- ELED 491 - September Experience
- ELED 492 - Practicum: Experience in Literacy Methods
- ELED 494 - Internship - Elementary
- HLED 455 - Health Education Grades K-8
- MATH 381 - Teaching K-8 Mathematics I
- MATH 382 - Teaching K-8 Mathematics II
- MATH 383 - Teaching K-8 Mathematics III
- MATH 491 - Internship Seminar - Teaching K-8 Mathematics
- MUS 361 - Music for Elementary Teachers
- PE 345 - Physical Education for Elementary School
- SCED 480 - Science Methods and Curriculum for the Elementary School
- SCED 490 - Laboratory/Field Experience in Elementary Science
- SPED 430 - Problem Solving for Diverse Needs

## **Reading – P-12 Additional Endorsement**

**106 credits 24-27 credits**

### **Introduction**

This program, combined with a performance-based assessment of competencies, leads to an additional endorsement in Reading when accompanied by a professional education program and a qualifying endorsement in another content area.

### **Admission and Declaration Process**

Admission Requirements ([see Elementary Education department page](#))

### **Grade Requirements**

All coursework and demonstration of state-required competencies must be completed with a grade of B (3.0) or better and within a five-year span, based on the application date for the reading endorsement.

### **Requirements**

- ELED 538 - Current Issues in Assessment and Evaluation in Elementary Literacy Education  
First of a two-course sequence; ELED 486 or ELED 594 must be taken the following quarter
  - One course from:
- ELED 480 - Literacy: Beginning Communicators
- ELED 587 - Improvement of Instruction in Literacy
  - or equivalent WWU course upon approval by advisor
- One course from:
- ELED 481 - Literacy: Fluent Communicators
- ELED 584 - Teaching the Integrated Language Arts
  - or equivalent WWU course upon approval by advisor
- One course from:
- ELED 486 - Literacy Difficulties in the K-12 Classroom (prereq ELED 538 or permission of instructor)
- ELED 586 - Seminar for Literacy Specialists
  - Second of a two-course sequence; ELED 538 should be taken preceding quarter
- One course from:
- ELED 489 - Language Structure and Reading Development
- ELED 589 - Language Acquisition and Literacy Development
- TESL 401 - Introduction to English Linguistics for TESOL
- ENG 370 - Introduction to Language
- LING 201 - Introduction to Linguistics Science
  - or equivalent WWU course upon approval by advisor
- One course from:
- ELED 405 - Books and Materials for Elementary Schools
- ELED 583 - Literacy and Children's Literature
  - or equivalent WWU course upon approval by advisor

## **Teaching English Language Learners, Endorsement**

**27-33 credits**

### **Introduction**

This program leads to an additional endorsement in English Language Learners based on Washington state English Language Learners endorsement competencies, when accompanied by a professional teacher education program and a first endorsement in another content area. Students must demonstrate study of another culture (gained through experience, or the minimum of 3 credits of approved course work) and the equivalent of one year of college-level foreign language study. A passing score on the ELL WEST-E is required by the state.

### **Admission and Declaration Process**

Admission Requirements (see TESOL program page)

### **Grade Requirements**

Each required course must be completed with a grade of B- (2.7) or better.

### **Requirements**

- TESL 401 - Introduction to English Linguistics for TESOL
- TESL 404 - Understanding English Grammar for TESOL
- TESL 405 - Methods for Teaching English Grammar
- TESL 410 - Second Language Acquisition Theory for TESOL
- TESL 420 - Methods and Materials for Basic Communication
- TESL 421 - Methods and Materials for Academic Language Proficiency
- TESL 432 - Seminar in TESOL and Bilingual Education
- TESL 433 - TESOL Practicum

## **Teaching English to Speakers of Other Languages Minor**

**27 credits**

### **Introduction**

Undergraduates may choose to complete either a 27-credit minor in TESOL or a 33-credit minor in Bilingual Education, but not both. To declare the TESOL minor, students must demonstrate study of another culture (gained through experience, or the minimum of 3 credits of approved course work) and the equivalent of one year of college-level foreign language study.

### **Grade Requirements**

Students must complete the minor with a minimum GPA of 2.7 in minor course work.

## **Requirements**

- TESL 401 - Introduction to English Linguistics for TESOL
- TESL 404 - Understanding English Grammar for TESOL
- TESL 405 - Methods for Teaching English Grammar
- TESL 410 - Second Language Acquisition Theory for TESOL
- TESL 420 - Methods and Materials for Basic Communication
- TESL 421 - Methods and Materials for Academic Language Proficiency
- TESL 432 - Seminar in TESOL and Bilingual Education
- TESL 433 - TESOL Practicum

## **Literacy, Non-Thesis, MEd**

### **Graduate Faculty**

**Carney, Joanne**, PhD.

**Carroll, David**, PhD.

**Coskie, Tracy**, PhD.

**Flores, Maria**, PhD.

**French, Kristen**, EdD.

**Henniger, Michael**, PhD.

**Hoelscher, Karen**, EdD.

**Hughes, Eileen**, PhD.

**Johnson, Nancy**, PhD.

**Johnson, Paula**, PhD.

**Keiper, Robert**, EdD.

**Krogh, Suzanne L.**, PhD.

**Larson, Bruce**, PhD.

**McClanahan, Lauren**, PhD.

**Miller, Matthew**, PhD.

**Ohana, Chris**, PhD.

**Romano, Rosalie**, PhD.

**Riddle Buly, Marsha**, PhD.

**Wayne, Kathryn**, PhD.

**Wolpow, Ray**, PhD.

Graduate Program Advisor: Dr. Tracy Coskie, Miller Hall 264B, 360-650-2164

### **Program Description**

The MEd – Literacy has four main components: foundations, core study, independent research, and study in a concentration area. May provide Washington state additional endorsement in reading.

### **Program Application/Admission Requirements**

Candidates must meet the requirements of the Graduate School (see pages 58-59) in addition to the following departmental requirements:

- **Specific Test Requirements:** Miller Analogies Test or Graduate Record Exam, General Test.
- **Supporting Materials:**

- A résumé
- A statement of purpose for seeking the MEd, not to exceed one page
- An on-campus interview (only if requested by the department)
- In limited cases, students who do not meet the departmental requirements for full admission may be granted provisional admission by the Graduate School.

Students' applications are first reviewed by the Graduate School before consideration for admission to a specific program. No graduate Record Exams (GRE) or Miller Analogies Test (MAT) is required if an applicant holds an advanced degree.

### **Program Requirements (48 credits minimum)**

#### **Non-Thesis: Research Paper and General Comprehensive Exam**

- Foundations (12 cr)
  - EDUC 501 - Introduction to Educational Research
  - EDUC 505 - Creating Classrooms for Learning
  - EDUC 691 - Research Seminar and Inquiry Project
- Core (12-13 CR)
  - ELED 518 - Current Issues in Education
  - ELED 521 - Seminar in Elementary Curriculum
  - ELED 535 - Research Analysis of Current Issues in Elementary Education
- Concentration Electives (23-24 cr): Concentration electives will generally be selected, by advisement, from elementary and early childhood education, literacy, TESOL, and special education courses. Contact the department office for requirements within the various concentrations.

#### **Advancement to Candidacy**

Advancement to candidacy is formal recognition that the student has completed all admission requirements and has demonstrated satisfactory performance in at least 12 credits of graduate study. In addition to the above requirements, the department requires students to submit a proposal for a research paper (EDUC 691) for approval by the student's committee.

#### ***Research Paper***

The research paper plus comprehensive exams (EDUC 691) represent the independent research component of the program. Students design and carry out independent research under the direction of a faculty committee. Two faculty are required for the committee directing the research paper (EDUC 691).

#### **Additional Information**

#### **Competency in Instructional Technology**

Students admitted to programs in the Woodring College of Education are required to possess competence in the use of instructional technology in education prior to completion of their program and, when applicable, prior to being recommended for certification. Procedures for demonstrating or developing competence are available in Miller Hall 204.

#### **Comprehensive Assessment Woodring**

College of Education students in the Non-Thesis option are required to complete a comprehensive assessment. The format, timeline and criteria are defined by specific departments. For procedures, students should see their graduate advisors.

## **Second Master's Degree**

Enrollment must be for a single MEd, MA or MIT program. Students who have earned an MEd or MIT may apply for admission to another MEd program but all requirements of the second program must be met (with possible allowance for some course work taken in the first program). However, all programs must be completed with the minimum number of required credits.

**NOTE :** Due to a review and revision process which may affect Woodring College of Education programs and courses, the information contained in the Education section of this catalog is subject to change.

Post-baccalaureate candidates interested in combining teacher certification and master's degree study should contact the Teacher Education Admissions office or the Graduate Office.

Some programs include an internship. A Washington State Patrol/FBI fingerprint check is required of most students prior to the internship. Students should check with their department advisor for details.

## **Literacy, Thesis, MEd**

### **Graduate Faculty**

**Carney, Joanne**, PhD.

**Carroll, David**, PhD.

**Coskie, Tracy**, PhD.

**Flores, Maria**, PhD.

**French, Kristen**, EdD.

**Henniger, Michael**, PhD.

**Hoelscher, Karen**, EdD.

**Hughes, Eileen**, PhD.

**Johnson, Nancy**, PhD.

**Johnson, Paula**, PhD.

**Keiper, Robert**, EdD.

**Krogh, Suzanne L.**, PhD.

**Larson, Bruce**, PhD.

**McClanahan, Lauren**, PhD.

**Miller, Matthew**, PhD.

**Ohana, Chris**, PhD.

**Romano, Rosalie**, PhD.

**Riddle Buly, Marsha**, PhD.

**Wayne, Kathryn**, PhD.

**Wolpow, Ray**, PhD.

Graduate Program Advisor: Dr. Tracy Coskie, Miller Hall 264B, 360-650-2164

### **Program Description**

The MEd – Literacy has four main components: foundations, core study, independent research, and study in a concentration area. May provide Washington state additional endorsement in reading.

### **Program Application/Admission Requirements**

Candidates must meet the requirements of the Graduate School (see pages 58-59) in addition to the following departmental requirements:

- **Specific Test Requirements:** Miller Analogies Test or Graduate Record Exam, General Test.
- **Supporting Materials:**
  - A résumé
  - A statement of purpose for seeking the MEd, not to exceed one page
  - An on-campus interview (only if requested by the department)
  - In limited cases, students who do not meet the departmental requirements for full admission may be granted provisional admission by the Graduate School.

Students' applications are first reviewed by the Graduate School before consideration for admission to a specific program. No graduate Record Exams (GRE) or Miller Analogies Test (MAT) is required if an applicant holds an advanced degree.

### **Program Requirements**

- Foundations (12 cr)
  - EDUC 501 - Introduction to Educational Research
  - EDUC 505 - Creating Classrooms for Learning
  - EDUC 690 - Thesis
- Core (12-13 cr)
  - ELED 518 - Current Issues in Education
  - ELED 521 - Seminar in Elementary Curriculum
  - ELED 535 - Research Analysis of Current Issues in Elementary Education
- Concentration Electives (20-21 cr) Concentration electives will generally be selected, by advisement, from elementary and early childhood education, literacy, TESOL, and special education courses. Contact the department office for requirements within the various concentrations.

### **Advancement to Candidacy**

Advancement to candidacy is formal recognition that the student has completed all admission requirements and has demonstrated satisfactory performance in at least 12 credits of graduate study. In addition to the above requirements, the department requires students to submit a proposal for a thesis (EDUC 690) or research paper (EDUC 691) for approval by the student's committee.

### **Thesis**

The thesis (EDUC 690) represents the independent research component of the program. Students design and carry out independent research under the direction of a faculty committee. The thesis option (EDUC 690) requires a committee of three faculty.

### **Additional Information**

### **Competency in Instructional Technology**

Students admitted to programs in the Woodring College of Education are required to possess competence in the use of instructional technology in education prior to completion of their program and, when applicable, prior to being recommended for certification. Procedures for demonstrating or developing competence are available in Miller Hall 204.

### **Second Master's Degree**

Enrollment must be for a single MEd, MA or MIT program. Students who have earned an MEd or MIT may apply for admission to another MEd program but all requirements of the second program must be met (with possible allowance

for some course work taken in the first program). However, all programs must be completed with the minimum number of required credits.

**NOTE :** Due to a review and revision process which may affect Woodring College of Education programs and courses, the information contained in the Education section of this catalog is subject to change.

Post-baccalaureate candidates interested in combining teacher certification and master's degree study should contact the Teacher Education Admissions office or the Graduate Office.

Some programs include an internship. A Washington State Patrol/FBI fingerprint check is required of most students prior to the internship. Students should check with their department advisor for details.

## **Human Services and Rehabilitation**

### **Introduction**

The Department of Human Services and Rehabilitation is comprised of an undergraduate (B.A.) program in Human Services and a graduate (M.A.) program in Rehabilitation Counseling. Both programs are committed to an academic learning experience that integrates theory and practice using a strengths-based model of professional practice.

### **Faculty**

**ELIZABETH BOLAND** (2005) Chair and Associate Professor. Director of the Graduate Program in Rehabilitation Counseling and Director of the Department of Human Services and Rehabilitation in Everett. BBA, University of Wisconsin-Whitewater; MS, PhD, University of Wisconsin, Madison.

**JACQUELYN BAKER SENNETT** (2000) Associate Professor. AB, Occidental College; PhD, Cornell University

**ANNE BLANCHARD** (2007) Senior Instructor, Everett. BA, MEd Western Washington University; PhD, University of Washington.

**JUDITH DEIRO** (1997) Senior Instructor, Everett. BA, Oklahoma State University; MA, University of Florida; PhD, University of Washington

**RAINE DOZIER** (2008) Assistant Professor. BA State University of New York; MA, PHD University of Washington.

**DIANA JONES** (2008) Assistant Professor. BA, Adrian College; MA, Emory University; MTS, Candler School of Theology, Emory University; PhD, Vanderbilt University.

**SUSAN KINCAID** (1995) Assistant Professor. BA, MEd, Western Washington University; PhD, Walden University.

**JOHN KORSMO** (2006) Assistant Professor. BA, Portland State University; MS, PhD, University of Wisconsin Milwaukee.

**MORGAN LIVINGSTON** (1997) Senior Instructor. BA, MA, University of Oregon.

**TRULA NICHOLAS** (1994) Assistant Professor. BA, MS, Western Washington University; EdD, Nova Southeastern University.

**JANE VERNER** (1994) Senior Instructor. BS, New York University; MBA, University of Toronto.

#### *Human Services*

[www.wwu.edu/hs](http://www.wwu.edu/hs)

The Human Services major (B.A.) attracts students with a strong commitment to social and economic justice, human dignity, self-determination, and the desire to affect change through direct and indirect service delivery. Since its inception more than 35 years ago, Western has graduated thousands of human services majors who have committed their careers to the helping professions. Graduates work in agencies and organizations in such fields as mental health services, nonprofit management, human resources, faith-based services, community development, advocacy, public policy, corrections, and international relief. Graduates often serve as case managers, grant writers, educators, or administrators to address such social issues as poverty, child abuse, domestic violence, and homelessness. Many graduates pursue advanced study in social work, education, public policy, law, nonprofit management or counseling.

#### *Course of Study*

The faculty is committed to the idea that undergraduate preparation in human services requires both a strong academic foundation and a solid experiential base. Students who are enrolled in the major become members of an interdisciplinary and inter-professional community of learners who engage in classroom and field-based inquiry with WWU faculty, practicing professionals, and community members.

The human services curriculum is designed to meet National Standards in human services education as outlined by the Council for Standards in Human Service Education ([www.cshse.org](http://www.cshse.org)). Students take many of their courses as a cohort. This learning community provides students with an opportunity to build a deep understanding of the human services profession in a dynamic and collaborative learning environment. Built on a liberal arts foundation, the core of the curriculum examines the profession within the context of self and individuals, small groups, organizations, communities, and global systems. Additionally, students gain knowledge and expertise in case management and interventions, human

development, diversity and social justice, applied research, agency management, and program planning and evaluation. Partnering with community based human services agencies and organizations, the program incorporates several quarters of field study, including practicum and internship, that integrates theory, knowledge, and skills with professional practice. Together classroom and field-based study prepares graduates to confront the challenges of the 21st century. For additional information visit: [www.wvu.edu/hs](http://www.wvu.edu/hs).

### **Declaration Process**

Human services program applicants must have a 2.75 GPA or higher overall college level work or over the last 45 credits (with some exceptions as noted below) and must submit the following materials to be considered for admission to the major:

- A completed Human Services program application, including written essay
- A completed self-assessment of competency in technology use and integrated software
- A Washington State Patrol criminal history background check, including fingerprinting
- A signed contract indicating an understanding and intention to comply with the program's essential functions and expectations for academic and professional performance

Interviews may be required for admission to the program. Prospective students are encouraged to seek information available in Miller Hall 403, 360-650-7759, prior to submitting an application. Please contact the program for application deadlines. Students with a Washington state transferable Associate of Arts degree must apply to both Western and the major.

### *Admissions Exceptions*

Human Services applicants with a GPA below 2.75 may contact the department to discuss the admissions exceptions policy. A personal interview will be required.

Human Services applicants within 10 credits of completing Western's GURs or within 5 credits of receiving a direct transfer degree (AA) from a Washington state community college are eligible to apply to the program.

A minor in Human Services is not available. Non-matriculated students, undeclared majors, and/or students from other majors at Western are able to enroll in some courses on a space available basis, with permission of the department.

### *Technology Competency and Access*

Many courses in the major have an online learning component. Therefore, students admitted to the Department of Human Services and Rehabilitation are expected to maintain regular internet access and possess competence in the use of word processing, spreadsheet and database applications. All applicants are required to complete and submit the Technology Self Assessment Statement when applying to the program.

### *Program Offerings and Tuition*

The Human Services program is offered in Bellingham Everett and via Distance delivery, with classes meeting in the afternoon and evening and field-study occurring during the day.

Note that tuition rates and fees are different for students enrolling at outreach locations.

### *Program Retention and Completion*

Retention in the Human Services program is dependent upon each student's ability to meet university requirements and the program's essential functions and expectations for academic and professional performance. Prior to entering a practicum / internship placement, all students are required to successfully complete HSP 340 and the Practicum I benchmark examination. To qualify for program completion, students must successfully complete a comprehensive

capstone portfolio that demonstrates they meet both program standards and national standards in human services education, as outlined by the Council for Standards in Human Services Education (<http://www.CSHSE.org>). For additional information on the human services major, see [www.wwu.edu/hs](http://www.wwu.edu/hs).

#### *Questions*

For additional information on the Human Services program, call 360-650-7759, or e-mail [hsp.info@wwu.edu](mailto:hsp.info@wwu.edu).

#### *Rehabilitation Counseling*

[www.wwu.edu/rc](http://www.wwu.edu/rc)

The rehabilitation counseling program (M.A.) prepares graduates to work with individuals with disabilities in a variety of public and private settings. Graduates of the program are eligible to sit for the Certified Rehabilitation Counselor Examination that is required by many organizations. The program includes a combination of delivery modes , with some classes offered at the program's outreach site located at Everett Community College and other courses offered via distance in a web-based format.

### **Undergraduate Degrees and Programs**

Human Services, BA

#### **Graduate Degrees and Programs**

Rehabilitation Counseling, Non-Thesis, MA

Certificate in Rehabilitation Services

### **Human Services, BA**

**76 credits**

#### **Admission and Declaration Process**

Admission ([see Human Services and Rehabilitation department page](#))

#### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

#### **Requirements**

- Core courses (24 credits) taken in sequential order over six quarters.
  - HSP 301 - Human Services Professionals and Personal Systems
  - HSP 303 - Human Services Professionals and Interpersonal Systems
  - HSP 305 - Human Services Professionals and Small Group Systems
  - HSP 402 - Human Services Professionals Organizational Systems
  - HSP 404 - Human Services Professionals and Community Systems
  - HSP 406 - Human Services Professionals and Global Systems
- Other required courses (31 credits):
  - HSP 302 - Introduction to Human Services
  - HSP 315 - Human Development and Human Services

- HSP 325 - Interviewing for Human Services
  - HSP 345 - Case Management and Interventions
  - HSP 385 - Applied Research Methods
  - HSP 435 - Human Services and Management
  - HSP 455 - Diversity & Social Justice Dynamics
  - HSP 485 - Program Planning and Evaluation
    - Field study (16 credits):
  - HSP 340 - Practicum and Seminar I
  - HSP 341 - Practicum and Seminar II provide entry level skills prior to internship;
  - HSP 440 - Internship and Seminar (repeatable to 12 credits; 8 credits required)  
students spend 12 hours per week gaining professional experience in an approved human services setting
    - Capstone portfolio (5 credits):
  - HSP 304 - Portfolio Development in Human Services
  - HSP 495 - Capstone Portfolio
- This introduces students to portfolio learning. Students create portfolio artifacts throughout the major curriculum, and then revise and complete portfolios in a capstone course

## Certificate in Rehabilitation Services

A certificate of completion designed to assist rehabilitation professionals in acquiring national or state certification is offered through the Rehabilitation Counseling program. Admission to the program requires a bachelor's degree and either (a) two or more years of experience in a job related to rehabilitation counseling and/or serving individuals with disabilities, or (b) completion or concurrent enrollment in a master's program in counseling. The certificate program requires a student to complete 12 to 18 credits of classroom or distance learning course work. Students may select from the following courses: RC 580, 582, 585, 586, 587, 588, 589, and 590.

For further information, see the Rehabilitation Counseling program website at [www.wwu.edu/rc](http://www.wwu.edu/rc).

## Rehabilitation Counseling, Non-Thesis, MA

### Graduate Faculty

Boland, Elizabeth, PhD.

Program Director: Dr. Elizabeth Boland, 425-259-8920, [Elizabeth.Boland@wwu.edu](mailto:Elizabeth.Boland@wwu.edu).

### Program Information

Rehabilitation counselors work with people with a variety of disabilities, including physical, cognitive, sensory, learning, and psychiatric disabilities. Rehabilitation counselors are competent to provide an assessment of abilities and functional limitations, develop plans consistent with individual needs, and assist clients in achieving their goals through a variety of modalities including individual and group counseling, vocational training and education, and job development and placement. Rehabilitation counseling is a dynamic, exciting field with excellent employment opportunities in both the public and private sectors.

The Rehabilitation Counseling program prepares students to work in settings such as state and federal rehabilitation agencies, private nonprofit agencies, veterans programs, private counseling and consultation firms, hospitals, substance abuse and mental health centers, and universities. Students learn how to assist individuals in adjusting to the

psychological, social, medical, and vocational effects of a disability on their lives. Students in graduate rehabilitation counseling programs typically have completed undergraduate degrees in human services, psychology, sociology, or other areas of social services.

The degree program is completed through a combination of classroom-based and distance learning coursework. Classroom-based courses are offered at the program's off-campus site located at Everett Community College.

For further information, see the Rehabilitation Counseling program website at [www.wwu.edu/rc](http://www.wwu.edu/rc).

## **Goals**

The Master of Arts in Rehabilitation Counseling prepares rehabilitation professionals to assist individuals with disabilities to enhance their lives in significant ways, including self-determination, independence, employment, and full community participation. The program is fully accredited by the Council on Rehabilitation Education (CORE).

The program prepares rehabilitation professionals to work in a variety of public and private settings.

## **Application Information**

**Admit Quarters:** Fall, winter.

**Application Deadlines:** Application deadlines are June 1 for fall quarter and October 1 for winter quarter.

## **Supporting Materials:**

Candidates must meet the requirements of the Graduate School in addition to the following departmental requirements:

- The Miller Analogies Test (MAT) is preferred or the Graduate Record Exam, General Test; test scores are not required if an applicant holds an advanced degree from an accredited college or university
- Three current references
- A current résumé
- A typed personal statement outlining the rationale for applying to the program. The statement should address career objectives, rationale for choosing this program, professional and personal strengths as they apply to the field of rehabilitation counseling, related work experiences, the way in which personal and professional life experiences have converged to motivate application to the program, a statement of goals and interests which demonstrates and illustrates the applicant's personal value system, computer competence, and other insights as deemed appropriate by the applicant
- A personal interview
- Access to computer, necessary software, and computer competencies are required

Please collect all application materials, then forward the packet directly to the Graduate School, Old Main 530.

## **Admission**

Successful candidates must demonstrate their commitment to working with individuals with disabilities to assist them to adjust to the psychological, social, medical, and vocational impact of a disability on their lives. The commitment may be demonstrated by either work or volunteer experiences with persons with disabilities. Applicants are expected to demonstrate strong writing skills.

## **Retention**

In addition to Graduate School and University policies, retention in the Rehabilitation Counseling program is dependent upon the development of professional competencies in interaction with clients and other professionals, especially as related to practice, practicum, and internship requirements. Development of professional competencies is monitored and

evaluated on a yearly basis by the faculty of the program and will serve as a basis for retention of the student in the Rehabilitation Counseling program.

## **Program of Study**

### **Requirements (minimum 72 credits)**

#### **Core (41 credits)**

- RC 501 - Rehabilitation Research
- RC 580 - Theory of Rehabilitation Counseling
- RC 582 - Introduction to Rehabilitation Counseling
- RC 583 - Practice of Rehabilitation Counseling
- RC 584 - Group Counseling Techniques in Rehabilitation
- RC 585 - Social, Psychological and Attitudinal Aspects of Disability
- RC 586 - Medical Aspects of Disability
- RC 587 - Utilization of Tests and Evaluation Tools
- RC 588 - Occupational Information and Career Development
- RC 589 - Case Management in Rehabilitation
- RC 590 - Employment Strategies and Job Placement
- RC 594 - Introduction to Psychiatric Rehabilitation
- RC 595 - Cognitive Disabilities in Rehabilitation
  - Practicum/Internship: (25 credits)
- RC 591 - Practicum in Rehabilitation Counseling
- RC 592 - Internship in Rehab Counseling
  - Electives selected under advisement (6 credits)

### **Comprehensive Examination**

Students are required to pass a comprehensive examination prior to graduation during the last quarter in the program.

#### **Additional Information**

##### *Competency in Instructional Technology*

Students admitted to programs in the Woodring College of Education are required to possess competence in the use of instructional technology in education prior to completion of their program and, when applicable, prior to being recommended for certification. Procedures for demonstrating or developing competence are available in Miller Hall 204.

##### *Comprehensive Assessment*

Woodring College of Education students in Option II are required to complete a comprehensive assessment. The format, timeline and criteria are defined by specific departments. For procedures, students should see their graduate advisors.

##### *Second Master's Degree*

Enrollment must be for a single MEd, MA or MIT program. Students who have earned an MEd or MIT may apply for admission to another MEd program but all requirements of the second program must be met (with possible allowance

for some course work taken in the first program). However, all programs must be completed with the minimum number of required credits.

**NOTE:** Due to a review and revision process which may affect Woodring College of Education programs and courses, the information contained in the Education section of this catalog is subject to change.

Post-baccalaureate candidates interested in combining teacher certification and master's degree study should contact the Teacher Education Admissions office or the Graduate Office.

Some programs include an internship. A Washington State Patrol/FBI fingerprint check is required of most students prior to the internship. Students should check with their department advisor for details.

## **Secondary Education**

- Secondary Education Programs
- Certification
- Choosing an Academic Major / Endorsement
- Undergraduate and Post-Baccalaureate Certification Program
- Other Departmental Information

### **Introduction**

The Department of Secondary Education offers professional education programs that lead to recommendation to the Office of the Superintendent of Public Instruction for residency teacher certification in the state of Washington. The programs in secondary education are designed to prepare thoughtful, knowledgeable, and effective middle and secondary school teachers for a diverse society.

Consistent with state and national standards for what teachers should know and be able to do, the secondary education curriculum is a carefully sequenced professional program that is firmly backed by current research on effective teaching and learning. The program reflects a framework which embraces the artistic, scientific, and professional aspects of teaching.

Programs which address residency teacher certification require students to complete an academic major, the teacher certification sequence and a semester internship. Upon completion of the program successful candidates will be recommended to the Certification Office of the Superintendent of Public Instruction to receive a certificate to teach in their endorsed field.

### *Information*

Individuals interested in teacher certification can obtain information from the Website at [www.wce.wwu.edu/Admiss](http://www.wce.wwu.edu/Admiss). Inquiries should be directed to Woodring College Teacher Education Admissions Student Services, Miller Hall 250, phone 360-650-3313, e-mail address [TeacherAdmissions@wwu.edu](mailto:TeacherAdmissions@wwu.edu). Written inquiries may be addressed to Teacher Education Admissions, Western Washington University, MS-9090, 516 High St., Bellingham, WA 98225-9090.

Information about secondary education programs may be obtained by visiting the department website at [www.wce.wwu.edu/Depts/SEC](http://www.wce.wwu.edu/Depts/SEC). Advising related to the academic major or endorsement will take place in the academic major department. Students should meet with an academic major advisor before consulting with a secondary education advisor. Questions may be directed to the secondary education department in Miller Hall 173, by phone at 360-650-3327, or by e-mail to [Patricia.Roberts@wwu.edu](mailto:Patricia.Roberts@wwu.edu).

Those persons interested in graduate programs should consult the Graduate School section of this catalog or contact the graduate school directly, phone 360-650-3170, e-mail [gradschl@wwu.edu](mailto:gradschl@wwu.edu). Written inquiries may be addressed to the Graduate School, Old Main 530, Western Washington University, MS-9037, 516 High St., Bellingham, WA 98225-9037.

### **Faculty**

**RAY WOLPOW** (1994) Chair and Professor. BA, Wagner College; MA, Columbia University; PhD, Pennsylvania State University.

**DONALD BURGESS** (2004) Assistant Professor. MSEd, State University of New York, Cortland; PhD, University of British Columbia.

**ANGELA HARWOOD** (1997) Professor. BA, University of Utah; MA, PhD, Emory University.

**LORRAINE KASPRISIN** (Educational Foundations) (1979) Professor. BA, MA, The College of the City of New York; MPhil, PhD, Teachers College, Columbia University.

**ROBERT KEIPER** (1990) Associate Professor. BA, Kearney State College; MA, EdD, University of Northern Colorado.

**TIMOTHY KEIPER** (1997) Associate Professor. BA, University of Northern Colorado; MA, EdS, PhD, University of

Missouri-Columbia.

**BRUCE LARSON** (1996) Professor. BAE, Pacific Lutheran University; MEd, PhD, University of Washington.

**MOLLY LAWRENCE** (2007) Assistant Professor. BA, Principia College; MEd, University of Georgia.

**LAUREN MCCLANAHAN** (2000) Associate Professor. BA, MA, PhD, The Ohio State University.

**VICTOR NOLET** (1997) Professor. BA, MEd, University of Maine;Ph.D., University of Oregon

**ROSALIE ROMANO** (2008) Assistant Professor. BA, PhD, University of Washington

**CHRISTINE SCHAEFER** (1996) Affiliated Teaching Faculty. BA, Whitman College; MEd, PhD, University of Washington.

**SHELBY SHEPPARD** (Educational Foundations) (1997) Assistant Professor. MA, BGS, PhD, Simon Fraser University.

#### *Secondary Education Programs*

The Department of Secondary Education offers two programs which lead to teacher certification by the state of Washington.

- Secondary Education: Undergraduate and Postbaccalaureate
  - This secondary education program leads to a recommendation to the state of Washington for a teaching certificate endorsed in at least one subject area. This program requires completion of the secondary professional education course sequence, a baccalaureate degree and academic preparation for a qualifying endorsement, and a full semester internship
- Master's in Teaching with Residency Certification (MIT)
  - This program is designed for candidates who have already completed a baccalaureate degree and academic preparation for a qualifying endorsement and who wish to complete a master's degree while gaining teacher certification. The MIT program is available on the Western campus or at the off-campus site in Everett.

#### *Certification*

The Washington Administrative Code specifies the requirements for earning a Washington state teacher certificate. State-approved preparation programs and certification requirements align with state learning goals and essential academic learning requirements, and require candidates to demonstrate that they have made a positive impact on student learning. First-level residency certification programs are designed around the standards of foundational knowledge, effective teaching, and professionalism. Second-level professional certification programs are designed around the standards of effective teaching, professional development, and professional contribution. Teacher certificates are issued by the state, upon the recommendation of the regionally accredited college or university where the candidate completed a state-approved preparation program.

**State requirements for teacher certification at the time of completion of a student's program will supersede those outlined in this catalog. These changes may affect the time it takes for a student to complete the teacher education program.**

#### *Residency Teacher Certification*

**The first-level residency certificate is awarded to new teachers upon the completion of these general requirements:**

- A baccalaureate or higher-level degree from a regionally accredited college or university
- A state-approved, performance-based teacher preparation program that includes preparation in an endorsable subject area, teaching methodology, and an internship
- Evidence of good moral character and personal fitness

Candidates for residency certification must pass a subject knowledge assessment, the Washington Educator Skills Test — Endorsements (WEST-E), to receive an endorsement for certification. WWU requires submission of a passing WEST-E score for each endorsement to be earned, before commencement of the student teaching internship. For current information on test requirements, registration, fees, and test dates and locations, refer to the WEST-E Resource Website,

[www.wce.wwu.edu/Resources/Endorsements/WEST-E.shtml](http://www.wce.wwu.edu/Resources/Endorsements/WEST-E.shtml). Candidates for residency certification must also complete the state of Washington Performance-based Pedagogy Assessment during the student teaching internship. Application for the residency certificate is made to Woodring College Teacher Certification, Student Services, Miller Hall 250, 360-650-4930, no later than three months prior to the start of student teaching.

The first-issue residency certificate is valid until completion of two consecutive years of certificated employment and acceptance of a third year contract with a Washington State public school district or a state-approved private school. Application is then made for a reissued residency certificate, valid for an additional five-year term.

#### *Professional Teacher Certification*

The second-level professional certificate is awarded to experienced teachers who hold a valid residency certificate and who pass the Washington ProTeach Portfolio assessment or earn national board certification through the National Board of Professional Teaching Standards. For further information, contact the Woodring College of Education certification officer at 360-650-4630, Miller Hall 250.

#### *Endorsements*

An endorsement identifies the subject matter in which a teacher is prepared and authorized by the state to teach. One qualifying endorsement is required for residency certification. Courses required for a state teaching endorsement and the professional education sequence must be completed with a grade of C (2.0) or better. Secondary education students earn a qualifying endorsement by completing a state-approved program delivered through an academic major or approved equivalent. Students completing a major in theatre arts, physical education and health, music, special education, visual arts or world languages (Spanish, French, German or Japanese) will be prepared to teach grade levels P-12. The remaining majors prepare students to teach at the secondary level. The secondary education department also offers an additional endorsement in Humanities — Middle Level. For information on additional endorsement programs offered throughout the University, contact the Woodring College of Education certification officer at 360-650-4630, Miller Hall 250.

#### *Choosing an Academic Major / Endorsement*

Secondary education graduates are in high demand as teachers in many fields and grade levels. Areas of greatest demand fluctuate. Students who are interested in a teaching career are encouraged to visit the Career Services Center, Old Main 280, for information as to which endorsements are in greatest demand. Certain academic majors require sequences of classes in the first two years of college in order to complete a baccalaureate degree in four years. All secondary education students are advised to speak with an academic department advisor. The following Western Washington University majors or approved equivalent meet content requirements for a qualifying teaching endorsement:

#### *Secondary Level (Middle and High School)*

- English-Literature Emphasis
- Mathematics - Secondary
- Sciences:
  - Biology
  - Chemistry
  - Chemistry/Biology - Secondary
  - Chemistry/Mathematics - Secondary
  - Chemistry/Physics - Secondary
  - Earth Science - Secondary
  - Earth Science/Science - Secondary
  - Physics/Mathematics - Secondary

- General Science - Secondary (Biology, Chemistry, Earth & Space Science or Physics; and Science)
- Social Studies:
  - Anthropology/Social Studies
  - Economics/Social Studies
  - Geography/Social Studies
  - History/Social Studies
  - Political Science/Social Studies
  - Sociology/Social Studies

*All Levels (P-12)*

- Art - P-12 Specialist
- Dance, BA
- Dance, BFA
- French with a Teaching Endorsement
- German with a Teaching Endorsement
- Japanese with a Teaching Endorsement
- Music Education - P-12 Choral, General or Instrumental
- Physical Education & Health - P-12
- Spanish with a Teaching Endorsement
- Special Education - P-12
- Theatre Arts - P-12

The No Child Left Behind (NCLB) "highly qualified teacher" requirement may impact eligibility for certain middle school teaching assignments in a core academic subject(s). Students are responsible for consulting with an advisor for further information on NCLB.

*Content Methods Courses*

Content methods courses are required for all endorsements. For specific course numbers and schedule information, students are advised to contact their academic department advisor.

**Undergraduate and Post-Baccalaureate Certification Program**

*Program Length*

While it is possible, in some majors, to earn a bachelor's degree and residency teaching certificate in four academic years, most students require closer to five years. Undergraduate students usually take certification courses while completing their academic major during their junior and senior years. Students who apply to the undergraduate certification program should have satisfied all of the General University Requirements and should have completed some course work toward their academic major.

Students in the post-baccalaureate program usually complete the certification sequence in three academic quarters plus a one-semester internship. This time frame could be extended if additional course work is needed to meet department or state endorsement requirements. Applicants to the post-baccalaureate program who have completed a baccalaureate degree and academic preparation for a qualifying endorsement are strongly encouraged to apply to the MIT program outlined below.

### *Admission Requirements*

All applicants to the Woodring College of Education programs must be formally admitted to and currently enrolled at Western Washington University or must apply to Western for the same quarter they apply to teacher education. Woodring College teacher education program application materials are available in Miller Hall 250 and are also printable from [www.wce.wwu.edu/Admiss](http://www.wce.wwu.edu/Admiss).

The requirements listed below are minimum application criteria. Enrollment restrictions apply to teacher education programs. Meeting the following requirements makes the applicant eligible for admission consideration but does not guarantee admission. Students who meet all criteria are further evaluated to determine the most qualified applicants. Students will be evaluated on all information provided with the application, including required copies of transcripts from all prior colleges. Application criteria:

- Completion of at least 75 quarter credits of college-level course work
- Cumulative grade point average of 2.75 or higher over all college-level work or over the last 45 credits
- Passing score on all three subtests (reading, mathematics, writing) of the Washington Educator Skills Test-Basic (WEST-B). Visit the WEST-B Website at [www.west.nesinc.com](http://www.west.nesinc.com) for more information
- Completion of an English composition course with a grade of B (3.0) or higher
- Adequate academic major preparation. Please see an advisor from the academic major department prior to submitting an application to Secondary Education or consulting with a Secondary Education advisor. The academic major departments will participate in file review and recommendations for admission
- Consideration will be given to those applicants with endorsements in academic areas of current critical need

### *Advising and Orientation*

Upon acceptance, each student is assigned a secondary education faculty advisor. **All newly accepted students must attend a required orientation and advising session before beginning first quarter classes.** Students may be dropped from Secondary Education for failing to attend the required orientation.

### *Program Continuation*

Students admitted to the Woodring College of Education must meet specified requirements throughout the course of their teacher education program in order to remain in the program.

### *Requirements Upon Program Admission*

- Completion of an *Institutional Application for a Teacher's Certificate and Character and Fitness Supplement*, and background checks as described below under *Character and Fitness*
- Completion of the Woodring College of Education Prevention of Sexual Harassment Training
- Completion of the Woodring College of Education Blood-Borne Pathogens Training

### *Character and Fitness*

The Washington Administrative Code requires applicants for teacher certification to give evidence of "good moral character and personal fitness." Students provide evidence of character and fitness through two separate but related processes:

- Institutional Application for a Teacher's Certificate and Character and Fitness Supplement, provided to students upon acceptance into the program. The application for certification requires candidates to answer questions regarding professional fitness, criminal history and personal conduct. Students with "yes" responses must report to the certification officer in Miller Hall 250 before registering for classes.
- Washington State Patrol and FBI background checks through a fingerprinting process. Procedures and fee information are provided to students upon acceptance into the program.

**No student in a teacher education program may participate in a University-sponsored activity in the public schools until cleared by the Washington State Patrol, or in some cases, investigated and then cleared by the Washington State Office of Superintendent of Public Instruction.** Clearances are validated for specified time frames. Students must maintain character and fitness clearance until they have been recommended for a residency teacher certificate following completion of the teacher education program.

In addition to the Washington state character and fitness requirements noted above, students must abide by the Woodring College of Education conduct policies acknowledged in the Student Conduct and Requirements Agreement, which is submitted with program application materials.

#### *General Retention Requirements*

- Students must maintain at least a 2.75 GPA (graduate students a 3.0 GPA), beginning with the quarter they are notified of admission to Secondary Education. This requirement applies even to quarters where no education courses are being taken. Students who fail to meet this standard will receive a letter advising them that they have been dropped from the program. Grade point average for the academic major or minor may differ among academic departments
- Students must earn a grade of C (2.0) or better in both the professional education sequence and in all courses required for the endorsement
- Students must successfully complete a minimum of one certification course each calendar year
- Students must demonstrate a high level of competence in the English language. Those who have a difficulty in their verbal and/or written communications should expect to seek remediation before beginning the internship
- Students are responsible for compiling a portfolio illustrating the quality of their work in each professional education class. This portfolio will be submitted to the instructor of the SEC 432 (SEC 533 for graduate students) course prior to the internship
- Students must complete all certification and endorsement course work
- Students are required to conduct themselves in a professional manner, in terms of moral code, use of written or verbal language, abstention from sexual harassment, gender, ethnic and racial bias

#### *Program Completion*

To qualify for program completion and recommendation for state of Washington residency certification, students must complete the following requirements and assessments:

- A baccalaureate or higher-level degree from a regionally accredited college or university
- A state-approved, performance-based teacher preparation program that includes preparation in an endorsable subject area, teaching methodology, and an internship
- Evidence of good moral character and personal fitness
- Completion of the Woodring College of Education prevention of sexual harassment training II.
- Minimum scores set by the state of Washington on the Washington Educator Skills Test (WEST-E) for the qualifying endorsement area(s) required by the teacher preparation program
- Completion of the Washington Performance-based Pedagogy Assessment
- Successful completion of the student teaching internship as shown by performance on the WWU Intern Development and Evaluation System (IDES)
- Students who interrupt enrollment in a teacher education program for more than two consecutive quarters (summer quarter not included) must meet all program admission, completion and certification requirements in place for the quarter in which they expect to return

## **Other Departmental Information**

### *Internships*

All secondary internships are a **semester** in length and require students to teach under the direct supervision of a certified teacher in a school setting. While sequences of activities differ within different placements, generally speaking, interns spend time early in the semester being acclimated to the school, students and affiliated clinical faculty (cooperating teacher), and begin teaching by assuming responsibility for one class per day for a period of time and gradually work toward assuming responsibility for teaching four to five classes per day for the final eight to ten weeks of the semester.

Teaching internships will begin upon completion of all certification course work and upon a recommendation of the secondary faculty. The secondary faculty review the list of interns for the forthcoming semester internship and review the portfolios of any students whom they feel may not be competent to student teach.

Recommendation by the secondary faculty is based on an evaluation of the student's competence in the following:

- written communication
- verbal communication
- presentation skills
- working with students from racial and ethnic populations other than his/her own, and with special needs students
- academic major requirements
- student portfolio
- Teacher Education Knowledge and Skills Performance Standards and Secondary Education Department Code of Ethics

Should the faculty question the readiness of the student for the internship, a conference with a faculty review committee will be arranged, at which time faculty concerns will be presented to the student. The student will have the opportunity to defend the materials viewed by the faculty and bring forth any supporting evidence. Following the conference the faculty will make one of the following decisions: 1) approval to begin the internship, 2) develop a plan for monitoring specific behaviors during the internship, 3) develop a plan for remediation, delaying the internship, or 4) drop the student from the program.

The semester internship spans two academic quarters. Students must successfully complete the entire semester to receive credit for the internship and recommendation for certification.

### *Application for Internship*

The Office of Field Experiences is the service agency of the College of Education which seeks placements for prospective interns. Students must have completed Prevention of Sexual Harassment Training I and II, Blood-borne Pathogens Training, a residency teacher certificate application packet including endorsement evaluation, and Washington State Patrol/FBI fingerprinting before OFE will seek an internship placement.

Before commencement of the internship, passing scores on the WEST-E for each endorsement must be submitted, all education and endorsement course work and practica must be completed, and fingerprint/character and fitness clearance must be valid. Students who interrupt enrollment for a quarter or more must meet the deadline for filing a returning student application.

OFE does not guarantee placements and reserves the right to place students anywhere within the WWU service area.

Placement in a school is contingent on:

- Fulfillment of all requirements (satisfactory academic work, education and endorsement program course work, and practica)

- Submission of passing scores on the WEST-E tests in their endorsement areas
- Availability of placements and supervision in specific subjects, grade levels, and specific geographic area
- Acceptance by P-12 school personnel
- Fingerprint clearance, and character and fitness clearance through the end of the internship

Students are required to interview with the certified teacher and/or school administrator at the school where the placement is being considered. A maximum of three interviews for an internship placement are arranged by OFE. Any subsequent placement after a voluntary or nonvoluntary withdrawal from an internship is granted only by faculty recommendation following a case conference.

Time commitment to the internship requires seven clock hours daily Monday through Friday plus preparation time, seminars, and responsibilities outside the school. Students should not register for other course work, hold jobs, or obligate themselves to time-demanding commitments without the approval of the department chair and OFE.

Students must submit an application for an internship placement to OFE in January prior to a fall/winter internship or in April prior to a winter/spring internship. All out-of-area or special placement requests require a petition. Applications, placement locations, petitions, and other information are available in the Office of Field Experiences, Student Services, Miller Hall 250.

### **Secondary Education Programs**

Humanities - Middle Level - Additional Endorsement

Secondary Education Undergraduate and Post-baccalaureate Professional Program

### **Graduate Degrees and Programs**

Master in Teaching, Non-Thesis, MIT

Master in Education, MEd

## **Humanities — Middle Level - Additional Endorsement**

**30-38 credits**

### **Introduction**

This additional endorsement program must be accompanied by the professional preparation program in secondary education, and preparation for an English Language Arts or Social Studies endorsement. Professional education program admission, completion, and teacher certification requirements are provided within this *Secondary Education* section of the catalog.

Secondary education students who complete this program will build on their preparation for an English Language Arts or Social Studies endorsement to earn an additional endorsement in Middle Level Humanities. The Middle Level-Humanities endorsement prepares individuals to teach these core subjects and an integrated language arts/social studies core block classroom in the middle and junior high school.

### **Admission and Declaration Process**

Admission Requirements (see Secondary Education department page)

## **Grade Requirements**

Students must earn a grade of C (2.0) or better in the secondary education professional program and in all courses required for the endorsement

## **Requirements**

### **Middle School Pedagogy**

- SEC 450 - Introduction to Middle Schools
- SEC 451 - Curriculum and Instruction in Middle Schools — taken in place of SEC 431
- SEC 452 - Intensive Middle School Practicum — taken in place of SEC 435

### **Content and Methods — Option I or Option II**

#### **Option I - Requirements**

##### **English Language Arts Endorsement**

See English for a description of the major in English – Literature Emphasis with Teaching Endorsement leading to an endorsement in English Language Arts.

##### **Social Studies Supporting Component**

- EGEO 201 - Human Geography
- HIST 103 - Introduction to American Civilization: American History to 1865
- HIST 104 - Introduction to American Civilization: American History Since 1865
- HIST 391 - History of the Pacific Northwest
- HIST 111 - Introduction to Western Civilization: Prehistory to 476
- PLSC 250 - The American Political System
- SEC 426 - Social Studies for the Secondary School
- One course from:
  - ECON 206 - Introduction to Microeconomics
  - ECON 446 - Economics for the Teacher

#### **Option II - Requirements**

##### **Social Studies Endorsement**

See Social Studies Education for majors leading to the endorsement in Social Studies. Students earning the Middle Level Humanities additional endorsement under Option I should include HIST 111 in their selection of history courses for the Social Studies endorsement.

##### **English Language Arts Supporting Component**

- ENG 202 - Writing About Literature
- ENG 370 - Introduction to Language
- ENG 443 - Teaching English Language Arts in the Secondary Schools I
- One course from:
  - ENG 347 - Studies in Young Adult Literature
  - ENG 441 - Children's Literature for the Elementary and Middle School Teacher

- One course from:
  - ENG 301 - Writing Studies
  - ENG 302 - Introduction to Technical and Professional Writing
  - ENG 350 - Introduction to Creative Writing
  - ENG 371 - Studies in Rhetoric and Rhetorical Analysis

#### **Additional Requirements**

#### **Link to Woodring College of Education**

#### ***Secondary Education Undergraduate and Post-baccalaureate Professional Program Requirements (68 credits)***

- EDUC 301 - Educational Psychology I: Development and Individual Differences
- EDUC 302 - Educational Psychology II: Motivation, Learning and Assessment
- EDUC 310 - The Teacher and the Social Order
- IT 444 - Classroom Use of Instructional Technology (Secondary)
- SEC 410 - Dynamics of Teaching
- SEC 411 - Philosophical Foundations of Education
- SEC 425 - Developmental Reading, Writing and Learning in Secondary Schools
- SEC 430 - Secondary School Methods I - Instructional Strategies, Daily Planning, and Standards
- SEC 431 - Secondary School Methods II-Assessment and Long Term Planning
- SEC 432 - Secondary School Methods III - Management, Motivation and Discipline
- SEC 433 - Peer Teaching Laboratory
- SEC 435 - Middle Level Practicum
- SEC 436 - Secondary School Practicum
- SEC 495 - Internship - Secondary
- SPED 363 - Secondary Students With Special Needs

### **Secondary Education Undergraduate and Post-baccalaureate Professional Program**

**68 credits**

#### **Admission and Declaration Process**

Admission Requirements ([see Secondary Education department page](#))

#### **Grade Requirements**

Students must earn a grade of C (2.0) or better in the secondary education professional program and in all courses required for the endorsement.

#### **Requirements**

- EDUC 301 - Educational Psychology I: Development and Individual Differences
- EDUC 302 - Educational Psychology II: Motivation, Learning and Assessment
- EDUC 310 - The Teacher and the Social Order
- IT 444 - Classroom Use of Instructional Technology (Secondary)
- SEC 410 - Dynamics of Teaching

- SEC 411 - Philosophical Foundations of Education
- SEC 425 - Developmental Reading, Writing and Learning in Secondary Schools
- SEC 430 - Secondary School Methods I - Instructional Strategies, Daily Planning, and Standards
- SEC 431 - Secondary School Methods II-Assessment and Long Term Planning
- SEC 432 - Secondary School Methods III - Management, Motivation and Discipline
- SEC 433 - Peer Teaching Laboratory
- SEC 435 - Middle Level Practicum
- SEC 436 - Secondary School Practicum
- SEC 495 - Internship - Secondary
- SPED 363 - Secondary Students With Special Needs

Academic content methods courses are required for content methods courses are required for all major endorsement areas. For specific course numbers and schedule information, students are advised to contact their academic major department advisor.

## **Master in Education, MEd**

This program is not currently accepting new students. For further information contact the Graduate School, Western Washington University, 516 High St., Bellingham, WA 98225-9037, 360-650-3170, [gradschool@wwu.edu](mailto:gradschool@wwu.edu).

## **Master in Teaching, Non-Thesis, MIT**

### **Graduate Faculty**

**Harwood, Angela**, PhD, graduate advisor.  
**Kasprisin, Lorraine**, PhD.  
**Keiper, Robert**, EdD, graduate advisor.  
**Keiper, Timothy**, PhD.  
**Larson, Bruce**, PhD.  
**Lawrence, Molly**, PhD.  
**McClanahan, Lauren**, PhD., graduate advisor.  
**Nolet, Victor**, PhD.  
**Romano, Rosalie**, Ph.D.  
**Sheppard, Shelby L.**, PhD., graduate advisor  
**Wolpow, Ray**, PhD.

Graduate Advisor: Dr. Robert Keiper, Miller Hall 166, 360-650-3986, [Robert.Keiper@wwu.edu](mailto:Robert.Keiper@wwu.edu)

### **Program Description**

This degree program is designed for candidates who wish to complete a master's degree while gaining state of Washington residency certification. Candidates must have completed a baccalaureate degree and academic preparation for a qualifying endorsement. This degree program combines the endorsement preparation with a graduate-level program of certification course work to produce a Master in Teaching program. This degree is firmly backed by current research of effective teaching and reflects a conceptual framework which embraces three basic strands in education: artistic, scientific and professional. Completion of the MIT sequence usually takes two years.

The MIT program is available on the Bellingham campus or the University Center of North Puget Sound at Everett Community College.

## **Goals**

The program prepares candidates to teach at the secondary school level (middle and high school).

## **Prerequisites/Qualification Examination**

Candidates must meet the admission requirements of the Graduate School (see Graduate School Admissions section in this catalog) as well as the following department requirements:

- Graduate Record Exam,\* General Test, with a combined minimum score of 1,000 on the Verbal and Quantitative, and a minimum of 4.5 on the Analytic Writing; or Miller Analogies Test, with a score of 403. Test scores are not required if an applicant holds an advanced degree
- Minimum passing scores on all three subtests (reading, math, writing) of The Washington Educator Skills Test - Basic (WEST-B). For schedule and registration information, refer to the WEST-B website, [www.west.nesinc.com](http://www.west.nesinc.com). Out-of-state applicants may meet this requirement through alternative tests and should contact the secondary education department for further information
- English composition course with a grade of B or better
- Interview by secondary education faculty. Details will be provided once applications are received

\*GRE preferred, as it more accurately indicates an applicant's potential for success in this program.

**Candidates for the Master in Teaching Degree** must have completed a baccalaureate degree and academic preparation for a qualifying endorsement. (see listing of WWU academic majors in the Secondary Education section of the current catalog). The MIT leads to a recommendation to the Office of the Superintendent of Public Instruction for State of Washington residency teacher certification. Teacher certification candidates must sign the "Student Conduct Requirements and Agreement" form, complete **Character and Fitness** requirements, the sexual harassment prevention education workshop, and the blood-borne pathogen workshop. It is possible to be awarded certification prior to completion of master's degree requirements; the MIT will be awarded only to those who successfully complete all requirements for Washington state certification, including a successful student internship. Therefore, the MIT cannot be awarded without certification.

## **Program Application/Admission Requirements**

Applications and supporting materials must be received by the Graduate School for the corresponding quarter of admission by the following deadlines for priority consideration:

- Fall quarter: April 1
- Winter quarter: October 1
- Everett location (summer quarter only):\* February 1

\*This off-campus, summer-start program admits students only for summer; Late applications accepted only on a space available basis.

Required supporting materials include:

- Résumé
- A personal statement that describes your experience(s) with adolescents and background as it applies to the teaching profession. The secondary education faculty believe experience with diverse, multicultural populations benefit prospective teachers. Make sure to include any and all background or experience(s) you have had with diverse populations
- Three letters of recommendation that address 1) your educational potential to do graduate-level course work; 2) your successful experience with adolescents and your experience with diverse populations; and 3) character and maturity

- English competency:  
Completion of an approved English composition course, with a grade of B or higher. ENG 101, 201, 202 and 301 at Western or equivalent courses fulfill this requirement.
- An interview with Secondary Education faculty
- Student Conduct:  
The **Student Conduct Requirements and Agreement** portion of the supplemental Woodring College application must be completed

Students' applications are first reviewed by the Graduate School before consideration for admission to a specific program.

No graduate Record Exams (GRE) or Miller Analogies Test (MAT) is required if an applicant holds an advanced degree.

### **Advising and Orientation**

Upon acceptance, each student is assigned a education graduate faculty advisor. All newly accepted secondary students must attend a required orientation and advising session before beginning first quarter classes. Students may be dropped from Secondary Education for failing to attend the required orientation.

### **Program Length**

All requirements for the degree must be completed within five years of the initial quarter of registration. Normally, full-time graduate students complete the program in two years. This time frame could be extended if additional course work is needed to meet department or state endorsement requirements.

### **Program Continuation**

Students admitted to the Woodring College of Education must meet specified requirements throughout the course of their teacher education program in order to remain in the program.

### **Requirements Upon Program Admission**

- Completion of an **Institutional Application for a Teacher's Certificate and Character and Fitness Supplement**, and background checks as described below under **Character and Fitness**
- Completion of the Woodring College of Education Prevention of Sexual Harassment Training
- Completion of the Woodring College of Education Blood-Borne Pathogens Training

### **Character and Fitness**

The Washington Administrative Code requires applicants for teacher certification to give evidence of "good moral character and personal fitness." Students provide evidence of character and fitness through two separate but related processes:

- Institutional Application for a Teacher's Certificate and Character and Fitness Supplement, provided to students upon acceptance into the program. The application for certification requires candidates to answer questions regarding professional fitness, criminal history and personal conduct. Students with "yes" responses must report to the certification officer in Miller Hall 250 before registering for classes.
- Washington State Patrol and FBI background checks through a fingerprinting process. Procedures and fee information are provided to students upon acceptance into the program.

**No student in a teacher education program may participate in a University-sponsored activity in the public schools until cleared by the Washington State Patrol, or in some cases, investigated and then cleared by the Washington State Office of Superintendent of Public Instruction.** Clearances are validated for specified time frames.

Students must maintain character and fitness clearance until they have been recommended for a residency teacher certificate following completion of the teacher education program.

In addition to the Washington state character and fitness requirements noted above, students must abide by the Woodring College of Education conduct policies acknowledged in the Student Conduct and Requirements Agreement, which is submitted with program application materials.

### **General Retention Requirements**

- Students must maintain at least a 2.75 GPA (graduate students a 3.0 GPA), beginning with the quarter they are notified of admission to Secondary Education. This requirement applies even to quarters where no education courses are being taken. Students who fail to meet this standard will receive a letter advising them that they have been dropped from the program. Grade point average for the academic major or minor may differ among academic departments
- Students must earn a grade of C (2.0) or better in both the professional education sequence and in all courses required for the endorsement
- Students must successfully complete a minimum of one certification course each calendar year
- Students must demonstrate a high level of competence in the English language. Those who have a difficulty in their verbal and/or written communications should expect to seek remediation before beginning the internship
- Students are responsible for compiling a portfolio illustrating the quality of their work in each professional education class. This portfolio will be submitted to the instructor of the SEC 432 (SEC 533 for graduate students) course prior to the internship
- Students must complete all certification and endorsement course work
- Students are required to conduct themselves in a professional manner, in terms of moral code, use of written or verbal language, abstention from sexual harassment, gender, ethnic and racial bias

### **Program Completion**

To qualify for program completion and recommendation for state of Washington residency certification, students must complete the following requirements and assessments:

- A baccalaureate or higher-level degree from a regionally accredited college or university
- A state-approved, performance-based teacher preparation program that includes preparation in an endorsable subject area, teaching methodology, and an internship
- Evidence of good moral character and personal fitness
- Completion of the Woodring College of Education prevention of sexual harassment training II.
- Minimum scores set by the state of Washington on the Washington Educator Skills Test (WEST-E) for the qualifying endorsement area(s) required by the teacher preparation program
- Completion of the Washington Performance-based Pedagogy Assessment
- Successful completion of the student teaching internship as shown by performance on the WWU Intern Development and Evaluation System (IDES)
- Students who interrupt enrollment in a teacher education program for more than two consecutive quarters (summer quarter not included) must meet all program admission, completion and certification requirements in place for the quarter in which they expect to return

### **Requirements**

- Research and Foundations — 12 credits
  - SEC 501 - Introduction to Educational Research Inquiry for Secondary Teachers
  - SEC 512 - Seminar in Educational Philosophy
  - SEC 513 - Seminar in Socio-Cultural and Legal Issues in Education
- Secondary Master's Requirements — 34 credits

- SEC 433 - Peer Teaching Laboratory
- SEC 435 - Middle Level Practicum
- SEC 436 - Secondary School Practicum
- SEC 510 - Teacher As Communicator
- SEC 525 - Content Reading, Writing and Communication in Secondary Schools
- SEC 531 - Teaching Adolescents
- SEC 532 - Curriculum and Instruction in Secondary Schools
- SEC 533 - Assessment and Professional Development in Secondary Schools
- SEC 534 - Management, Motivation and Discipline in the Secondary Schools
- SPED 510 - Secondary Students With Special Needs
- I T 544 - Instructional Technology and Education
  - Internship (24 cr)
- SEC 595 - Graduate Internship
  - Research Course (1-6 cr)
- SEC 691 - Research Seminar

#### Additional Information

#### **Competency in Instructional Technology**

Students admitted to programs in the Woodring College of Education are required to possess competence in the use of instructional technology in education prior to completion of their program and, when applicable, prior to being recommended for certification. Procedures for demonstrating or developing competence are available in Miller Hall 204.

#### **Comprehensive Assessment**

Woodring College of Education students in the non-thesis option are required to complete a comprehensive assessment. The format, timeline and criteria are defined by specific departments. For procedures, students should see their graduate advisors.

#### **Second Master's Degree**

Enrollment must be for a single MEd, MA or MIT program. Students who have earned an MEd or MIT may apply for admission to another MEd program but all requirements of the second program must be met (with possible allowance for some course work taken in the first program). However, all programs must be completed with the minimum number of required credits.

**NOTE:** Due to a review and revision process which may affect Woodring College of Education programs and courses, the information contained in the Education section of this catalog is subject to change.

Remaining program and certification requirements can be found in the Secondary Education section of this catalog.

## Special Education

- Special Education Programs
- Certification
- Professional Program Requirements
- Other Departmental Information

### Introduction

The Department of Special Education offers professional education programs that lead to recommendation to the Office of the Superintendent of Public Instruction for residency teacher certification in the state of Washington. The programs in special education are designed to *prepare thoughtful, knowledgeable, and effective special education teachers for a diverse society.*

Consistent with state and national standards for what special education teachers should know and be able to do, the curriculum is a carefully sequenced academic and professional program that is grounded in current research on effective teaching and learning. This sequence includes a significant amount of training in best practices with an emphasis on Curriculum-Based Evaluation (CBE) and Response to Intervention (RtI).

Programs which address residency teacher certification require students to complete an academic major, the teacher certification sequence and an internship. Special Education offers two academic majors: Special Education and Early Childhood Special Education. Special Education majors may also complete the dual endorsement program and earn endorsements to teach both special education and elementary education. Upon completion of the program, successful candidates will be recommended to the Superintendent of Public Instruction to receive a certificate to teach in their endorsement area(s).

There are two definitions of special education. One is the education of students with disabilities. The other is the application of exceptional teaching. We in the special education department at Western Washington University believe very strongly in the second definition. We think it is our mission to prepare exceptional teachers and, while students who have disabilities often require the services of such teachers, we also believe that there are many other students who can benefit from high-quality instruction. We also think that there is much satisfaction to be gained from the acquisition of the highest levels of teaching skill and that the teachers trained in our program benefit professionally and personally from the acquisition of these skills. That is why the word "special" in our title is a source of pride to us and to our graduates.

### Information

Individuals interested in teacher certification can obtain information from the Website at [www.wce.wwu.edu/Admiss](http://www.wce.wwu.edu/Admiss). Inquiries should be directed to Woodring College Teacher Education Admissions, Student Services, Miller Hall 250, phone 360-650-3313, e-mail address [TeacherEdAdmissions@wwu.edu](mailto:TeacherEdAdmissions@wwu.edu). Written inquiries may be addressed to Teacher Education Admissions, Western Washington University, MS-9090, 516 High St., Bellingham, WA 98225-9090.

Information about special education programs may be obtained by visiting the department Website at [www.wce.wwu.edu/Depts/SPED](http://www.wce.wwu.edu/Depts/SPED). Applicants who wish to speak with a faculty advisor may request an appointment through the special education department in Miller Hall 200 or by phone at 360-650-3330 or by e-mail to [Pam.Hamilton@wwu.edu](mailto:Pam.Hamilton@wwu.edu).

Those persons interested in graduate programs in special education should consult the *Graduate School* section of this catalog or contact the Graduate School directly, phone 360-650-3170, e-mail [gradschl@wwu.edu](mailto:gradschl@wwu.edu). Written inquiries may be addressed to the Graduate School, Old Main 530, MS-9037, Western Washington University, 516 High St., Bellingham, WA 98225-9037.

## **Faculty**

**M. CHUCK LAMBERT** (2004) Chair and Associate Professor. BEd, Gonzaga University; MA, San Francisco State University; PhD, Ohio State University.

**GAIL COULTER** (2008) Assistant Professor. BA, MA, California State University-Chico; PhD, University of Oregon.

**SHEILA FOX** (1977) Professor. BA, Western Washington State College; MEd, PhD, University of Washington.

**KENNETH W. HOWELL** (1988) Professor. BA, MA, Arizona State University; PhD, University of Oregon.

**KEITH J. HYATT** (2002) Associate Professor. BS, MS, University of Idaho; EdS, EdD, University of Nevada-Las Vegas.

**BRIDGET KELLEY** (1995) Assistant Professor. BS, University of Pittsburgh; MEd, Arizona State University; PhD, University of Washington.

**WILLIAM H. LAY** (1986) Lecturer. BA, University of Montana; MEd, Western Washington University.

**JENNY PARKER** (2003) Lecturer. BA, University of Washington; MEd, Antioch University, Seattle.

**LEANNE K. ROBINSON** (2002) Associate Professor. BAE, Central Washington University; MEd, Western Washington University; PhD, Washington State University.

**LINDA SCHLEEF** (1997) Lecturer. BAE, MEd, Western Washington University.

**KRISTINE L. SLENTZ** (1989) Professor. BA, State University of New York; MA, PhD, University of Oregon.

**BETH STICKLEY** (2003) Lecturer. BA, University of Northern Iowa; MEd, Western Washington University.

**TRACY THORNDIKE-CHRIST** (2005) Assistant Professor. BA, MS, Western Washington University; PhD, University of Nebraska-Lincoln.

## **Special Education Programs**

Students at Western Washington University may choose from five initial teacher preparation options that result in residency certification with an endorsement to teach special education in the state of Washington.

The No Child Left Behind "highly qualified teacher" requirement may impact the eligibility for certain teaching assignments in a core academic subject(s). Students are responsible for consulting with an advisor for further information on NCLB.

- Early Childhood Special Education Major
  - Completion of this major and the required professional education courses results in a BA in Education with a teaching certificate and an endorsement in Early Childhood Special Education Preschool through Grade 3 (P-3) with an option of completing additional coursework to add the special education (P-12) endorsement. Additional coursework required to add ECE endorsement for P-3 general education. A nonteaching option in Early Childhood Special Education is also available.
- Special Education Major (P-12)
  - Completion of this major and the required professional education courses results in a BA in Education with a teaching certificate and an endorsement in Special Education Preschool through Grade 12 (P-12)
- Special Education Major (P-12) with Elementary Education Endorsement (Dual Endorsement)
  - Completion of this major and the required elementary professional education courses results in a BA in Education with a teaching certificate and endorsements in Special Education (P-12) and Elementary Education
- Special Education Endorsement (P-12) and Secondary Education
  - Completion of course work leading toward P-12 Special Education endorsement can be arranged in coordination with a secondary education department advisor
- Post-baccalaureate Special Education (P-12)
  - Completion of Special Education undergraduate major course work and required professional education courses results in a Washington state teaching certificate and an endorsement in Special Education Preschool through Grade 12 (P-12)

Teachers who hold a valid and endorsable Washington state certificate may earn an endorsement in special education (P-12) by completing core course work requirements.

The Special Education and Early Childhood Education Special Education Majors are academically rigorous programs aligned with the content and performance standards of the Council for Exceptional Children.

#### *Certification*

The Washington Administrative Code specifies the requirements for earning a Washington state teacher certificate. State-approved preparation programs and certification requirements align with state learning goals and essential academic learning requirements, and require candidates to demonstrate that they have made a positive impact on student learning. First-level residency certification programs are designed around the standards of foundational knowledge, effective teaching, and professionalism. Second-level professional certification programs are designed around the standards of effective teaching, professional development, and professional contributions. Teacher certificates are issued by the state, upon the recommendation of the regionally accredited college or university where the candidate completed a state-approved preparation program.

**State requirements for teacher certification at the time of completion of a student's program will supersede those outlined in this catalog.** These changes may affect the time it takes for a student to complete the teacher education program.

#### *Residency Teacher Certification*

The first-level residency certificate is awarded to new teachers upon the completion of these general requirements:

- A baccalaureate or higher-level degree from a regionally accredited college or university
- A state-approved, performance-based teacher preparation program that includes preparation in an endorsable subject area, teaching methodology, and an internship
- Evidence of good moral character and personal fitness

Candidates for residency certification must pass a subject knowledge assessment, the Washington Educator Skills Test-Endorsements (WEST-E), to receive an endorsement for certification. WWU requires submission of a passing test score for each endorsement to be earned, before commencement of the student teaching internship. For current information on test requirements, registration, fees, and test dates and locations, refer to the WEST-E Resource Website, [www.wce.wwu.edu/Resources/Endorsements/WEST-E.shtml](http://www.wce.wwu.edu/Resources/Endorsements/WEST-E.shtml). Candidates for residency certification must also complete the state of Washington Performance-based Pedagogy Assessment during the student teaching internship. Application for the residency certificate is made to Woodring College Teacher Certification, Student Services, Miller Hall 250, 360-650-4930, no later than three months prior to the start of the internship.

The first-issue residency certificate is valid until completion of two consecutive years of certificated employment and acceptance of a third year contract with a Washington State public school district or a state-approved private school. Application is then made for a reissued residency certificate, valid for an additional five-year term.

#### *Professional Teacher Certification*

The second-level professional certificate is awarded to experienced teachers who hold a valid residency certificate, and who pass the Washington ProTeach Portfolio assessment or earn national board certification through the National Board for Professional Teaching Standards. For further information contact the Woodring College of Education certification officer at 360-650-4630, Miller Hall 250.

#### *Endorsements*

An *endorsement* identifies the subject matter a teacher is prepared and authorized by the state to teach. One qualifying endorsement is required for residency certification. Courses required for a teaching endorsement and the professional education sequence must be completed with a grade of C (2.0) or better.

## **Professional Program Requirements**

### **Program Length**

Time to completion of the Special Education major and teacher certification, after completion of all General University Requirements (GURs) or an Associate of Arts degree from a state of Washington community college, ranges from two to three years. Students earning both Special Education P-12 and Elementary Education endorsements should plan on approximately 10 academic quarters for completion. Western students who apply to Teacher Education programs should have satisfied most of the GURs. Transfer students from a community college should have satisfied all of the GURs and preferably have received an AA degree.

### **Admission Requirements**

All applicants to the Woodring College of Education undergraduate and post-baccalaureate teacher education programs must be formally admitted to and currently enrolled at Western Washington University or must apply to Western for the same quarter they apply to teacher education. Woodring College teacher education program application materials are available in Miller Hall 250 and are also printable from [www.wce.wwu.edu/Admiss](http://www.wce.wwu.edu/Admiss).

The requirements listed below are minimum application criteria. Enrollment restrictions apply to teacher education programs. Meeting the following requirements makes the applicant eligible for admission consideration but does not guarantee admission. Students who meet all criteria are further evaluated to determine the most qualified applicants. Students will be evaluated on all information provided with the application, including required copies of transcripts from all prior colleges.

Application criteria:

- Completion of at least 45 quarter credits of college-level course work
- Cumulative grade point average of 2.75 or higher over all college-level course work or over the last 45 credits.
- Passing scores on all three subtests (reading, mathematics, writing) of the Washington Educator Skills Test-Basic (WEST-B). Visit the WEST-B Website at [www.west.nesinc.com](http://www.west.nesinc.com) for more information
- Completion of an English composition course with a grade of B- (2.7) or higher
- It is recommended that all students seek advisement from the special education department prior to submitting an application to best satisfy the admissions criteria. Experiences with children, strong interpersonal communication skills, and other skills helpful in teaching children are considered

### *Advisement and Orientation*

Upon acceptance, each student is assigned an advisor. Students are required to make an advising appointment before registering for classes each quarter. **Additionally, all accepted students must attend a required orientation.** Students may be dropped from Special Education for failing to attend the required orientation.

### *Program Continuation*

Students admitted to the Woodring College of Education must meet specified requirements throughout the course of their teacher education program in order to remain in the program.

### *Requirements Upon Program Admission*

- Completion of an *Institutional Application for a Teacher's Certificate and Character and Fitness Supplement*, and fingerprinting by the Washington State Patrol as described below under *Character and Fitness*
- Completion of the Woodring College of Education Prevention of Sexual Harassment Training
- Completion of the Woodring College of Education Blood-Borne Pathogens Training

### *Character and Fitness*

The Washington Administrative Code requires applicants for teacher certification to give evidence of "good moral character and personal fitness." Students provide evidence of character and fitness through two separate but related processes:

- An Institutional Application for a *Teacher's Certificate and Character and Fitness Supplement*, provided to students upon acceptance into the program. The application for certification requires candidates to answer questions regarding professional fitness, criminal history and personal conduct. Students with "yes" responses must report to the certification officer in Miller Hall 250 before registering for classes.
- Washington State Patrol and FBI background checks through a fingerprinting process. Procedures and fee information are provided to students upon acceptance into the program

**No student in a teacher education program may participate in a University-sponsored activity in the public schools until cleared by the Washington State Patrol, or in some cases, investigated and then cleared by the Washington State Office of the Superintendent of Public Instruction.** Clearances are valid for specified time frames. Students must maintain character and fitness clearance until they have been recommended for a residency teacher certificate following completion of the teacher education program.

In addition to the Washington state character and fitness requirements noted above, students must abide by the Woodring College of Education conduct policies acknowledged in the Student Conduct Requirements and Agreement, which is submitted with program application materials. Students must also abide by the Department of Special Education Professionalism Expectations document provided at the mandatory orientation.

### *General Retention Requirements*

- Students must maintain at least a 2.75 quarterly GPA beginning the quarter they are notified of admission to Special Education. This requirement applies even to quarters when no education courses are being taken. Students who fail to meet this standard will receive a letter advising them they have been dropped from the program
- Students must earn a grade of C (2.0) or better in the professional education sequence and in all courses required for the endorsement and the academic major
- Students must understand and demonstrate a high level of competence in use of the English language. Those who have difficulty in their verbal and/or written communications should expect to seek remediation before beginning the internship
- Students must complete all certification and endorsement course work prior to the internship
- Completion of the Woodring College of Education Prevention of Sexual Harassment Training II
- Students who interrupt enrollment in a teacher education program for more than two consecutive quarters (summer quarter not included) must meet all program admission, completion and certification requirements in place for the quarter in which they expect to return

### *Program Completion*

To qualify for program completion and recommendation for state of Washington residency certification, students must complete the following requirements and assessments:

- A baccalaureate or higher-level degree from a regionally accredited college or university
- A state-approved, performance-based teacher preparation program that includes preparation in an endorsable subject area, teaching methodology, and an internship
- Evidence of good moral character and personal fitness
- Minimum scores set by the state of Washington on the Washington Educator Skills Test-Endorsements (WEST-E) for the qualifying endorsement area(s) required by the teacher preparation program
- Completion of the Washington Performance-based Pedagogy Assessment

- Successful completion of the student teaching internship as shown by performance on the WWU Intern Development and Evaluation System (IDES)

## **Other Departmental Information**

### *Internship*

An important experience for teaching certification candidates is the student teaching internship. During the internship, students teach under the direct supervision of a certified teacher in a school setting. The internship involves intensive practice in integrated methods, content area knowledge, and classroom organizational strategies.

Special Education and Early Childhood Special Education majors seeking certification are required to complete one quarter of internship for 16 credits. Students enroll in either SPED 496, 498 or 499. Those students completing the Special Education and Elementary Education dual endorsement program must also complete an internship in a general elementary education classroom. The one quarter Elementary internship is completed after the one quarter Special Education internship.

The Office of Field Experiences (OFE) is the service agency of the Woodring College of Education that seeks placements for prospective interns. Students apply for their internship around January prior to a fall internship start quarter, or April prior to a winter or spring internship start quarter. Specific dates for informational meetings and application deadlines are published on the OFE Website, [www.wce.wwu.edu/Resources/OFE](http://www.wce.wwu.edu/Resources/OFE).

Students must have completed Prevention of Sexual Harassment Training I and II, blood-borne pathogens training, a residency teacher certificate application packet including credit evaluation, and Washington State Patrol/FBI fingerprinting before OFE will seek an internship placement.

Before commencement of the internship, passing scores on the WEST-E for each endorsement must be submitted, all education and endorsement course work and practica must be completed, and fingerprint/character and fitness clearance must be valid. Students who interrupt enrollment for a quarter or more must meet the deadline for filing a returning student application.

OFE does not guarantee placements. Placement in a school is contingent on:

- Fulfillment of all program requirements (satisfactory academic work, education and endorsement program course work and training, practica, and faculty recommendations)
- Submission of passing scores on the WEST-E test(s) for each endorsement
- Availability of placements and supervision in specific subjects and grade levels
- Acceptance by P-12 school personnel
- Fingerprint/character and fitness clearance through the point of certification

Students are required to interview with the public school teacher to whom they will be assigned, for final approval of placement. OFE will make every effort to arrange up to three initial interviews but does not guarantee an interview.

Any subsequent placement after a voluntary or nonvoluntary withdrawal from an internship will be granted only by faculty recommendation following a case conference.

Time commitment to the internship requires seven clock hours daily Monday through Friday plus class preparation time, seminars and responsibilities outside of school. Students may not register for other course work or hold jobs or other time-demanding commitments without the approval of the department and OFE.

Placement locations are listed on the map available in the department office or the Office of Field Experiences. OFE reserves the right to place students anywhere within the WWU service area.

For further information, contact the Woodring College of Education, Office of Field Experiences, Student Services, phone 360- 650-3310, Miller Hall 250.

## **Undergraduate Degrees and Programs**

Early Childhood Special Education P-3, BAE  
Special Education — P-12 and Elementary Education (Dual Endorsement), BAE  
Special Education — P-12, BAE

## **Graduate Degrees and Programs**

Special Education, Thesis, MEd (Endorsement Optional)  
Special Education, Non-Thesis, MEd (Endorsement Optional)

## **Early Childhood Special Education P-3, BAE**

**114 credits (without teacher certification)**

**136 credits (with teacher certification)**

### **Introduction**

This plan of study is designed to prepare personnel to work with children from birth through eight years who have been identified as at-risk for developmental delay and disability and with their families. The major combines studies in Early Childhood and Special Education. Since some students plan on working in community-based agencies rather than teaching in public schools, and therefore do not desire or need teacher certification, the public School Practica and Internship would not be required.

Students seeking a bachelor's degree with teacher certification and an endorsement in Early Childhood Special Education must complete the Professional Studies Core, the Early Childhood Special Education (P-3) major, and Public School Practica and Internship. Additional coursework required to add the P-12 Special Education endorsement or the Early Childhood Education (P-3) endorsement.

### **Admission and Declaration Process**

Admission Requirements ([see Special Education department page](#))

### **Grade Requirements**

Students must earn a grade of C (2.0) or better in the special education professional program and in all courses required for the endorsement.

### **Requirements**

#### **Major — Early Childhood Special Education (P-3): 83 credits**

- ECE 380 - Foundations of Literacy for Early Childhood Education
- ECE 390 - Infant and Toddler Practicum and Seminar
- ECE 391 - Preschool Practicum and Seminar
- ECE 430 - Creativity & Play in ECE
- ECE 431 - Fundamentals of Early Childhood Education
- ECE 432 - Social Studies for Early Childhood Education

- ECE 434 - Environments for Early Learning
- SPED 360 - Introduction to Special Education
- SPED 443 - Early Development Variations
- SPED 444 - Assessment and Intervention in Early Childhood Special Education
- SPED 460 - Interventions for Classroom Management
- SPED 466 - Assessment, Evaluation and IEP
- SPED 467 - Curriculum-Based Evaluation
- SPED 468 - Families, Professionals and Exceptional Children
- SPED 474 - Students With Complex Needs
- SPED 480 - Practicum II: Literacy I
- SPED 483 - Reading Instruction for Students With Special Needs
- SPED 484 - Designing Written Expression Interventions
- SPED 485 - Designing Math Interventions
- SPED 486 - Case Study Applications in Special Education
- One course from:
- KIN 308 - Human Growth and Motor Development
- PE 443 - Adapted Physical Education Methods & Practicum
- One course from:
- CSD 251 - Introduction to Communication Disorders
- CSD 354 - Speech and Language Development in Children

**Professional Studies Core: 31 credits**

- ECE 435 - Child Abuse and Neglect
- EDUC 301 - Educational Psychology I: Development and Individual Differences
- EDUC 302 - Educational Psychology II: Motivation, Learning and Assessment
- EDUC 310 - The Teacher and the Social Order
- IT 443 - Classroom Use of Instructional Technology (Special Education)
- MATH 381 - Teaching K-8 Mathematics I
- SPED 420 - Effective Teaching
- SPED 440 - School Practicum

**Public School Practica and Internship — Special Education: 22 credits**

- SPED 481 - Practicum III: Literacy 2
- SPED 482 - Practicum IV: Math
- SPED 496 - Internship - Exceptional Children/Early Childhood

# **Special Education — P-12 and Elementary Education (Dual Endorsement), BAE**

**152-153 credits (major and professional program)**

## **Introduction**

Students seeking a bachelor's degree with teacher certification and endorsements in Special Education and Elementary Education complete the Special Education Major (P-12), Elementary Program Curriculum and Methods, the Professional Studies Core, and two internships.

## **Admission and Declaration Process**

Admission Requirements ([see Special Education department page](#))

## **Grade Requirements**

Students must earn a grade of C (2.0) or better in the special education professional program and in all courses required for the endorsements.

## **Requirements**

### **Major — Special Education: 58 credits**

- SPED 360 - Introduction to Special Education
- SPED 390 - Special Education Practicum I
- SPED 460 - Interventions for Classroom Management
- SPED 466 - Assessment, Evaluation and IEP
- SPED 467 - Curriculum-Based Evaluation
- SPED 468 - Families, Professionals and Exceptional Children
- SPED 471 - Interventions for Learning Problems
- SPED 472 - Behavior Assessment and Intervention
- SPED 474 - Students With Complex Needs
- SPED 480 - Practicum II: Literacy I
- SPED 481 - Practicum III: Literacy 2
- SPED 482 - Practicum IV: Math
- SPED 483 - Reading Instruction for Students With Special Needs
- SPED 484 - Designing Written Expression Interventions
- SPED 485 - Designing Math Interventions
- SPED 486 - Case Study Applications in Special Education

### **Elementary Program Curriculum and Methods: 29 credits**

- ART 380 - Art Educating the Child
- ELED 426 - Social Studies Methods
- MATH 382 - Teaching K-8 Mathematics II
- MATH 383 - Teaching K-8 Mathematics III
- MUS 361 - Music for Elementary Teachers
- PE 345 - Physical Education for Elementary School

- SCED 480 - Science Methods and Curriculum for the Elementary School
- SCED 490 - Laboratory/Field Experience in Elementary Science

#### **Professional Studies Core: 33-34 credits**

- EDUC 301 - Educational Psychology I: Development and Individual Differences
- EDUC 302 - Educational Psychology II: Motivation, Learning and Assessment
- EDUC 310 - The Teacher and the Social Order
- HLED 455 - Health Education Grades K-8
- IT 443 - Classroom Use of Instructional Technology (Special Education)
- MATH 381 - Teaching K-8 Mathematics I
- SPED 420 - Effective Teaching
- SPED 440 - School Practicum
- One course from:
  - ELED 424 - Language Arts in the Elementary Curriculum
  - ENG 440 - Teaching English Language Arts in the Elementary School

#### **Internships — Special Education and Elementary Education: 32 credits**

- ELED 494 - Internship - Elementary
- SPED 498 - Internship - Exceptional Children/Elementary

## **Special Education — P-12 Outreach Program, BAE**

Department of Special Education, Woodring College of Education

### **141–144 credits (professional program and major)**

#### **Introduction**

Students seeking a bachelor's degree with teacher certification and an endorsement in elementary education through Teacher Education Outreach Programs located in Bremerton, Everett and Seattle complete the Elementary Education Professional Program and the major in Special Education (P-12). Program coursework listed below is delivered through a cohort-based, integrated model designed specifically for outreach program sites. Graduates may earn an endorsement in special education by completing a second internship (16 credits) through the special education additional endorsement program. Courses must be completed with a grade of C (2.0) or better.

#### **Admission and Declaration Process**

Admission Requirements (see Special Education department page)

#### **Grade Requirements**

Students must earn a grade of C (2.0) or better in the elementary education professional program and in all courses required for the endorsement.

## **Requirements**

### **Elementary Education Professional Program – Outreach Programs: 99 credits**

- ART 380 - Art Educating the Child
- EDUC 301 - Educational Psychology I: Development and Individual Differences
- EDUC 302 - Educational Psychology II: Motivation, Learning and Assessment
- EDUC 310 - The Teacher and the Social Order
- ELED 372 - Introduction to Teaching Seminar
- ELED 373 - Introduction to Teaching - Practicum
- ELED 380 - Literacy I: Foundations
- ELED 386 - Practical Assessment in the Elementary Classroom I
- ELED 387 - Practical Assessment in the Elementary Classroom II
- ELED 426 - Social Studies Methods
- ELED 472 - Developing Teaching Seminar
- ELED 473 - Developing Teaching - Practicum
- ELED 474 - Documenting Teaching Seminar
- ELED 475 - Documenting Teaching - Practicum
- ELED 478 - Literacy: Fluent Communicators Seminar
- ELED 479 - Literacy: Fluent Communicators - Practicum
- ELED 494 - Internship - Elementary
- HLED 455 - Health Education Grades K-8
- IT 344 - Basic Instructional Technology Skills
- IT 442 - Classroom Use of Instructional Technology (Elementary)
- MATH 381 - Teaching K-8 Mathematics I
- MATH 382 - Teaching K-8 Mathematics II
- MATH 383 - Teaching K-8 Mathematics III
- MUS 361 - Music for Elementary Teachers
- PE 345 - Physical Education for Elementary School
- SCED 480 - Science Methods and Curriculum for the Elementary School
- SCED 490 - Laboratory/Field Experience in Elementary Science
- SPED 360 - Introduction to Special Education
- SPED 440 - School Practicum

### **Special Education (P-12) - Outreach Programs, BAE**

- SPED 466 - Assessment, Evaluation and IEP
- SPED 467 - Curriculum-Based Evaluation
- SPED 468 - Families, Professionals and Exceptional Children
- SPED 471 - Interventions for Learning Problems
- SPED 472 - Behavior Assessment and Intervention
- SPED 474 - Students With Complex Needs
- SPED 480 - Practicum II: Literacy I
- SPED 481 - Practicum III: Literacy 2
- SPED 482 - Practicum IV: Math
- SPED 483 - Reading Instruction for Students With Special Needs

- SPED 484 - Designing Written Expression Interventions
- SPED 485 - Designing Math Interventions
- Elective under advisement:
- SPED 470 - Violent and Aggressive Youth

## **Special Education — P-12, BAE**

**107-108 credits (major and professional program)**

### **Introduction**

Students seeking a bachelor's degree with teacher certification and an endorsement in Special Education must complete the Special Education (P-12) major, the Professional Studies Core, and internship. Graduates are not endorsed to be the sole teacher in the general education classroom.

### **Admission and Declaration Process**

Admission Requirements (see Special Education department page)

### **Grade Requirements**

Students must earn a grade of C (2.0) or better in the special education professional program and in all courses required for the endorsement.

### **Major — Special Education: 58 credits**

- SPED 360 - Introduction to Special Education
- SPED 390 - Special Education Practicum I
- SPED 460 - Interventions for Classroom Management
- SPED 466 - Assessment, Evaluation and IEP
- SPED 467 - Curriculum-Based Evaluation
- SPED 468 - Families, Professionals and Exceptional Children
- SPED 471 - Interventions for Learning Problems
- SPED 472 - Behavior Assessment and Intervention
- SPED 474 - Students With Complex Needs
- SPED 480 - Practicum II: Literacy I
- SPED 481 - Practicum III: Literacy 2
- SPED 482 - Practicum IV: Math
- SPED 483 - Reading Instruction for Students With Special Needs
- SPED 484 - Designing Written Expression Interventions
- SPED 485 - Designing Math Interventions
- SPED 486 - Case Study Applications in Special Education

### **Professional Studies Core: 33-34 credits**

- EDUC 301 - Educational Psychology I: Development and Individual Differences
- EDUC 302 - Educational Psychology II: Motivation, Learning and Assessment
- EDUC 310 - The Teacher and the Social Order

- HLED 455 - Health Education Grades K-8
- IT 443 - Classroom Use of Instructional Technology (Special Education)
- MATH 381 - Teaching K-8 Mathematics I
- SPED 420 - Effective Teaching
- SPED 440 - School Practicum
- One course from:
  - ELED 424 - Language Arts in the Elementary Curriculum
  - ENG 440 - Teaching English Language Arts in the Elementary School

#### **Internship — Special Education: 16 credits**

- One course from:
  - SPED 498 - Internship - Exceptional Children/Elementary
  - SPED 499 - Internship - Exceptional Children/Secondary

Note(s): Post-baccalaureate teacher certification with Special Education endorsement has essentially the same requirements as the undergraduate teacher certification program in Special Education, including the Professional Studies Core and internship requirements.

### **Special Education, Non-Thesis, MEd (Endorsement Optional)**

Department of Special Education  
Miller Hall 161, 360-650-3981

No new applications are being accepted at this time. Please contact the department or see the department website for updated information.

#### **Graduate Faculty**

**Coulter, Gail**, PhD.  
**Howell, Kenneth W.**, PhD.  
**Hyatt, Keith**, EdD.  
**Kelley, Bridget**, PhD.  
**Lambert, M. Charles**, PhD.  
**Robinson, LeAnne**, PhD.  
**Slentz, Kristine L.**, PhD.  
**Thorndike-Christ, Tracy**, PhD.

#### **Goals**

The program prepares special educators to become master teachers and consultants in specialized instruction.

Graduate studies in special education are generally designed for students who have met Washington state teacher certification requirements, and are seeking a master's degree in combination with an endorsement to teach special education, and for certificated special education teachers. Prospective students who hold a bachelor's degree and are seeking a first Washington state certification should refer to the Special Education Post-Baccalaureate Program as preparation for graduate admission.

## **Application Information**

Candidates must meet the requirements of the Graduate School (see General Requirements in this section of the catalog) in addition to the following departmental requirements:

- Specific test requirements:
  - Miller Analogies Test or Graduate Record Exam, General Test.
- Supporting materials:
  - A résumé
  - A statement of purpose for seeking the MEd, and SPED endorsement, if applicable, not to exceed one page
  - Completion of Washington state residency certificate requirements
  - Three current letters of reference
  - An on-campus interview if requested by the department

In limited cases, students who do not meet departmental admission requirements may be granted provisional admission by the Graduate School.

## **Research Paper**

The department requires students to submit a proposal for a research paper (691). This proposal must be approved by the student's committee prior to registering for SPED 691. In SPED 691 students will design and carry out independent research under the direction of a faculty committee. Two faculty are required for the committee directing the research paper (691).

## **Comprehensive Assessment**

Student achievement of the program competencies will be assessed by faculty during the final two quarters of the program through one of two methods:

- Research paper (SPED 691)
- Qualifying examination - the qualifying exam is required by the end of the third quarter of enrollment, after completing SPED 501 with a grade of B- or better. Passage of the qualifying exam is required prior to registering for SPED 691 credits.

Courses (52 credits)

**NOTE:** curriculum undergoing revision

### **Options including a special education teaching endorsement (52 credits)**

- Core requirements :
  - EDUC 501 - Introduction to Educational Research
  - IT 503 - Designing Instruction and Selecting Technologies for Learning
  - SPED 567 - Advanced Issues in Special Education \*
- SPED course work:
  - SPED 466 - Assessment, Evaluation and IEP
  - SPED 474 - Students With Complex Needs
  - SPED 560 - Literacy Instruction for Students With Special Needs
  - SPED 562 - Learning Problems
  - SPED 563 - Curriculum and Methods in Special Education
  - SPED 564 - Social Skills

- SPED 565 - Communication and Collaboration in Special Education
- SPED 568 - Curriculum-Based Evaluation and Decision Making
  - Research paper requirement :
- SPED 691 - Research Seminar
  - A one quarter student teaching internship may be required to earn the P-12 special education endorsement.

**Options not including a special education teaching endorsement (52 credits)**

- Core requirements:  
EDUC 501  
IT 503  
SPED 567\*
- SPED course work:  
A minimum of 10 hours in Special Education and others by advisement
- Research paper requirement:  
SPED 691

\* Repeatable – 6 credits required.

**Special Education, Thesis, MEd (Endorsement Optional)**

Department of Special Education  
Miller Hall 161, 360-650-3981

No new applications are being accepted at this time. Please contact the department or see the department website for updated information.

**Graduate Faculty**

**Coulter, Gail, PhD.**  
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**Kelley, Bridget, PhD.**  
**Lambert, M. Charles, PhD.**  
**Robinson, LeAnne, PhD.**  
**Sleutz, Kristine L., PhD.**  
**Thorndike-Christ, Tracy, PhD.**

**Goals**

The program prepares special educators to become master teachers and consultants in specialized instruction.

Graduate studies in special education are generally designed for students who have met Washington state teacher certification requirements, and are seeking a master's degree in combination with an endorsement to teach special education, and for certificated special education teachers. Prospective students who hold a bachelor's degree and are seeking a first Washington state certification should refer to the Special Education Post-Baccalaureate Program as preparation for graduate admission.

## **Application Information**

Candidates must meet the requirements of the Graduate School (see General Requirements in this section of the catalog) in addition to the following departmental requirements:

- Specific test requirements:
  - Miller Analogies Test or Graduate Record Exam, General Test.
- Supporting materials:
  - A résumé
  - A statement of purpose for seeking the MEd, and SPED endorsement, if applicable, not to exceed one page
  - Completion of Washington state residency certificate requirements
  - Three current letters of reference
  - An on-campus interview if requested by the department

In limited cases, students who do not meet departmental admission requirements may be granted provisional admission by the Graduate School.

## **Thesis and Research Paper**

The department requires students to submit a proposal for a thesis (690). This proposal must be approved by the student's committee prior to registering for SPED 690 or SPED 691. In SPED 690 students will design and carry out independent research under the direction of a faculty committee. The thesis option (690) requires a committee of three faculty.

## **Comprehensive Assessment**

Student achievement of the program competencies will be assessed by faculty during the final two quarters of the program through one of two methods:

- Thesis proposal, paper, and defense (SPED 690)
- Research paper (SPED 691)
- Qualifying examination - the qualifying exam is required by the end of the third quarter of enrollment, after completing SPED 501 with a grade of B- or better. Passage of the qualifying exam is required prior to registering for SPED 690/691 credits.

## **Courses (52 credits)**

**NOTE:** curriculum undergoing revision

Options including a special education teaching endorsement (52 credits)

**NOTE:** curriculum undergoing revision

- Core Requirements:
  - EDUC 501 - Introduction to Educational Research
  - IT 503 - Designing Instruction and Selecting Technologies for Learning
  - SPED 567 - Advanced Issues in Special Education \*
- SPED course work:

- SPED 466 - Assessment, Evaluation and IEP
- SPED 474 - Students With Complex Needs
- SPED 560 - Literacy Instruction for Students With Special Needs
- SPED 562 - Learning Problems
- SPED 563 - Curriculum and Methods in Special Education
- SPED 564 - Social Skills
- SPED 565 - Communication and Collaboration in Special Education
- SPED 568 - Curriculum-Based Evaluation and Decision Making
- Research paper requirement:
- Thesis requirement: SPED 690 - Thesis

A one quarter student teaching internship may be required to earn the P-12 special education endorsement.

#### **Options not including a special education teaching endorsement (52 credits)**

- Core requirements:
  - EDUC 501 - Introduction to Educational Research
  - IT 503 - Designing Instruction and Selecting Technologies for Learning
  - SPED 567 - Advanced Issues in Special Education \*
- SPED course work:
  - A minimum of 10 hours in Special Education and others by advisement
- Thesis requirement:
  - SPED 690 - Thesis

\*Repeatable — 6 credits required.

## **Teacher Education Outreach Programs**

Teacher Education Outreach Programs offers professional education programs that lead to recommendation to the Office of the Superintendent of Public Instruction for residency teacher certification in the state of Washington. These programs integrate studies in Elementary Education, Special Education, and across eight additional disciplines, including math, science, health, and physical education.

The course work for undergraduate and post-baccalaureate programs is offered in a prescribed sequence with evening classes, and daytime practicum work. Upon completion of the major (undergraduates), the professional studies core, the endorsement course work and internship, students will receive a teaching certificate with an endorsement in elementary education. Students may choose to complete a second internship to earn an additional endorsement in special education.

The programs, designed to prepare thoughtful, knowledgeable, and effective educators for a diverse society, offer courses and certification sequences at Western Washington University program sites in Bremerton, Everett, and Seattle. Prospective students are encouraged to contact the site office closest to them for information on program offerings that meet their individual needs.

### **Information**

Individuals interested in Teacher Education Outreach Programs can obtain general information from the Website, [www.wce.wwu.edu/Depts/TEOP](http://www.wce.wwu.edu/Depts/TEOP).

Inquiries should be directed to the site you wish to attend. Bremerton, 360-475-7272; Everett, 425-259-8918; Seattle, 206-529-6052.

### **Teacher Education Outreach Programs**

- BA in Education (Special Education major) leading to a teacher certificate endorsed in Elementary Education
- Post-Baccalaureate teacher certification with Elementary Education endorsement
- Special Education (P-12) additional endorsement (certified teachers only)
- Elementary Education additional endorsement (certified teachers only)
- The No Child Left Behind (NCLB) "highly qualified teacher" requirement may impact eligibility for certain middle school teaching assignments in a core academic subject(s). Students are responsible for consulting with an advisor for further information on NCLB.

### **Certification**

The Washington Administrative Code specifies the requirements for earning a Washington state teacher certificate. State-approved preparation programs and certification requirements align with state learning goals and essential academic learning requirements, and require candidates to demonstrate that they have made a positive impact on student learning. First-level residency certification programs are designed around the standards of foundational knowledge, effective teaching, and professionalism. Second-level professional certification programs are designed around the standards of effective teaching, professional development, and professional contributions. Teacher certificates are issued by the state, upon the recommendation of the regionally accredited college or university where the candidate completed a state-approved preparation program.

State requirements for teacher certification at the time of completion of a student's program will supersede those outlined in this catalog. These changes may affect the time it takes for a student to complete the teacher education program.

### **Residency Teacher Certification**

The first-level residency certificate is awarded to new teachers upon the completion of these general requirements:

- A baccalaureate or higher-level degree from a regionally accredited college or university
- A state-approved, performance-based teacher preparation program that includes preparation in an endorsable subject area, teaching methodology, and an internship
- Evidence of good moral character and personal fitness

Candidates for residency certification must pass a subject knowledge assessment, the Washington Educator Skills Test — Endorsements (WEST-E), to receive an endorsement for certification. WWU requires submission of a passing WEST-E score for each endorsement to be earned, before commencement of the student teaching internship. For current information on test requirements, refer to the WEST-E Resource Website, [www.wce.wwu.edu/Resources/Endorsements/WEST-E.shtml](http://www.wce.wwu.edu/Resources/Endorsements/WEST-E.shtml). Candidates for residency certification must also complete the state of Washington Performance-based Pedagogy Assessment during the student teaching internship.

Application for the residency certificate is made to Woodring College Teacher Certification, Student Services, Miller Hall 250, phone 360-650-4930, no later than three months prior to the start of the internship. Candidates will be contacted by the program site or certification supervisor with required application materials.

The first-issue Residency Certificate is valid until completion of two consecutive years of certificated employment and acceptance of a third year contract with a Washington State public school district or a state-approved private school. Application is then made for a reissued Residency Certificate, valid for an additional five-year term.

### *Professional Teacher Certification*

The second-level professional certificate is awarded to experienced teachers who hold a valid residency certificate and who pass the Washington ProTeach Portfolio assessment or earn national board certification through the National Board of Professional Teaching Standards. For further information, contact the Woodring College of Education certification officer at 360-650-4630, Miller Hall 250.

### **Endorsements**

An endorsement identifies the subject matter in which a teacher is prepared and authorized by the state to teach. One qualifying endorsement is required for residency certification. Courses required for a teaching endorsement and the professional education sequence must be completed with a grade of C (2.0) or better. For information on additional endorsement programs offered throughout the University, contact the Woodring College of Education certification officer at 360-650-4630, Miller Hall 250.

### *Approved Academic Majors*

Post-baccalaureate students seeking teacher certification and an endorsement in elementary education through Teacher Education Outreach programs must have completed an approved academic major in anthropology, art, communication, English, environmental studies, foreign language, general science, geography, geology (earth science), history, humanities, elementary education studies, mathematics, music, psychology (human development), social studies, sociology, special education or student/faculty designed major. For further information on the applicability of a particular major, contact any Teacher Education Outreach Programs site.

### *Program Length*

The sequence of study for teacher certification is designed for students who hold a transferable Associate of Arts degree (DTA) from a Washington state community college, or have satisfied Western's General University Requirements, or have a bachelor's degree with an approved major and are seeking certification. Students begin their program in the fall at all sites and move through their programs as a cohort.

- Students earning a BA in Education attend class for 11 quarters, including the internship, or 12 quarters if earning the Special Education endorsement through the additional endorsement program.
- Post-Baccalaureate students attend classes for 7 quarters, including the internship.

### *Admission Requirements*

All applicants to undergraduate and post-baccalaureate teacher certification programs must be formally admitted to both Western Washington University and the applicable program. Admission occurs once a year in the fall.

The requirements listed below are minimum application criteria. Enrollment restrictions apply to all teacher education programs. Meeting the following requirements makes the applicant eligible for admission consideration but does not guarantee admission. Students who meet all criteria are further evaluated by the department to determine the most qualified applicants. Students will be evaluated on all information provided with the application, including required copies of transcripts from all prior colleges.

#### *Application criteria:*

- Transferable associates degree from a Washington State community college or satisfaction of the Western Washington University general education requirements (undergraduate program only).
- Bachelor's degree in an approved academic major (post-baccalaureate program only).
- Cumulative grade point average of 2.75 or higher over all college-level course work or over the last 45 credits.
- Passing scores on all three subtests (reading, mathematics, writing) of the Washington Educator Skills Test-Basic (WEST-B); visit the WEST-B Website at [www.west.nesinc.com](http://www.west.nesinc.com) for more information.
- Completion of an English composition course with a grade of B- (2.7) or higher.
- Three letters of recommendation and a reflective essay.

### *Advisement and Orientation*

Upon acceptance to the Woodring College of Education, each student is assigned an advisor. At all Teacher Education Outreach Program sites, the advisor is the academic program director. Additionally, all accepted students must attend a required orientation. Students may be dropped from their program for failing to attend the orientation.

### *Program Continuation*

Students admitted to the Woodring College of Education must meet specified requirements throughout the course of their teacher education program in order to remain in the program.

#### *Requirements upon Program Admission*

- Completion of an Institutional Application for a Teacher's Certificate and Character and Fitness Supplement, and background checks as described below under Character and Fitness
- Completion of the Woodring College of Education Prevention of Sexual Harassment Training
- Completion of the Woodring College of Education Blood-Borne Pathogens Training

#### *Character and Fitness*

The Washington Administrative Code requires applicants for teacher certification to give evidence of "good moral character and personal fitness." Students provide evidence of character and fitness through two separate but related processes:

- An Institutional Application for a Teacher's Certificate and Character and Fitness Supplement, provided to students upon acceptance into the program. The application for certification requires candidates to answer questions regarding professional fitness, criminal history and personal conduct. Students with "yes" responses must contact the certification officer at (360) 650-4630 before registering for classes
- Washington State Patrol and FBI background checks through a fingerprinting process. Procedures and fee information are provided to students upon acceptance into the program

No student in a teacher education program may participate in a University-sponsored activity in the public schools until cleared by the Washington State Patrol, or in some cases, investigated and then cleared by the Washington State Office of Superintendent of Public Instruction. Clearances are valid for specified time frames. Students must maintain character and fitness clearance until they have been recommended for a residency teacher certificate following completion of the teacher education program.

In addition to the Washington state character and fitness requirements noted above, students must abide by the Woodring College of Education conduct policies acknowledged in the Student Conduct Requirements and Agreement, which is submitted with program application materials.

#### *General Retention Requirements*

- Students must maintain at least a 2.75 GPA, beginning with the quarter they are notified of admission. This requirement applies even to quarters where no education courses are being taken. Students who fail to meet this standard will receive a letter advising them that they have been dropped from the program.
- Students must earn a grade of C (2.0) or better in both the professional education sequence and in all courses required for the endorsement
- Students must understand and demonstrate a high level of competence in the English language. Those who have difficulty in their verbal and/or written communications should expect to seek remediation before beginning the internship
- Completion of the Woodring College of Education Prevention of Sexual Harassment Training II
- Students who interrupt enrollment in a teacher education program for more than two consecutive quarters (summer quarter not included) must meet all program admission, completion and certification requirements in place for the quarter in which they expect to return.

#### *Program Completion*

- To qualify for program completion and recommendation for state of Washington residency certification, students must complete the following requirements and assessments:

- A baccalaureate or higher-level degree from a regionally accredited college or university
- A state-approved, performance-based teacher preparation program that includes preparation in an endorsable subject area, teaching methodology, and an internship
- Evidence of good moral character and personal fitness
- Minimum scores set by the state of Washington on the Washington Educator Skills Test (WEST-E) for the qualifying endorsement area(s)
- Completion of the Washington Performance-Based Pedagogy Assessment
- Completion of Woodring College of Education Prevention of sexual harassment training II
- Successful completion of the student teaching internship as shown by performance on the WWU Intern Development and Evaluation System (IDES)

## **Other Departmental Information**

### *Internship*

An important experience for teacher certification candidates is the student teaching internship. Students spend two quarters taking final classes in the program along with time in their assigned classroom preparing for quarter three when they are full-time teaching under the direct supervision of a certificated teacher in a school setting. This internship involves intensive practice in integrating methods, content area knowledge, and classroom organizational strategies.

Students will be able to work part time during two quarters of the three quarter internship. However, one quarter of the internship involves full-time teaching responsibilities and students will find that trying to work will prove impossible.

The Office of Field Experiences (OFE) is the service agency of the Woodring College of Education that seeks placement for prospective interns. Students apply for their internship around January prior to a fall internship start quarter, or April prior to a winter or spring internship start quarter. Specific dates for informational meetings and application deadlines are published on the OFE Website, [www.wce.wwu.edu/Resources/OFE](http://www.wce.wwu.edu/Resources/OFE).

Students must have completed Prevention of Sexual Harassment Training I and II, blood-borne pathogens training, a residency teacher certificate application packet including credit evaluation, and Washington State Patrol/FBI fingerprinting before OFE will seek an internship placement.

Before commencement of the internship, passing scores on the WEST-E for each endorsement must be submitted, all educational endorsement course work and practica must be completed, and fingerprint/character and fitness clearance must be valid. Students who interrupt enrollment for a quarter or more must meet the deadline for filing a returning student application.

OFE does not guarantee placements. Placement in a school is contingent upon:

- Fulfillment of all program requirements (satisfactory academic work, education and endorsement program course work and training, practica, and faculty recommendations)
- Submission of passing scores on the WEST-E test(s) for each endorsement
- Availability of placements and supervision in specific subjects and grade levels
- Acceptance by P-12 school personnel
- Fingerprint/character and fitness clearance through the point of certification

Students are required to interview with the public school teacher to whom they will be assigned, for final approval of placement. OFE will make every effort to arrange up to three initial interviews but does not guarantee an interview.

Any subsequent placement after a voluntary or nonvoluntary withdrawal from an internship will be granted only by faculty recommendation following a case conference.

For further information, contact the Woodring College Office of Field Experiences, Student Services, phone 360-650-3310, Miller Hall 206

### **Undergraduate Certification Programs**

Special Education (P-12) and Elementary Education - Outreach Programs, BAE  
Elementary Education Post-Baccalaureate Teacher Certification - Outreach Programs

## **Graduate School**

- Admission
- General Requirements
- Funding and Support
- Program Requirements
- Transfer Correspondence and Workshop Courses
- Graduate Departments and Programs

### **Introduction**

*E-mail:* [gradschool@wwu.edu](mailto:gradschool@wwu.edu)  
[www.wwu.edu/gradschool](http://www.wwu.edu/gradschool)

Dr. Moheb A. Ghali, Dean, Old Main 530, 360-650-3170

WWU is authorized by the State Legislature to award seven graduate degrees:

- Master of Arts (MA)
- Master of Science (MS)
- Master of Education (MEd)
- Master of Business Administration (MBA)
- Master of Music (MMus)
- Master of Public Accounting (MPAcc)
- Master in Teaching (MIT)

The purpose of graduate study at WWU is to provide students quality graduate education with opportunities for research and professional development. Graduate programs are intended to prepare able students for (1) teaching, (2) entering professions, (3) career advancement and (4) further advanced study.

WWU's graduate programs are accredited by the Northwest Commission on Colleges and Universities. Graduate programs which result in educator certification are also accredited by the National Council for the Accreditation of Teacher Education (NCATE). The College of Business and Economics is accredited by the AACSB International Association to Advance Collegiate Schools of Business at both the graduate and undergraduate levels. The Department of Communication Sciences and Disorders is accredited by the American Speech-Language- Hearing Association's Council on Academic Accreditation in Audiology and Speech-Language Pathology (ASHA) and by the National Council for the Accreditation of Teacher Education (NCATE). The mental health and school counseling programs are accredited by Council for Accreditation of Counseling and Related Educational Programs (CACREP). The Rehabilitation Counseling program is accredited by the Council on Rehabilitation Education (CORE). The University is a member of the Council of Graduate Schools in the United States and adheres to the general policies and criteria established by this national association.

The graduate programs provide service to the state and its major divisions, to the business and commercial sector, and to a number of professions.

Several of WWU's graduate programs offer courses or program elements at locations outside Bellingham, within the Puget Sound region and online. Refer to the University's online Summer Session Bulletin (<http://www.acadweb.wwu.edu/eesp/summer/index.shtml>) for programs offering summer graduate courses.

Persons who plan to enter graduate study at WWU should read this section of the General Catalog closely before applying for admission to graduate study or enrolling in any course intended to count toward a

master's degree or advanced certificate of study. Students working toward a residency, continuing, or professional teaching certificate should contact the Certification Office in the Woodring College of Education. Students should consult with the appropriate graduate program advisor and the graduate office for additional admissions or program-related questions.

## **Admission**

Admission is granted by the Graduate School of Western Washington University with the concurrence of the department or program unit in which the student will pursue graduate study. The Graduate School informs applicants of the admissions decision. Online application submission and credit card payment is available from the Graduate School Website. Paper application forms may be requested or downloaded from the Website forms page. A nonrefundable application fee of \$50 (subject to change) is charged for each application submitted, whether initial application, or request to defer, change to another quarter of admission, or transfer into another WWU graduate program. A nonrefundable application fee of \$100 (subject to change) is charged for each application submitted for an off-campus self-supporting graduate program. This applies to the initial application and each request to transfer into another off-campus self-supporting WWU graduate program. A fee of \$50 (subject to change) is required of post-master's degree applicants. Admission to the Graduate School is limited to a single graduate program unless two disciplines have an approved joint offering (see University Graduation Requirements section of this catalog for further discussion). Graduate School admission deadline dates are as follows, although many programs have earlier specific deadline dates and do not admit for all quarters.

Initial application with all supporting materials (see below) must be received in the Graduate School Office by June 1 for fall, October 1 for winter, February 1 for spring and May 1 for summer unless program-specific deadlines exist (see specific program information).

**NOTE:** The requirements and procedures listed below demand lead time. Applicants are urged to submit all necessary materials as early as possible before the beginning of the term for which admission is requested or by the earlier, program specific deadline dates. Timeliness of complete application materials may impact graduate assistantships and other sources of funding. Faculty review of application materials is unlikely during periods that the University is not in session.

## **General Requirements**

### *Full Admission to Master's Degree Study*

- A four-year baccalaureate degree from a U.S. college or university that was regionally accredited at the time the degree was conferred, or an equivalent baccalaureate degree from a foreign university; the degree must be appropriate to the master's study intended. Two recent, official transcripts from each college or university attended (no exceptions) must accompany the application in a sealed envelope prepared by the Registrar of each institution. WWU students do not need to submit a WWU transcript or transcripts previously submitted to WWU (unless there is a later period of attendance).
- A 3.0 undergraduate grade point average (on a 4.0 scale) in the last 90-quarter or 60-semester hours of study. In order for post-baccalaureate credit to be included in the GPA computation, the coursework must be upper division. Post-baccalaureate coursework at community colleges will not be included in the GPA used for admission. Applicants with advanced degrees from accredited institutions are generally, at the discretion of the Graduate School, considered to have met GPA requirements.
- Three current letters of reference from professors in the applicant's undergraduate major field, or from professors of post-baccalaureate courses, or from others able to make an appropriate

assessment of the applicant's academic or professional competence (forms available from the Graduate School website). If the applicant selects confidential (rather than open) letters of recommendation, the confidential letters must be received in sealed envelopes, with the signature of the referee across the seal. The MBA and MPAC programs require a résumé in lieu of references. The Educational Administration program requires a professional recommendation.

- Graduate Record Exam (GRE) or other test scores; applicants with advanced degrees from regionally accredited institutions applying to certain programs do not need to submit scores; see program admission requirements for specific test information and requirements. MBA and MPAC applicants must provide the Graduate Management Admissions Test (GMAT), not the GRE, within the MBA and MPAC program deadlines. Some Woodring College of Education programs accept the Miller Analogies Test (MAT). Scores must be received in the Graduate School office by the program specific deadline date; if no program-specific deadline date, then by the Graduate School deadline date.
- All applicants must demonstrate English language proficiency. Applicants who have received the bachelor's or advanced degree from an accredited institution where instruction is in English do not need to submit scores from the TOEFL (see the International Applications section).
- Favorable review and recommendation of applications by the graduate faculty in the program to which application is made.
- **Special Requirements.** Certain programs have additional requirements or procedures; see the program descriptions. If a program requires a statement of purpose and/or writing sample(s), these must accompany the application. See specific program information for clarification.

Materials submitted in support of an application will not be returned, forwarded, or copied at the request of the applicant; materials are used only for the WWU Graduate School admissions and Teaching Assistant selection process. Incomplete or inactive applications are kept on file in the Graduate Office for three years, then destroyed. If during this three-year period an applicant reapplys, official documents (test scores, transcripts, current letters of recommendation) may be used for a new admission application.

The MAT generally is offered monthly through the Western Washington University Office of Institutional Assessment and Testing, 360-650-3080.

Contact Educational Testing Service in Princeton, N.J. at 866-473-4373 or [www.gre.org](http://www.gre.org) for further information about the GRE testing program. The GRE bulletin is also available at the Graduate School and Western's testing center, 360-650-3080. For information about the GMAT, visit [www.mba.com/mba](http://www.mba.com/mba).

Current GRE board policy states that scores are reportable for five years. The Graduate School accepts only official test scores from admissions tests sent directly from the testing organization. Students should refer to the specific test website for information on the availability of official test scores.

#### *Provisional Admission*

Students who do not meet all the requirements for full admission may be granted provisional admission. The number of admissions on a provisional basis is limited under Higher Education Coordinating Board regulations. The faculty of the applicant's intended graduate program must submit a statement of support for provisional admission to the graduate dean. If provisional admission is authorized by the Graduate School, the provisions are stated in the letter offering the student special admission to graduate study. No K (incomplete) grades are allowed until provisional status is removed. A provisionally admitted student is not eligible for a teaching assistantship or Graduate School-funded scholarships until the provisional status is removed.

### *Licenses/Certification*

Students in some master's programs also apply for licensing or certification through professional organizations or state agencies. The certificate or license is separate from the master's degree. It is the applicant's responsibility to inquire about licensing or certification requirements prior to enrolling.

### *International Applicants*

Students who are not native speakers of English must demonstrate competence in written and spoken English. This can be done by submitting a satisfactory score on the international TOEFL, taken within one year of the date of application. A minimum composite score of 567 is required for the paper-based test; the scaled score for the computer-based test is 227; the Internet-based score is 86. The TOEFL scores must be on file in the Graduate School prior to receipt of the application for graduate study. Applicants who have received the bachelor's or advanced degree from an accredited institution in the U.S. or in an English-speaking country or from an accredited institution where instruction is in English do not need to submit scores from the TOEFL.

International students must submit official translations to English of all transcripts and diplomas. International applicants must have their credentials evaluated by a professional evaluation service for degree equivalency only; course by course evaluation is not required. The agency must belong to the National Association of Credential Evaluation Services ([naces.org](http://naces.org)). International students must file a satisfactory statement of financial responsibility with the Graduate School. Current expenses are approximately \$29,000 for one academic year of study. An application for an international student cannot be processed unless accompanied by appropriate financial guarantee documentation. International students are not eligible for federal or state governmental financial aid.

International students are encouraged to complete the admission process as soon as possible to obtain a visa and make travel arrangements.

### **Funding and Support**

#### **Graduate Assistantships**

Graduate assistantships are available in limited number in most graduate programs and are competitively awarded. Assistantships are not available in self-sustaining (non state-supported) programs. Only students with full admit, not provisional status, may be awarded the TA. To continue as a graduate assistant, the graduate student must meet or exceed all academic criteria pertaining to satisfactory progress toward the degree, and meet or exceed all departmental requirements and criteria for satisfactory service as a graduate teaching assistant. Graduate students are limited to no more than the equivalent of six full-time quarters of service as graduate teaching assistants. Graduate assistants must meet the Graduate School definition of full-time enrollment.

Duties vary according to the department and program, the needs of the program faculty and the student's graduate plan of study. A full-time assistantship does not allow for additional salary or employment from the University. Graduate teaching assistantship applicants whose native language is not English must demonstrate English language proficiency required for classroom or laboratory instruction. Applicants to graduate programs check the TA box on the on-line application or submit the on-line graduate assistantship request for consideration (go to Graduate School website).

## *Financial Aid*

Graduate students also are eligible for several types of financial aid; information can be obtained from the University's Financial Aid Office, [www.finaid.wwu.edu/](http://www.finaid.wwu.edu/).

## **Program Requirements**

Graduate programs at WWU generally require a minimum of 45 credits with thesis (referred to as Option I) and 48 credits without thesis (referred to as Option II). The minimum basic program requirement generally contains at least 24 credits of approved 500- and 600-level courses other than the thesis (690); and no fewer than 5 credits and no more than 36 credits of thesis (690). For a non-thesis program, the minimum basic program requirement must contain at least 38 credits of approved 500- and 600-level courses. A maximum of 10 credits of approved 400-level courses can be applied to either Option I or Option II programs. All 400-level courses must meet the same standards as regular 500-level courses with regard to grading, time frame, et cetera.

For students who have taken a significant number of graduate level mathematics or computer science courses as undergraduates at WWU, and who as undergraduates were identified for admission to the Graduate School, the graduate programs in mathematics and computer science require only 36 500- and 600-level credits. Guidelines for this option are available from the departments.

It is recommended that no more than 10 credits of directed independent study be applied toward the degree, although some programs are more restrictive. A graduate student registering for a 500 or 400 independent study course used for the degree develops a contract (online form) with the instructor, which is then reviewed and approved by the graduate program advisor, department chair and the Graduate School. Independent study credit normally will not be given when the student is paid for engaging in the work described on the contract (e.g., internship, work-study projects, graduate assistantships).

Many programs require more than 45 or 48 credits to meet degree requirements. Also, certain undergraduate deficiencies may add additional credits to an individual student's course of study. (See *Plan of Study* section that follows.) These deficiencies may affect financial aid awards.

## **Additional Requirements**

Program descriptions in this catalog provide information about special requirements: statistics competency, second language competency, sequence of particular courses, et cetera. Most graduate programs provide information about such special requirements; the student should request this information from the program advisor.

Students whose research involves human subjects or live vertebrate animals must obtain approval prior to conducting research and comply with University policies regarding these types of research. Please refer to [www.wwu.edu/depts/rsp](http://www.wwu.edu/depts/rsp).

Graduate students in departments with a foreign language requirement or a foreign language requirement option may satisfy the requirement by (a) successfully completing the final course in a second-year language sequence or (b) passing a reading competency exam in the language. Each department sets its own minimum standard to indicate the required level of competency. Graduate students are encouraged to complete the foreign language requirement early in their program.

### **Time Limits**

All requirements for the degree must be completed within five years of the initial quarter of matriculation. Active graduate students within this five-year time period maintain access to library and computer resources. Students who have not completed their program after three years of study are required to file a plan for completion of the degree within the five-year limit. Otherwise it is understood that the student has decided to withdraw from the program, and the graduate file is inactivated. Student computer accounts which allow access to computer labs, e-mail, library privileges, and other student technology services are purged at the end of this five-year period. Incomplete or inactive applications are kept on file in the Graduate Office for three years, then destroyed. Files of students who are admitted and register for coursework but do not complete their programs are kept for five years after the five-year program requirement. Files of students who complete programs are archived for 35 years.

### **Academic Load**

The maximum credit load for a graduate student is determined in consultation with the student's graduate program advisor, within the policies set by the Registrar.

The Graduate School defines full-time enrollment as 8 or more credits per quarter. Graduate students who have successfully completed all coursework on the approved Plan of Study, except for thesis (690) or research (691) work, maintain eligibility for the teaching assistantship if enrolled for a minimum of two credit hours of continuous enrollment, thesis, or research. See the Financial Aid section for implications of being enrolled for 2 credits if the student requires financial aid.

### **Transfer, Correspondence, and Workshop Courses**

Coursework taken prior to formal admission to a WWU master's degree program, whether at Western or another accredited institution, can be considered for transfer credit if the criteria listed below are met. Credit taken at another accredited institution, concurrent with graduate status in a WWU master's degree program, can also be considered for transfer credit if the criteria listed below are met. (Such coursework should be approved in advance of registration to prevent any misunderstanding or false expectations.) The criteria are: a limit of nine quarter (six semester) credits; graded with a B, 3.0, or better; taken no more than three years prior to a student's quarter of admission; be acceptable to the granting institution for its master's degree; and meet the requirements and conditions of approved courses offered by WWU. The request for transfer credit, including a copy of the course syllabus, is submitted by the graduate program advisor and student for approval by the Graduate School. At the recommendation of the graduate program advisor and the approval of the Graduate School, some course requirements may be waived, depending on a student's previous academic experience. However, the total number of credits required for the degree must still be met.

No credit is given for correspondence courses. No credit is allowed by challenge examination or performance.

Courses offered as workshops or in a shortened time frame, even under regular course numbers, do not qualify for graduate credit toward a degree, unless the department obtains prior permission for each specific instance from Graduate Council. To ensure that prior approval has been granted, students should obtain written permission from the Graduate School prior to enrolling.

## **Thesis and Comprehensive Examinations**

Master's degree programs are Option I (thesis) or Option II (additional coursework and, in most programs, a comprehensive exam). See specific program descriptions for information. Minimally, the thesis committee has three members. The chair and a second member must be regular graduate faculty members from the student's department or program. Guidelines for the thesis are available online at the Graduate School Website. Joint manuscripts are not permitted. Only an individually authored manuscript will meet the thesis requirements. Departments that require the thesis customarily provide additional guidance.

Refer to the Graduate School website for current information on Graduate School requirements pertaining to thesis publication.

Prior to registration for thesis, departments and the Graduate School require that a student be advanced to candidacy and have an approved thesis topic on file in the Graduate Office. Students whose research involves human subjects or live vertebrate animals must comply with University policies regarding these types of research. Please refer to [www.wwu.edu/depts/rsp](http://www.wwu.edu/depts/rsp). Registering for thesis credits beyond the maximum allowed for the degree may affect a student's eligibility for certain kinds of financial aid.

Comprehensive exams or assessments vary among programs. Students should consult their respective programs for information.

The comprehensive exam should be scheduled for the final quarter of the student's enrollment. It may be deferred upon request by the student and agreement by the graduate advisor until all coursework has been completed. Comprehensive exams, if failed, may be repeated, but only if the graduate faculty of the particular program approves the student's request to repeat the exam.

## **Plan of Study**

During the first quarter of graduate study at WWU, the student and graduate program advisor together develop a "Plan of Study" in accordance with the requirements described in the catalog's program narrative. This plan is signed by both the student and program advisor and submitted to the Graduate School for approval. Copies of the approved plan are sent to the student and advisor and the financial aid office. Plans of study may be amended as necessary, upon the request of the student and program advisor and final approval by the Graduate School. Failure to have an approved plan of study on file may result in loss of registration privileges.

## **Scholarship Standards**

A maximum of 10 credits of C grades (C+, C, C-) is allowed towards completion of a grad program (courses listed on the approved plan of study). Courses in which a D+ or lower is earned may not be applied towards completion of a grad program. The accumulation of more than 10 credits of C+ or lower (including U) grades will result in the student being withdrawn from the master's program. There are certain courses that must be passed with a grade of B or better; course descriptions note such requirements. A grade of C+ or lower and U count toward the 10-credit maximum, even if the course is retaken and a grade of B or better, or S, is earned. A graduate student may be required by the department to repeat a course to document attainment of a certain level of competence or knowledge. Pass/No Pass grades are not applicable toward a graduate degree. S grades are applicable, but not computed in the GPA. An incomplete (K) grade may be assigned in accordance with the regulations outlined in the Academic Policies section of this catalog. If, after a calendar year, the course requirements have not been met, the K grade lapses to a Z. These Z grades are computed as failing grades in a student's grade point average and may affect retention in the master's program. Exceptions to the K grade rule are K grades which are received for thesis and certain research

courses. In these cases, the K grades are allowed to stand until the thesis or research is completed, whereupon the grade is changed to the earned grade.

To remain a candidate for the degree, a student must maintain at least a 3.0 GPA in courses listed on the plan of study. The GPA is calculated on letter grades earned (on record) at the time grades are posted, i.e., K grades are not considered. A student also must be making satisfactory progress in the graduate program to which he or she has been admitted.

### **Degree Candidacy**

Advancement to degree candidacy is formal recognition that the student has completed all admission requirements and has demonstrated satisfactory performance in at least 12 credits of graduate study as listed on an approved plan of study. Advancement to candidacy is a prerequisite to earning the master's degree and should be accomplished as early as the student is eligible. Advancement is granted by the student's program upon completion of minimum requirements as stated above. A student must be advanced to candidacy before submitting the application for degree. Confer with your advisor if you have questions about your status or eligibility for advancement to candidacy.

### **Awarding of the Master's Degree**

The master's degree is earned at the end of the quarter in which the student has completed all degree requirements and has filed the application for degree. Recommendation for the degree is made to the Graduate Council by the student's advisor (option I and II) and thesis committee (option I). Application for the degree must be made by the last day of classes of the quarter prior to the quarter the student intends to graduate. A student must also be enrolled for at least two state-supported credits at WWU during the quarter in which the degree is awarded or during the preceding (calendar) quarter. Auditing a course for this purpose is not permitted. A commencement ceremony is held at the end of each quarter. Students participate in the commencement ceremony for the quarter in which degree requirements are met, including filing the application for degree and paying the diploma fee by the stated deadline.

### **Teacher Certification**

The Woodring College of Education, not the Graduate School, administers the certification of P-12 teachers. Students interested in certification at the P-12 or secondary level, contact the Secondary Education Department, MH 173 360-650-3327. Students interested in Special Education P-12 certification, contact the Special Education Department, MH 161, 360-650-3330. Other certification questions can be directed to the Teacher Certification, Student Services, MH 250, 360-650-4930 or [www.wce.wwu.edu/resources/certification/](http://www.wce.wwu.edu/resources/certification/).

### **Undergraduate and Post-Baccalaureate Enrollment in 500/600 Level Courses**

Undergraduates at WWU who are in their senior year and have at least a 3.0 grade point average can take a single graduate course during any quarter, but under certain provisions. There must not be an appropriate undergraduate course in their field that is equally available; permission must be obtained in advance from the department chair and graduate program advisor of the department offering the graduate course; and the Graduate Office must approve the enrollment. A senior who later enters a master's program at WWU may transfer up to nine credits of coursework into the master's program. The credit must not have been used for the baccalaureate degree and must meet all criteria for transfer credit. To register, contact the Graduate School office for a registration system override. Post-baccalaureate students may enroll for 500-level courses. All prerequisites must be met and permission obtained from the department.

Neither undergraduate nor post-baccalaureate students may enroll in 600-level courses.

### **The Graduate Council**

The Graduate Council, comprised of representatives from graduate faculty, colleges with graduate programs, and graduate students, is assigned responsibility within the University for graduate policy and procedures. The Council reviews all graduate course proposals and graduate program requirements and conducts periodic reviews of graduate programs. The Council also hears and decides on requests for exceptions from standing policies and procedures that regulate graduate study.

### **Faculty/Student-Designed Programs**

#### **MA, MS, MEd**

At times students and faculty develop programs that are more interdisciplinary than the master's programs described in this catalog. In each instance this requires a complete Graduate School application and a proposed plan of study that has been approved by the graduate faculty and departments the student intends to work with and by the University's Graduate Council. At least two or more graduate disciplines must be involved.

Programs of this type are restricted by several factors: current offerings which can provide a basis for the individual program; availability of appropriate faculty; the applicant's academic preparation and ability; and the internal logic, or relationship of the elements of the proposed program. Each case is considered on its merits.

For candidates who are currently enrolled as graduate students no more than 15 credits of course work (completed by the end of the quarter the petition is approved) can apply toward the designated program.

Detailed information can be obtained by contacting the Graduate Office. Ask for *Fact Sheet: Faculty/Student-Designed Programs*. Procedures for applying are contained in the Fact Sheet.

### **Graduate Departments and Programs**

#### **Student/Faculty Designed, MA**

At times students and faculty develop programs that are more interdisciplinary than the master's programs described in this catalog. In each instance this requires a complete Graduate School application and a proposed plan of study that has been approved by the graduate faculty and departments the student intends to work with and by the University's Graduate Council. At least two or more graduate disciplines must be involved.

Programs of this type are restricted by several factors: current offerings which can provide a basis for the individual program; availability of appropriate faculty; the applicant's academic preparation and ability; and the internal logic, or relationship of the elements of the proposed program. Each case is considered on its merits. For candidates who are currently enrolled as graduate students no more than 15 credits of course work (completed by the end of the quarter the petition is approved) can apply toward the designated program.

Detailed information can be obtained by contacting the Graduate Office. Ask for **Fact Sheet: Faculty/Student-Designed Programs**. Procedures for applying are contained in the Fact Sheet.

### **Student/Faculty Designed, MEd**

At times students and faculty develop programs that are more interdisciplinary than the master's programs described in this catalog. In each instance this requires a complete Graduate School application and a proposed plan of study that has been approved by the graduate faculty and departments the student intends to work with and by the University's Graduate Council. At least two or more graduate disciplines must be involved.

Programs of this type are restricted by several factors: current offerings which can provide a basis for the individual program; availability of appropriate faculty; the applicant's academic preparation and ability; and the internal logic, or relationship of the elements of the proposed program. Each case is considered on its merits. For candidates who are currently enrolled as graduate students no more than 15 credits of course work (completed by the end of the quarter the petition is approved) can apply toward the designated program.

Detailed information can be obtained by contacting the Graduate Office. Ask for **Fact Sheet: Faculty/Student-Designed Programs**. Procedures for applying are contained in the Fact Sheet.

### **Student/Faculty Designed, MS**

At times students and faculty develop programs that are more interdisciplinary than the master's programs described in this catalog. In each instance this requires a complete Graduate School application and a proposed plan of study that has been approved by the graduate faculty and departments the student intends to work with and by the University's Graduate Council. At least two or more graduate disciplines must be involved.

Programs of this type are restricted by several factors: current offerings which can provide a basis for the individual program; availability of appropriate faculty; the applicant's academic preparation and ability; and the internal logic, or relationship of the elements of the proposed program. Each case is considered on its merits. For candidates who are currently enrolled as graduate students no more than 15 credits of course work (completed by the end of the quarter the petition is approved) can apply toward the designated program.

Detailed information can be obtained by contacting the Graduate Office. Ask for **Fact Sheet: Faculty/Student-Designed Programs**. Procedures for applying are contained in the Fact Sheet.

## **Interdisciplinary Studies**

### **All-University Programs**

- Center for International Studies
- Cultural Exchange Opportunities
- Center for Service-Learning
- Field Experience Programs
- First-Year Experience
- First-Year Interest Group Program
- Post-Baccalaureate Professional Schools
- Professional Transfer Programs

Western Washington University is organized into seven colleges and a Graduate School. This organization not only accommodates Western's size and complexity, but also enables flexibility and innovation in Western's curriculum.

Some programs at Western are available through one department or college; some are interdisciplinary, involving several academic units; and some, the All-University Programs listed below, involve all or most of Western's departments and colleges.

#### **Center for International Studies**

360-650-3298

<http://www.wwu.edu/international/>

The Center for International Studies provides a focus for international education at Western. Its mission is to foster international and global perspectives for all Western students, faculty, and staff through courses, international experiences and study abroad.

The Center for International Studies coordinates the activities of six international education units on campus:

- Center for Canadian-American Studies
- Center for East Asian Studies
- International Programs & Exchanges
- Intensive English Program
- Asia University Program
- Korea University Program

The Center also oversees the International Studies Minor and sponsors lectures and presentations on topical global issues and concerns, provides support to incoming international students and visiting scholars, and assists Western faculty members in developing new international teaching, learning and research opportunities. The Center for International Studies is responsible for:

- **Curriculum Development** - The Center assists all university departments in developing internationally focused courses and learning experiences for students. Support includes seed grants for course development, faculty workshops, and assistance in building short-term courses taught by Western faculty abroad. <http://www.wwu.edu/international/>

- **International Activities on Campus** - The Center sponsors cultural and educational activities and programs for the campus community, including those associated with International Education Week, Canada Week, Japan Week and the World Issues Forum. The Center also hosts seminars on current international education issues. <http://www.wwu.edu/international/>
- **Quarterly International Lecture Series** - The Center sponsors lectures and presentations by both visiting and resident scholars during the academic year, focusing on regions as diverse as Quebec and Mongolia. Topics range from international trade to global literature and current world political events. <http://www.wwu.edu/international/>
- **Global Citizen Distinguished Scholar Program** - Approximately twenty-five first-year students with strong academic records and global interests participate in this program that is organized by the Center, and which connects them to international courses, activities, and events on campus throughout the academic year. <http://www.wwu.edu/international/>
- **Links to the Community** - The Center fosters collaboration and partnerships with a wide variety of governmental and civic organizations, including Bellingham Sister Cities, Rotary Club, Slum Doctor Programme, Bellingham School District, and Whatcom Community College. <http://www.wwu.edu/international/>
- **Study Abroad** - The Center promotes and develops a wide array of study abroad programs, and is committed to finding ways to make the study abroad experiences accessible to all Western students. The Center supports those international programs that give students a chance to broaden their global perspectives, gain foreign language fluency, engage in service learning and volunteer opportunities, and acquire global citizenship skills. <http://www.wwu.edu/ipe/abroad.shtml>
- **International Students** - The Center organizes and promotes activities for Western's population of international students, provides venues for international students to meet and interact with the campus community, and works with the Office of Admissions to promote international student enrollment. <http://www.wwu.edu/international/>

## Cultural Exchange Opportunities

### Asia University America Program

The WWU-Asia University America Program (AUAP) is an English language and cultural orientation program that has been developed cooperatively with Asia University (Tokyo, Japan), Central Washington University, and Eastern Washington University. During this five-month study-abroad program, students from Asia University attend AUAP courses at Western in English as a Second Language, American cultural studies, and physical education. AUAP students earn credit from Asia University and are not matriculated at Western. Approximately 110 AUAP students come to Western each year, with sessions running from September to mid-February, and late February through late July.

The AUAP offers a number of opportunities to the Western community:

- Language and cultural exchange opportunities to Western students and community residents through the Campus Friends, Community Friends, and Classroom Volunteer programs; these programs provide intercultural contacts both within and beyond the classroom
- Informational programming about Japanese culture in various Western classes and residence-hall groups; in addition, AUAP staff facilitate exchanges with AUAP and regular Western classes
- Interaction with Japanese students on a daily basis in their halls and dining rooms for Western students who share residence halls with AUAP students
- Paid leadership positions for Western students, such as international peer advisors and curriculum assistants, that give valuable experience in an intercultural context, provide opportunities to develop international friendships, and assist in financing their education

- Cultural-exchange services to the community, including programming in Bellingham public schools which introduces local elementary school children to Japanese language and culture and, most importantly, to international friendship
- Participation by Western faculty and students in research opportunities through AUAP; faculty and students from the communications, foreign languages, psychology, business, and anthropology departments have conducted studies based on linguistic or attitudinal surveys of AUAP students

For more information on the AUAP, contact the office at 360-650-3922; by fax at 360-650-2284; by e-mail at [auap@wwu.edu](mailto:auap@wwu.edu); or visit the AUAP website at [www.wwu.edu/~auap](http://www.wwu.edu/~auap).

### **Intensive English Program**

The Intensive English Program (IEP) provides a variety of English language courses designed to prepare international students for academic study at American colleges and universities. IEP classes, which are mostly noncredit, focus on preparing students for these academic experiences, as well as helping them to adapt socially and culturally to living in the U.S. The program emphasizes creating opportunities for Western students and IEP students to interact, both in the classroom and through informal conversational situations.

The IEP, in cooperation with the Office of Admissions, manages a conditional undergraduate admissions process, in which international students, as admitted undergraduates, enroll in a combination of regular academic classes and advanced English-language classes. This dual enrollment functions as a bridging process from English language coursework to university coursework and is designed to better prepare international students for study in degree programs. IEP students also prepare for graduate school application and enrollment in a pre-Graduate track of IEP and regular academic coursework.

Other links to academic areas of the University include the following:

- IEP works with Western faculty to facilitate intercultural experiences for current Western students in communications, management, psychology, anthropology, education and foreign languages courses by arranging joint classes, projects and other interactions with IEP students
- IEP is closely linked to the TESOL certificate program by providing practicum experience, tutoring experience and employment opportunities for TESOL students
- IEP provides opportunities for Western faculty who have professional relationships in other countries to bring students, individually or in groups, to campus for language and content-area study or for eventual matriculation into Western

For more information, contact the IEP office at 360-650-3755; by fax at (360) 650-6818; or by e-mail at [iep@wwu.edu](mailto:iep@wwu.edu), or visit the website at [www.wwu.edu/depts/iep/](http://www.wwu.edu/depts/iep/).

### **International Programs and Exchanges**

International Programs and Exchanges (IPE) administers and cooperates in more than 100 international study abroad programs in Asia, Europe, Latin America, Oceania and Africa. A variety of study abroad, exchange and international internship options are available for a quarter, semester, or year-round or a short term period of several weeks. Qualified students for all study abroad and international exchange programs are concurrently enrolled at the University and at the host university or institution, earn WWU credit and maintain financial aid eligibility and residency.

International study courses within departments are normally assigned 237, 337, or 437 numbers. At the completion of a study abroad or exchange program, credits for course work may be applied to major, minor or electives toward graduation. Since special application and registration procedures are required for participation in study abroad or exchange programs, it is important to contact IPE well in advance of the program deadline.

IPE serves international students, faculty and scholars at Western by providing advising, programs, and preparation and maintenance of immigration records. IPE also assists with resolving financial, academic, employment and personal difficulties in coordination with other university offices and community resources.

Program information and advising are available from International Programs and Exchanges, College Hall 104, 360-650-3298, [ipe@wwu.edu](mailto:ipe@wwu.edu); [www.wwu.edu/ipe](http://www.wwu.edu/ipe).

### **Korea University Program**

Western's Korea University Program offers two experiences for students from Korea University's Sejong Campus. The Academic and Cultural Programs both offer opportunities for Korean students to connect with American students and the greater Bellingham community through the following activities:

- Korean students join a local family for "the Dinner Club", sharing their cultures with each other
- Excursions to local and regional areas of cultural interest, joined by WWU faculty, staff and students
- Cultural exchanges between Korean students and local school children to promote international understanding
- Provide classroom experience and employment opportunities for TESOL students

The Korea University Cultural Program offers students an opportunity to study English in a non-credit program and to experience American culture while living on campus. Cultural Program participants study in an intensive program to improve their English speaking, listening, writing and reading skills with the goal of returning to Korea University to complete their degree.

The Korea University Academic Program offers students the opportunity to improve their English skills in mostly non-credit ESL classes. The goal of Academic Program participants is to improve their language skills to be able to enroll and successfully complete academic classes at Western or other American universities.

Program information and advising are available from Korea University Program, College Hall 104, 360-650-3298, [cis@wwu.edu](mailto:cis@wwu.edu); [www.wwu.edu/koreaup](http://www.wwu.edu/koreaup).

### **Center for Service-Learning**

360-650-7542  
[www.wwu.edu/depts/csl](http://www.wwu.edu/depts/csl)

Service-learning is an experiential learning method in which students learn through active participation in thoughtfully organized service experiences that meet community needs. Service-learning offers students the opportunity to learn outside the classroom, explore the richness and diversity of their community, and examine social justice issues, while applying classroom theory in a real-world setting.

The Center for Service-Learning exists to facilitate quality educational experiences for Western student through community-based service-learning. The Center connects campus and community resources to create diverse learning experiences and to serve community needs. Its programs integrate the academic, service and reflection components of service-learning by providing resources, including training and technical assistance, to students, fa

Western offers many courses that include service-learning; contact the Center to learn more.

### **Field Experience Programs**

Western Washington University recognizes that work experience outside of the classroom can enhance student learning by providing opportunities to put theory into practice. To this end, the University works

closely with a wide variety of businesses and community and governmental agencies which offer internship opportunities, and many academic departments require or make academic credit available for field experience.

Students interested in exploring field experience opportunities should contact the Career Services Center, Old Main 280.

### **First-Year Experience**

First-Year Experience (FYE) courses aim to help first-year students with their transition to the University. FYE courses are stand-alone courses offered by departments for academic credit, as either a General University Requirement or an elective. Taught in small sections of 30 or less, with registration restricted to Freshmen, FYE courses provide first-year students with a small group experience.

First-Year Experience offerings are intended to:

- ⇒ Give first-year students the opportunity for more interaction with faculty, fostering a stronger sense of academic community
- ⇒ Communicate high academic expectations to students
- ⇒ Help students recognize and take advantage of the roles that various campus resources play in their academic lives

Examples of First-Year Experience courses include:

- CLST 117 - The Ancient Legacy
- PSY 117 - The Psychology of Identity

### **First-Year Interest Group Program**

The First-Year Interest Group (FIG) program offers entering students a chance to satisfy General University Requirements (GURs) at the same time that they participate in a learning community for freshmen only. FIG students co-enroll in two designated GUR classes and a small seminar (SMNR 101). FIG clusters are limited to first-year students and are available fall quarter only. While the GUR courses in a FIG cluster will usually be large, the attached SMNR 101 is limited to 25 students.

The FIG seminar provides first-year students with access to resources that can help with their transition to Western. The program emphasizes faculty-student and student-student interaction as well as deeper learning.

The FIG seminar uses the context from the linked GUR lecture courses as a context for fostering critical thinking and building academic competencies. An example of a FIG cluster is:

#### *Frames of Mind*

- ANTH 201 - Introduction to Cultural Anthropology (5)
- PSY 101 - Introduction to Psychology (5)
- SMNR 101 - Perspectives on Learning (2)

For more information, contact the FIG Director, Steven VanderStaay, Old Main 480B, 360-650-3004, or via e-mail at [Steven.Vanderstaay@wwu.edu](mailto:Steven.Vanderstaay@wwu.edu)

## **Post-Baccalaureate Professional Schools**

Admission to graduate professional schools requires a baccalaureate degree and is competitive. Early consultation with the relevant advisor and excellent academic work are crucial to success.

### *Dentistry*

Admission to dental schools is highly selective and includes evaluation of GPA, letters of recommendation, scores from the Dental Admission Test (DAT), and an interview, as well as demonstrated dental knowledge and community service.

Course requirements for entry into a dental program afford each applicant an opportunity to pursue almost any area of interest as a major field of study and still acquire the background necessary to prepare for the DAT and to pursue a dental curriculum. The DAT must be taken the year prior to admission to dental school; normally it is taken in the junior year.

Typical freshman year curriculum:

- CHEM 121, 122, 123 (begin 121 as soon as possible)
- BIOL 204, 205, 206 (continues into second year)
- ENG 101
- MATH (pre-calculus or calculus, depending upon major)

Early consultation with a pre-professional advisor is strongly recommended. Students will find it valuable to engage in early and regular discussions of matters such as selection of a major, course sequences and graduation requirements at Western, as well as dental school entrance requirements and application procedures, the DAT, and other pertinent information.

Advisors: Dr. George Kriz, Director of Advising for Pre-Healthcare Professions; Renée Murray, Graduate and Pre-Professional Programs Advisor, Old Main 280, 360-650-3268, careers@wwu.edu.

### *Law*

Law schools require a baccalaureate degree. They do not require a specific undergraduate major, but do seek students who are broadly educated. Admission is selective based primarily on GPA, LSAT scores and letters of recommendation. Law schools want students who excel in oral and written communication; understand economic, political and social institutions; and have well-developed objective and critical thinking skills. Western's General University Requirements are intended to aid students in honing these skills.

The Law School Admission Test (LSAT), normally required of applicants to American and Canadian law schools, is offered on the Western campus several times each year. Applications and test schedule information may be obtained from the Testing Center and the Department of Political Science. Students should plan to take the LSAT late in their junior year or early in their senior year.

Advisors: Dr. Paul Chen, Department of Political Science, Arntzen Hall 436, 360-650-4876, Paul.Chen@wwu.edu; Julie Helling, Fairhaven College, FA 333, 360-650-4907, Julie.Helling@wwu.edu.

### *Medicine*

The faculties of the School of Medicine at the University of Washington and other medical schools in the U.S. believe that the appropriate level of scholarly achievement and preparation for medicine can best be developed in a liberal arts program with the emphasis on a discipline selected by the student.

In recognition of the diverse opportunities afforded the graduate in medicine, specified entrance requirements are purposely kept to a minimum. This enables each student to pursue, as a major field of study, almost any area of interest — the arts, humanities, social sciences, biological or physical sciences — and still acquire the background necessary to prepare for the Medical College Admission Test (MCAT) and to pursue a medical curriculum. The MCAT must be taken at least one full year prior to the date of admission to medical school; normally it is taken in the junior year.

Early consultation with the pre-professional advisor is strongly recommended. Students will find it valuable to engage in early and regular discussions of matters such as selection of a major, course sequences and graduation requirements at Western, as well as medical school entrance requirements and application procedures, MCAT and other pertinent information.

Typical freshman year curriculum:

- CHEM 121, 122, 123 (begin 121 as soon as possible)
- BIOL 204, 205, 206 (continues into second year)
- ENG 101
- MATH 124 and 125
- General University Requirements

Premed students should also seek advising in their major department.

Advisors: Dr. George Kriz, Director of Advising for Pre-Healthcare Professions; Renée Murray, Graduate and Pre-Professional Programs Advisor, Old Main 280, 360-650-3268, [careers@wwu.edu](mailto:careers@wwu.edu); <http://www.careers.wwu.edu/prehealth.shtml>.

### *Pharmacy*

Programs at Washington State University, University of Washington, and other institutions lead to a Doctor of Pharmacy degree. Western provides courses that prepare students for admission to these programs. Admission into a pharmacy program is highly selective and includes evaluation of GPA, letters of recommendation, scores from the Pharmacy College Admissions Test (PCAT), and an interview. Because admission requirements at pharmacy programs are highly variable students are strongly encouraged to seek advisement from the pre-healthcare professions advisors.

Typical freshman year curriculum:

- CHEM 121, 122, 123 (begin 121 as soon as possible)
- BIOL 204, 205, 206 (continues into the second year)
- ENG 101
- Math 124
- General University Requirements

Advisors: Dr. George Kriz, Director of Advising for Pre-Healthcare Professions; Renée Murray, Graduate and Pre-Professional Programs Advisor, OM 280M, 360-650-3268, [careers@wwu.edu](mailto:careers@wwu.edu).

### *Physical Therapy*

Admission to a graduate program in physical therapy is highly selective. Students prepare for entry by obtaining a baccalaureate degree, completing the prerequisite course work for entry into each specific program, and by obtaining volunteer clinical experience. Students may complete undergraduate degrees in any area. Most physical therapy programs are three-year programs offered at the doctoral level.

Admission requirements for entry into a physical therapy program include the completion of a required prerequisite set of courses, three letters of recommendation and the completion of an internship under the direction of a physical therapist (200 to 500 hours). Most programs require submission of scores from the Graduate Record Exam (GRE — general test only) and some require a minimum score on the two sections of the GRE. The GRE should be taken in the fall quarter of the application year.

Specific information on each program can be obtained from the PT Education link on the American Physical Therapy Association home page at [www.apta.org](http://www.apta.org). Program prerequisites, statistics, and curriculums are presented by geographic location. Students are encouraged to review prerequisite courses early in their academic planning and to develop a plan of study within the first quarter of entry to Western.

Courses which are common to many prerequisite requirements for physical therapy programs:

- BIOL 101; or 204, 205
- BIOL 245
- BIOL 348, 349
- CHEM 121, 122, 123
- PHYS 114, 115, 116
- PSY 101, 230 or 250
- Statistics  
Other recommended courses:
  - KIN 308, 311, 312, 410, 413
  - CHEM 251

Advisor: Dr. Kathleen Knutzen, Department of Physical Education, Health and Recreation, CV 105, 360-650-3055, [Kathy.Knutzen@wwu.edu](mailto:Kathy.Knutzen@wwu.edu), <http://www.wwu.edu/alliedhealth/Pre-Physical%20Therapy.shtml>

### *Nursing*

Western does not offer a nursing education program but many Western students enter nursing programs by transferring to a nursing program or by entering a nursing program after graduation. Registered Nurse (R.N.) credentials are obtained after successfully completing a state board examination following completion of a certified nursing program at the community college (ASN or ARN) or a four-year university (BSN or direct-entry MSN). To be eligible for a nursing education program, students must complete a specified set of prerequisites and obtain volunteer or paid health care experience. Students may work on completing the prerequisites at WWU and apply for entry into the ASN or BSN program. Completion of a degree is required for the direct-entry MSN program. Examples of Western majors that cover some or all of the prerequisites include: Biology-Anthropology, Biology, Community Health and Kinesiology/Pre-Healthcare Professions.

To meet the requirements for a number of programs (ASN, BSN, MSN) students complete:

- PSY 101, 230
- BIOL 101; or 204, 205
- BIOL 245
- BIOL 348, 349
- CHEM 121, 251
- HLED 350
- MATH 240  
Other recommended courses:
  - CHEM 122, 123
  - KIN 308, 309

- Sociology
- Anthropology

Volunteer work: It is recommended that students obtain 200+ hours of volunteer or paid health care experience. It is also recommended that students consider obtaining the Certified Nursing Assistant license via a local technical or community college.

Advisor: Dr. Kathleen Knutzen, Department of Physical Education, Health and Recreation, CV 105, 360-650-3055, [Kathy.Knutzen@wwu.edu](mailto:Kathy.Knutzen@wwu.edu), <http://www.wwu.edu/alliedhealth/Pre-Nursing.shtml>.

### *Occupational Therapy*

Occupational therapy is offered at the master's degree level at over 150 higher education institutions in the country. Western students prepare for entry by obtaining a baccalaureate degree, completing the prerequisite coursework and obtaining volunteer clinical experience. Students may complete undergraduate degrees in any area but are encouraged to review prerequisite courses early in their academic planning to develop a plan of study.

Courses which are common prerequisites to many occupational therapy programs:

- PSY 101, 230, 250
- BIOL 101 OR 204, 205
- BIOL 348, 349
- CHEM 121
- PHYSICS 101 or 114
- MATH 240
- Other recommended courses:
  - CHEM 122, 123
  - KIN 308, 309, 312
  - Sociology
  - Anthropology

Advisor: Dr. Kathleen Knutzen, Department of Physical Education, Health and Recreation, CV 105, 360-650-3055, [Kathy.Knutzen@wwu.edu](mailto:Kathy.Knutzen@wwu.edu), <http://www.wwu.edu/alliedhealth/Pre-Occupational%20Therapy.shtml>.

### **Professional Transfer Programs**

Students who plan to complete a baccalaureate program at another institution should seek advice from that institution for curriculum planning, test requirements and information on application procedures. The Western advisor listed below is also available to students.

The institution to which the student is transferring determines admission to the program and makes decisions regarding the transferability of credit.

Programs undergo constant revision. The student, therefore, must bear responsibility for continued contact with the transfer institution.

### **Engineering**

Western provides two curricular paths to a career in engineering. The Two-Plus-Two program requires two years of study at Western Washington University followed by two or more years of study at an engineering college.

The second path is a dual degree program the Three-Two program, that requires three years at Western Washington University followed by two years of study at the College of Engineering at the University of Washington. At the conclusion of this five-year program students will receive two degrees: the Bachelor of Arts from Western and the Bachelor of Science in Engineering from the University of Washington.

The primary purpose of both pre-engineering programs is to provide a strong fundamental education in science and mathematics, to develop skills necessary for success at an engineering college. In addition to courses in science and mathematics, engineering schools and colleges also require additional courses distributed in social sciences and humanities, which can be selected from Western's offerings, to meet the requirements of the specific engineering school to which the student intends to transfer. Note that most engineering schools specify a minimum number of credits completed and a competitive grade point average for admission to a given engineering program.

### **Pre-Engineering Program**

While at Western, students may complete two years of courses in science and mathematics, and other areas depending upon the engineering field of interest. The choice of courses should be tailored to meet the requirements of the engineering school to which the student plans to transfer. Transfer generally occurs after two years of study.

### **Three-Two Dual Degree Program**

Western cooperates with the College of Engineering of the University of Washington in a program of engineering education based upon a broad foundation of liberal arts. The program consists of three years at Western Washington University followed by two years in the College of Engineering at the University of Washington. The nature of the program makes it difficult to pursue by students who do not begin at Western as freshmen. A minimum of 135 credits must be completed prior to leaving Western for the University of Washington, and at least 90 of these must be earned at Western.

While at Western, students may complete the pre-engineering courses listed below and take General University Requirements in communications, humanities, social sciences, non-Western and minority cultural studies, math and science for the Bachelor of Arts degree. Upon successful completion of the program the student will receive the Bachelor of Arts from Western and the Bachelor of Science in Engineering from the University of Washington. This two-degree program provides an excellent liberal arts, mathematics and science background prior to specialization in engineering. The combined program is competitive and designed specifically for students who have strong preparation in communication skills, mathematics and science.

The curriculum does not guarantee admission to the College of Engineering at the University of Washington. Entrance to the University of Washington is competitive, so students must maintain a sufficient grade point average in order to gain admission to the University of Washington.

### **Introductory core courses**

All pre-engineering students, regardless of intended engineering field, should take:

- CHEM 121
- ENG 101
- MATH 124, 125, 204, 224, 331
- PHYS 121, 122, 123, 223, 233 (the entire sequence of 121, 122, 123 and 223 should be completed to minimize transfer problems)

- CSCI 140 or 141 (check with engineering program you intend to transfer to and take the CSCI course with the appropriate computer language)
- 15 credits of Humanities and Social Sciences (at least one course in each)

Students interested in mechanical, civil, aeronautical, industrial, or manufacturing engineering or materials science or engineering should also take CHEM 122 and ETEC 112, 224, 225, and 226.

Students interested in electrical or computer engineering may also take ETEC 271, 273, and 274, but students should be aware that these courses are unlikely to transfer.

Students interested in chemical or biomedical engineering should also take CHEM 122, 123, 351, 352 and check with the engineering program of interest to see if any biology is appropriate as well.

Check with the pre-engineering advisor for additional courses.

Students not prepared to take Mathematics 124 (Calculus) should enroll in a preparatory sequence, under advisement.

Program advisor: Dr. Jeffrey L. Newcomer, Department of Engineering Technology, ET 309, 360-650-7239, [Jeff.Newcomer@wwu.edu](mailto:Jeff.Newcomer@wwu.edu).

## American Cultural Studies

### Introduction

American cultural studies allows students to concentrate on the Americanization process, American character, American cultural institutions and/or American cultural values, particularly as these shape our concepts and choices of vocation.

The program in American cultural studies serves those students and faculty who are interested in the study of such questions but find that important aspects of cultural institutions, cultural artifacts and cultural values are not fully revealed by the course of study within a single department or college. The program allows students the opportunity to study issues especially arising from the cultural diversity in American society. Whenever possible, the program takes advantage of the rich curricular offerings of the various departments and colleges of the University.

Students who want a liberal arts education of breadth and depth will find that, because of its flexibility, the program adapts well to their needs. It offers suitable undergraduate background for advanced study in law, domestic social services, public service, government service or education, and for graduate work in American studies, ethnic studies and the social sciences. It also offers unique ways to combine the study of the humanities and social sciences.

For further information and advisement about the program contact the director of the program, Dr. Lawrence J. Estrada, College Hall 203 or Fairhaven College 330.

### Faculty

**LARRY J. ESTRADA**, Fairhaven College. Director, American Cultural Studies program. Race and ethnicity in America; Chicana-Hispano studies; urban multicultural education; U.S.-Mexican relations.

**JEANNE ARMSTRONG**, Wilson Library. Research strategies, gender studies, postcolonial theory and comparative cultural and literary studies.

**MARIE EATON**, Fairhaven College. Minorities and education, gay/lesbian/ bisexual/transgender studies.

**PAT FABIANO**, Woodring College of Education. Multicultural issues in higher education; gay, lesbian, bisexual, transgender people and studies; working class studies; feminist research approaches.

**JOHN FEODOROV**, Fairhaven College. New genre art, Native American Art, Art and Society

**KRISTEN FRENCH**, Woodring College of Education. Educational pluralism.

**CHRIS FRIDAY**, History. Asian American and Native American studies; immigration, labor, Pacific Northwest and U.S. West studies.

**CAROL GUESS**, English. Fiction, creative nonfiction, poetry writing, queer studies.

**CECILY HAZELRIGG-HERNANDEZ**, Fairhaven. Chicano/Latino studies, comparative cultural studies, immigration, social justice and the U.S. legal system.

**STEVE HOFFMAN**, American Cultural Studies. American Judaism and Jewish religious practices.

**VERNON JOHNSON**, Political Science. Culture and politics of African societies; African American studies; the civil rights movement in America.

**ROSANNE KANHAI-BRUNTON**, English. Feminist literary theory; postcolonial literatures; African American literature; imaginative literature by women of color.

**KEVIN LEONARD**, History. History of Latino and African Americans in the United States.

**JAMES LOUCKY**, Anthropology. Immigration policy, Native American cultures, Latin and Latin American cultures, United States-Mexico border policy.

**BILL LYNE**, English. African American literature, cultural studies, cultural theory.

**KATE MILLER**, Women Studies. Women studies, comparative racial and ethnic studies, multiracial identity, GLBT studies.

**RAQUEL MONTOYA-LEWIS**, Fairhaven College. Law, federal and traditional/customary Indian law, theories of jurisprudence, social welfare systems and social work practice, lesbian/gay/bisexual/transgendered studies, identity (racial, cultural, gender) studies.

**DAVE OREIRO**, Northwest Indian College. American Indian experience; contemporary American Indian issues; American Indian higher education

**TARA PERRY**, Communication. Communication cultural/critical studies; students with disabilities in higher education; service learning; issues of diversity in teaching and learning.

**JOHN PURDY**, English. Native American literature; ethnic perspectives on literary theory.

**MARSHA RIDDLE-BUL Y**, Woodring College of Education. Literacy and historically marginalized students; English as a Second Language; bilingual education.

**DAN FIRST SCOUT ROWE**, Fairhaven College. American Indian studies, veterans studies.

**RAE LYNN SCHWARTZ-DUPRE**, Communication. Communication cultural/ critical studies; rhetorical theory and criticism; visual rhetoric; feminist postcolonial theory and criticism.

**TANIS S'EILTIN**, Fairhaven. Art and creativity; American Indian art forms; American Indian issues.

**MART STEWART**, History. African American history, cultural history of science and the environment.

**MIDORI TAKAGI**, Fairhaven. United States History; African American History; comparative racial and ethnic studies.

**NING YU**, English. Asian American studies minor. Asian American literature; Asian mythology; 19th century American literature and science.

### **Undergraduate Degrees and Programs**

American Cultural Studies, BA

American Cultural Studies Minor

African American Studies Minor

American Indian Studies Minor

Asian American Studies Minor

Diversity in Higher Education Minor

Gay, Lesbian, Bisexual, Transgender Studies Minor

Raza Latina Studies Minor

## **African American Studies Minor**

**21-28 credits**

### **Introduction**

The program in African American studies provides students with an interdisciplinary approach to the history, culture, and politics of peoples of African descent. In addition, this program offers a closer examination of Black leaders, activists, feminists, writers, artists, and scholars and their contributions to the development of the United States.

Courses range from in-depth studies on specific African American topics to classes on comparative political and cultural issues that give context to the Black experience in America. This minor program can be combined with many major designations.

For more information, contact Dr. Bill Lyne, coordinator of the African American Studies minor concentration or Dr. Lawrence J. Estrada, Director of American Cultural Studies.

## **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

## **Requirements**

### **Core Courses: 11 credits**

#### One course from:

- AMST 204 - The African-American Experience
- FAIR 219D - The African-American Experience
- One course from:
  - AMST 301 - Comparative Cultural Studies
  - FAIR 366E - Comparative Cultural Studies
  - AMST 316 - Contemporary African American Issues

**Elective courses:** Choose from the following lists any number of courses totaling 10 or more credits; as some of these courses do not focus entirely or prominently on African American culture and issues, students must consult with the minor coordinator to receive approval **and** devote their major paper or quarter project to an aspect of African American studies within the discipline of the course. Under advisement of the African American studies minor coordinator, students can choose a course or frame an ISP course that is not contained within the electives listing.

#### Preferred Electives:

- ENG 234 - Introduction to African-American Literature
- HIST 263 - African Americans Since 1865
- PLSC 347 - Race, Politics and Public Policy

#### Additional Elective Options:

- ENG 310 - Literature and Culture IV: 19th and 20th Centuries
- ENG 327 - Studies in Historically Marginalized Literatures
- ENG 335 - Literary and Creative Expressions Across Cultures
- FAIR 213D - Slave Narratives and Other Testimonies of the Old South
- FAIR 216B - Testimonies of the New South
- FAIR 261E - Race In/To the Movies I: Race Relations on Film 1900-1950
- FAIR 361E - Race In/To the Movies II: Race Relations on Film: 1950-1980
- HIST 286 - Modern Africa
- LBRL 276 - Humanities of Africa
- MUS 202 - Jazz: Genesis and Evolution
- SOC 269 - Race and Ethnic Relations
- SOC 369 - Sociology of Race and Ethnicity

## American Cultural Studies Minor

### 25 Credits

#### Grade Requirements

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

#### Requirements

##### Core Courses: 21-22 credits

Choose three courses from the following options:

One of the following:

- AMST 202 - The American Indian Experience
- FAIR 263B - The American Indian Experience

One of the following:

- AMST 203 - The Hispano/a-American Experience
- FAIR 218C - The Hispano/a-American Experience

One of the following:

- AMST 204 - The African-American Experience
- FAIR 219D - The African-American Experience

One of the following:

- AMST 205 - The Asian-American Experience
- FAIR 215F - The Asian-American Experience
- AMST 206 - The Jewish-American Experience
- AMST 242 - The Lesbian, Gay, Bisexual, Transgendered Experience

One course from:

- AMST 301 - Comparative Cultural Studies
- FAIR 366E - Comparative Cultural Studies

One course from:

- ENG 227 - Introduction to Gay, Lesbian, Bisexual and Transgender Literature
- ENG 234 - Introduction to African-American Literature
- ENG 235 - Introduction to American Indian Literatures
- ENG 236 - Introduction to Asian-American Literatures
- ENG 239 - Introduction to Latina/o Literatures
- ENG 327 - Studies in Historically Marginalized Literatures

One course from:

HIST 261

- HIST 263 - African Americans Since 1865
- HIST 265 - Lesbian, Gay, Bisexual, and Transgender Experiences in U.S. History
- HIST 275 - The Indian in American History
- HIST 353 - Latinas/os in the US West

One course from:

- HIST 362 - Asian-American History
- AMST 362 - Asian-American History
- HIST 461 - US Urban History

- HIST 467 - American Cultural History: 1790-1880

**Related Courses:** 3-4 credits

For more information, contact Dr. Lawrence J. Estrada, Director of American Cultural Studies.

## American Cultural Studies, BA

### 70 Credits

#### Grade Requirements

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

#### Requirements

**Core Courses:** 39-44 credits

One course from:

- AMST 301 - Comparative Cultural Studies
- FAIR 366E - Comparative Cultural Studies

One course from:

- AMST 499 - Research and Writing
- LIBR 499 - Special Problems

Choose a total of three courses from the following options:

One course from:

- AMST 202 - The American Indian Experience
- FAIR 263B - The American Indian Experience

One course from:

- AMST 203 - The Hispano/a-American Experience
- FAIR 218C - The Hispano/a-American Experience

One course from:

- AMST 204 - The African-American Experience
- FAIR 219D - The African-American Experience

One course from:

- AMST 205 - The Asian-American Experience
- FAIR 215F - The Asian-American Experience
- AMST 206 - The Jewish-American Experience
- AMST 242 - The Lesbian, Gay, Bisexual, Transgendered Experience
- AMST 297

Two courses from the social sciences, selected under advisement from:

- AMST 314 - Contemporary Latino/a Issues

One course from:

- AMST 315 - Contemporary American Indian Issues
- FAIR 399B - Contemporary American Indian Issues
- AMST 316 - Contemporary African American Issues

One course from:

- ANTH 104 - American Mosaic: The Cultures of the United States
- ANTH 353 - Sex and Gender in Culture
- EGEO 201 - Human Geography
- FAIR 212E - Coast to Coast on a Piece of Toast: Hoboism in America
- FAIR 374B - The Cultural Creation of Identity
- FAIR 443R
- PLSC 101 - Government and Politics in the Modern World
- PLSC 250 - The American Political System
- PLSC 347 - Race, Politics and Public Policy
- PLSC 421 - Lesbian, Gay, Bisexual, Transgendered Politics
- SOC 221 - Introduction to Population Issues
- SOC 255 - Social Organization of Criminal Justice
- SOC 260 - The Family in Society
- SOC 268 - Gender and Society
- SOC 269 - Race and Ethnic Relations

Select one course from:

- HIST 261
- HIST 263 - African Americans Since 1865
- HIST 265 - Lesbian, Gay, Bisexual, and Transgender Experiences in U.S. History
- HIST 275 - The Indian in American History
- HIST 353 - Latinas/os in the US West

One course from:

- HIST 362 - Asian-American History
- AMST 362 - Asian-American History
- HIST 369 - Topics in Us Women's History
- HIST 461 - US Urban History
- HIST 465 - History of Sexuality in the United States
- HIST 467 - American Cultural History: 1790-1880

Two courses from:

- ENG 216 - Introduction to American Literature
- ENG 227 - Introduction to Gay, Lesbian, Bisexual and Transgender Literature
- ENG 234 - Introduction to African-American Literature
- ENG 235 - Introduction to American Indian Literatures
- ENG 236 - Introduction to Asian-American Literatures
- ENG 239 - Introduction to Latina/o Literatures
- ENG 270 - Introduction to Language and Society
- ENG 327 - Studies in Historically Marginalized Literatures
- ENG 338 - Women and Literature

Select one course from:

One course from:

- A/HI 360 - Nationalism and Cultural Identity, 19th and 20th Centuries  
A/HI 448 (plus prerequisites)
- DNC 232 - Movement and Culture  
FAIR 359
- FAIR 451X - Resistance Art of the Indigena

One course from:

- MUS 202 - Jazz: Genesis and Evolution
- MUS 205 - Survey of Non-Western Musical Cultures

#### Other Requirements

Individualized Program of Study 26-31 credits (selected under advisement)

A formal program of study is initially designed by the student in consultation with a member of the American Cultural Studies faculty. The program is then approved by the Director of American Cultural Studies. No program of study may substantially duplicate an existing departmental or college program. Ordinarily, final approval of the course of study must be granted before senior status is reached.

The student may propose a broad, general program in American Cultural Studies, social science or education concentrations, or focus on one major aspect, for example: ethnic studies, sexuality, myth and folklore or Pacific Northwest studies. In any case, the proposed program must include substantial upper-division work in at least two curricular units of the University. These may include Fairhaven or Huxley colleges.

The faculty recommends that students use a minor to develop special career interests or foci (see, for example, the Asian American Studies minor), or to develop additional depth in one of the traditional academic disciplines or programs of the University.

## American Indian Studies Minor

**25 credits**

### Introduction

The minor in American Indian studies is designed to provide students with in-depth study of the cultures and traditions, histories, and arts of indigenous peoples of the Western Hemisphere. The minor is recommended for students who plan to collaborate with American Indians in research, educational, environmental, creative, and political projects. The concentration is interdisciplinary and allows students to combine it with many major designations.

For more information, contact Tanis S'eiltin, coordinator of the American Indian Studies minor concentration, or Dr. Lawrence J. Estrada, director of the American Cultural Studies program.

### Grade Requirements

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

### Requirements

**Core Courses: 15 credits**

One course from:

- AMST 202 - The American Indian Experience
  - FAIR 263B - The American Indian Experience
- One course from:
- AMST 301 - Comparative Cultural Studies

- FAIR 366E - Comparative Cultural Studies
  - One course from:
    - AMST 315 - Contemporary American Indian Issues
    - FAIR 399B - Contemporary American Indian Issues
  - Any one of the following courses:
    - ANTH 361 - Native Peoples of North America
    - ENG 235 - Introduction to American Indian Literatures
    - FAIR 451X - Resistance Art of the Indigena
    - HIST 275 - The Indian in American History

**Elective Courses:** 10 credits

- Any related courses under advisement or additional courses from the list above.

## Asian American Studies Minor

**27 credits**

### Introduction

The program in Asian American Studies provides for a coherent, integrated and concentrated investigation of peoples of Asian heritage in North America. It also examines separate experiences of Asian Americans and their positions as ethnic minorities in American society and politics. This is accomplished through concentration on Asian American history and its place in North America, situating the literatures and other cultural publications of Asian Americans in a broad context, and engaging contemporary issues with appropriate analytical tools.

For more information contact Dr. Midori Takagi, coordinator of the Asian American Studies minor concentration, or Dr. Lawrence J. Estrada, Director of American Cultural Studies.

### Grade Requirements

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

### Requirements

**Core Courses:** 17 credits

- One course from:

- AMST 205 - The Asian-American Experience
- FAIR 215F - The Asian-American Experience
  - One course from:
    - AMST 301 - Comparative Cultural Studies
    - FAIR 366E - Comparative Cultural Studies
  - One course from:
    - AMST 362 - Asian-American History
    - HIST 362 - Asian-American History
    - ENG 236 - Introduction to Asian-American Literatures

**Elective Courses:** 10 credits

Three courses from the two categories listed below:

- Contextualizing Asian America
- ENG 335 - Literary and Creative Expressions Across Cultures
- ENG 406 - Topics in Critical and Cultural Theory
- ENG 408 - Cultural Studies
- HIST 461 - US Urban History
- SOC 369 - Sociology of Race and Ethnicity
- Focusing on Asian America
- ENG 327 - Studies in Historically Marginalized Literatures
- FAIR 362F - We're Not for Sale: History of Asian Women in America
- FAIR 363B - Suzie Wong to Miss Saigon: Asian Presence in Hollywood
- Other courses under advisement may include, but are not limited to, an ISP of 2 to 5 credits (specially arranged independent learning); internship of 2 to 5 credits (encouraged within the major but may be arranged through the minor); language classes up to 5 credits in the second year or higher of a college- or university-level Asian language; East Asian courses (2 to 5 credits) on approval of the Asian American Studies coordinator. For Independent Study Projects (ISP) and internship guidelines, contact Dr. Midori Takagi.

## Diversity in Higher Education Minor

**25 credits**

### Introduction

This interdisciplinary minor will develop multicultural knowledge and competencies that contribute to the development of culturally effective administrators/ practitioners who are open to self-examination, are flexible and knowledgeable about diversity, and are constantly seeking to promote cross-cultural and global understanding. The minor offers an undergraduate background for advanced study in higher education, student affairs administration, as well as graduate studies in public service/public sector areas.

For more information, contact Dr. Pat Fabiano, coordinator of the Diversity in Higher Education minor, or Dr. Lawrence Estrada, Director of American Cultural Studies.

### Grade Requirements

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

### Requirements

**Core Courses:** 16 credits

One course from:

- AMST 301 - Comparative Cultural Studies
- FAIR 366E - Comparative Cultural Studies
  - AMST 400: Independent Study and/or Internship in Higher Education/Student Affairs
- COMM 322 - Civil Discourse as Learning Interaction
- SAA 375 - Diversity in Higher Education and Student Affairs

**Elective Courses:** 9 or more credits

Students must select *at least two* courses from Theoretical Foundations of Diversity in Higher Education and at least one course from Conceptual Frameworks for Diversity in Higher Education and at least one course from Conceptual Frameworks for Diversity in Higher Education.

Theoretical Foundations of Diversity in Higher Education

Select at least 2 courses from:

One course from:

- AMST 202 - The American Indian Experience
- FAIR 263B - The American Indian Experience

One course from:

- AMST 203 - The Hispano/a-American Experience
- FAIR 218C - The Hispano/a-American Experience

One course from:

- AMST 204 - The African-American Experience
- FAIR 219D - The African-American Experience

One course from:

- AMST 205 - The Asian-American Experience
- FAIR 215F - The Asian-American Experience
- AMST 206 - The Jewish-American Experience
- AMST 242 - The Lesbian, Gay, Bisexual, Transgendered Experience

One course from:

- AMST 315 - Contemporary American Indian Issues
- FAIR 399B - Contemporary American Indian Issues
- AMST 316 - Contemporary African American Issues
- FAIR 313E - Gay, Lesbian, Bisexual and Transgender Issues in Education
- WMNS 211 - Introduction to Women Studies

Conceptual Frameworks for Diversity in Higher Education

Select at least one course from:

- ANTH 484 - Cross-Cultural Education
- COMM 225 - Communication, Diversity and Controversy
- COMM 325 - Introduction to Intercultural Communication
- HIST 461 - US Urban History
- HSP 443 - Disability: Individuals and Systems
- HSP 455 - Diversity & Social Justice Dynamics
- INTL 325 - Global Literature
- SAA 420 - Foundations of Student Leadership: Theory and Practice
- SOC 269 - Race and Ethnic Relations
- WMNS 314 - Global Women

## **Gay, Lesbian, Bisexual, Transgender Studies Minor**

**26 credits**

### **Introduction**

The program in Gay/Lesbian/Bisexual/Transgender (GLBT) studies is an interdisciplinary program designed to educate students about the diversity within the GLBT community in the United States, and to explore the GLBT contributions to shaping U.S. history, culture literature, and politics.

For more information, contact Dr. Carol Guess, coordinator of the GLBT Studies minor, or Dr. Lawrence J. Estrada, director of the American Cultural Studies.

### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

### **Requirements**

#### **Core Courses: 17 credits**

- AMST 242 - The Lesbian, Gay, Bisexual, Transgendered Experience
- ENG 227 - Introduction to Gay, Lesbian, Bisexual and Transgender Literature
- HIST 265 - Lesbian, Gay, Bisexual, and Transgender Experiences in U.S. History
  - One course from:
  - AMST 301 - Comparative Cultural Studies
  - FAIR 366E - Comparative Cultural Studies
- Related Courses: 9 credits
  - ANTH 353 - Sex and Gender in Culture
  - FAIR 313E - Gay, Lesbian, Bisexual and Transgender Issues in Education
  - HIST 465 - History of Sexuality in the United States
  - PLSC 421 - Lesbian, Gay, Bisexual, Transgendered Politics
  - TTHR 428 - Major Dramatists
- Other courses under advisement may include, but are not limited to, an ISP of 2 to 5 credits (specially arranged independent learning), and/or an internship of 2 to 5 credits.

## **Raza Latina Studies Minor**

**23-27 credits**

### **Introduction**

The program for Raza Latina Studies is designed to educate students about Chicano/Latino cultures and community. It will provide in-depth study of the history, culture, traditions, politics and experiences. This program is recommended for students interested in working with/learning about the Chicano/Latino community. The minor requires 23-27 credits, of which 16 will be required and the remainder, elective. It is recommended that the electives come from the social science, history, literature and language offerings

below, though other courses may be chosen under advisement of the Raza Latina Studies minor coordinator. Students also have the option of framing an Independent Study Project with the approval of the minor coordinator.

For more information, contact Dr. Lysa Rivera, coordinator of the Raza Latina Studies minor, or Dr. Lawrence Estrada, Director of American Cultural Studies

### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

### **Requirements**

#### **Core Courses: 16 credits**

One course from:

- AMST 203 - The Hispano/a-American Experience
- FAIR 218C - The Hispano/a-American Experience
- One course from:
  - AMST 301 - Comparative Cultural Studies
  - FAIR 366E - Comparative Cultural Studies
  - AMST 314 - Contemporary Latino/a Issues
  - ENG 239 - Introduction to Latina/o Literatures

#### **Elective Courses: 7 or more credits**

Students must select at least one course from the Social Sciences and History options and at least one course from the literature and Language offerings.

Social Sciences and History:

- ANTH 201 - Introduction to Cultural Anthropology
- ANTH 365 - Peoples of Latin America
- ANTH 465 - Peoples of Mexico and Central America
- ANTH 475 - Global Migration
- ANTH 476 - Borderlands
- FAIR 364C - El Movimiento Chicano
- FAIR 365D - Issues in Contemporary Mexican Society
- FAIR 397n
- HIST 273 - Latin America: 1492-1824
- HIST 274 - Latin America: 1824 to the Present
- HIST 353 - Latinas/os in the US West
- HIST 474
- PLSC 271 - Introduction to International Relations
- SOC 210 - Introduction to Research Methods
- SOC 221 - Introduction to Population Issues
- SOC 269 - Race and Ethnic Relations
- Literature and Language
- ENG 310 - Literature and Culture IV: 19th and 20th Centuries (under advisement)
- ENG 311 - Literature and Culture V: 20th and 21st Centuries (under advisement)
- ENG 312 - Film and Culture (under advisement)

- ENG 335 - Literary and Creative Expressions Across Cultures
- SPAN 332 - Culture of Latin America
- SPAN 352 - Survey of the Literature of Latin America

## **Honors Program**

### **Undergraduate Degrees**

#### **Honors Program**

#### **Introduction**

Western's Honors Program allows students to combine the best of a private liberal arts college experience (small classes, interaction with professors and other students, and the opportunity to work on research and creative activities with faculty) with the advantages of a much larger public institution, including a wide variety of majors, outstanding academic facilities, and numerous extra-curricular options. Admission is selective, and students are invited to join the program on the bases of high school record, scores on standardized tests, a writing sample, and letters of evaluation. Transfer students or students already enrolled in the university may enter the program on the bases of academic record, a writing sample, and the recommendation of a university or other faculty member.

The program is structured in a way that provides a graduated, on-going experience for students as they engage in increasingly sophisticated work while moving through Honors. Most students join the program upon entry into Western, but there are opportunities for already enrolled and transfer students to participate in Honors.

Students in the Honors Program are eligible for Honors courses and seminars, and have the opportunity to undertake extended Honors independent study projects in their major fields.

Students interested in the Honors program should get in touch with the Honors Office, College Hall 204, 360-650-3034, or visit the Honors website, [www.wwu.edu/~honors](http://www.wwu.edu/~honors), for more information.

#### **Requirements for Graduation through the Honors Program**

Classes in the first and second year apply to the student's General University Requirements. Classes may be applied to the GUR area indicated for each class.

##### **First-Year Honors:**

- HNRS 103 - Major Cultural Traditions I (Humanities)
- HNRS 104 - Major Cultural Traditions II (Humanities)
- HNRS 105 - Major Cultural Traditions III (ACGM)  
or
- HNRS 106 - Major Cultural Traditions IV (BCGM)

Freshmen with science and mathematics are encouraged to consider enrollment in the following Honors Classes:

- MATH 134 - Calculus I Honors
- MATH 135 - Calculus II Honors
- MATH 138 - Accelerated Calculus
- CHEM 125 - General Chemistry I, Honors
- CHEM 126 - General Chemistry II, Honors
- CHEM 225 - General Chemistry III, Honors

**Second-Year Honors:**

- Two Honors Colloquia. Classes are at the 200-level, and a variety is offered each year in areas such as psychology, philosophy, physics (intended for non-science majors), anthropology, economics.

**Third-Year Honors:**

- A minimum of two Honors seminars. Seminars are offered in a broad array of fields each year, and offerings change from year to year. Classes are numbered 350 and above.

In some cases, students may apply HNRS seminars to their major or their GURs, with permission of the Honors Program director or the Honors advising staff, and the department concerned.

**Fourth-Year Honors:**

- Senior Project, which is concentrated work in the student's major field, though in exceptional cases work may be done in an allied area. It is not unusual for a student to be engaged in Senior Project work before the final year, and this is the experience of many students in the natural sciences. Students may take HNRS 490, Senior Project, as well as classes in their major department to meet this requirement.

Requirements for already enrolled Western students and transfer students:

- Four Honors seminars
- A senior project

Additional requirements for graduation through the Honors Program:

A cumulative grade point average of at least 3.50 for the last 90 graded credits of University-level work

## **International Studies**

### **Introduction**

The Center for International Studies oversees the International Studies Minor, which incorporates a number of courses across WWU colleges, and complements existing majors.

The Minor is designed to provide students knowledge, perspectives and skills that are critical for global competence and careers in today's increasingly interrelated world. The Minor consists of completion of an approved international study abroad program or exchange, International Studies courses, a foreign language, and course work in other related fields. Students completing this minor will be well prepared for a variety of professional opportunities in a progressively interconnected world.

### **Faculty**

**AMIR ABEDI**, Political Science. Comparative politics, European politics.

**TROY ABEL**, Environmental Studies. Environmental policy and resolutions.

**BABAFAEMI AKINRINADE**, Fairhaven College. Human rights.

**SANDRA ALFERS**, Modern and Classical Languages. German program.

**BIDISHA BISWAS**, Political Science. Security and counterterrorism.

**STEPHEN BLANK**, Ross Distinguished Professorship of Canada/US Business and Economic Relations.

**PETRA FIERO**, Modern and Classical Languages. German program.

**JOAN HOFFMAN**, Modern and Classical Languages. Spanish.

**MICHAEL KARLBERG**, Communication.

**ELIZABETH MOGFORD**, Sociology.

**DOUG NORD**, Center for International Studies, Executive Director. Political Science. Canadian foreign policy.

**NIALL OMURCHU**, Fairhaven College. Political economy.

**KRISTEN PARRIS**, Political Science. East Asian politics. East-Asia-Canada immigration.

**JOHN PURDY**, English. Canadian literature.

**THOMAS ROEHL**, Management. International business and management.

**GEORGE SANDERS**, Accounting.

**JULIA SAPIN**, Art. Asian art history, Japanese art, art of the Pacific Rim.

**TRISH SKILLMAN**, TESOL and Elementary Education.

**PAUL STORER**, Economics. Canadian economic policy, macroeconomics, labor economics.

**MASSIMILIANO TOMASI**, Modern and Classical Languages. Japanese language and culture, modern Japanese rhetoric and literature.

**JOHN TUXILL**, Fairhaven College. Ethnobotany and Ethnoecology.

**EDWARD J. VAJDA**, Center for East Asian Studies, Director. Modern and Classical Languages. Russian languages. Inner Asian and Siberian languages and history.

**JANET XING**, Modern and Classical Languages. Chinese language, Chinese linguistics.

### **Adjunct Faculty**

**BARBARA ROFKAR**, International Studies.

**LILLY YANG**, Modern and Classical Languages. Chinese language.

### **Department Mission**

The Center for International Studies mission is to foster international and global perspectives for all Western students, faculty, and staff through courses, international experiences and study abroad.

## **Declaration Process**

Initial advisement can be secured through the Center for International Studies, College Hall 104, 360-650-3298. The course of study for the minor will be determined in consultation with international studies advisors in several departments on campus.

## **Additional Information**

Additional information regarding international education opportunities at Western can be found at: [www.wwu.edu/international](http://www.wwu.edu/international).

## **Undergraduate Degrees**

International Studies Minor

## **International Studies Minor**

**35 credits**

### **Introduction**

The minor in International Studies is designed to provide knowledge, perspectives and skills that are critical for global competence. Students completing this minor will be well prepared for a variety of professional opportunities in an increasingly interconnected world. The minor builds largely on existing courses across the colleges, and complements existing majors.

The course of study for the minor will be determined in consultation with international studies advisors in several departments on campus. Initial advisement can be secured through the Center for International Studies, College Hall 101, 360-650-7544.

### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

### **Requirements**

- INTL 201 - Introduction to Global Studies
- INTL 499 - Thesis in International Studies
  - Completion of an approved international program or exchange
    - At least one foreign language course above 201 level; 100 level may be accepted for languages not commonly taught
    - Additional credits from courses approved by the faculty advisors for international studies in at least two related fields such as anthropology, business and economics, communications, environmental studies, history, liberal studies, political science; at least two such courses to be completed on campus

## **Library**

The library provides an array of credit and noncredit instruction to enable student mastery of critical information seeking skills within and across disciplinary frameworks and resource formats. Students' mastery of these skills and abilities can be measured through the library's Information Literacy Learning Outcomes, which are applied to both credit and noncredit instruction in the library. Noncredit instruction can encompass reference, consultation, bibliographic instruction, online tutorials, orientation and instructional materials. Credit instruction, which includes a variety of courses, teaches information-seeking skills, research strategies, critical analysis and evaluation of information, and an understanding of the importance of information in our society.

### **Library Faculty**

**CHRISTOPHER COX** (2008) Dean of Libraries and Professor. BA, Susquehanna University; MA, University of Connecticut; MLS, SUNY at Albany, NY

**MARIAN L. ALEXANDER** (1970) Associate Professor. AB, Occidental College; MLS, University of California-Los Angeles.

**JEANNE ARMSTRONG** (1997) Professor. BA, University of Dayton; MA, Rosary College Graduate School; PhD, University of Arizona.

**MARGARET FAST** (1997) Associate Professor. BA, Mills College; MA, University of British Columbia; MLS, State University of New York.

**GABRIEL GOSSETT** (2009) Instructor, BA, University Wisconsin-Madison; MLIS, University Wisconsin-Madison.

**ROBERT LOPRESTI** (1987) Associate Professor. BA, Juniata College; MLS, Rutgers, The State University.

**MICHAEL LORENZEN** (2010) Asst Dean for Public Services; BA, Bowling Green State University; MLS, Kent State University; MA, Ohio University; PhD, Central Michigan University.

**LEZA (ELIZABETH) MADSEN** (2002) Associate Professor. BA, Western Washington University; MLS, University of Hawaii; MA, Stanford University.

**ANDREA PETERSON** (1999) Associate Professor. BA, University of Utah; MLS, Indiana University.

**PAUL PIPER** (1997) Professor. BS, MFA, University of Montana; MLIS, University of Hawaii.

**CECILIA SIU-WAH POON** (2000) Associate Professor. BA, University of South Florida; MLS, Indiana University.

**JEFF PURDUE** (1999) Associate Professor. BA, MA, University of Illinois at Chicago; MLIS, Dominican University.

**MARIAN A. RITTER** (1969) Associate Professor. BME, MLS, University of Portland.

**PETER A. SMITH** (1990) Associate Professor. BA, MA, MLS, Wayne State University.

**ELIZABETH STEPHEN** (2008) Assistant Professor. BA, NW Missouri State University; MLIS, University of Wisconsin-Madison

**SYLVIA TAG** (1997) Associate Professor. BA, The Colorado College; MLIS, University of Iowa.

**BOB THOMAS** (2006) Assistant Professor. BS, University of New York; MLIS, University of Washington.

## **Women Studies**

[www.wwu.edu/depts/womenstudies/](http://www.wwu.edu/depts/womenstudies/)

The Women Studies program offers students an interdisciplinary approach to the study of feminist perspectives and voices, and provides a forum for students to develop and articulate their own experience. Courses in the program address issues in three basic areas: women in history and politics, women in science and society, and women in language and the arts.

The minor includes five core courses and additional electives for a total of 30 credits. Students are expected to earn at least a C+ in courses counting toward the minor.

Students may design a student/faculty-designed major through the College of Humanities and Social Sciences. Close advisement is recommended, as new courses may apply to this minor.

Women studies minors are required to register with the Women Studies office. For program advisement, contact the Women Studies office, Miller Hall 177, phone 360-650-3534.

### **Participating Faculty**

**ROSANNE KANHAI**, Women studies director, English. Women of color, transnational feminism, literature across cultures.

**KATHRYN ANDERSON**, Fairhaven. American women's history and politics, gender and communication, women's oral history.

**KRISTEN ANDERSON**, Sociology. Gender and society, the family in society, domestic violence and the criminal justice system.

**JEANNE ARMSTRONG**, Library. Gender studies, postcolonial theory and comparative cultural and literary studies.

**BIDISHA BISWAS**, Political Science. Diaspora politics, international relations, ethnic and civic conflicts, terrorism.

**KAREN BRADLEY**, Sociology. Gender and education.

**MARIA CHAVEZ**, Anthropology. Latin America women with an emphasis on Central America women, Mayan indigenous women.

**BARBARA COLLAMER**, Psychology. Gender issues, learning and cognitive development, adolescent development.

**LESLIE CONTON**, Fairhaven College. Cultural anthropology (transpersonal/ applied), cross-cultural healing, sex roles, consciousness and creativity.

**SUSAN CONSTANZO**, History. Russian women's history and culture.

**DAWN DIETRICH**, English. Literature, technology and gender, feminist film theory, performance studies.

**MARIE EATON**, Fairhaven. Lesbian/gay/bisexual/transgendered issues in education.

**ANNA EBLEN**, Communication. Gender and language, women and communication.

**PATRICIA M. FABIANO**, Prevention and Wellness Services. Women's health, gay/lesbian/bisexual/transgendered health, social and political determinants of health.

**DEBORAH KIRBY FORGAYS**, Psychology. Psychology of women, women and health, gender assessment across cultures, the experience and expression of anger in women.

**ALLISON GIFFEN**, English. Early 19th century American women writers and American women poets.

**CAROL GUESS**, English. Lesbian/gay/bisexual/transgendered studies, creative writing.

**JOYCE HAMMOND**, Anthropology. Cross-cultural women studies, gender in visual media and popular culture, gender and body, women's folk arts.

**PAM HARDMAN**, English. Women's literature, cultural studies, medical institutions' treatment of women.

**DANA JACK**, Fairhaven. Gender issues in cultural contexts, including women's psychology, depression,

eating disorders, anger and aggression in women.

**CAROL JANSON**, Art. Women in early modern European visual culture, representing gender and sexuality in myths, the role of women in museum culture.

**KATHLEEN KENNEDY**, History. American women's history, women and American politics, the history of sexuality.

**KEVIN LEONARD**, History. U.S. West, Pacific Northwest, lesbian/gay/bisexual/ transgendered studies.

**ARLEEN LEWIS**, Psychology. Gender roles and behaviors, family counseling.

**ANNE LOBECK**, English. Language and gender.

**JEN LOIS**, Sociology. Gender and society.

**MARY JANELL METZGER**, English. Feminist theory, women and literature.

**B BARBARA MILLER**, Art History. Feminist art theory, contemporary women artists, and the representation of gender in modern and contemporary visual culture.

**KATE MILLER**, Women studies. Introduction to women studies, lesbian/gay/ bisexual/transgendered studies, creative writing, feminist theory.

**RAQUEL MONTOYA-LEWIS**, Fairhaven. Social constructs; ethnic, racial, and cultural identity

**CYNTHIA MOULDS**, Women studies. Introduction to women studies, gender and globalization, transnational feminism.

**LISA MOULDS**, Women studies. Service learning, introduction to women studies.

**CAROLYN NIELSON**, Journalism. Diversity, mass media and social change as it relates to women's lives.

**SHIRLEY OSTERHAUS**, Fairhaven. Human rights and gender differences on a local and global scale.

**NANCY PAGH**, English. Gender and Pacific Northwest regional studies, women and environments, women and space.

**SUZANNE PAOLA**, English. Creative writing, women and literature.

**DEBRA J. SALAZAR**, Political science. Women and environmental politics.

**KATHY SAUNDERS**, Anthropology. Gendered aspects of technoscience, reproduction and kinship, cross-cultural sex and gender.

**RAE LYNN A. SCHWARTZ-DuPRE**, Communication. Rhetoric, mass media and gender identity.

**LINDA SMEINS**, Art. Feminist art theory.

**MIDORI TAKAGI**, Fairhaven. Race, class and gender, comparative studies of women of color.

**SHURLA THIBOU**, Women studies. Women and literature, Caribbean women, women and the prison industrial complex.

**KATE TRUEBLOOD**, English. Women and literature, creative writing.

**NANCY VAN DEUSEN**, History. Women and gender in Latin America.

**SARA WEIR**, Political Science. Social and health policy, women and politics, feminist political theory.

**CHRISTOPHER WISE**, International Studies. Colonization/Post colonization and expected gender roles.

**KATHLEEN YOUNG**, Anthropology. Cross cultural gender roles.

## **Undergraduate Degrees**

Women Studies Minor

## **Women Studies Minor**

**30 credits**

### **Grade Requirements**

A grade of C- or better is required for a student's major or minor courses, and supporting courses for majors and minors.

### **Requirements**

#### **Core**

**8-10 credits**

- WMNS 211 - Introduction to Women Studies
- WMNS 411 - Senior Project

**20-22 credits**

One course from each of the following areas:

— Women in History and Politics: These courses examine women's role and constructions of gender in history and politics:

- WMNS 311 - American Women Studies: 1620-1850
- WMNS 313 - American Women Studies: 1850-Present
- FAIR 311C - Alternatives in Education
- FAIR 362F - We're Not for Sale: History of Asian Women in America
- FAIR 363B - Suzie Wong to Miss Saigon: Asian Presence in Hollywood
- FAIR 412D - Pre-Colombian Mesoamerica Societies
- HIST 367 - US Women to 1865
- HIST 368 - US Women from 1865
- HIST 369 - Topics in Us Women's History

HIST 417A

HIST 417C

- HIST 465 - History of Sexuality in the United States
- HIST 556 - Topics in Latin American History
- PLSC 345 - Women and Politics
- PLSC 421 - Lesbian, Gay, Bisexual, Transgendered Politics
- PLSC 469 - Feminist Political Theory

— Women in Science and Society: These courses examine social constructs and theories pertaining to women's identity and roles, drawing especially on issues of class, race and gender; women's work and the economy; families and households:

- ANTH 353 - Sex and Gender in Culture
- ANTH 453 - Women of the Global South
- ANTH 553 - Women of the Global South
- FAIR 313E - Gay, Lesbian, Bisexual and Transgender Issues in Education
- FAIR 314E - Studying Korea: Modern History, Culture, and People
- FAIR 338P - Clt/Biol Prspc of Preg/Chldb
- FAIR 341T - Awareness Through the Body II
- FAIR 342U - The Body Speaks: Culture and Eating Disorders

- FAIR 347U - Psychology of Women
  - SOC 354 - Domestic Violence and the Criminal Justice System
  - SOC 359 - Women and Deviance
  - SOC 368 - Gender and Education
  - WMNS 314 - Global Women
    - Women in Language and the Arts: These courses discuss feminist critiques of representations of women in language and literature, visual and performance arts, and the media:
  - COMM 416 - Topics in Communication
  - ENG 309 - Literature and Culture III: 18th and 19th Centuries
  - ENG 311 - Literature and Culture V: 20th and 21st Centuries
  - ENG 338 - Women and Literature
  - ENG 408 - Cultural Studies
  - ENG 417
  - ENG 550 - Studies in American Literatures
  - ENG 575 - Studies in Womens Literature
  - FAIR 326K - Studies in Film
  - INTL 325 - Global Literature
  - THTR 428 - Major Dramatists
  - WMNS 212 - Feminist Theory and Expression
  - WMNS 314 - Global Women
- Electives: 4 or more credits from any of the above areas

Each academic year the women studies office compiles a list of all courses with a gender/women studies focus. Detailed descriptions of the above courses can be found in their respective department listings.

Students are expected to earn at least a C+ in courses counting toward the minor.

## **Seminar and First-Year Interest Group**

### **Seminar Courses and the FIG Program**

The First-Year Interest Group (FIG) program offers entering students a chance to satisfy General University Requirements (GURs) at the same time that they participate in a learning community for freshmen only. FIG students co-enroll in two designated GUR classes and a small seminar (SMNR 101). FIG clusters are limited to first-year students and are available fall quarter only. While the GUR courses in a FIG cluster will usually be large, the attached SMNR 101 is limited to 25 students.

The FIG seminar provides first-year students with access to resources that can help with their transition to Western. The program emphasizes faculty-student and student-student interaction as well as deeper learning.

The FIG seminar uses the context from the linked GUR lecture courses as a context for fostering critical thinking and building academic competencies.

For more information, contact the FIG Director, Steven VanderStaay, Old Main 480B, 360-650-3004, or via e-mail at [Steven.Vanderstaay@wwu.edu](mailto:Steven.Vanderstaay@wwu.edu)

## **Extended Education and Summer Programs**

*405 32nd St., Suite 209, 360-650-3308*

[www.extendeded.wwu.edu](http://www.extendeded.wwu.edu)

### **Extended Education and Summer Programs**

Extended Education and Summer Programs (EESP) connects learners of all ages to the Western Experience. EESP collaborates with colleges, departments and the community, linking University resources with educational needs and opportunities both on and off campus.

EESP supports and delivers University programs to students and community members within and beyond the borders of the Bellingham campus. Bachelor's degree completion, graduate, and certificate/endorsement programs are available at various locations around Puget Sound or, in some instances, online. Individual distance learning courses are offered via correspondence study, USB and online for degree completion and professional development purposes. EESP also facilitates the on-campus Summer Session.

EESP reaches out to the public with academic camps and workshops for youth, and noncredit enrichment courses for all ages. EESP facilitates conferences for groups and organizations, both on and off campus. Training programs can be arranged for businesses and industry.

Most programs and courses offered through EESP are self-sustaining (not funded by legislative appropriation). Tuition and fees are charged per credit at extension rates and subject to change.

### **Degree Programs**

*Lois Longwood, Director*

360-650-6854

[www.extendeded.wwu.edu](http://www.extendeded.wwu.edu)

The following academic degree, certificate and preparation programs are offered through the College of Business and Economics, College of Humanities and Social Sciences, the College of Sciences and Technology, Huxley College of the Environment, Woodring College of Education, and the Graduate School. For program information, contact the appropriate site listed below.

Many of these programs are self-sustaining and are contingent upon sufficient enrollment and available University resources. Upon startup, all course work for program completion will be offered at a designated site or through distance education.

### **Communication Sciences and Disorders**

The Department of Communication Sciences and Disorders offers a post-baccalaureate program for students interested in preparing for a graduate degree in the communication sciences and disorders field. The program is a lockstep program beginning fall quarter; courses are taken sequentially through the year.

- Western Washington University, 516 High St., Bellingham, WA 98225, 360-650-6854

### **Educational Administration**

The MEd in educational administration and/or postmaster's course work leads to Washington State Principal Certification (residency or professional certification). The program is designed to prepare elementary and secondary school personnel to assume the leadership roles of the principal or associate principal.

- WWU Seattle Center, North Seattle Community College, 9600 College Way N., Seattle, WA 98103-3599, 866- 913-3323.
- WWU Bremerton Center at Olympic College, 1600 Chester Ave., Bremerton WA 98337-1699, 866-913-3323.

*Superintendent's Certificate Program*

Superintendent's Certificate Program trains exemplary leaders to meet the demands of school district leadership focused on optimal student achievement. Completion of the program leads to state superintendent certification and qualifies candidates for the superintendency as well as other district-level leadership roles.

- Everett, WA 866-913-3323.

**Elementary/Special Education Teacher Certification Program**

Students with an AA degree may take a sequence of upper-division courses leading to a **BA in Education and the Washington State Residency Teaching Certificate** with an endorsement in elementary education. Candidates complete a special education major and may complete a full endorsement with internship. Evening classes allow working adults to continue or complete education goals.

Students with a BA or BS in an approved academic major may complete post-baccalaureate course work leading to a **Washington State Residency Teaching Certificate** with an endorsement in elementary education. This program offers evening courses.

*The undergraduate and post-baccalaureate programs are offered at the following extension sites:*

- WWU Bremerton Center at Olympic College, 1600 Chester Ave., Bremerton, WA 98337-1699, 360-475-7269 eesp.Bremerton@wwu.edu
- WWU Seattle Center, North Seattle Community College, 9600 College Way N., Seattle, WA 98103-3599, 206-529-6052 eesp.NSCC@wwu.edu

**Elementary and Special Education Endorsement Programs**

*Elementary Education*

The Elementary Education endorsement program is designed for certificated teachers who wish to obtain an additional endorsement in Elementary Education. Credits will vary depending on previous courses. The program provides coherent preparation in all areas of the elementary education curriculum as well as an internship experience. 360-650-6292 <http://www.wce.wwu.edu/Depts/TEOP/ELEDEndorsement/> Offered in Bellingham, Everett, Bremerton and Seattle.

*Special Education*

The Special Education 45-credit endorsement program is designed for certificated teachers who wish to obtain an additional endorsement in Special Education (P-12). The program provides coherent preparation in all areas of the special education curriculum as well as an internship experience. 360-650-2425 <http://www.wce.wwu.edu/Depts/TEOP/SPEDEndorsement/> Offered in Bellingham, Everett, Bremerton and Seattle.

See the Woodring College of Education Teacher Education Outreach Programs section of this catalog for further information about undergraduate, post baccalaureate, and masters level state-funded teacher certification programs offered at the University Center of North Puget Sound at Everett Community College.

For information regarding Professional Certification for Educators see Professional Studies and Independent Learning within this section.

## **Huxley College of the Environment**

For Huxley College on the Peninsula's preparatory courses and major requirements see Huxley College of the Environment catalog listing.

### *Bachelor of Arts – Planning and Environmental Policy*

The interdisciplinary program in Planning and Environmental Policy prepares students to enter professional fields concerned with the sustainability of the human and natural environment. This program provides students with the knowledge and skills necessary to promote positive change by solving problems and implementing shared visions in both natural settings and urban communities. The degree emphasis concentrates in public policy development, sustainability, law and decision making.

### *Bachelor of Science – Environmental Science*

Environmental Science draws on basic knowledge of the physical, chemical, biological, and quantitative aspects of natural systems. The knowledge of how natural systems work is applied to solving problems largely created by human activities. Often these problems are represented by disturbances in the functioning of natural systems. Humans are altering their own life-support systems – the air, water and soil. Scales of disturbance range from the molecular and cellular to individuals, populations, ecosystems, and regional and global levels.

- WWU Bremerton Center at Olympic College, Bremerton/Poulsbo, 360-417-6521
- WWU Port Angeles Center at Peninsula College, 1502 E. Lauridsen Blvd., Port Angeles, WA 98262-6698, 360-417-6521
- University Center of North Puget Sound at Everett Community College, 2000 Tower Street, Everett, WA 98201, 360-417-6521

## **Human Services**

The Human Services major is an interdisciplinary, upper-division program leading to a BA degree. The degree prepares students for a variety of career options in areas such as youth and family services, nonprofit management, advocacy and public policy, prevention and intervention services, and community education.

- WWU Bremerton Center at Olympic College, 1600 Chester Ave., Bremerton, WA 98337-1699, 360-475-7265, hs.bremerton@wwu.edu

See the Woodring College of Education Teacher Education Outreach Programs section of this catalog for further information on these programs, including the state-funded teacher certification programs offered at the WWU Everett Center at Everett Community College.

## **Master of Business Administration - Weekend MBA@Everett**

The Master of Business Administration Program in Everett is a graduate program intended for active managers and professionals. This program prepares you to advance in your current leadership positions in private, public and non-profit organizations. The Western MBA Program features a high quality Graduate Business education with high student-faculty interaction, small class sizes, and meets Friday and Saturday of every other weekend.

- University Center of North Puget Sound at Everett Community College, 2000 Tower Street, Everett, WA 98201, 360-650-7780

## **Vehicle Design**

The Vehicle Research Institute (VRI) offers a post-baccalaureate program in vehicle design for students with a background in engineering. The program is a three-quarter lockstep program beginning fall quarter; courses are taken sequentially through spring quarter. The courses are based at the undergraduate level with additional content and an emphasis on applied laboratory experience. Students may also become involved in the ongoing research of VRI.

Western Washington University, 516 High Street, Bellingham, WA 98225-5293, 360-650-2117

**Independent Learning**

**Maggie Barklind, Assistant Director**

360-650-3650

[www.extendeded.wwu.edu/ilearn](http://www.extendeded.wwu.edu/ilearn)

Independent Learning offers alternatives for completing university credit. Many of the courses are open to anyone – both Western students and the public may enroll.

**Independent Learning** offers:

- General University Requirements; upper-division writing proficiency requirement; electives; or, if available, courses required for WWU majors.
- Online (Internet-based) courses begin and end with Western's quarterly schedule. Students may access the course 24 hours, seven days a week and work at the pace designated by the instructor.
- Print-based (correspondence style) and USB courses enable students to start anytime and work from any location while following a course guide developed for the self-paced student.

Independent study contracts are available for students not currently enrolled at WWU

**Professional Studies**

**Lois Longwood, Director**

360-650-6854

Professional Development opportunities are available for individuals interested in broadening their professional skills, exploring new careers, or seeking professional certification, additional endorsements, or courses to enhance their careers. Offerings include:

- **Credit Option/Clock Hour partnerships** with professional organizations provide Western credit or clock hours to their course offerings. Course work must meet University academic standards
- **Certificate Programs** offer in-depth study in professional and specialized areas, resulting in professional certification or a certificate of completion when the program is successfully completed. Courses are designed to meet the busy schedules of adults. Programs include:
  - The **Emergency Management** 24-credit, online certificate program offers a foundation in hazards, disasters, and society's organized response to them. Students are prepared to pursue or advance in a career in emergency management or a related field. [www.EmergencyMgmt.wwu.edu](http://www.EmergencyMgmt.wwu.edu)
    - Required courses: EXT 370, 371, 372
    - Complete one of the following: EXT 464, 466
    - Complete one of the following: EXT 494, 495
    - Elective courses: EXT 463, 464, 465, 466, 467
    - Portfolio assignment required
  - The **Professional Certificate Program** for educators prepares candidates to become outstanding teachers and helps them to engage in career-long, self-directed professional development. The program promotes best practices in teacher education and professional development, and assists candidates in achieving and demonstrating a positive impact on student learning. 360-650-3332 [www.wce.wwu.edu/Resources/Certification/Pro/](http://www.wce.wwu.edu/Resources/Certification/Pro/)
  - **Writing the Modern Memoir Certificate** is a three course non-credit option program for serious writers interested in crafting a memoir. It is designed to take students from inspiration to fully developed essays or chapters in just eight months. Students in this program can expect to create a unique narrative voice by developing and editing materials, produce work suitable for publication, and read a selected portion of written work at a local bookstore author's night. [www.extendeded.wwu.edu/Certificates](http://www.extendeded.wwu.edu/Certificates)

- **Project Management** courses are offered that teach the principles and practices of project management as well as preparation for the national certification exam.  
[www.extendeded.wwu.edu/Certificates](http://www.extendeded.wwu.edu/Certificates)
- **The Web Design and Development Certificate** is a three course credit option program that can be completed in eight months. In this practical hands-on, project-based program, students will gain a solid understanding of HTML, develop websites using Macromedia's Dreamweaver, use cascading style sheets, build information-gathering and other critical forms, and learn effective search engine tips. Students will leave this program with a completed Website.  
[www.extendeded.wwu.edu/Certificates](http://www.extendeded.wwu.edu/Certificates)
- **Professional Editing for Print and Online** is a nine-month Editing Certificate Program aimed mainly at those who work in professions or businesses and find they need editing skills in order to produce: newsletters, content for Web sites, marketing materials, formal reports, and similar publications. The program will also benefit those who want to work as free-lance editors, publication staff members, or authors of their own print and online projects.  
[www.extendeded.wwu.edu/Certificates](http://www.extendeded.wwu.edu/Certificates)
- **Writing Children's Literature** - Three professionals conduct a series of non-credit classes offering their insight, skill and unique perspective in writing children's literature to help you fire up your own creative abilities. With expert guidance, participants will experiment and sample the field exploring children's fiction and nonfiction, including picture books, chapter books, middle-grade books, and books for young adults. Focus will be placed on essential literary elements such as plot, character, setting, dialogue - and that all-important first chapter. All you need is paper, pencil and the courage to begin. [www.extendeded.wwu.edu/Certificates](http://www.extendeded.wwu.edu/Certificates)

### **Summer Programs**

Marlene Harlan, Director  
 360-650-7221  
[www.extendeded.wwu.edu](http://www.extendeded.wwu.edu)

**Summer Session** is a self-support quarter on the Bellingham campus which offers academic credit and professional development courses. Over 400 courses are offered each summer and are open to WWU students and the public. In addition to the traditional 6- and 9-week courses, offerings include short courses from 3 days on, online courses and faculty-led travel programs. 360-650-3308, [www.wwu.edu/summer](http://www.wwu.edu/summer).

**Conference Services** is active year-round in facilitating and planning professional conferences and workshops for groups and organizations. Services include fiscal management, registration, marketing, web development, hospitality, printing, media equipment and support. 360-650-6821,  
[www.conferences.wwu.edu](http://www.conferences.wwu.edu) .

**Youth Programs** are designed for the academic pursuits and leadership development of youth in elementary, middle and high school. Participants live on campus or commute while they explore the arts, humanities, technology, science, outdoor challenges and more, 360-650-6820. [www.wwu.edu/youth](http://www.wwu.edu/youth)

- **College Quest** - This pre-college program for high school students entering grades 10-12 is offered each summer. Students complete a real college course, gain valuable "success in college" information, and form extraordinary social connections that come with life in a residence hall. College Quest will bridge the gap between high school and college and put students on a path to personal, educational and career success.
- **Grandparents U** - This intergenerational summer program is designed for grandparents and grandchildren (ages 7-14). Participants choose from exciting classes taught by WWU faculty. Each class provides opportunities to learn, have fun and create lifelong memories. Grandparents "U" is offered in partnership with WWU Extended Education and Summer Programs and the WWU Alumni Association.

- **Odyssey of Science and Arts** - WWU faculty, instructors and staff create summer academic enrichment offerings that will excite students entering grades 4-9. The resulting “signature” courses spotlight areas of their expertise and take advantage of WWU’s campus. These courses offer a quality and uniqueness that is hard to find elsewhere. Students attend classes, participate in field trips, work on projects in specialized labs, and engage in a wide range of other hands-on activities which make learning interactive and fun.
- **Sleeping Over with Science and Art s** - Sleeping Over with Science & Arts (SOS & A) is for students in grades 3-5 who are eager to learn more about science or arts. Students spend a Friday evening discovering and exploring exciting topics in Science and Art.
- **Western Kids Camp** - Kids entering grades K-6 participate in hands-on and interactive morning academic enrichment activities and programmed afternoon recreation based on a weekly theme. Theme-inspired summer sessions include nature, science, culture study, the arts, and more. Students utilize college classrooms, labs, equipment, playing fields, and the award-winning Wade King Student Recreation Center (WKSRC). Campers are divided into groups according to age and participate in age appropriate activities. Western Kids Camp is offered in partnership with WWU Extended Education and Summer Programs and Campus Recreation

## Directions

When approaching Bellingham from the north or south on Interstate 5, take Exit #252, marked Samish Way and WWU. Turn west onto Samish Way and follow the signs to Bill McDonald Parkway and the University campus.

NORTH



For parking, call (360) 650-2945 or stop at the Campus Services Building near the corner of Bill McDonald Parkway and 21st Street.

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## COURSE DESCRIPTIONS

## **Notice to Readers**

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Every effort has been made to provide accurate information. Policies and information may have changed since publication. Please consult with the appropriate University department or office for possible revisions. For department information, call the University at 360-650-3000.

This catalog is available in alternate formats by calling the ADA Coordinator at 360-650-3307 (voice) or 360-650-2535 (TTY).

### **Policy on providing equal opportunity and prohibiting illegal discrimination**

This policy governs all employees, students, agents, groups, individuals, and organizations who use University facilities, and other members of the University community to the extent provided by law.

Federal and state statutes prohibit discrimination on the basis of race, color, religion, national origin, sex, age, disability, status as a Vietnam era or disabled veteran, creed, and marital status. Western Washington University and a Governor's Executive Order also prohibit discrimination on the basis of sexual orientation.

The Board of Trustees has pledged to make every reasonable effort to provide the resources necessary to implement this policy. Questions can be directed to the Vice Provost for Equal Opportunity and Employment Diversity, 360-650-3307 (voice).

1. Definition. Personnel Actions – Decisions related to employment such as hiring, promotion, separation, compensation, benefits within the limits of the law, transfers, layoffs, return from layoff, University-sponsored training, education, tuition assistance, and social or recreational programs.
2. Western Washington University shall provide equal opportunity to its employees, students, applicants and users of its services and facilities.
3. Discrimination based on race, color, religion, national origin, sex, age, disability, status as a Vietnam era or disabled veteran, creed, marital status and sexual orientation is prohibited in the operation of all University programs, activities and services.
4. The President of Western Washington University ensures compliance with this policy.
5. All members of the University community are responsible for ensuring that equal opportunity and non-discrimination are integral parts of Western Washington University.
6. Recruitment and selection policies will be developed, monitored and enforced to remove barriers to equal employment opportunity and to prevent illegal discrimination.
7. Personnel actions will be administered with fairness and equity.
8. Promotion and hiring decisions shall be in accordance with the principles of equal opportunity.
9. Illegal discrimination in the recruitment and admission of students is prohibited.
10. Western will cooperate with federal and state agencies in fulfilling obligations under the law.

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# AY 2010 -11 Course Descriptions

## Art History

Courses numbered X37; X97; 300, 400; 417, 445 are described in the University Academic Policies section of this catalog.

### A/HI 220 - Visual Culture in Ancient Greece and Rome

Art and visual culture from prehistoric Aegean civilizations to the 7th century C.E. in Greece and Rome.

Credits: 3

### A/HI 221 - Visual Culture in Medieval Europe

Art and visual culture from the sixth to 14th centuries in Europe. Was A/HI 220b in previous catalog.

Credits: 3

### A/HI 230 - Visual Culture in Western Europe 1400-1550

Art and visual culture in Western Europe 1400-1550. Was A/HI in previous catalog.

Credits: 3

### A/HI 231 - Visual Culture in Western Europe 1550-1700

Art and visual culture in Western Europe, 1550-1700. Was A/HI in previous catalog.

Credits: 3

### A/HI 240 - Visual Culture in Western Europe in the 19th Century

Issues and topics in art, 19th century. Was A/HI 240a in previous catalog.

Credits: 3

### A/HI 241 - Visual Culture in Western Europe and America in the 20th Century

Issues and topics in art, 20th century. Was A/HI 240b in previous catalog.

Credits: 3

### A/HI 270 - Visual Culture in South and Southeast Asia

Issues and topics in South and Southeast Asian art and visual culture, from ancient to contemporary. Was A/HI 270a in previous catalog.

Credits: 3

### A/HI 271 - Visual Culture in East Asia

Issues and topics in Chinese, Korean, and Japanese visual culture, from ancient to contemporary. Was A/HI in previous catalog.

Credits: 3

### A/HI 275 - Introduction to Writing and Critical Thinking

A preparatory course to develop skills in writing and analysis of visual art and cultural practices. Art History majors will continue on to complete the writing series (A/HI 375 and 475).

**Prerequisites & Notes:** ENG 101

Credits: 4

### A/HI 301 - Modern Art and Modernism

Survey and critical analysis of modernist, theory and criticism.

**Prerequisites & Notes:** A/HI majors: A/HI 275; non-majors: 3 credits A/HI.

Credits: 4

### A/HI 305 - Gallery Workshop

Emphasis on art preparation/installation methods, and gallery/collections management. Students must commit to registering for this class for fall, winter and spring quarters. Repeatable to 9 credits. Intended as a resume building class. Credits may not be used for the Art History major or minor.

**Prerequisites & Notes:** 6 credits ART or A/HI; instructor permission; meet WWU Gallery intern selection criteria  
Credits: 3

### A/HI 306 - Arts Internship

Internship at museum, educational or public arts organization under the direction of a designated faculty member, in consultation with a staff member of the host institution. Up to 4 credits may be used as elective credits for the art history major. No credits may be applied to the art history minor. Repeatable to a maximum of 9 credits.

**Prerequisites & Notes:** 24 credits A/HI and written permission of instructor.

Credits: 3

#### **A/HI 308 - Visual Arts in the Community**

A hands-on class designed to give students a practical experience in promotion of visual culture in the community.

**Prerequisites & Notes:** A/HI majors: A/HI 275; non-majors: 3 credits A/HI.

Credits: 4

#### **A/HI 310 - Indigenous Arts of the Pacific Northwest**

Selected topics in the arts of the Pacific Northwest. Includes discussion of contemporary artists.

**Prerequisites & Notes:** A/HI majors: A/HI 275; non-majors: 3 credits A/HI.

Credits: 4

#### **A/HI 311 - Foundation of Graphic Design History**

Issues and topics in graphic design, illustration and design production from ancient culture to 19th century with emphasis on the development of typographic and print cultures.

**Prerequisites & Notes:** A/HI 220B, A/HI 230A

Credits: 4

#### **A/HI 313 - Art and Technology**

Critical approaches to the study of artistic practices based on visual technology. Topics may include: photography, film, video, computer-generated art and electronic media.

**Prerequisites & Notes:** A/HI majors: A/HI 275; non-majors: 3 credits in A/HI.

Credits: 4

#### **A/HI 315 - Civic Identity in 15th- and 16th-Century Europe**

Civic identity explored through ritual structures, urban society, and lay cultures.

**Prerequisites & Notes:** A/HI majors: A/HI 275; non-majors: 3 credits A/HI.

Credits: 4

#### **A/HI 316 - Land and Landscape**

Studies of landscape and ideology in painting and garden design; issues of environment in the production of visual culture; relationships of land and architecture.

**Prerequisites & Notes:** A/HI majors: A/HI 275; non-majors: 3 credits A/HI.

Credits: 4

#### **A/HI 330 - Art and Texts of the Sacred**

The ideological basis of painting, sculpture and manuscript illumination as tools of communication. The interdependence of textual and visual traditions and their subversion or alteration.

**Prerequisites & Notes:** A/HI majors: A/HI 275; non-majors: 3 credits A/HI.

Credits: 4

#### **A/HI 358 - Postwar, Mass Media and Popular Culture**

Examines postwar American culture, from 1950 to 1970, and critically assesses the relationships between art, popular media and the social upheavals of the postwar era.

**Prerequisites & Notes:** A/HI majors: A/HI 275; non-majors: 3 credits in A/HI.

Credits: 4

#### **A/HI 360 - Nationalism and Cultural Identity, 19th and 20th Centuries**

Studies in the relationship between ideas of nation and the formation of cultural identity.

**Prerequisites & Notes:** A/HI majors: A/HI 275; non-majors: 3 credits A/HI.

Credits: 4

#### **A/HI 368 - Pacific Arts and Visual Culture**

Art of Melanesia, Polynesia, Micronesia. Includes study of contemporary Pacific arts.

**Prerequisites & Notes:** A/HI majors: A/HI 275; non-majors: 3 credits A/HI.

Credits: 4

#### **A/HI 370 - Islamic Visual Cultures**

Topics addressing historical and contemporary Islamic visual cultures in the Middle East, Africa and Asia.

**Prerequisites & Notes:** A/HI majors: A/HI 275; non-majors: 3 credits A/HI.

Credits: 4

**A/HI 371 - Transforming Traditions: Art and Visual Culture In Japan**

Study of visual cultures in Japan from 5000 BCE to present. Analysis of cultural influx and assimilation from Asia and Europe as well as indigenous and individual visual expressions.

**Prerequisites & Notes:** A/HI majors: A/HI 271 or A/HI 275; Non majors A/HI 271.

Credits: 4

**A/HI 375 - Methods in Art History**

Methodological approaches to the study of Art History and further development of writing skills and visual analysis.

**Prerequisites & Notes:** A/HI 275

Credits: 4

**A/HI 396 - Summer Art History Program in Japan**

Study traditional and contemporary culture in Japan. Activities include: visiting historical sites, galleries, museums and artist studios. Experience a tea ceremony, papermaking, weaving, natural dyeing and more. Students will write a paper following the trip. Offered summer quarter only.

**Prerequisites & Notes:** A/HI 271 or permission of instructor.

Credits: 7

**A/HI 401 - Contemporary Issues and Post-Modern Critiques**

Theoretical analysis of late twentieth century postmodernist art and culture, and critical discussion of the expansion of visual media during the contemporary era.

**Prerequisites & Notes:** A/HI major: A/HI 375; non-major: 4 credits A/HI or instructor permission.

Credits: 4

**A/HI 411 - Contemporary Japanese Visual Culture**

Examines Japanese artistic forms and visual culture from Post-World War II until the present. Explores connections between Japanese socioeconomic and artistic developments, as well as visual manifestations of contemporary Japanese youth culture. Topics include anime, manga, Harajuku fashion and art movements such as Gutai and Superflat.

**Prerequisites & Notes:** Art History Majors: A/HI 271 and A/HI 375; non-majors: A/HI 271 and 4 credits of 300-level in Art History or permission of instructor.

Credits: 4

**A/HI 413 - Space and Representation**

Theoretical and cultural analysis of the history of representing space within Western art and architecture, from Gothic cathedrals and Renaissance perspective to cubist fractured surfaces and contemporary heterogeneous space.

**Prerequisites & Notes:** Art History majors: A/HI 375; non-majors: 4 credits, 300-level, in Art History or permission of instructor.

Credits: 4

**A/HI 415 - Space and the Urban Environment**

Topics in urban organization, urban/rural dynamics, regionalism, spaces and social production in the built environment and the arts.

**Prerequisites & Notes:** A/HI major: A/HI 375; non-major: 4 credits 300-level A/HI or instructor permission

Credits: 4

**A/HI 416 - Borders and Terrains**

Mapping artistic domains; implications of geographic borders; defining places and margins in cultural production.

**Prerequisites & Notes:** A/HI major: A/HI 375; non-major: 4 credits 300-level A/HI or instructor permission

Credits: 4

**A/HI 420 - Building 17th and 18th Century Europe**

Studies of architecture, spatial organization and visual culture in 17th and 18th century Europe, including studies of colonization and contacts with Asia. Each course offering has a selected geographic focus and introduces theory for visual and spatial analysis.

**Prerequisites & Notes:** A/HI major: A/HI 375; non-major: 4 credits 300-level A/HI or instructor permission

Credits: 4

**A/HI 429 - Patronage and Power: The Baroque Era**

The relationship of artist and public to the mechanisms of patronage and the art market.

**Prerequisites & Notes:** A/HI major: A/HI 375; non-major: 4 credits 300-level A/HI or instructor permission

Credits: 4

**A/HI 430 - Court Art of the Renaissance**

Courtly art in the context of humanism, antiquity, and chivalric society in Renaissance Italy.

**Prerequisites & Notes:** A/HI majors: A/HI 375; Non-majors 4 credits 300 level A/HI or permission of Instructor.

Credits: 4

**A/HI 431 - Popular Culture, Tourism and Leisure**

Studies in topics such as collecting, pilgrimage, touring and acquisition of the authentic.

**Prerequisites & Notes:** A/HI major: A/HI 375; non-major: 4 credits 300-level A/HI or instructor permission

Credits: 4

**A/HI 438 - Art and Feminism**

Studies of women artists, their past and present visual practices, and how they engage with cultural representations of gender, sexuality and class.

**Prerequisites & Notes:** A/HI major: A/HI 375; non-major: 4 credits 300-level A/HI or instructor permission

Credits: 4

**A/HI 440 - New Media and Digital Art**

Theoretical and critical approaches to the development of cyberspace and its relationship to new media, electronic art, virtual reality, videogames, and biotech art.

**Prerequisites & Notes:** A/HI major: A/HI 375; non-major: 4 credits 300-level A/HI or instructor permission.

Credits: 4

**A/HI 450 - Colonization and Cross-Cultural Encounters**

Theoretical analysis of colonization, neocolonization and multiculturalism, and their political, economic and cultural effects on representational practices.

**Prerequisites & Notes:** A/HI majors: A/HI 375; non-majors: 4 credits 300-level A/HI or instructor permission.

Credits: 4

**A/HI 475 - Senior Projects/Practicum**

Final course for art history majors. May be a research project aimed toward the pursuit of an advanced degree or a practicum in one of several careers in arts advocacy, administration, community outreach, and other fields.

**Prerequisites & Notes:** A/HI 375; Art History majors only.

Credits: 4

**A/HI 489 - Architecture and Museum**

Examines museum architecture and the exhibition of architecture in museums in Europe and America from the eighteenth century to the present.

**Prerequisites & Notes:** Art History majors: A/HI 375; non-majors: 4 credits, 300-level, in Art History or permission of instructor.

Credits: 4

**A/HI 490 - Seminar: Exhibition Theory and Practice**

Seminar on issues such as the display of visual experience and the configuration of public culture and community identities by artists, institutions and audiences. Repeatable to a maximum of 8 credits.

**Prerequisites & Notes:** A/HI major: A/HI 375; non-major: 4 credits 300-level A/HI or instructor permission

Credits: 4

**A/HI 501 - Graduate Art Theory and Criticism**

Repeatable to a maximum of 12 credits.

**Prerequisites & Notes:** Graduate status. Undergraduate ART major or equivalent, A/HI minor or equivalent

Credits: 4

**A/HI 590 - Directed Studies in Art History**

Independent art historical research: 590a, Prehistoric and Primitive Art History; 590b, American Art History; 590c, Modern Art History; 590d, Art Theory Aesthetics and Art Criticism. Cumulative credit in any one area may not exceed 12 credits.

**Prerequisites & Notes:** ART major or minor status; senior or graduate status; 12 credits A/HI, with at least one field concentration

Credits: 1 TO 4

**A/HI 590A - Prehistoric/Primitive A/HI**

Independent art historical research: 590a, Prehistoric and Primitive Art History; 590b, American Art History; 590c, Modern Art History; 590d, Art Theory Aesthetics and Art Criticism. Cumulative credit in any one area may not exceed 12 credits.

**Prerequisites & Notes:** ART major or minor status; senior or graduate status; 12 credits A/HI, with at least one field

concentration  
Credits: 1 TO 4

#### **A/HI 590B - American Art History**

Independent art historical research: 590a, Prehistoric and Primitive Art History; 590b, American Art History; 590c, Modern Art History; 590d, Art Theory Aesthetics and Art Criticism. Cumulative credit in any one area may not exceed 12 credits.

**Prerequisites & Notes:** ART major or minor status; senior or graduate status; 12 credits A/HI, with at least one field concentration  
Credits: 1 TO 4

#### **A/HI 590C - Modern Art History**

Independent art historical research: 590a, Prehistoric and Primitive Art History; 590b, American Art History; 590c, Modern Art History; 590d, Art Theory Aesthetics and Art Criticism. Cumulative credit in any one area may not exceed 12 credits.

**Prerequisites & Notes:** ART major or minor status; senior or graduate status; 12 credits A/HI, with at least one field concentration  
Credits: 1 TO 4

#### **A/HI 590D - Theory Aesthetics/Criticism**

Independent art historical research: 590a, Prehistoric and Primitive Art History; 590b, American Art History; 590c, Modern Art History; 590d, Art Theory Aesthetics and Art Criticism. Cumulative credit in any one area may not exceed 12 credits.

**Prerequisites & Notes:** ART major or minor status; senior or graduate status; 12 credits A/HI, with at least one field concentration  
Credits: 1 TO 4

### **Accounting**

*Courses numbered X37; X97; 300, 400; 417, 445 are described in the University Academic Policies section of this catalog.*

#### **ACCT 240 - Financial Accounting**

An introduction to the theory and practice of accounting and financial reporting. Topics include the accounting cycle, financial statements and accounting for assets, liabilities, equities, revenues and expenses.

Credits: 4

#### **ACCT 245 - Managerial Accounting**

An introduction to the use of accounting information by managers. Topics include the use of accounting information for planning and control, performance evaluation, decision-making, and the statement of cash flows, along with financial statement analysis.

**Prerequisites & Notes:** ACCT 240

Credits: 4

#### **ACCT 321 - Accounting Information Systems I**

An introduction to the subject of information system's role in accomplishing the objectives of financial accounting, managerial accounting, tax accounting and auditing. Systems covered include manual accounting, computerized accounting, and Internet electronic commerce applications. Additional topics include internal controls, systems analysis, systems design and systems implementation.

**Prerequisites & Notes:** Major restricted, ACCT 245, MIS 220 or equivalent skills

Credits: 4

#### **ACCT 331 - Cost Management**

Procedures used for classifying, recording, summarizing and allocating current, and estimated costs for planning, controlling and reporting purposes.

**Prerequisites & Notes:** Major restricted, ACCT 245, DSCI 205, MIS 220 or equivalent skills

Credits: 4

#### **ACCT 341 - Intermediate Accounting Theory and Practice I**

An in-depth study of accounting theory and practice for students who require more than introductory coverage. Both conceptual and application topics are studied.

**Prerequisites & Notes:** Major restricted, ACCT 245

Credits: 4

**ACCT 342 - Intermediate Accounting Theory and Practice II**

A continuation of ACCT 341 covering complex topics in accounting and financial reporting.

**Prerequisites & Notes:** Major restricted, ACCT 341

Credits: 4

**ACCT 343 - Intermediate Accounting Theory and Practice III**

A continuation of ACCT 342 covering complex topics in accounting and financial reporting. Special topics, existing and emerging issues in accounting.

**Prerequisites & Notes:** Major restricted, ACCT 342

Credits: 4

**ACCT 375 - Income Taxation I**

Taxation of individuals and sole proprietorships. Introduction to tax planning and sources of authority of tax law.

**Prerequisites & Notes:** Major restricted, ACCT 240

Credits: 4

**ACCT 421 - Accounting Information Systems II**

Principles and techniques of database technology as applied to modern accounting information systems, uses of database technology for transaction processing and analysis. Systems documentation techniques and the auditing of computerized accounting systems. Format will be lecture, discussion, computer presentations and computer lab assignments.

**Prerequisites & Notes:** Major restricted, ACCT 321

Credits: 4

**ACCT 431 - Topics in Management Accounting**

Focuses on responsibility accounting, performance measurement and evaluation, and budgeting and control in various types of organizations. Additional topics may include quantitative methods in decision making and other current issues in management accounting.

**Prerequisites & Notes:** Major restricted, ACCT 331

Credits: 4

**ACCT 435 - Seminar in Cost Management**

Provides an in-depth study of cost management systems. Topics include activity-based management, Japanese cost management techniques, and strategic cost management.

**Prerequisites & Notes:** Major restricted, ACCT 331

Credits: 4

**ACCT 441 - Advanced Accounting Theory and Practice**

An introduction to business combinations and fund accounting. Partnerships, SEC reporting, interim reports and other topics.

**Prerequisites & Notes:** Major restricted, ACCT 343

Credits: 4

**ACCT 447 - Accounting in Not-For-Profit Organizations**

An examination of accounting and financial reporting in governmental and not-for-profit entities and an introduction to the use of accounting information in the management of these organizations.

**Prerequisites & Notes:** Major restricted, ACCT 343 or concurrent.

Credits: 4

**ACCT 451 - International Accounting**

Analysis of accounting for multinationals; area studies of accounting and financial reporting standards; and an evaluation of the international accounting harmonization effort.

**Prerequisites & Notes:** Major restricted, ACCT 343

Credits: 4

**ACCT 461 - Auditing Theory and Practice**

A study of the role of auditing and auditors in corporate financial reporting, and the importance of this role to the public. Topics covered include the audit planning process, audit reports, professional standards, and the legal and ethical responsibilities of auditors to their clients, the accounting profession and to the public.

**Prerequisites & Notes:** Major restricted, ACCT 321, ACCT 343

Credits: 4

**ACCT 462 - Advanced Auditing**

In-depth exposure to a variety of aspects of the theory and practice of professional auditing. Topics may include auditing theory and research, economic function of audits, professional standards and malpractice, new auditing

techniques and services. Cases, readings, individual research, and discussion.

**Prerequisites & Notes:** Major restricted, ACCT 461

Credits: 4

#### **ACCT 470 - Law of Commercial Transactions**

Legal principles underlying the law of contracts, sales, secured transactions, real property security, bankruptcy and suretyship.

**Prerequisites & Notes:** Major restricted, MGMT 271

Credits: 4

#### **ACCT 475 - Income Taxation II**

Taxation of corporations and partnerships. Advanced topics in tax planning and compliance.

**Prerequisites & Notes:** Major restricted, ACCT 375

Credits: 4

#### **ACCT 477 - Tax Research and Planning**

An in-depth look at tax research and tax planning. Students will gain proficiency in tax research and apply this skill to a variety of federal taxation issues and case studies.

**Prerequisites & Notes:** Major restricted, ACCT 375

Credits: 4

#### **ACCT 484 - Environmental Accounting**

An in-depth analysis of accounting for the natural environment. Readings, discussion and case analyses cover current issues, such as financial reporting and disclosure, management decision making and evaluation techniques, taxation and the profession's role in environmental issues.

**Prerequisites & Notes:** Major restricted, ACCT 331, ACCT 343, ACCT 375 or concurrent.

Credits: 4

#### **ACCT 490 - Internship in Accounting**

Practical application of academic curriculum beyond that contained in normal undergraduate course work. Internship may not be substituted for a required or elective accounting course.

**Prerequisites & Notes:** Major restricted, ACCT 341; minimum 2.75 GPA in 300/400-level ACCT courses; internship coordinator approval

Credits: 1 TO 2

### **American Cultural Studies**

*Courses numbered X37; X97; 300, 400; 417, 445 are described in the University Academic Policies section of this catalog.*

#### **AMST 202 - The American Indian Experience**

The social and cultural evolution of the first peoples of the Americas. Focus on such aspects as education, self-determination, health issues and urbanization as they impact native indigenous populations. Also listed as FAIR 263b on an S/U grading basis.

**Prerequisites & Notes:** also offered as FAIR 263

Credits: 3

#### **AMST 203 - The Hispano/a-American Experience**

The development of the Hispano/a-American community, with emphasis on its history, its social and political institutions, and the effects of education, continuing immigration and economic stratification. Also offered as FAIR 218.

**Prerequisites & Notes:** also offered as FAIR 218

Credits: 3

#### **AMST 204 - The African-American Experience**

An overview of African-American history from an interdisciplinary perspective. Emphasis is on the struggle for social and political equality in a developing capitalist economy. The contemporary social, economic and political life of African Americans also will be examined.

Credits: 3

#### **AMST 205 - The Asian-American Experience**

The history of Asians in the United States, the development of communities and the effects of the encounter between Asian cultures and the developing American cultural context.

Credits: 3

**AMST 206 - The Jewish-American Experience**

An overview of the Jewish experience in America, past and present Jewish American marginalization, encounters with anti-Semitism and impact on the national scene. Study of Jewish Americans as a secular community, a community of faith, and an American minority ethnic group.

Credits: 3

**AMST 242 - The Lesbian, Gay, Bisexual, Transgendered Experience**

The development of the lesbian, gay, bisexual transgendered community in the United States, with emphasis on identity formation, historical and sociological influences and the effects of encounters between gay cultures and the larger American cultural context. Also offered as FAIR 219.

**Prerequisites & Notes:** also offered as FAIR 219

Credits: 3

**AMST 301 - Comparative Cultural Studies**

The interaction of immigrant and indigenous cultures with the developing American cultural patterns. Emphasis upon models and concepts of interaction, especially related to African Americans, Native Americans, Asian Americans and Latinos.

**Prerequisites & Notes:** introductory-level course: history, sociology, anthropology or equivalent; also offered as FAIR 366

Credits: 4

**AMST 314 - Contemporary Latino/a Issues**

The course will familiarize students with theoretical approaches, empirical research, and policy issues relating to the social and historical conditions of Latino/as. By examining the conditions of adaptation, and particularly the implications of exclusion or inclusion, the course critically assesses the close ties that Latino/as have with the multiple dimensions of immigration and borders of many kinds.

**Prerequisites & Notes:** AMST 203/FAIR 218c or AMST 301/FAIR 266c

Credits: 4

**AMST 315 - Contemporary American Indian Issues**

A historical and cultural overview of issues in Indian/White relations. Emphasis on issues of sovereignty, land claims, water rights, treaty rights, education, women, economic development, religious freedom, and cultural appropriation. Also offered as FAIR 399b.

**Prerequisites & Notes:** AMST 202 or HIST 275.

Credits: 4

**AMST 316 - Contemporary African American Issues**

This course is an interdisciplinary examination of contemporary African American issues from the 1970s to the present. The focus will be on the various social, political, and economic issues that affect the African American community including education, economic development, affirmative action, reparations, interracial relations, criminal justice, racial discrimination, and political empowerment among others.

**Prerequisites & Notes:** AMST 204 or AMST 301

Credits: 4

**AMST 362 - Asian-American History**

Contributions Asian Americans have made to the development of the United States, with emphasis on immigration, adaptation, settlement and their struggle for justice and equality. Also taught as HIST 362.

**Prerequisites & Notes:** HIST 103 or HIST 104 or AMST 203, AMST 205 or AMST 301; also offered as HIST 362

Credits: 5

**AMST 499 - Research and Writing**

Designed to introduce students to primary and secondary sources associated with American cultural studies.

Assignments include one major research/writing project and several smaller ones. Also taught as LIBR 499.

**Prerequisites & Notes:** AMST 301; senior status or instructor approval; also offered as LIBR 499

Credits: 4

**Anthropology**

*Courses numbered X37; X97; 300, 400, 500; 417, 445, 517, 545 are described in the University Academic Policies section of this catalog.*

**ANTH 102 - Introduction to Human Origins**

Description of scientific evidence for the evolution of the human lineage from its primitive primate ancestors to the origins of civilization. Emphasis on analytical methods employed to reconstruct history from fossils, geological context and cultural remains.

Credits: 5

**ANTH 104 - American Mosaic: The Cultures of the United States**

The study of the cultures of the United States from the perspectives of ethnicity, race, gender and class. Special emphasis on anthropological methods and approaches to enhance understanding of contemporary socio-cultural lifeways.

Credits: 4

**ANTH 201 - Introduction to Cultural Anthropology**

The study of societies that contrast with Western civilization, leading to an acquaintance with the concept of culture and its importance to an understanding of human behavior. Emphasis on understanding each culture from its own point of view rather than from our own.

Credits: 5

**ANTH 210 - Introduction to Archaeology**

The historical roots and current goals of archaeology. Principles of archaeological inference, including formation of the archaeological record, data collection and analysis, and interpretive frameworks.

Credits: 5

**ANTH 215 - Introductory Biological Anthropology**

The biological side of anthropology; human osteology, primate paleontology, human variation, human evolution and primate behavior.

**Prerequisites & Notes:** no labs first week of class

Credits: 5

**ANTH 247 - Introduction to Linguistic Anthropology**

The study of language from an anthropological perspective. Includes an introduction to the structure and patterning of language, the study of language as it is used in daily life, and the role of language in human evolution.

Credits: 5

**ANTH 301 - Anthropological Theory**

The development of anthropological thought from the late 1800s to the present. Emphasis is placed on the major theoretical developments in the discipline.

**Prerequisites & Notes:** ANTH 201

**ANTH 303 - Qualitative Methods in Anthropology**

This course will familiarize students with perspectives, methods and techniques of qualitative research in anthropology. The course will cover the theoretical background of qualitative research, major research traditions, methods of data collection, analysis of textual data and the write-up of findings.

**Prerequisites & Notes:** ANTH 201

Credits: 5

**ANTH 308 - Hunter-Gatherer Societies in World Prehistory**

The archaeological remains of hunting-gathering groups from early hominids to modern times interpreted in terms of evolution of adaptive strategies. Relationship to agriculture as an adaptive strategy; contributions of studies of modern hunter-gatherer groups.

**Prerequisites & Notes:** ANTH 210.

**ANTH 310 - The Rise of Civilizations**

Village agricultural societies as revealed by archaeology; crystallization of village farming societies into urban civilizations in the Near East, Egypt, India, China and New World parallel developments.

**Prerequisites & Notes:** ANTH 102 or ANTH 210.

Credits: 4

**ANTH 312 - Field Course in Archaeology**

On-site training in methods and techniques of archaeological survey and excavation.

**Prerequisites & Notes:** ANTH 210 or equivalent and permission of instructor.

Credits: 12

**ANTH 314 - Archaeology of North America**

Origins of PaleoIndians of North America, their paleoenvironments and the cultural sequences leading to the historic peoples of the New World north of Panama. Mesoamerican and Mississippian cultures, those of the Southwest and the Woodland Archaic.

**Prerequisites & Notes:** ANTH 210.

Credits: 5

**ANTH 330 - Religion and Culture**

Comparative study of religious thought, belief and behavior; relationship of religious experience and institutions to other aspects of culture and society.

**Prerequisites & Notes:** ANTH 201

Credits: 5

**ANTH 335 - Quantitative Methods in Anthropology**

Mathematics and statistics as applied to anthropological problems.

**Prerequisites & Notes:** ANTH 201 or ANTH 210 or ANTH 215.

Credits: 5

**ANTH 338 - Economic Anthropology**

Examines the relationship between systems of production and culture through four theoretical approaches: formalist, substantivist, Marxist and culturalist. Emphasis on localized consequences of global economic forces. Service learning component required.

**Prerequisites & Notes:** ANTH 201 or instructor permission

Credits: 5

**ANTH 347 - The Ethnography of Communication**

Familiarizes students with methods of data collection and analysis used in linguistic anthropology through an examination of both classic and current literature. Examines the complex relationship between language and culture.

**Prerequisites & Notes:** ANTH 247.

Credits: 5

**ANTH 350 - The Ecology of Human Variation**

Examines contemporary sociopolitical, health and related environmental issues starting with a historical and evolutionary perspective that emphasizes changes in human biology, diet, demography and disease, and the cultural milieu since the hunting and gathering past.

**Prerequisites & Notes:** ANTH 215 and either ANTH 201 or ANTH 210.

Credits: 5

**ANTH 351 - Family and Kinship Organization**

Cross-cultural study of family types and the definition of social roles through kinship organization.

**Prerequisites & Notes:** ANTH 201

Credits: 5

**ANTH 352 - Cross-Cultural Study of Aging**

Explores aging and being old in a variety of cultures as well as our own in the context of an unprecedented worldwide population explosion of older people, examining longevity and the demography of aging, conceptualizations of the life course and late life, family and community roles of older people, gender differences and similarities of aging, status relations between and among people of different ages, health and health care.

**Prerequisites & Notes:** ANTH 201

Credits: 4

**ANTH 353 - Sex and Gender in Culture**

Cross-cultural study of gender stereotypes, gender and language, gender and work roles, gender and religion.

**Prerequisites & Notes:** ANTH 201.

Credits: 5

**ANTH 361 - Native Peoples of North America**

Ethnographic survey of the peoples and cultures.

**Prerequisites & Notes:** ANTH 201

Credits: 5

**ANTH 362 - Peoples of Asia**

Ethnographic survey of the peoples and cultures.

**Prerequisites & Notes:** ANTH 201

Credits: 5

**ANTH 365 - Peoples of Latin America**

Ethnographic survey of the peoples and cultures.

**Prerequisites & Notes:** ANTH 201

Credits: 5

**ANTH 406 - Archaeological Method and Theory**

History of theory and method in North American archaeology and the legacy of earlier goals. Current goals and the development of appropriate theory, method and empirical applications.

**Prerequisites & Notes:** ANTH 210 and ANTH 301.

Credits: 5

**ANTH 410 - Archaeological Analysis and Interpretation**

Archaeological laboratory methods; artifact identification, classification, measurement; map reproduction, soil and feature profiles; use of photographs and other graphic methods.

**Prerequisites & Notes:** ANTH 210 and Junior or Senior status.

Credits: 5

**ANTH 411 - Archaeology of Northwestern North America**

The prehistoric archaeology of the Northwest coast and plateaus; current explorations and interpretations in a context of paleoenvironmental and ethnohistorical evidence.

**Prerequisites & Notes:** ANTH 210 and one of ANTH 310 or ANTH 314 or ANTH 361.

Credits: 5

**ANTH 415 - Archaeological Spatial Analysis**

Focuses on the application of advanced quantitative methods in spatial analysis to specific archaeological contexts and projects. Students will complete a major research project and present it to the class and as a paper.

**Prerequisites & Notes:** ANTH 201 and ANTH 335.

Credits: 3

**ANTH 420 - Human Osteology and Forensic Anthropology**

After learning the human skeleton, the student will be trained in techniques for recovery of the body, reconstruction of the body's history (age, sex, race, etc.) and how to aid the crime investigator.

**Prerequisites & Notes:** ANTH 210 or ANTH 215 or ANTH 335 or ANTH 410 or permission of instructor

Credits: 5

**ANTH 422 - Nutritional Anthropology**

The study of human nutrition and metabolism from an anthropological perspective. Topics include the structure and function of the digestive system, the chemical composition of nutrients and the regulation by the body of nutrient stores and body composition. Focuses on using a comparative approach to elucidate a naturalistic human diet and the health consequences when this ideal is not met.

**Prerequisites & Notes:** ANTH 201 and ANTH 215 and BIOL 349 or permission of instructor

Credits: 5

**ANTH 423 - Human Evolution**

Detailed discussion on behavioral and anatomical changes leading to contemporary humanity evident from fossil record and studies of modern primates.

**Prerequisites & Notes:** ANTH 210 and ANTH 215 and one of ANTH 308 or ANTH 410 or ANTH 420; or instructor permission.

Credits: 5

**ANTH 424 - Medical Anthropology**

Introduction to an area where biological and cultural anthropology interface. Includes health and disease in evolution, the relationships between disease and world view, the healer and the cultural milieu, and comparative studies of healing practices.

**Prerequisites & Notes:** ANTH 201 and Junior standing or instructor permission.

Credits: 5

**ANTH 428 - Cultural Resource Management**

Introduction to the field of cultural resource management including historic preservation, archaeological resource management, cultural resource management for subsistence and spiritual practices. Background on legislation and current practices, review of case studies and experience with actual projects.

**Prerequisites & Notes:** ANTH 210 and junior or senior status or instructor permission.

Credits: 4

**ANTH 429 - Politics, Participation and the Critique of Power**

Examines how collective action is possible in societies without centralized authority. Considers problems of order, action and representation in non-state societies, and the question of popular participation in states.

**Prerequisites & Notes:** ANTH 301, and junior or senior status or permission of instructor

Credits: 3

**ANTH 440 - Cyborg Anthropology**

The cyborg is a life form that is part human and part machine. This course examines the shifting conceptual and physical boundaries between humans and their techno-scientific creations through theoretical works, ethnographic accounts and popular cultural artifacts such as film.

**Prerequisites & Notes:** ANTH 201 or instructor permission

Credits: 5

**ANTH 447 - Anthropological Semiotics**

Myth, metaphor and media offer the material for this exploration of theories which offer insight into the relationship between language and mind.

**Prerequisites & Notes:** ANTH 347 and junior or senior status or permission of instructor.

Credits: 5

**ANTH 453 - Women of the Global South**

Explores women's economic, religious, political and familial roles through topics such as development and globalization, violence, and women's movements. Student contributions to course topics emphasized through individual papers and group panel work.

**Prerequisites & Notes:** ANTH 301 and ANTH 353 and junior or senior status or permission of instructor.

Credits: 5

**ANTH 454 - Participatory Action Research Methods**

Participatory Action Research is a methodology of researching, analyzing, and carrying out actions that directly benefit members (stakeholders) of a community. As a form of applied anthropology, PAR is a method that emphasizes working in collaboration with others to develop research questions, conduct research, analyze findings, present results, and create actions. In this course, graduate students will work with an identified community group (in most cases, one with which the student already has a great familiarity through participant-observation fieldwork methods in ANTH 471) to work on a PAR project.

**Prerequisites & Notes:** ANTH 303 or ANTH 471 or permission of instructor.

Credits: 5

**ANTH 456 - Anthropology of War and Human Rights**

The course focuses on emic and etic perspectives of war and human rights. Investigates cultural relativism and anthropology with regard to war and violence. Cultural constructions of war and definitions of human rights are fundamental to an understanding of what it means to be human.

**Prerequisites & Notes:** ANTH 301 and junior or senior status.

Credits: 4

**ANTH 457 - The Anthropology of Death and Dying**

The course considers death and dying anthropologically as cultural constructs. The course explores a wide range of cultures from a variety of interdisciplinary and interactive perspectives in order to further our understanding of what it means to be human. Studies death and dying in order to broaden our understanding of the human cultural experience. Field trips required.

**Prerequisites & Notes:** ANTH 301 and junior or senior status.

Credits: 5

**ANTH 460 - Culture and Society of Japan**

Overview of Japanese culture and society, its pre-history and historic formation, emphasizing contemporary social organization and social relations in urban and rural society. Examines Japan's solutions to the problems of modern industrial society.

**Prerequisites & Notes:** ANTH 362 or permission of instructor.

Credits: 4

**ANTH 462 - Native Peoples of the Northwest**

Tribal distributions, social organization and ecological adaptation and social change with emphasis on the Native peoples of Washington state.

**Prerequisites & Notes:** ANTH 361

Credits: 5

**ANTH 463 - Peoples of East and Southeast Asia**

An ethnographic in-depth study of the national and minority peoples of China, mainland and insular Southeast Asia. Emphasis on special topics, including ecology, prehistory and selected cultural groups. Readings focus on original monographs.

**Prerequisites & Notes:** ANTH 362 or permission of instructor.

Credits: 5

**ANTH 465 - Peoples of Mexico and Central America**

Overview of cultures and social relations in Mesoamerica, with an emphasis on indigenous and rural communities, subsistence and survival issues, and factors underlying political and economic change.

**Prerequisites & Notes:** ANTH 365.

Credits: 5

**ANTH 466 - Reproductive Ecology**

Study of human reproduction from an anthropological perspective. Topics include the structure and function of the reproductive system, including hormonal control of ovarian cycling, but also culturally mediated behaviors that influence reproduction. Focus is on variation in the fertility between populations and among couples within populations.

**Prerequisites & Notes:** ANTH 201 and ANTH 215 and BIOL 349 or permission of instructor

Credits: 5

**ANTH 469 - Directed Internship**

Application of anthropological methods and theory in an applied setting. Interns work at least 10 hours per week at the work site, in the type of work specified in the internship contract. In addition students complete several written assignments, Repeatable to a maximum of 15 credits. No more than 10 credits in internship may be counted toward the major.

**Prerequisites & Notes:** permission of instructor.

Credits: 5 TO 10

**ANTH 470 - Museology Studies**

Internship at the Whatcom Museum of History and Art or other local museums. Students may select an area of museum specialization in most cases; essay questions and a paper are also required. Repeatable to a maximum of 10 credits.

**Prerequisites & Notes:** ANTH 301 and junior or senior status or permission of faculty liaison.

Credits: 3 TO 5

**ANTH 471 - Field Work Methods in Cultural Anthropology**

The study of ethnographic field work methods through exercises in class and a major field work project in the community. Discussion of topics, including the anthropologist as field worker and the ethics of field work.

**Prerequisites & Notes:** ANTH 301 or ANTH 303 and junior or senior status or permission of instructor.

Credits: 7

**ANTH 472 - Visual Anthropology**

Examination of photographic representation of people by anthropologists, ethnographic filmmakers, indigenous people, media and other groups. Analytical skills and applications are emphasized and theoretical perspectives are explored.

**Prerequisites & Notes:** ANTH 301 or ANTH 303 and junior or senior status or permission of instructor.

Credits: 5

**ANTH 473 - Filed Course in Ethnography**

Course is partly classroom-based and partly field-based research through participation in on-site projects. Actual projects vary by quarter and instructor.

**Prerequisites & Notes:** ANTH 201 and permission of instructor.

Credits: 5 TO 12

**ANTH 475 - Global Migration**

Economic, political and human factors motivating movements of people and affecting their transitions into new societies; comparative exploration of issues, case studies and global trends, with specific focus on implications for policy and services.

**Prerequisites & Notes:** ANTH 201.

Credits: 5

**ANTH 476 – Borderlands**

Comparative examination of simultaneous separating and integrating functions of borders, significance of border regions as vital transition zones, and transboundary policy needs associated with accelerated flows of people, goods and ideas; particular focus on U.S.-Mexico and US.-Canada borderlands.

**Prerequisites & Notes:** ANTH 201

Credits: 5

**ANTH 480 - Applied Anthropology**

Use of anthropology to solve human problems; examines ethics, interventions and policy applications regarding contemporary social issues.

**Prerequisites & Notes:** ANTH 301 or ANTH 303.

Credits: 5

**ANTH 481 - Childhood and Culture**

The process of socialization or enculturation viewed from a cross-cultural perspective.

**Prerequisites & Notes:** ANTH 201.

Credits: 5

**ANTH 484 - Cross-Cultural Education**

Comparative and anthropological study of educational issues. Examines learning in other cultures, home-school linkages, minority student achievement and multi-cultural curricula.

**Prerequisites & Notes:** ANTH 201 or permission of instructor.

Credits: 5

**ANTH 490 - Senior Seminar in Anthropology**

Capstone seminar in anthropology. Topics vary, emphasis is on current research questions in anthropology. Students write a research proposal, conduct a research project and present the findings. Repeatable to a maximum of 10 credits.

**Prerequisites & Notes:** Senior status in anthropology.

Credits: 5

**ANTH 495 - Teaching-Learning Processes in Anthropology**

Practicum as discussion leaders in anthropology courses. May be repeated once for departmental credit if taken from a different instructor.

**Prerequisites & Notes:** Permission of instructor.

Credits: 3

**ANTH 496 - Portfolio Assembly**

Student assembles and submits portfolio contents in four areas: research, competence, data analysis, critical comprehension and synthetic comparison, under continuing direction of departmental academic adviser. S/U grading.

**Prerequisites & Notes:** Senior status in anthropology.

Credits: 1

**ANTH 501 - History of Anthropology**

Development of principal theoretical orientations and methods in the cultural and historical setting; development of anthropology as a discipline.

Credits: 5

**ANTH 502 - Theory in Anthropological Research**

Issues relating to use of theory in contemporary anthropological research; examination of major writings and their implications.

Credits: 5

**ANTH 503 - Research Design and Method**

Analysis of major theoretical approaches; research methods and procedures; relationship of theory and method in formulating research problems.

Credits: 5

**ANTH 506 - Archaeological Method and Theory**

History of theory and method in North American archaeology and the legacy of earlier interpretive frameworks. Current goals of the discipline and the development of appropriate theory, method and empirical applications.

Credits: 5

**ANTH 510 - Applied Archaeological Analysis and Interpretation**

Advanced design and implementation of archaeological laboratory methods to a specific research project.

Credits: 5

**ANTH 511 - Current Archaeological Research in Northwestern North America**

Advanced survey of current literature in Pacific Northwest archaeology in seminar format with preparation of a major research paper.

Credits: 5

**ANTH 515 - Practicum in Archaeological Spatial Analysis**

Application of advanced quantitative spatial analysis techniques to specific archaeological contexts and projects.

Students will complete a major research project and paper.

Credits: 5

**ANTH 520 - Human Osteology**

Advanced study of human osteology. The latest methods in reconstruction of the individual.

Credits: 5

**ANTH 522 - Nutritional Anthropology**

Advanced study of human nutrition and metabolism from an anthropological perspective. Topics include the structure and function of the digestive system, the chemical composition of nutrients and the regulation by the body of nutrient stores and body composition. Each student will prepare a major research paper and presentation.

**Prerequisites & Notes:** graduate students in good standing in the anthropology department and other programs with approval of their program advisor

Credits: 5

**ANTH 524 - Applied Medical Anthropology**

Advanced study of the use of medical anthropological method and theory in contemporary health care systems or in the analysis of health and disease in past populations.

Credits: 5

**ANTH 525 - Primate Evolution**

Advanced study of primate paleontology. Each student is expected to become expert on some aspect of the fossil record.

Credits: 5

**ANTH 528 - Applied Cultural Resource Management**

Application of cultural resource management methods to specific management problems. Students will prepare a professional quality cultural resource management plan or nomination form.

Credits: 5

**ANTH 547 - Semiotic Anthropology**

Advanced study of theoretical approaches to meaning in linguistic anthropology, including but not limited to Piercean semiotics, trope theory, and methods for theorizing context.

**Prerequisites & Notes:** Graduate standing.

Credits: 5

**ANTH 553 - Women of the Global South**

Examines a variety of contemporary issues facing women of the South, such as economic realities, family responsibilities, health issues, and women's rights. Emphasis on individual and group work to examine selected topics and to gain in-depth knowledge about women in specific countries.

Credits: 5

**ANTH 554 - Participatory Action Research Methods**

Participatory Action Research is a methodology of researching, analyzing, and carrying out actions that directly benefit members (stakeholders) of a community. As a form of applied anthropology, PAR is a method that emphasizes working in collaboration with others to develop research questions, conduct research, analyze findings, present results, and create actions. In this course, graduate students will work with an identified community group (in most cases, one with which the student already has a great familiarity through participant-observation fieldwork methods in ANTH 571) to work on a PAR project.

**Prerequisites & Notes:** ANTH 571 or permission of instructor.

Credits: 5

**ANTH 563 - Peoples of East and Southeast Asia**

Advanced study of selected important topics regarding the peoples and cultures of China, mainland and insular Southeast Asia. Emphasis on work to gain in-depth knowledge and understanding of selected cultures and/or theoretical-analytical topics of special relevance to the region.

Credits: 5

**ANTH 565 - Peoples of Mexico & Central America**

Advanced ethnological analysis of cultures and social relations in Mesoamerica, with emphasis on ecological, economic and political issues and implications for community resources for facing globalization.

Credits: 5

**ANTH 566 - Reproductive Ecology**

Advanced study of human reproduction from an anthropological perspective in a seminar format. Will cover topics including the structure and function of the reproductive system, including hormonal control of ovarian cycling, but also culturally mediated behaviors that influence reproduction. Students will prepare a major research paper presentation.

Credits: 5

**ANTH 571 - Field Work Methods in Cultural Anthropology**

The study of ethnographic field work methods through exercises in class and a major field work project in the community. Discussion of topics, including the anthropologist as field worker and the ethics of field work.

Credits: 7

**ANTH 572 - Visual Anthropology**

Examination of photographic/digital image representation of people by anthropologists, ethnographic filmmakers, indigenous people, media and other groups. Requires analytical skills and applications and explores theoretical perspectives. Requires two projects with accompanying presentations.

Credits: 5

**ANTH 576 – Borderlands**

Advanced comparative examination of separating and integrating functions of borders, border regions as transition zones, and policy implications, with emphasis on U.S. borders with Mexico and Canada.

Credits: 5

**ANTH 580 - Applied Anthropology**

Advanced investigation of the use of anthropology to solve human problems; ethics, interventions and policy applications regarding contemporary social issues.

Credits: 5

**ANTH 581 - Childhood and Culture**

Advanced cultural analysis of the process of socialization, child welfare and policy relating to children.

Credits: 5

**ANTH 690 – Thesis**

Repeatable to a maximum of 12 credits. S/U grading

**Prerequisites & Notes:** formal advancement to candidacy for the MA in anthropology

Credits: 1 TO 12

**Arabic**

*Courses numbered X37; X97; 300, 400; 417, 445 are described in the University Academic Policies section of this catalog.*

**ARAB 101 - Elementary Arabic**

To be taken in sequence. Fundamentals of speaking, reading, writing and understanding standard Arabic.

Credits: 5

**ARAB 102 - Elementary Arabic**

101, 102, 103 Elementary Arabic (5 each). To be taken in sequence. Fundamentals of speaking, reading, writing and understanding standard Arabic.

**Prerequisites & Notes:** Arabic 101

Credits: 5

**ARAB 103 - Elementary Arabic**

101, 102, 103 Elementary Arabic (5 each). To be taken in sequence. Fundamentals of speaking, reading, writing and understanding standard Arabic.

**Prerequisites & Notes:** Arabic 102

Credits: 5

**ARAB 201 - Intermediate Arabic**

201, 202, 203 Intermediate Arabic (5 ea). To be taken in sequence. Continuation of skill development begun in elementary Arabic (Modern Standard Arabic), with additional work and focus on speaking and vocabulary acquisition.

**Prerequisites & Notes:** ARAB 103

Credits: 5

**ARAB 202 - Intermediate Arabic**

201, 202, 203 Intermediate Arabic (5 ea). To be taken in sequence. Continuation of skill development begun in elementary Arabic (Modern Standard Arabic), with additional work and focus on speaking and vocabulary acquisition.

**Prerequisites & Notes:** ARAB 201

Credits: 5

**ARAB 203 - Intermediate Arabic**

201, 202, 203 Intermediate Arabic (5 ea). To be taken in sequence. Continuation of skill development begun in elementary Arabic (Modern Standard Arabic), with additional work and focus on speaking and vocabulary acquisition.

**Prerequisites & Notes:** ARAB 202

Credits: 5

**Art**

*Courses numbered X37; X97; 300, 400 500; 417, 445, 517, 545 are described in the University Academic Policies section of this catalog. (Courses in art history are listed after the listings in art.)*

**NOTE:** The Department of Art may request samples of work produced in a studio course for exhibition purposes.

**ART 109 - Visual Dialogue**

Open to all students with the exception of a number of seats reserved for art majors each quarter. Art studio pre-majors are advised to take ART 109 in their first or second quarter concurrently with ART 110. Introduction to ideas and artists in 20th century art with an emphasis on the contemporary. Examines concepts of content, meaning, and cultural interrelationships in art, and questions the nature, function, and importance of art in contemporary society.

Credits: 3

**ART 110 - Form and Content I: Drawing**

Focuses on drawing as a means of conveying ideas. Includes studies in representational drawing, including figure drawing, perspective studies, and drawing from memory and the imagination. Various techniques, materials and surfaces are explored. Formal elements and organizing principles of design are introduced.

**Prerequisites & Notes:** ART pre-major or Industrial Design and FAIR majors

Credits: 3

**ART 120 - 2-Dimensional Design/Color**

Problem-solving through visual and critical thinking by incorporating the design principles of line, shape, space, texture, and color. Emphasis on color theory and color application.

**Prerequisites & Notes:** Completion of ART 109 recommended for art studio majors.

Credits: 3

**ART 130 - Form and Content III: 3-D**

Recommended to be taken concurrently with ART 120. Focuses on three-dimensional problem solving, visual and critical thinking and the elements and principles of design, including color. Explores a wide range of materials and processes. Emphasizes the relationship of drawing to three-dimensional construction.

**Prerequisites & Notes:** ART 109 (Art Studio only), ART 110, ART 120 or concurrent; ART pre-major or Industrial Design and FAIR majors

Credits: 3

**ART 140 - Form & Content IV: Special Topics**

Art 140 is a studio-based course that will address ideas and methods in art making through a variety of possible approaches.

**Prerequisites & Notes:** ART 109, ART 110, ART 120

Credits: 3

**ART 202 - Color - Theory and Systems**

The study of color includes the historical theories of color, the pigments of subtractive colorants, the light based technology of additive color as well as the understanding of human physiology related to vision. Discussion of the importance of cultural based meanings associated with color usage.

**Prerequisites & Notes:** ART 110 or ART 120

Credits: 3

**ART 203 - Contemporary Studio Drawing**

Examines the definition of drawing in the 21st century and explores contemporary approaches to drawing. Seeks to broaden the conceptual and technical basis for students' work and investigate a broad range of materials and traditions, including abstraction, observation, collage, imagination, color and mixed media on paper.

Experimentation with tools and techniques and in developing an individual system for artistic expression.

**Prerequisites & Notes:** ART 109, ART 110, ART 120, and ART 130 or ART 140

Credits: 4

### **ART 210 - Introduction to Printmaking**

A lecture/lab course covering history, methods, and practice of print concepts. Introduction to monotype, relief and intaglio process.

**Prerequisites & Notes:** ART 109, ART 110, ART 120, and ART 130 or ART 140

Credits: 4

### **ART 220 – Painting**

Introduction to contemporary painting.

**Prerequisites & Notes:** ART 109, ART 110, ART 120, and ART 130 or ART 140

Credits: 4

### **ART 230 - Beginning Sculpture**

Emphasis on methods, ideas and materials relating to current practices in contemporary sculpture and non two-dimensional art. Introduction to the idea of sculptural form as a repository for content.

**Prerequisites & Notes:** ART 109, ART 110, ART 120, and ART 130 or ART 140

Credits: 4

### **ART 240 – Ceramics**

Introduction to ceramics. Pottery and sculptural forms are hand-built using coil, slab and molded techniques.

Introduction to glaze formulation, kiln loading and firing.

**Prerequisites & Notes:** ART 109, ART 110, ART 120, and ART 130 or ART 140

Credits: 4

### **ART 260 - Fibers/Fabrics I**

Introduction to technical explorations of dye application, fabric manipulation, and structural process of textile production. Technical information accompanied by presentations of contemporary fiber history and issues. All explorations to focus on the inherent expressive qualities of traditional fiber media and processes, and their mixed media counterparts. Lecture/lab.

**Prerequisites & Notes:** ART 109, ART 110, ART 120, and ART 130 or ART 140; variable fee

Credits: 4

### **ART 290 – Photography**

This introductory course is structured to establish an understanding of contemporary photographic art in both theory and practice, including techniques and history. Lecture/lab.

**Prerequisites & Notes:** ART 109, ART 110, ART 120, and ART 130 or ART 140; variable fee

Credits: 4

### **ART 303 - Intermediate Studio Drawing**

A continuation of Contemporary Studio Drawing (ART 203). This course goes beyond the introductory level to emphasize the pursuit of drawing as a creative mode of expression and is an examination of creative trends in drawing in the 21st Century. Students will explore various types of visual responses to creative problem solving through a variety of media, tools, and techniques emphasizing the use of mixed media on paper. Repeatable to a maximum of 10 credits.

**Prerequisites & Notes:** Completion of 100 level requirements and 12 credits of 200-level studio practice including ART 203.

Credits: 5

### **ART 304 - Figure Drawing and Issues of the Body**

Intermediate-level investigation through two-dimensional media of the human form. Basic drawing techniques and topics such as gesture, proportion, line, color, texture, value, expression, and some basic anatomy will be covered as applied to the life model. Explores contemporary issues of the body in art through major thematic and conceptual projects. Repeatable to a maximum of 15 credits.

**Prerequisites & Notes:** Completion of 100-level requirements plus 12 credits 200-level studio practice, including ART 203 or ART 250

Credits: 5

### **ART 305 - Experimental Drawing**

An intermediate level course that covers a wide range of materials and procedures. Students will be pushed to expand upon their own definition of what constitutes a drawing through key issues and exploration including: chance, operation, exterior influences, the use of non-traditional drawing materials and tools, bringing drawing into a third dimension, and drawing as a means to, or part of, a larger whole. The course aims to help the student build a suitable foundation for further artistic development in a variety of media. Mature levels of invention and problem

solving, and the development of critical insight that facilitates dialogue and conceptual skills are required. Lecture/lab. Repeatable to a maximum of 15 credits.

**Prerequisites & Notes:** Completion of 100-level requirements and 12 credits of 200-level studio practice.  
Credits: 5

#### **ART 306 - Mixed Media on Paper**

An intermediate level course that emphasizes the use and combining of diverse media and surfaces. Techniques covered will include: collage, ground surface treatments, washes, gouache, working with found and recycled material, and other modes of working with contemporary sources and forms. Repeatable up to 10 credits.

**Prerequisites & Notes:** ART 203 and 8 credits of 200-level studio practice.  
Credits: 5

#### **ART 310 - Printmaking – Relief**

Introduces and explores surface/relief printmaking processes with a concentration on color printing and working in layers. Uses conventional and experimental methods on a variety of materials to create matrices for woodblock and linoleum-cuts. Historical and contemporary relief examples are explored. Lecture/lab. Repeatable to a maximum of 15 credits.

**Prerequisites & Notes:** ART 210 and 8 credits of studio practice.  
Credits: 5

#### **ART 311 - Printmaking – Lithography**

A course covering history, methods, criticism, and practice of planographic processes with emphasis on stone lithography including color printing and registration. Historical and contemporary lithographic examples explored. Lecture/lab. Repeatable to a maximum of 15 credits.

**Prerequisites & Notes:** ART 210 and 8 credits of 200-level studio practice.  
Credits: 5

#### **ART 312 - Printmaking – Intaglio**

Course covers history, methods, criticism, and practice of the intaglio print processes; dry point, engraving and mezzotint, hard-ground and soft-ground etching, aquatint, color applications, multi-plate registration, and photo-polymer gravure. Historical and contemporary intaglio examples explored. Lecture/lab. Repeatable to a maximum of 15 credits.

**Prerequisites & Notes:** ART 210 and 8 credits of 200-level studio practice.  
Credits: 5

#### **ART 313 - Printmaking – Color**

A course covering history, methods and practice of color printmaking processes: surface relief, lithography or intaglio processes. Lecture/lab. Repeatable to a maximum of 15 credits.

**Prerequisites & Notes:** ART 210 and 8 credits of 200-level studio practice.  
Credits: 5

#### **ART 321 - Painting Workshop**

Intermediate problems in painting. Development of individual direction in form and expression. Repeatable to a maximum of 15 credits.

**Prerequisites & Notes:** Completion of 100-level requirements plus 12 credits 200-level studio practice, including ART 203 and ART 220  
Credits: 5

#### **ART 322 - Intermediate Painting**

Continued exploration of painting concepts and techniques through the development of individual content. Studio work is complemented by in-depth discussion of issues in historical and contemporary painting. Lecture/lab. Repeatable to a maximum of 15 credits.

**Prerequisites & Notes:** ART 220.  
Credits: 5

#### **ART 324 - Figure Painting**

Painting concepts and techniques with an emphasis on the human form and the figure in context. Studio work is complemented by in-depth discussion of issues of historical and contemporary figure painting. Repeatable to a maximum of 10 credits.

**Prerequisites & Notes:** ART 220.  
Credits: 5

**ART 325 - Experimental Painting**

An investigation of contemporary painting strategies using abstraction, mixed-media, and installation.

**Prerequisites & Notes:** ART 203 and ART 220.

Credits: 5

**ART 331 - Wood Sculpture**

Examines the traditions of wood sculpture in the context of utilizing a variety of woods and wood-based materials to make contemporary sculpture. Further emphasis is placed upon development of concepts in relation to forms and materials. Repeatable to a maximum of 10 credits.

**Prerequisites & Notes:** ART 230 and 8 credits of 200-level studio practice.

Credits: 5

**ART 332 - Sculpture - Metals**

Focus on traditional, industrial and alternative processes in metal fabrication and casting as a means of producing contemporary sculpture. Emphasis on achieving a balance between studio practice and theory. Repeatable to a maximum of 10 credits.

**Prerequisites & Notes:** Completion of 100-level requirements plus 12 credits 200-level studio practice, including ART 230

Credits: 5

**ART 333 - Sculpture - Mixed Media**

Use of disparate media for contemporary object making and non-two-dimensional art forms, within an expanding field of alternative sculptural practices. Repeatable to a maximum of 10 credits.

**Prerequisites & Notes:** ART 230 and 8 credits of 200-level studio practice.

Credits: 5

**ART 334 - Installation Art**

Explores distinctions between private and public art, traditional gallery presentation and site-specific installations. Performance and collaboration with other artists or disciplines will be offered as possible areas of work. Additional emphasis on effective documentation of temporary and site-specific work. Lecture/lab. Repeatable to a maximum of 10 credits.

**Prerequisites & Notes:** Art 230 and 8 credits of 200-level studio practice.

Credits: 5

**ART 341 - Ceramics II**

Introduction to the potter's wheel as a tool; hand building, glaze formulation and kiln firing.

**Prerequisites & Notes:** Completion of 100-level requirements plus 12 credits 200-level studio practice, including ART 240

Credits: 5

**ART 342 - Ceramics Workshop**

Intermediate problems in clay as a medium. Development of individual directions in pottery and/or ceramic sculpture. Weekly seminars. Repeatable to a maximum of 15 credits.

**Prerequisites & Notes:** Completion of 100-level requirements plus 12 credits 200-level studio practice, including ART 240 and ART 341

Credits: 5

**ART 343 - Summer Intensive Ceramics**

How, why, when and what to do with clay. Basic manipulation of clay; glazing and kiln firing. Attention to workable classroom problems, critiquing, safety, historical background and slide presentations. Covers a variety of hand-building techniques, how to use the potter's wheel, glazing, casting, kiln loading and firing. A variety of clays and firing techniques are used. Offered summers only. Repeatable to a maximum of 15 credits.

Credits: 5

**ART 361 - Surface Design**

Techniques and concepts of cloth alteration with an emphasis on surface and design. Specifics include: heat transfer dye on polyester fabric, advanced dyeing techniques on silk and screen-printing. Through traditional and contemporary fiber investigations, students will develop thematic and conceptual ideas while learning new skills and processes. Lecture/lab. Repeatable to a maximum of 15 credits.

**Prerequisites & Notes:** ART 260 and 8 credits of 200-level studio practice.

Credits: 5

**ART 362 - Papermaking/Mixed Media**

A lecture/lab course covering the history of papermaking, exploration of the traditional processes, and contemporary applications. Two-dimensional and three-dimensional projects will be made utilizing a variety of materials. Repeatable

to a maximum of 15 credits.

**Prerequisites & Notes:** Completion of 100-level requirements plus 12 credits 200-level studio practice including ART 260 or ART 230

Credits: 5

#### **ART 363 - Multidimensional Forms in Fiber**

Focuses on three-dimensional off-loom processes in fiber and material studies. Historical and contemporary applications of sandal weaving, basket making, felt making, lace making, and soft sculpture including wearable art will be explored. Integration between 2D and 3D forms will be conceptually presented through individual skills and creative ideas. Lecture/lab. Repeatable to a maximum of 15 credits.

**Prerequisites & Notes:** ART 260 and 8 credits of 200-level studio practice.

Credits: 5

#### **ART 367 - Woven Structures**

Focus on loom weaving techniques such as pattern weaving, double cloth weaving, Ikat weaving, tapestry and the AVL computer loom. Understanding woven structures and personal expression using both traditional and contemporary process as an art form will be explored. Lecture/lab. Repeatable to a maximum of 15 credits.

**Prerequisites & Notes:** ART 260 and 8 credits of 200-level studio practice.

Credits: 5

#### **ART 380 - Art Educating the Child**

Not for ART majors. Strategies and techniques in production of art and critical inquiry by elementary school children.

**Prerequisites & Notes:** Open to Education Majors only.

Credits: 3

#### **ART 381 - Theories and Teaching Strategies in Art Education**

The study and application of art education theory in the elementary and secondary schools. Emphasis will be placed on curricular development in art criticism, aesthetics, art history and studio production.

**Prerequisites & Notes:** Admission to Woodring College of Education; Art 109, ART 110, ART 120, ART 130

Credits: 4

#### **ART 390 - Photography II**

This intermediate course offers students an opportunity to develop their knowledge, skills, and concepts through seminars, readings, exhibitions and professional practices. The course focuses on the further development of concepts and technique through concentrated studies in specialized materials and processes. Lecture/lab. Repeatable to a maximum of 15 credits.

**Prerequisites & Notes:** ART 290 and 8 credits of 200-level studio practice, DSGN 251 highly recommended as part of the concentration with photography.

Credits: 5

#### **ART 391 - Color Photography**

This course explores the fundamentals of color image making, including traditional, alternative, and new technologies, Lecture/lab. Repeatable to a maximum of 15 credits.

**Prerequisites & Notes:** ART 390 and 8 credits of 200-level studio practice.

Credits: 5

#### **ART 392 - Alternative Photographic Processes**

This course will explore the history and practice of alternative forms of photography, including but not limited to, a variety of non-silver techniques and experimental contemporary methods, blending traditional and new technologies.

**Prerequisites & Notes:** Art 290 and 8 credits of 200-level studio practice.

Credits: 5

#### **ART 394 - Art Workshop: Italy**

Intensive drawing and painting workshop in Italy. Summer only. Course will be team taught in central and northern Italy. Explores drawing and painting as well as on-site study of Italian art and culture. Lecture/lab. Repeatable.

**Prerequisites & Notes:** ART 110 or other beginning drawing courses

Credits: 7

#### **ART 396 - Summer Art Program in Japan**

Study traditional and contemporary culture in Japan. Activities include: visiting historical sites, galleries, museums and artist studios. Experience a tea ceremony, papermaking, weaving, natural dyeing and more. Students will contribute to an exhibition following the trip. Offered summer quarter only.

**Prerequisites & Notes:** ART 109 and ART 110.

Credits: 7

**ART 401 - Advanced Drawing Workshop**

A course pursuing individually motivated creativity with an emphasis on contemporary issues in drawing as related to art making. Lecture/lab. Repeatable to a maximum of 15 credits.

**Prerequisites & Notes:** 15 credits 300-level studio practice, including 10 credits ART 303

Credits: 5

**ART 402 - Advanced Life Drawing**

A course covering history, methods, processes, criticism and the practice of drawing from the model. Lecture/lab. Repeatable to a maximum of 15 credits.

**Prerequisites & Notes:** 15 credits 300-level studio practice, including 10 credits ART 304

Credits: 5

**ART 411 - Advanced Print Workshop**

Investigation of contemporary problems and individual directions in the production and criticism of the print as personal expression. Lecture/lab. Repeatable to a maximum of 15 credits.

**Prerequisites & Notes:** 10 credits 300-level print courses

Credits: 5

**ART 421 - Advanced Painting Workshop**

Development of individual technique and content through independent studio practice. Studio work is complemented by discussion of pertinent topics in historical and contemporary painting. Lecture/lab. Repeatable to a maximum of 15 credits.

**Prerequisites & Notes:** 15 credits of 300-level painting.

Credits: 5

**ART 431 - Advanced Sculpture**

Project-oriented advanced work. Working closely with instructor, students will concentrate on the development of their discipline and artistic production as a personal mode of creative research, in the general context of contemporary art practices. Lecture/lab. Repeatable to a maximum of 15 credits.

**Prerequisites & Notes:** 15 credits 300-level sculpture or instructor permission

Credits: 5

**ART 441 - Advanced Ceramic Workshop**

Problems in advanced ceramics; self-directed projects and weekly seminars. Repeatable to a maximum of 15 credits.

**Prerequisites & Notes:** ART 342

Credits: 5

**ART 460 - Advanced Fibers/Fabrics**

Advanced problems in fiber/fabrics study. Emphasis on self-directed project development and contemporary issues in fibers/fabrics. Repeatable to a maximum of 15 credits.

**Prerequisites & Notes:** 5 credits 300-level fiber courses or instructor permission

Credits: 5

**ART 482 - Art Education Workshop**

Explorations in art media and their adaptation to use in the school. Not to be used for graduate program. Repeatable to a maximum of 15 credits.

**Prerequisites & Notes:** teaching experience

Credits: 1 TO 5

**ART 490 - Advanced Photography Workshop**

This studio seminar course focuses on self-directed photography-based projects in which students produce a substantial body of research-driven work which reflects their individual interests culminating in a group exhibition. Lecture/lab. Repeatable to a maximum of 15 credits.

**Prerequisites & Notes:** ART 390 or ART 391 or instructor permission; variable fee

Credits: 5

**ART 494 - Advanced Studio Seminar**

Critique-driven interdisciplinary course based in self-directed project development with an emphasis on contemporary issues in studio art. Repeatable to a maximum of 15 credits.

**Prerequisites & Notes:** BFA status or instructor permission; variable fee

Credits: 5

**ART 495 - Professional Practices for Studio Artist**

For the student who anticipates graduation and completion of the Studio Art BA or BFA degree in the near future. Designed to facilitate entry into the world of professional artists, galleries, critics, and curators, with an emphasis on

survival skills for the emerging artist. Includes current trends, professional issues and practices, and the preparation of a complete portfolio.

**Prerequisites & Notes:** BFA status or instructor permission; variable fee

Credits: 5

#### **ART 496 - BFA Seminar**

Art 496 is an advanced seminar that will address issues in studio practice for the BFA student. Repeatable to a maximum of 15 credits.

**Prerequisites & Notes:** Acceptance into BFA Program.

Credits: 5

#### **ART 580 - Current Challenges in Art Education**

Special problems in art education as listed in the Timetable of Classes. Repeatable to a maximum of 12 credits.

**Prerequisites & Notes:** teaching experience plus 27 credits in ART

Credits: 2 TO 4

#### **ART 582 - Curriculum Planning**

Planning, development, implementation and evaluation of art as related to the total curriculum.

**Prerequisites & Notes:** teaching experience plus 27 credits in ART

Credits: 4

#### **ART 590A - Graduate Studio: Drawing/Print**

Repeatable to a maximum of 20 credits.

**Prerequisites & Notes:** graduate status with BA or BFA in ART; instructor permission

Credits: 5

#### **ART 590B - Graduate Studio: Painting**

Repeatable to a maximum of 20 credits.

**Prerequisites & Notes:** graduate status with BA or BFA in ART; instructor permission

Credits: 5

#### **ART 590C - Graduate Studio: Sculpture**

Repeatable to a maximum of 20 credits.

**Prerequisites & Notes:** graduate status with BA or BFA in ART; instructor permission

Credits: 5

#### **ART 590D - Graduate Studio: Ceramics**

Repeatable to a maximum of 20 credits.

**Prerequisites & Notes:** graduate status with BA or BFA in ART; instructor permission

Credits: 5

#### **ART 590E - Graduate Studio: Photography**

Repeatable to a maximum of 20 credits.

**Prerequisites & Notes:** graduate status with BA or BFA in ART; instructor permission

Credits: 5

#### **ART 590F - Graduate Studio: Fiber/Fabric**

Repeatable to a maximum of 20 credits.

**Prerequisites & Notes:** graduate status with BA or BFA in ART; instructor permission

Credits: 5

#### **ART 590G - Graduate Studio: Graphic Design**

Repeatable to a maximum of 20 credits.

**Prerequisites & Notes:** graduate status with BA or BFA in ART; instructor permission

Credits: 5

#### **ART 690 - Thesis**

Repeatable to a maximum of 20 credits.

**Prerequisites & Notes:** advancement to candidacy

Credits: 1 TO 6

## Astronomy

Courses numbered X37; X97; 300, 400; 417, 445 are described in the University Academic Policies section of this catalog.

### ASTR 103 - Introduction to Astronomy

A survey of astronomy including stars, galactic structure and cosmology. Not recommended for science, math or computer science majors.

**Prerequisites & Notes:** MATH 107 or higher

Credits: 4

### ASTR 113 - Sun, Moon, and Planets

Introduction to the Solar System, with emphasis on the motion of objects in the sky, including seasons, phases of the Moon, and eclipses. Properties of the Sun, planets, and moons with discussion of recent results from space missions. Some class sessions will be held in the planetarium. Intended for future science educators but open to all students.

**Prerequisites & Notes:** MATH 107 or higher.

Credits: 3

### ASTR 315 - The Solar System

Introduction to the modern physical understanding of the Solar System. Topics include gravity, orbits, the formation of stars and planets, planetary atmospheres and surfaces, physical processes in the Solar System.

**Prerequisites & Notes:** One year of college physics.

Credits: 3

### ASTR 316 - Stars and Galaxies

Observational evidence of the nature of stars; star formation and star death; structure and kinematics of the Milky Way and other galaxies.

**Prerequisites & Notes:** One year of college physics.

Credits: 3

### ASTR 320 - Cosmology

Large-scale structure of the universe; black holes and active galaxies; curved spacetime; evolution of the expanding universe; the Big Bang and the early universe.

**Prerequisites & Notes:** ASTR 316.

Credits: 3

### ASTR 390 - Astronomy Junior Lab

Selected experiments in observational astrophysics. Graded work includes lab notebook, oral, and written presentations, and exams.

**Prerequisites & Notes:** PHYS 235, PHYS 322, PHYS 326. Co-requisite ASTR 315.

Credits: 3

### ASTR 416 - Astrophysics

Application of physics to stars, nebulae and galaxies. Radiation; atomic spectra and chemical abundances in stellar atmospheres and gaseous nebulae; nuclear synthesis in stars; stellar evolution.

**Prerequisites & Notes:** ASTR 316, PHYS 336, PHYS 363

Credits: 3

### ASTR 493 - Senior Project in Astronomy

Individual astronomy projects under supervision. The astronomy project may be an extension of a summer research project carried out at another institution. Oral presentation and written paper with drafts required. Repeatable for credit. S/U grading. Writing proficiency course.

**Prerequisites & Notes:** ASTR 316; senior status in Physics; permission of instructor required.

Credits: 1 TO 3

## Biology

Courses numbered X37; X97; 300, 400, 500; 417, 445, 517, 545 are described in the University Academic Policies section of this catalog.

### Biol 101 - Introduction to Biology

Major ideas and processes of modern biological science at molecular, cellular, organismic and community levels; stressing qualitative and quantitative dimensions of the discipline in lecture, laboratory, field and discussion settings. Lab included. Intended for non-science majors.

**Prerequisites & Notes:** MATH 106 or higher.

Credits: 4

**BIOL 102 - Biological Diversity: Evolution and Systems**

A consideration of biodiversity; adaptations and life cycles of plants and animals; organismal biology; science as a way of knowing; the relevance of the above-mentioned topics for the educated citizen. Lecture, discussion, field and lab included.

**Prerequisites & Notes:** BIOL 101

Credits: 4

**BIOL 140 - The Ecology and Economics of Salmon Recovery**

Focus on the 4 causes of salmon decline (Habitat, Hydropower, Harvest, and Hatcheries) to investigate the interactions between ecology and economics through lectures, reading and independent projects. Also offered as ECON 140.

Credits: 4

**BIOL 150 - Marine Biology**

Recognition, life history, ecological relationships, and distribution and evolutionary trends of representative organisms.

**Prerequisites & Notes:** BIOL 101

Credits: 3

**BIOL 204 - Introduction to Evolution, Ecology and Biodiversity**

Introduction to evolutionary and ecological processes involved in the generation of our planet's biodiversity, including review of patterns and processes that influence the origin, evolution, distribution, and abundance of living things.

**Prerequisites & Notes:** CHEM 121 or CHEM 125 or concurrent.

Credits: 4

**BIOL 205 - Introduction to Cellular and Molecular Biology**

Structure and function of biomolecules and cells, membrane structure and function, photosynthesis and respiration, molecular origin of life, phylogenetic and metabolic diversity of prokaryotes, molecular genetics and genomics.

**Prerequisites & Notes:** BIOL 204; CHEM 121 or CHEM 125; CHEM 122 or CHEM 126 or concurrent.

Credits: 5

**BIOL 206 - Introduction to Organismal Biology**

Study of the many ways that eukaryotic organisms perform basic functions and cope with varying environmental conditions. Phylogenetic organismal diversity and organ system structural and functional diversity will be studied in lecture and laboratory.

**Prerequisites & Notes:** BIOL 205; CHEM 122 or CHEM 126; CHEM 123 or CHEM 225 or concurrent.

Credits: 5

**BIOL 245 - Microbiology for Health Sciences**

General microbiology with an emphasis on health related issues. Students will learn aseptic technique in lab and the characteristics of microbes that affect human health. Credits earned in this course cannot be applied towards a Biology degree.

**Prerequisites & Notes:** BIOL 101, or BIOL 204 and BIOL 205

Credits: 5

**BIOL 321 - Genetics**

Survey of classical genetics, molecular genetics and genomics in prokaryotic and eukaryotic organisms.

**Prerequisites & Notes:** BIOL 204, BIOL 205, BIOL 206

Credits: 4

**BIOL 322 - Genetics Lab**

Uses prokaryotic and eukaryotic model organisms to explore the fundamentals of genetics and the use of genetics as a tool for basic research. Includes lecture.

**Prerequisites & Notes:** BIOL 321 or concurrent.

Credits: 4

**BIOL 323 - Cell and Molecular Biology**

Cell structure and function. Topics include: protein structure and function, gene regulation, cell cycle, signal transduction, and organelle assembly and function.

**Prerequisites & Notes:** CHEM 351 and CHEM 352 (or CHEM 251)

Credits: 4

**BIOL 324 - Methods in Molecular Biology**

An introduction to widely used molecular biology techniques and laboratory skills.

**Prerequisites & Notes:** BIOL 321 or BIOL 323

Credits: 3

**BIOL 325 - Ecology**

Organismal-environmental relationships in marine, fresh water and terrestrial habitats. Functions and development of ecosystems.

**Prerequisites & Notes:** BIOL 204, BIOL 205, BIOL 206

Credits: 3

**BIOL 326 - Ecology Laboratory**

Introduction to ecological research, culminating in student-designed research projects. Written and oral presentation of projects.

**Prerequisites & Notes:** BIOL 325 or concurrent.

Credits: 3

**BIOL 340 - Biometrics**

The design of biological experiments and appropriate statistical analysis of experimental data.

**Prerequisites & Notes:** BIOL 204, BIOL 205, BIOL 206; instructor permission.

Credits: 5

**BIOL 345 - Fundamentals of Microbiology**

Cell structure, metabolism, evolution and ecology of prokaryotes.

**Prerequisites & Notes:** BIOL 205, CHEM 251 or CHEM 351

Credits: 3

**BIOL 346 - Microbiology Lab**

Techniques of general microbiology, including isolation, culture, enumeration and identification of prokaryotes.

**Prerequisites & Notes:** BIOL 205; CHEM 351 or CHEM 251; BIOL 345 or concurrent.

Credits: 2

**BIOL 348 - Human Anatomy and Physiology**

Macroscopic and histological examination of human anatomical systems, and study of general neuromuscular and cardiopulmonary functions. Includes lab. Credits earned in this course cannot be applied towards a BA or BS in Biology, except for the BA and BS in Biology/Anthropology.

**Prerequisites & Notes:** BIOL 101 or BIOL 205.

Credits: 5

**BIOL 349 - Human Physiology**

A comprehensive introduction to the study of integrated functions of cells, organs and organ systems in humans.

**Prerequisites & Notes:** BIOL 348; CHEM 115 or CHEM 121 or CHEM 125

Credits: 5

**BIOL 395 - Biology Research Participation**

Participation in biology research under the tutelage of a biology professor. The experience may include assisting in the maintenance of experimental setup, data collection, data entry, literature searches, and developing graphics.

**Prerequisites & Notes:** Permission of instructor.

Credits: 1 TO 4

**BIOL 403 - Physiological Ecology of Animals**

Physiological and biochemical adaptations of animals to environmental factors. Marine environments are emphasized, but adaptations to fresh water and terrestrial conditions also are considered. Laboratories introduce research techniques which are then applied in student-designed independent research projects.

**Prerequisites & Notes:** BIOL 206; and BIOL 325 or ESCI 325; or instructor permission

Credits: 5

**BIOL 404 - Plant Ecology**

Ecology of plant communities, interpretation of vegetation pattern, and plant ecophysiology.

**Prerequisites & Notes:** BIOL 206, BIOL 325, BIOL 326

Credits: 5

**BIOL 405 - Microbial Ecology**

Study of microbial communities in aquatic and terrestrial environments, with emphasis on the functional role of microbes in energy flow, nutrient cycling and element transformation. Overview of microbial interactions with

eukaryotic hosts. Discussion of structure, genetics, and community on microbial communities. Offered in alternate years.

**Prerequisites & Notes:** BIOL 325 and BIOL 345 or instructor permission.

Credits: 4

#### **BIOL 406 - General Oceanography**

Introduction to chemical, physical, geological and biological oceanographic subdisciplines. Sampling methods and analytical techniques applied to local marine areas.

**Prerequisites & Notes:** BIOL 204, BIOL 205, BIOL 206; PHYS 114

Credits: 5

#### **BIOL 407 - Marine Ecology**

The structure and function of marine ecosystems with an emphasis on processes in shallow-water and benthic habitats. Investigative field and laboratory studies of local marine and estuarine systems.

**Prerequisites & Notes:** BIOL 325, BIOL 326

Credits: 5

#### **BIOL 408 - Ecological Methods**

Students will learn instrumentation and methodology for field research, and practice it in a field setting. Specifically, students will perform comparative investigations of three meso-habitats by measuring ecologically relevant parameters, such as spatiotemporal variation in microclimate or vegetation, and terrestrial invertebrate abundance and diversity.

**Prerequisites & Notes:** BIOL 325 or ESCI 325.

Credits: 6

#### **BIOL 409 - Research in Reptile Ecology**

Field research will focus on developing knowledge and understanding of the population, behavioral, and physiological ecology of reptiles. Observational-comparative and experimental methods will be learned. Data collected in BIOL 408 will be analyzed, interpreted, and prepared for publication.

**Prerequisites & Notes:** BIOL 325 or ESCI 325. Co-requisite BIOL 408.

Credits: 6

#### **BIOL 410 - Animal Behavior**

Investigation of the component processes and adaptive functions of animal behavior in an ecological and evolutionary context, and an introduction to the questions asked, hypotheses proposed and methods used in the study of animal behavior. Offered in alternate years.

**Prerequisites & Notes:** BIOL 206; BIOL 325 or ESCI 325; or instructor permission.

Credits: 4

#### **BIOL 416 - Ecosystem Ecology and Global Change**

Investigation of the factors controlling whole ecosystem processes such as productivity, decomposition, and nutrient cycling. Application of these concepts to current issues in global change, including the carbon cycle and global warming, land use change, nitrogen-loading, and biodiversity and ecosystem function. Lectures and textbook reading are integrated with discussion of papers from the primary literature.

**Prerequisites & Notes:** BIOL 325 or ESCI 325; BIOL 326 recommended.

Credits: 4

#### **BIOL 432 - Evolutionary Biology**

Principles, patterns, processes and mechanisms of evolution.

**Prerequisites & Notes:** BIOL 321

Credits: 4

#### **BIOL 433 - Quaternary Biogeography**

This course examines the impact that climatic changes during the past 2 million years had on the distribution of biological diversity, with an emphasis on the flora and fauna of the Pacific Northwest.

**Prerequisites & Notes:** BIOL 325 or ESCI 325.

Credits: 3

#### **BIOL 434 - Population Genetics**

Exploration of the analysis of genetic variation in and among populations. Quantifying genetic variation and understanding the evolutionary forces influencing that variation will be discussed using both theory and empirical examples. Offered alternate years.

**Prerequisites & Notes:** BIOL 321, BIOL 325 or equivalent.

Credits: 3

**BIOL 436 - Molecular Phylogeny and Microbial Diversity**

Explore the ramifications of the recent revolutionary discoveries in microbial diversity, the reconstruction of evolutionary discoveries in history at both molecular and organismal levels and the implications of the origins of life on prokaryotic evolution. Emphasis on applications of phylogenetic theories and methods to the understanding and "modeling" of the evolutionary progression of life. Multiple phylogenetic reconstruction algorithms will be closely examined and scrutinized. Offered alternate years.

**Prerequisites & Notes:** BIOL 345, BIOL 346

Credits: 5

**BIOL 439 - Symbiosis**

Symbiotic interactions among organisms will be explored through lectures and discussions of the ecological and evolutionary relationships of all major groups of organisms. Offered alternate years.

**Prerequisites & Notes:** BIOL 325; BIOL 432 recommended.

Credits: 3

**BIOL 450 - Plant Anatomy**

Structure of the plant body, from cellular to whole plant level, including developmental and ecological aspects. Offered alternate years.

**Prerequisites & Notes:** BIOL 206

Credits: 5

**BIOL 451 - Plant Growth and Development**

The developmental biology of plants, including the cellular and molecular genetic basis of morphogenesis, its integration by phytohormones and its responses to environmental factors. Offered alternate years.

**Prerequisites & Notes:** BIOL 206

Credits: 3

**BIOL 452 - Systematic Botany**

Taxonomy of higher plants with emphasis on the characteristics and phylogeny of flowering plant families; collection and identification of local species.

**Prerequisites & Notes:** BIOL 206

Credits: 5

**BIOL 453 - Investigations in Plant Development**

Laboratory skills and contemporary methods in plant developmental biology. Projects focus on an open-ended question, and a variety of morphometric, cellular, biochemical and molecular genetic techniques are used to address the problem. Offered alternate years.

**Prerequisites & Notes:** BIOL 206; Co-requisite: BIOL 451.

Credits: 3

**BIOL 455 - Economic Botany**

The agricultural, medicinal, industrial and folk uses of plants and plant products. Offered alternate years.

**Prerequisites & Notes:** BIOL 206

Credits: 3

**BIOL 456 - Algae**

Physiology and ecology of macroalgae and phytoplankton; including identification, collection and culture of major algal groups. Laboratory focus on research techniques which are then applied in student independent projects.

**Prerequisites & Notes:** BIOL 206

Credits: 5

**BIOL 457 - Pollination Biology**

A study of the strategies that plants use to transfer pollen and reproduce, with special attention to the pollination interactions between plants and animals.

**Prerequisites & Notes:** BIOL 204, BIOL 205, BIOL 206

Credits: 4

**BIOL 460 - Invertebrate Zoology**

Evolutionary relationships of invertebrate animals, including anatomy, physiology, classification, development and ecology.

**Prerequisites & Notes:** BIOL 204, BIOL 205, BIOL 206

Credits: 5

**BIOL 462 - Entomology**

The biology of insects, emphasizing their ecology and evolution, as well as comparative anatomy, physiology, and development. Laboratory exercises will focus on community studies and insect identification.

**Prerequisites & Notes:** BIOL 206

Credits: 5

**BIOL 463 - Ornithology**

Evolution of morphological adaptations of birds, classification, distribution; annual cycle including migration, breeding and population dynamics; laboratory study, field trips.

**Prerequisites & Notes:** BIOL 206 or equivalent.

Credits: 5

**BIOL 464 - Biology of Marine Mammals**

Examination of the evolution, physiology, ecology and conservation of marine mammals through critical thinking and discussion of the primary literature. Offered in alternate years. Writing-proficiency course.

**Prerequisites & Notes:** BIOL 204, BIOL 205, BIOL 206. Recommended: BIOL 406 or ESCI 321.

Credits: 4

**BIOL 465 - Vertebrate Zoology**

Investigations of vertebrate phylogenies; analyses of the biogeographic and ecological patterns of spatiotemporal distribution of many vertebrate taxa; examinations of the principal adaptive features that uniquely define each major vertebrate taxon. Offered alternate years.

**Prerequisites & Notes:** BIOL 206, BIOL 325 or ESCI 325; or instructor permission.

Credits: 5

**BIOL 467 - Comparative Vertebrate Physiology**

Examination of the physiological functions of organ systems in each of the major vertebrate classes, with systems of taxa compared in evolutionary and ecological contexts.

**Prerequisites & Notes:** BIOL 206

Credits: 3

**BIOL 468 - Comparative Vertebrate Physiology Laboratory**

Design and implement laboratory research on some aspect of whole-animal performance physiology.

**Prerequisites & Notes:** BIOL 206; BIOL 467 or concurrent.

Credits: 3

**BIOL 470 - Functional Genomics**

Examines the development and application of genome-based experimental approaches in biology.

**Prerequisites & Notes:** BIOL 321, BIOL 323

Credits: 3

**BIOL 471 - Biochemistry I**

A consideration of the structure and function of biological macromolecules; intermediary metabolism; membrane structure and function; bioenergetics. Also offered as CHEM 471.

**Prerequisites & Notes:** BIOL 205; CHEM 123 or CHEM 225; CHEM 353 or concurrent.

Credits: 4

**BIOL 472 - Biochemistry II**

A consideration of the structure and function of biological macromolecules; intermediary metabolism; membrane structure and function; bioenergetics. Also offered as CHEM 471, 472.

**Prerequisites & Notes:** BIOL 471

Credits: 4

**BIOL 473 - Molecular Biology**

An examination of the structure, replication and expression of genetic information. Also offered as CHEM 473.

**Prerequisites & Notes:** BIOL 321; BIOL 471 or CHEM 471 or permission of instructor.

Credits: 3

**BIOL 474 - Biochemistry Laboratory**

Modern methods of isolation and characterization of biological macromolecules, especially enzymes and other proteins. Also offered as CHEM 474.

**Prerequisites & Notes:** CHEM 354; BIOL 472 or CHEM 472 or concurrent.

Credits: 3

**BIOL 476 - The Structural Basis of Membrane Transport Proteins**

This course will examine the general structural basis of membrane transport proteins; studying their mechanistic information, examining the actual body plans and structure of these proteins and evaluating the structure-function relationship that permits them to perform their task. The overall goal of this course is to acquire a unifying view of membrane transport mechanisms. Offered in alternate years.

**Prerequisites & Notes:** BIOL 323; BIOL 471 or CHEM 471 recommended.

Credits: 3

**BIOL 479 - Plant Physiology**

Basic principles of physiology including cell structure and function, plant-soil-water relationships, absorption and translocation of materials, transpiration, photosynthesis, respiration, mineral nutrition, growth and development, hormonal regulation.

**Prerequisites & Notes:** BIOL 206; CHEM 351 and CHEM 352, or CHEM 251

Credits: 5

**BIOL 482 - Developmental Biology of Animals**

An examination of the molecular, cellular and genetic aspects of developmental biology in invertebrate and vertebrate model systems: fruitflies, nematodes, sea urchins, frogs and mammals.

**Prerequisites & Notes:** BIOL 321 and BIOL 323

Credits: 4

**BIOL 484 - Cell and Developmental Biology Laboratory**

Laboratory investigations of cellular and developmental processes. Tissue culture methods and microscopy techniques, including immunofluorescence. Lectures will focus on optics and image processing.

**Prerequisites & Notes:** BIOL 482 or concurrent.

Credits: 4

**BIOL 494 - Biology Research**

Individual or collaborative research, including design and implementation of a research project, working under the tutelage of a biology professor. Repeatable to a maximum of 8 credits.

**Prerequisites & Notes:** phase II in biology; Completion of department course requirement agreement form.

Credits: 1 TO 5

**BIOL 495 - Research Communication**

Analysis and written and/or oral presentation of results of individual scientific research. Communication can be in the form of a full scientific paper, a poster, or an oral presentation. Number of credits is dependent on the form of communication. Repeatable to a maximum of 6 credits.

**Prerequisites & Notes:** BIOL 494; phase II in Biology and permission of instructor.

Credits: 1 TO 4

**BIOL 496 - Professional Work Experience in Biology**

Full- or part-time work with a cooperating agency or firm. Written reports required. Repeatable to a maximum of 8 credits. S/U grading.

**Prerequisites & Notes:** Phase II in Biology and permission of instructor.

Credits: 1 TO 5

**BIOL 498 - Teaching Practicum**

Classroom experience in biology teaching. Students will assist faculty in the laboratory and lecture settings.

Repeatable to a maximum of 4 credits. S/U grading.

**Prerequisites & Notes:** Phase II in Biology and permission of instructor.

Credits: 1 TO 4

**BIOL 501 - Fundamentals of Biological Research**

Introduction to developing and writing research proposals, obtaining funding, and conducting research in the Biological Sciences.

**Prerequisites & Notes:** Graduate status in Biology or permission of instructor.

Credits: 3

**BIOL 503 - Advanced Topics in Ecology**

Analysis of current literature on fundamental properties of ecosystems, communities, populations, species and characteristic environments. Repeatable with different topics.

**Prerequisites & Notes:** 25 credits in biology

Credits: 4

**BIOL 505 - Current Research in Marine Science**

Presentation and discussion of research expertise of University faculty participating in the marine and estuarine science graduate specialization. Repeatable to a maximum of 2 credits. S/U grading.

Credits: 1

**BIOL 508 - Advanced Topics in Marine Biology**

Analysis and discussion of current literature on selected topics in marine and estuarine biology. Examples of topics include symbiosis, intertidal community dynamics and marine microbiology. Repeatable with different topics.

**Prerequisites & Notes:** 25 credits in biology

Credits: 4

**BIOL 513 - Physiological Ecology of Animals**

Physiological and biochemical adaptations of animals to environmental factors. Emphasizes marine environments, but adaptations to freshwater and terrestrial environments conditions are also considered. Labs introduce research techniques which are applied in student-designed independent research projects.

**Prerequisites & Notes:** BIOL 206, BIOL 325; or introductory courses in zoology and ecology

Credits: 5

**BIOL 516 - Advanced Ecosystem Ecology and Global Change**

Investigates the factors controlling whole ecosystem processes. Application of these concepts to current issues in global change, including the carbon cycle and global warming, land-use change, nitrogen load, and biodiversity and ecosystem functioning.

**Prerequisites & Notes:** BIOL 325 or ESCI 325 or equivalent; BIOL 326 recommended

Credits: 4

**BIOL 525 - Research Mentorship**

Part of the core curriculum for all Biology MS students. This course provides an overview of research methods in biology and guidance for developing a research program. Through this seminar-style course, students will discuss research methods and how to trouble shoot research problems across the discipline. Offered Winter and Spring only, required of 1st and 2nd year students in each quarter, for 4 credits total. S/U grading.

**Prerequisites & Notes:** admission to MS program in biology or interdisciplinary graduate program involving biology  
Credits: 1

**BIOL 533 - Advanced Quaternary Biogeography**

This course examines the impact that climatic changes during the past 2 million years had on the distribution of biological diversity, with an emphasis on the flora and fauna of the Pacific Northwest.

**Prerequisites & Notes:** Background in Ecology.

Credits: 3

**BIOL 534 - Advanced Population Genetics**

Explores the factors that influence genetic variation in and among populations. These issues are central to evolutionary biology and are applicable to conservation biology and forensic sciences.

**Prerequisites & Notes:** BIOL 325 or ESCI 325; BIOL 321 or equivalent

Credits: 3

**BIOL 559 - Advanced Topics in Botany**

Analysis and discussion of current literature on plant anatomy, physiology and systematics. Repeatable with different topics.

**Prerequisites & Notes:** 25 credits in biology

Credits: 4

**BIOL 568 - Topics in Developmental and Comparative Morphology**

Structural changes, cellular interactions, and control mechanisms operating during growth and development or evolution of selected organisms. Repeatable with different topics.

**Prerequisites & Notes:** 25 credits in biology

Credits: 4

**BIOL 571 - Advanced Topics in Cell and Molecular Biology**

Examination of special topics such as cell cycle control, signal transduction and regulation of gene expression. Repeatable with different topics.

**Prerequisites & Notes:** 25 credits in biology

Credits: 4

**BIOL 571P - Literature Relevant in Proteomics**

This course builds upon a basic understanding of proteomics and genomics to focus upon how to critically analyze and effectively present key research papers in the field. Repeatable to a maximum of 16 credits.

**Prerequisites & Notes:** BIOL 571

Credits: 4

**BIOL 576 - Structural Basis of Membrane Transport Proteins**

This course will examine the general structural basis of membrane transport proteins; studying their mechanistic information, examining the actual body plans and structure of these proteins and evaluating the structure-function relationship that permits them to perform their task. The overall goal of this course is to acquire a unifying view of membrane transport mechanisms. Offered in alternate years.

**Prerequisites & Notes:** Graduate status. BIOL 323 or equivalent; background in biochemistry recommended.

Credits: 3

**BIOL 577 - Advanced Topics in Physiology**

Topics in general, microbial or comparative physiology; laboratory work illustrating processes or experimental techniques. Repeatable with different topics.

**Prerequisites & Notes:** 25 credits in biology; instructor permission

Credits: 4

**BIOL 579 - Enzymology Laboratory**

Assay and quantification of selected enzymes; isolation and characterization; determination of kinetic parameters.

**Prerequisites & Notes:** upper-division course in biochemistry

Credits: 3

**BIOL 583 - Advanced Topics in Biosystematics**

Role of morphology, cytology, biochemistry and genetics in taxonomy; systematic study of a specific group of local organisms. Repeatable with different topics.

**Prerequisites & Notes:** 25 credits in biology; instructor permission

Credits: 4

**BIOL 584 - Population and Community Biology**

Study of populations and communities as interacting, functioning systems, and the changes in the numbers and proportions of organisms in populations and the diversity of species in communities; also factors influencing changes in populations and communities.

**Prerequisites & Notes:** upper-division course in genetics

Credits: 4

**BIOL 594 - Cell and Developmental Biology Laboratory**

Laboratory investigations of cellular and developmental processes. Tissue culture methods and microscopy techniques, including immunofluorescence. Lectures will focus on optics and image processing.

**Prerequisites & Notes:** graduate standing and permission of instructor; Biol 482 or equivalent.

Credits: 4

**BIOL 595 - Developmental Biology**

An examination of the molecular, cellular and genetic aspects of developmental biology in invertebrate and vertebrate model systems: fruitflies, nematodes, sea urchins, frogs and mammals.

**Prerequisites & Notes:** 25 credits in biology

Credits: 5

**BIOL 598 - Essentials of Biology Graduate Studies**

An overview of departmental resources, guidelines for navigating the Biology MS in a timely fashion, with workshops for developing skills in teaching and giving presentations in the biological sciences. Fall quarter of the first year only. Required of all first-year Biology MS students. Not repeatable. S/U grading.

**Prerequisites & Notes:** Permission of instructor.

Credits: 2

**BIOL 599 - Seminar in Biology**

Selected problems in biology, with emphasis on current literature. Repeatable.

**Prerequisites & Notes:** 40 credits in biology

Credits: 2

**BIOL 599A - Seminar in Bioethics**

How large should our bioethical commitment be? As biologists, how much are we obliged to consider the moral rights and wrongs in our areas of expertise? Are we fulfilling those obligations, and are our priorities right? If not,

how can we do better? In this student-led seminar we will address current and emerging issues in bioethics.

**Prerequisites & Notes:** Graduate level student or permission of instructor.

Credits: 2

#### **BIOL 599B - Marine Conservation Biology**

How large should our bioethical commitment be? As biologists, how much are we obliged to consider the moral rights and wrongs in our areas of expertise? Are we fulfilling those obligations, and are our priorities right? If not, how can we do better? In this student-led seminar we will address current and emerging issues in bioethics.

Credits: 2

#### **BIOL 599C - Functional Genomics**

How large should our bioethical commitment be? As biologists, how much are we obliged to consider the moral rights and wrongs in our areas of expertise? Are we fulfilling those obligations, and are our priorities right? If not, how can we do better? In this student-led seminar we will address current and emerging issues in bioethics.

**Prerequisites & Notes:** BIOL 319, BIOL 321, or equivalent

Credits: 2

#### **BIOL 599D - Ecosystem Services**

How large should our bioethical commitment be? As biologists, how much are we obliged to consider the moral rights and wrongs in our areas of expertise? Are we fulfilling those obligations, and are our priorities right? If not, how can we do better? In this student-led seminar we will address current and emerging issues in bioethics.

Credits: 2

#### **BIOL 599E - Evolutionary Ecology of Host-Parasite Interactions**

Course focuses on general ecological, evolutionary, and phylogenetic patterns in host-parasite relationships and presentation of prevalent hypotheses and theories in host-parasite relationships in the first few weeks and then investigates those ideas in depth for the remainder of the quarter.

**Prerequisites & Notes:** Graduate status or senior-level undergraduate with at least a B average.

Credits: 2

#### **BIOL 599F - Seminar: Ecological Indicators of Ecosystem Conditions**

How do you take the pulse of an ecosystem? In this seminar style class, we will explore the primary scientific literature to better understand approaches to monitor biodiversity and ecosystem services in the interest of ecologically sustainable management.

**Prerequisites & Notes:** BIOL 325, ESCI 325, or equivalent; graduate status or permission of instructor.

Credits: 2

#### **BIOL 599G - Gelatinous Zooplankton Ecology**

The often-ignored gelatinous species are infamous for bloom formation and stinging swimmers, and are extremely important consumers in marine environments. The course includes three lectures to introduce students to the diversity of and biology of gelatinous zooplankton. There will be an all-day boat trip and laboratory session at the Shannon Point Marine Center to participate in collection, identification and observation of local species. The remaining class sessions will be discussions. Grading is S/U and is based on each student's discussion and class participation.

**Prerequisites & Notes:** BIOL 460 recommended

Credits: 2

#### **BIOL 599H - Seminar: Predation Physiology**

Problems in predation challenges relating to acquiring prey, heightened sensory and motor skills, and cognitive integration of those skills. Study of unique, contrasting adaptations for aerial and aquatic vs terrestrial and benthic environs with comparisons among predators that may lead to comprehensive, integrative understanding of predation physiology.

**Prerequisites & Notes:** Graduate-level student or permission of instructor.

Credits: 2

#### **BIOL 599P - Predator-Prey Dynamics**

The influence of predators on their prey and the influence of prey on predator include their direct behavioral interaction and its consequences, the avoidance of predator by prey, and the spatiotemporal patterns of predator and prey populations.

**Prerequisites & Notes:** 300-level course in Ecology, or equivalent.

Credits: 2

**BIOL 599S - Scaling in Biology**

Scaling is the study of how size affects the biochemistry, physiology, morphology and ecology of organisms. This course investigates the consequences of body size in different organisms.

Credits: 2

**BIOL 690 - Thesis Research**

Research contributing to a graduate degree program. Graded "K" until thesis completed. Repeatable up to 36 credits. S/U grading.

Credits: 1 TO 12

**Canadian/American Studies**

Courses numbered X37; X97; 300, 400; 417, 445 are described in the University Academic Policies section of this catalog.

**NOTE:** Most Canadian-American Studies courses are listed in the individual disciplines. See individual department listings for course titles and descriptions included under the Canadian-American Studies major and minor.

**C/AM 200 - Introduction to Canadian Studies**

A basic interdisciplinary course of studies covering the major physical, historical and sociopolitical aspects of Canada.

Credits: 5

**C/AM 401 - Research Problem Identification and Development**

Directed research on a problem or in an area of interest.

**Prerequisites & Notes:** C/AM 200, 15 credit core crses

Credits: 3

**C/AM 402 - Research Analysis and Writing**

Analysis and writing on the research findings in C/AM 401. A writing proficiency course.

**Prerequisites & Notes:** C/AM 401

Credits: 3

**C/AM 410 - Study Canada Summer Institute**

Intensive survey course featuring expert instruction from WWU faculty and distinguished speakers from Canada and the US. Topics include: Canadian history, geography, government, culture, free trade and environmental issues, First Nations and Canada-US relations. Participants are introduced to a variety of curriculum materials, visit Canada, experience its culture, and develop a curriculum project that meets national standards and expands their personal teaching portfolios. Repeatable to a maximum of 9 credits.

**Prerequisites & Notes:** K-12 classroom or pre-service teachers

Credits: 3

**C/AM 489 - Managing an International Ecosystem**

A research seminar that examines how economic, environmental, social and political agendas affect the shared international ecosystem - Georgia Basin/Puget Sound. Course focuses on the interests of various stakeholders and the efforts taken to manage the cross-border environmental issues. The course involves cross-border travel and field work and thus participants require a passport. In some years, the course will involve collaborations with students and faculty from Canadian Universities. Also offered as ESTU 489 and PLSC 489.

**Prerequisites & Notes:** Junior Status or Permission of Instructor.

Credits: 5

**Continuing & College Education**

Courses numbered X37; X97; 300, 400, 500; 417, 445, 517, 545 are described in the University Academic Policies section of this catalog.

**CCE 473 - Methods for Writing Assistants**

Study and practice in theories and strategies for guiding writers, one-to-one or in groups, face-to-face or online.

Repeatable to a maximum of 5 credits. S/U grading.

**Prerequisites & Notes:** Selection as a Writing Center Assistant.

Credits: 1 TO 3

**CCE 501 - Introduction to Research in Education**

Introduction to concepts and procedures of research in education. Interpreting research findings and critiquing research designs. Defining research questions and selecting appropriate methods. Introduction to research planning.

**Prerequisites & Notes:** Admission to Continuing and College Education program or permission of instructor.

Credits: 4

**CCE 510 - Second Language Acquisition Theory for the Adult Learner of English**

Content includes insights of modern linguistic and psychological theory into the process of second language learning, with special reference to the acquisition of English by adult speakers of other languages. Interaction with English language learners will guide a research component which identifies particular difficulties faced by the adult non-native speaker and how these challenges can be addressed.

**Prerequisites & Notes:** TESL 401 recommended.

Credits: 4

**CCE 518 - Current Issues in Education**

Examination and discussion of several current and controversial issues in education. Repeatable with no maximum.

Credits: 1 TO 5

**CCE 521 - Methods and Materials for the Adult English Language Learner in Content Courses**

Theoretical and practical concerns in designing and implementing content instruction for adult learners with intermediate proficiency in English. Students learn to scaffold content learning and English literacy within a communicative framework. Students demonstrate proficiency by developing an effectively-scaffolded unit plan and through a project informed by research and a weekly practicum component with adult English Language Learners in a classroom setting.

**Prerequisites & Notes:** permission of instructor

Credits: 5

**CCE 542 - Classroom Management**

Techniques for dealing with ethical, behavioral and motivational challenges experienced both inside and outside the classroom. Legal rights and responsibilities of students and faculty.

**Prerequisites & Notes:** admission to community/technical college certification program or instructor permission

Credits: 2

**CCE 554 - Foundations of Continuing Education**

Introductory seminar that provides an understanding of continuing education as a discipline and a field. Topics include: scope, structure, philosophy, history and current factors influencing practice.

Credits: 4

**CCE 556 - The Community College**

History, objectives, organization and role of the public community college; special attention to the expanding system in the State of Washington.

**Prerequisites & Notes:** admit to Student Personnel Admin Program or instructor permission

Credits: 3

**CCE 557 - Student Development Theory and Practice**

Examine cognitive, psychosocial and identity development theories and models as well as implications for student affairs programs, services and student interactions.

**Prerequisites & Notes:** admission to Student Affairs Administration program or instructor permission

Credits: 4

**CCE 570 - Issues in Adult Literacy**

Overview of the context in which adult literacy educators operate. Topics include politics of literacy, workplace and family literacy, federal and state policies, local literacy program designs and issues.

**Prerequisites & Notes:** instructor permission

Credits: 3

**CCE 571 - Curriculum Development and Assessment**

Students will analyze and apply models of curriculum development and assessment.

Credits: 4

**CCE 572 - Continuing Professional Development**

Provides an overview of continuing education programs for professionals, the role of the provider and current issues and research in the field.

Credits: 4

**CCE 574 - Experiential Learning: Theory to Practice**

Designed to provide theory and practice in the use of educational strategies that enhance the learner's ability to translate research into usable knowledge.

Credits: 4

**CCE 576 - Leadership and Management of Educational Programs**

A study of contemporary theories of leadership and their application in private, public and nonprofit agencies.

Credits: 4

**CCE 577 - Learning in Adulthood**

Study of the ways adults learn and the factors related to their motivation, participation and achievement. Application of theory to practice.

Credits: 4

**CCE 578 - Program Planning**

Program planning for all types of institutionalized adult education settings, including both private and public organizations, in-service education, etc. Case studies utilized.

Credits: 4

**CCE 579 - Power in Organizations**

Study the sources of power in organizations, power acquisition and various kinds of power. Examine alternatives to traditional views of power and bureaucracy.

Credits: 4

**CCE 580 - Effective Teaching**

Study and practice in effective teaching strategies and assessment for post-secondary and continuing education settings. Special emphasis on facilitating student learning and applied classroom practice.

**Prerequisites & Notes:** CCE 577 recommended prior to CCE 580

Credits: 4

**CCE 581 - Readings in Continuing and College Education**

Supervised study focusing on selected topics in the following areas: adult education, student affairs, human resources development, human services. Repeatable to a maximum of 6 credits.

**Prerequisites & Notes:** instructor permission

Credits: 2 TO 5

**CCE 582 - Theory and Practice of Transfer of Learning**

Examination of variables needed in the program planning and training process to ensure transfer of learning occurs in the workplace.

**Prerequisites & Notes:** Admission to CCE program or permission of instructor

Credits: 4

**CCE 583 - Training and Staff Development in Continuing Professional Education**

Examination of approaches used for training and staff development and demonstrations of training techniques.

**Prerequisites & Notes:** Admission to CCE program or permission of instructor

Credits: 3

**CCE 584 - Fund Development**

A study of the practices of raising funds for educational programs and writing grants for projects.

**Prerequisites & Notes:** Admission to CCE program or permission of instructor

Credits: 4

**CCE 585 - Organizational Change in Educational Settings**

Exploration and application of various models for bringing about change in an organization and the development of visions and strategies for changes in training and staff development.

**Prerequisites & Notes:** Admission to the CCE program or permission of instructor.

Credits: 3

**CCE 586 - Teaching in E-Learning and Hybrid Environments**

Instructional strategies used with adult learners in online and face-to-face environments. Students will practice configuring and using an electronic course management system. Includes two teaching demonstrations.

**Prerequisites & Notes:** CCE 571 or CCE 580 or permission of instructor.

Credits: 3

**CCE 590 - Global Perspectives in Education**

An examination of how cultural, political, social, and economic factors impact education from a global perspective compared to the factors impacting education in North America.

Credits: 4

**CCE 591 - Applied Research Proposal**

The student uses qualitative research models to develop a research proposal to study a question from his or her own practice.

**Prerequisites & Notes:** EDU 501

Credits: 2

**CCE 592 - Field Experience**

Field-based project in an aspect of continuing education or community college education to enhance theory/practice integration, such as, teaching, training, leadership, project management, curriculum development, distance education design. Repeatable to a maximum of 8 credits under advisement. S/U grading.

Credits: 2 TO 6

**CCE 599 - Graduation Seminar**

Provides a capstone experience for graduating candidates. Readings and discussions to assist integration of overall program experience. Repeatable to a maximum of 3 credits. S/U grading.

**Prerequisites & Notes:** final quarter classes excluding thesis/field project; program advisor approval

Credits: 1 TO 3

**CCE 690 - Thesis**

Research study under the direction of a faculty committee. Repeatable to a maximum of 9 credits. S/U grading.

**Prerequisites & Notes:** advancement to candidacy; graduate committee approval

Credits: 1 TO 9

**CCE 691 - Research Seminar**

Graduate research under the direction of program adviser/committee. Repeatable to a maximum of 6 credits. S/U grading.

**Prerequisites & Notes:** graduate committee or program advisor approval

Credits: 1 TO 6

## **Coaching Development**

*Courses numbered X37; X97; 300, 400; 417, 445 are described in the University Academic Policies section of this catalog.*

**CD 280 - Coaching Practicum - Basketball**

A practical application of principles and techniques used in sport coaching, including program organization and administration, team building, teaching sports strategies, leadership principles related to sport performance, sport-related motor skill acquisition and performance principles, and the evaluation of coaching strategies and methods. S/U grading.

**Prerequisites & Notes:** Permission of instructor.

Credits: 2

**CD 281 - Coaching Practicum - Volleyball**

A practical application of principles and techniques used in sport coaching, including program organization and administration, team building, teaching sports strategies, leadership principles related to sport performance, sport-related motor skill acquisition and performance principles, and the evaluation of coaching strategies and methods.

**Prerequisites & Notes:** Permission of instructor.

Credits: 2

**CD 343 - Sports Officiating/Track & Field**

Officiating techniques for individual and team sports.

**Prerequisites & Notes:** Permission of instructor.

Credits: 2

**CD 381 - Coaching Sports: Basketball**

Practical and theoretical aspects of coaching the sport with special emphasis on advanced skill development and current methodology and resource material being utilized.

**Prerequisites & Notes:** Permission of instructor.

Credits: 3

**CD 383 - Coaching Sports: Track**

Practical and theoretical aspects of coaching the sport with special emphasis on advanced skill development and current methodology and resource material being utilized.

**Prerequisites & Notes:** Permission of instructor.

Credits: 3

## **Chemistry**

Courses numbered X37; X97; 300, 400, 500; 417, 445, 517, 545 are described in the University Academic Policies section of this catalog.

### **CHEM 101 - Chemical Concepts**

A survey course for non-science students. Fundamental topics of chemistry such as: atoms and molecules, periodic table, organic and biochemistry, radioactivity. Applications to selected and variable topics. Lab included.

**Prerequisites & Notes:** MATH 107 or MATH 112; no CHEM 101 labs first week of class

Credits: 4

### **CHEM 121 - General Chemistry I**

Stoichiometry atomic and molecular structure, states of matter, solutions, thermodynamics, chemical equilibrium, kinetics, electrochemistry. Lab included.

**Prerequisites & Notes:** MATH 114 or equivalent intermediate algebra math placement test score. No CHEM 121 labs first week of class.

Credits: 5

### **CHEM 122 - General Chemistry II**

Stoichiometry atomic and molecular structure, states of matter, solutions, thermodynamics, chemical equilibrium, kinetics, electrochemistry. Lab included.

**Prerequisites & Notes:** CHEM 121; no CHEM 122 labs first week of class.

Credits: 5

### **CHEM 123 - General Chemistry III**

Stoichiometry atomic and molecular structure, states of matter, solutions, thermodynamics, chemical equilibrium, kinetics, electrochemistry. Lab included.

**Prerequisites & Notes:** CHEM 122; no CHEM 123 labs first week of class.

Credits: 4

### **CHEM 125 - General Chemistry I, Honors**

An accelerated survey of fundamental chemical principles, including atomic and molecular structure, bonding, chemical thermodynamics, equilibria, kinetics, solution chemistry, nuclear chemistry, and analytical methods. Lab included.

**Prerequisites & Notes:** One year of high school chemistry or equivalent; MATH 114 or equivalent score on the WWU intermediate algebra math placement test; no CHEM 125 labs first week of class

Credits: 5

### **CHEM 126 - General Chemistry II, Honors**

An accelerated survey of fundamental chemical principles, including atomic and molecular structure, bonding, chemical thermodynamics, equilibria, kinetics, solution chemistry, nuclear chemistry, and analytical methods. Lab included.

**Prerequisites & Notes:** CHEM 125

Credits: 5

### **CHEM 201 - Independent Research**

Undergraduate research under supervision. Written report required.

**Prerequisites & Notes:** CHEM 351 or concurrent and permission of instructor.

Credits: 1 TO 3

### **CHEM 225 - General Chemistry III, Honors**

An accelerated survey of fundamental chemical principles, including atomic and molecular structure, bonding, chemical thermodynamics, equilibria, kinetics, solution chemistry, nuclear chemistry, and analytical methods. Lab included.

**Prerequisites & Notes:** CHEM 126

Credits: 5

### **CHEM 251 - Elementary Organic Chemistry**

Reactions, nomenclature and uses of carbon compounds; an abbreviated course in organic chemistry primarily for persons not requiring the CHEM 351-354 series.

**Prerequisites & Notes:** CHEM 121 or CHEM 125; no CHEM 251 labs first week of class

Credits: 5

### **CHEM 301 - Independent Research**

Undergraduate research under supervision. Written report required. Repeatable to a maximum of 9 cr over three quarters. S/U grading.

**Prerequisites & Notes:** 30 credits of chemistry

Credits: 1 TO 3

### **CHEM 308 - Introduction to Polymer Chemistry**

Types of polymers, methods of polymerization, and preparation of important commercial thermoplastic and thermosetting plastics. Addition and condensation polymers are prepared in the laboratory.

**Prerequisites & Notes:** CHEM 121 or CHEM 125; CHEM 251; ETEC 333

Credits: 3

### **CHEM 333 - Analytical Chemistry**

Theory and practice of gravimetric, volumetric, potentiometric and spectrophotometric methods of analysis. Selected analytical topics such as ion exchange resins, non-aqueous solvents, chelates, extractions, chromatography.

**Prerequisites & Notes:** CHEM 123

Credits: 5

### **CHEM 351 - Organic Chemistry**

Chemistry of carbon compounds with emphasis on structural theory, reactions and mechanisms.

**Prerequisites & Notes:** CHEM 123 or CHEM 225 or concurrent

Credits: 4

### **CHEM 352 - Organic Chemistry**

Chemistry of carbon compounds with emphasis on structural theory, reactions and mechanisms.

**Prerequisites & Notes:** CHEM 351

Credits: 4

### **CHEM 353 - Organic Chemistry**

Chemistry of carbon compounds with emphasis on structural theory, reactions and mechanisms.

**Prerequisites & Notes:** CHEM 352

Credits: 3

### **CHEM 354 - Organic Chemistry Laboratory I**

Techniques of organic chemistry: reactions, separations and syntheses of organic compounds.

**Prerequisites & Notes:** CHEM 352 or concurrent

Credits: 3

### **CHEM 355 - Organic Chemistry Laboratory II**

Techniques of organic chemistry: reactions, separations; multi-step syntheses and introduction to practical spectroscopy. Includes online and hardcopy literature searching, use of chemical drawing software, and writing journal-style reports. This course is intended for students planning to major in Chemistry.

**Prerequisites & Notes:** CHEM 354, CHEM 353 or concurrent

Credits: 3

### **CHEM 356 - Organic Chemistry Laboratory II for Life Sciences**

Techniques of organic chemistry: reactions, separations; syntheses and introduction to practical spectroscopy. This course is specifically designed to meet the requirements of students in Life Sciences, Biochemistry, and/or Pre-Healthcare Professions programs.

**Prerequisites & Notes:** CHM 354 or concurrent.

Credits: 2

### **CHEM 375 - Elements of Biochemistry**

Introduction to the structure and function of proteins, nucleic acid, lipids, and carbohydrates. Enzyme chemistry. Replication, transcription, and translation of genetic information. Metabolism of carbohydrates, the citric acid cycle, electron transport, and oxidation phosphorylation. This course is not intended for students in the bachelor of science-biochemistry program.

**Prerequisites & Notes:** CHEM 251 or CHEM 351, CHEM 352, CHEM 353

Credits: 4

### **CHEM 401 - Independent Research**

Undergraduate research under supervision. Written report required. Repeatable to a maximum of 9 cr over three quarters. S/U grading.

**Prerequisites & Notes:** CHEM 461 or concurrent and permission of instructor.

Credits: 1 TO 3

**CHEM 405 - Intensive Writing in Chemistry or Biochemistry**

Concentrated study of a topic associated with chemistry or biochemistry. Students are required to write a substantial expository paper. Writing proficiency course.

**Prerequisites & Notes:** CHEM 401, CHEM 425, CHEM 471, CHEM 494 or CHEM 498 or concurrent

Credits: 1

**CHEM 425A - Natural Products Chemistry**

**Prerequisites & Notes:** CHEM 353; instructor permission

Credits: 3

**CHEM 425B - Organic Reactions**

**Prerequisites & Notes:** CHEM 353; instructor permission

Credits: 3

**CHEM 425C - Medicinal Chemistry**

**Prerequisites & Notes:** CHEM 353 or instructor permission; CHEM 471 recommended

Credits: 3

**CHEM 425D - Group Theory and Spectroscopy**

**Prerequisites & Notes:** CHEM 463; instructor permission

Credits: 3

**CHEM 425H - Enzyme Chemistry**

**Prerequisites & Notes:** CHEM 463 or CHEM 466, CHEM 471; instructor permission

Credits: 3

**CHEM 425I - Immunology**

**Prerequisites & Notes:** CHEM 473 or BIOL 473; instructor permission

Credits: 3

**CHEM 425K - Bioanalytical Instrumentation**

The analysis of biomolecules, substances of significant biological interest, and substances in biological matrices using advanced instrumental methods.

**Prerequisites & Notes:** CHEM 333 or instructor permission

Credits: 3

**CHEM 425M - Organometallic Chemistry**

**Prerequisites & Notes:** CHEM 441; instructor permission

Credits: 3

**CHEM 425P - Computers in Chemistry**

**Prerequisites & Notes:** CHEM 461 or CHEM 467 or PHYS 331 or concurrent, or instructor permission

Credits: 3

**CHEM 425Q - Atmospheric Chemistry**

**Prerequisites & Notes:** CHEM 333 and CHEM 463 (or CHEM 466)

Credits: 3

**CHEM 425R - Surface Chemistry**

**Prerequisites & Notes:** CHEM 461; instructor permission

Credits: 3

**CHEM 425S - Protein Engineering**

**Prerequisites & Notes:** CHEM 471; instructor permission

Credits: 3

**CHEM 425T - Virology**

**Prerequisites & Notes:** CHEM 473 or BIOL 473; instructor permission

Credits: 3

**CHEM 434 - Instrumental Analysis**

Theory of modern optical, electrical and other physical measurements applied to chemical analysis.

**Prerequisites & Notes:** CHEM 333 or CHEM 225; CHEM 461 or concurrent

Credits: 3

**CHEM 436 - Instrumental Analysis Laboratory**

Application of modern instrumental methods of chemical analysis including optical, electrical and other physical measurements.

**Prerequisites & Notes:** CHEM 434 or concurrent.

Credits: 2

**CHEM 441 - Advanced Inorganic Chemistry**

Bonding, structure and reactivity of inorganic molecules; transition metal and organometallic chemistry; chemistry of the nonmetallic elements.

**Prerequisites & Notes:** CHEM 462 or concurrent

Credits: 4

**CHEM 454 - Organic Spectroscopy**

Identification of organic compounds by spectroscopic methods: infrared, nuclear magnetic resonance, ultraviolet and mass spectroscopy. Laboratory work includes application of spectroscopy in identifying unknowns with confirmation by chemical methods.

**Prerequisites & Notes:** CHEM 123 or CHEM 225; CHEM 353, CHEM 355

Credits: 5

**CHEM 455 - Advanced NMR Techniques**

A lecture/lab course in advanced techniques in nuclear magnetic resonance, including Fourier transformation, multiple pulse sequences, relaxation time measurements, gated decoupling, polarization transfer, pulse sequences and two-dimensional NMR experiments.

**Prerequisites & Notes:** CHEM 454

Credits: 3

**CHEM 461 - Physical Chemistry**

Atomic and molecular structure, states of matter, solutions, chemical thermodynamics and equilibria, chemical kinetics and electrochemistry.

**Prerequisites & Notes:** CHEM 123 or CHEM 225; MATH 224, and PHYS 121, PHYS 122, PHYS 123 or (PHYS 114, PHYS 115, and PHYS 116).

Credits: 4

**CHEM 462 - Physical Chemistry**

Atomic and molecular structure, states of matter, solutions, chemical thermodynamics and equilibria, chemical kinetics and electrochemistry.

**Prerequisites & Notes:** CHEM 461

Credits: 4

**CHEM 463 - Physical Chemistry**

Atomic and molecular structure, states of matter, solutions, chemical thermodynamics and equilibria, chemical kinetics and electrochemistry.

**Prerequisites & Notes:** CHEM 462

Credits: 3

**CHEM 464 - Physical/Inorganic Chemistry Laboratory I**

An integrated approach to inorganic synthesis and physical measurement. Includes formal report writing.

**Prerequisites & Notes:** CHEM 333 or CHEM 225; CHEM 441 or concurrent; CHEM 461; CHEM 462 or concurrent.

Credits: 3

**CHEM 465 - Physical/Inorganic Chemistry Laboratory II**

An integrated approach to inorganic synthesis and physical measurement. Includes formal report writing.

**Prerequisites & Notes:** CHEM 463 or concurrent and CHEM 464.

Credits: 3

**CHEM 467 - Biophysical Chemistry**

Biophysical experimental methods and theory, including classical and statistical thermodynamics, bonding, ligand binding, spectroscopy, transport processes, enzyme kinetics, and X-ray diffraction.

**Prerequisites & Notes:** MATH 224; one year of college physics; CHEM 471 or BIOL 471

Credits: 3

**CHEM 468 - Biophysical Chemistry**

Biophysical experimental methods and theory, including classical and statistical thermodynamics, bonding, ligand binding, spectroscopy, transport processes, enzyme kinetics, and X-ray diffraction.

**Prerequisites & Notes:** CHEM 467, CHEM 461

Credits: 4

**CHEM 471 - Biochemistry I**

A consideration of the structure and function of biological macromolecules; intermediary metabolism; membrane structure and function; bioenergetics. Also offered as BIOL 471.

**Prerequisites & Notes:** CHEM 123 or CHEM 225; CHEM 353 or concurrent; BIOL 205; CHEM 333 recommended; also offered as BIOL 471, BIOL 472.

Credits: 4

**CHEM 472 - Biochemistry II**

A consideration of the structure and function of biological macromolecules; intermediary metabolism; membrane structure and function; bioenergetics. Also offered as BIOL 472.

**Prerequisites & Notes:** CHEM 471

Credits: 4

**CHEM 473 - Molecular Biology**

An examination of the structure, replication and expression of genetic information. Also offered as BIOL 473.

**Prerequisites & Notes:** CHEM 471, BIOL 321 or instructor permission; also offered as BIOL 473

Credits: 3

**CHEM 474 - Biochemistry Laboratory**

Modern methods of isolation and characterization of biological macromolecules, especially enzymes and other proteins. Also offered as BIOL 474.

**Prerequisites & Notes:** CHEM 123 or CHEM 225; CHEM 354, CHEM/BIOL 472 or concurrent; also offered as BIOL 474

Credits: 3

**CHEM 494 - Industrial Work Experience**

Academic credit awarded for chemical employment in industry or government in areas such as research, development or quality control. Written report and an oral or poster presentation describing the work are required.

**Prerequisites & Notes:** 30 credits of chemistry including CHEM 333

Credits: 3

**CHEM 498 - Honors Research in Chemistry**

Oral presentation and honors thesis required.

**Prerequisites & Notes:** Six credits of Chemistry research courses, advancement to departmental honors candidacy (application required).

Credits: 3

**CHEM 501 - Research Project in Chemistry**

Advanced individual laboratory projects under supervision. Repeatable to a maximum of 12 credits.

Credits: 2 TO 6

**CHEM 502 - Teaching Practicum**

Curriculum and instructional support for teaching the general chemistry laboratory sequence. Repeatable to a maximum of 3 credits. S/U grading.

Credits: 1

**CHEM 510 - Special Topics**

Specialized lectures on a conference basis for a particular area of interest. Repeatable to a maximum of 9 credits.

Credits: 1 TO 3

**CHEM 511 - Advanced Laboratory Methods**

Specialized laboratory on a conference basis for a particular area of interest. Repeatable to a maximum of 9 credits.

**Prerequisites & Notes:** CHEM 463

Credits: 1 TO 3

**CHEM 534 - Instrumental Analysis**

Principles of chromatographic, spectrochemical and electrochemical methods of analysis.

**Prerequisites & Notes:** CHEM 333 or CHEM 225, CHEM 461 or concurrent

Credits: 3

**CHEM 535 - Bioanalytical Instrumentation**

The analysis of biomolecules, substances of significant biological interest, and substances in biological matrices using advanced instrumental methods.

**Prerequisites & Notes:** CHEM 333 or instructor permission

Credits: 3

**CHEM 536 - Instrumental Analysis Laboratory**

Advanced techniques of modern instrumental analysis including optical, electrical, and other physical measurements, including analysis of materials.

**Prerequisites & Notes:** CHEM 534 or concurrent.

Credits: 2

**CHEM 540 - Organometallic Chemistry**

Classes of organometallic compounds; structure, bonding, general patterns of reactivity; reactions; industrial homogeneous catalysis.

**Prerequisites & Notes:** CHEM 441

Credits: 3

**CHEM 552 - Chemistry of Natural Products**

Isolation, structure, synthesis, biosynthesis and photochemistry of selected classes of natural products.

**Prerequisites & Notes:** CHEM 353 or instructor permission

Credits: 3

**CHEM 553 - Organic Reactions**

Organic chemical reactions as applied to problems in organic synthesis.

**Prerequisites & Notes:** CHEM 353 or instructor permission

Credits: 3

**CHEM 554 - Organic Spectroscopy**

Identification of organic compounds by spectroscopic methods: infrared, nuclear magnetic resonance, ultraviolet and mass spectroscopy. Lab included.

**Prerequisites & Notes:** CHEM 123, CHEM 353, CHEM 355

Credits: 5

**CHEM 555 - Advanced NMR Techniques**

A lecture/lab course in advanced techniques in nuclear magnetic resonance, including Fourier transformation, multiple pulse sequences, relaxation time measurements, gated decoupling, polarization transfer and two-dimensional NMR experiments.

**Prerequisites & Notes:** CHEM 454 or CHEM 554

Credits: 3

**CHEM 556 - Medicinal Chemistry**

The chemistry of drug discovery, design, development, and action.

**Prerequisites & Notes:** CHEM 353 or instructor permission; CHEM 471 recommended

Credits: 3

**CHEM 562 - Group Theory and Spectroscopy**

Correlation of mathematical group theory with molecular symmetry and application of symmetry groups to the interpretation of molecular spectra. Principle applications will be to infrared and Raman vibrational spectra.

**Prerequisites & Notes:** CHEM 463

Credits: 3

**CHEM 563 - Computers in Chemistry**

Use of computers in chemistry and biochemistry, including chemistry on the Internet, molecular modeling, visualization, simulation, and the control of laboratory experiments.

**Prerequisites & Notes:** CHEM 461 or CHEM 467 or PHYS 331 or concurrent, or instructor permission

Credits: 3

**CHEM 565 - Surface Chemistry**

Physical chemistry of solid surfaces. Examples drawn from heterogeneous catalysis and environmental chemistry.

**Prerequisites & Notes:** CHEM 461

Credits: 3

**CHEM 573 - Enzyme Chemistry**

Preparation and measurement of activities of enzymes; mechanism of enzyme reactions; properties of individual enzymes and coenzymes.

**Prerequisites & Notes:** CHEM 463 or CHEM 468, CHEM 471

Credits: 3

**CHEM 575 - Immunology**

Biochemistry of the immune response, antibody structure and function, origin of antibody diversity, cell-mediated immunity.

**Prerequisites & Notes:** CHEM 473; instructor permission

Credits: 3

**CHEM 578 - Protein Engineering**

Analysis of protein structure and protein-ligand interactions, protein design considerations, and design of small molecule and protein-based therapeutic agents.

**Prerequisites & Notes:** CHEM 471

Credits: 3

**CHEM 579 - Virology**

Overview of viruses - their structures, life cycles and control. Bacterial, plant and animal viruses will be discussed.

**Prerequisites & Notes:** CHEM/BIOL 473

Credits: 3

**CHEM 595 - Seminar**

Presentation of contemporary subjects in chemistry. Repeatable to a maximum of 2 credits. S/U grading.

Credits: 1

**CHEM 596 - Seminar in Current Chemistry and Biochemistry**

Introduction to current research problems in chemistry and biochemistry. Repeatable to a maximum of 6 credits. S/U grading.

Credits: 1

**CHEM 690 - Thesis**

Research in chemistry under faculty direction terminating in a master's thesis. Repeatable to a maximum of 12 credits. S/U grading.

Credits: 1 TO 6

**CHEM 694 - Industrial Internship in Chemistry**

A supervised technical field experience in chemical laboratory practice. The experience may be in an industrial or government laboratory setting in such areas as research and development, chemical sales, manufacturing, process development, clinical chemistry, analytical chemistry, quality control or environmental control. A project report following an approved format is required. Repeatable to a maximum of 12 credits. S/U grading.

**Prerequisites & Notes:** advancement to candidacy; graduate advisor permission

Credits: 1 TO 6

**Chinese**

*Courses numbered X37; X97; 300, 400; 417, 445 are described in the University Academic Policies section of this catalog.*

**CHIN 101 - First-Year Chinese**

To be taken in sequence. Fundamentals of the modern standard language (Mandarin): pronunciation, grammar, aural comprehension, reading and speaking.

Credits: 5

**CHIN 102 - First-Year Chinese**

To be taken in sequence. Fundamentals of the modern standard language (Mandarin): pronunciation, grammar, aural comprehension, reading and speaking.

**Prerequisites & Notes:** CHIN 101 or equivalent

Credits: 5

**CHIN 103 - First-Year Chinese**

To be taken in sequence. Fundamentals of the modern standard language (Mandarin): pronunciation, grammar, aural comprehension, reading and speaking.

**Prerequisites & Notes:** CHIN 102 or equivalent

Credits: 5

**CHIN 201 - Second-Year Chinese**

To be taken in sequence. Review of the fundamentals of the modern standard language (Mandarin); emphasis on acquisition of oral and written vocabulary; intensive reading and discussion in Chinese of graded materials in modern Chinese (Mandarin).

**Prerequisites & Notes:** CHIN 103 or equivalent

Credits: 5

**CHIN 202 - Second-Year Chinese**

To be taken in sequence. Review of the fundamentals of the modern standard language (Mandarin); emphasis on acquisition of oral and written vocabulary; intensive reading and discussion in Chinese of graded materials in modern Chinese (Mandarin).

**Prerequisites & Notes:** CHIN 201 or equivalent

Credits: 5

**CHIN 203 - Second-Year Chinese**

To be taken in sequence. Review of the fundamentals of the modern standard language (Mandarin); emphasis on acquisition of oral and written vocabulary; intensive reading and discussion in Chinese of graded materials in modern Chinese (Mandarin).

**Prerequisites & Notes:** CHIN 202 or equivalent

Credits: 5

**CHIN 280 - Traditional Chinese Characters**

An introduction to the principles used in the formation of Chinese characters. The components of the characters are analyzed and compared with the new, simplified forms. Prepared texts provide practice in reading the characters. Calligraphy sessions provide opportunity to write the traditional forms. In addition, three phonetic transcription methods are taught.

**Prerequisites & Notes:** CHIN 101

Credits: 2

**CHIN 301 - Third-Year Chinese**

To be taken in sequence. Intensive reading, written vocabulary acquisition (reaching the 1,400 character level by the end of the sequence) and oral comprehension of materials in modern standard Chinese (Mandarin).

**Prerequisites & Notes:** CHIN 203

Credits: 4

**CHIN 302 - Third-Year Chinese**

To be taken in sequence. Intensive reading, written vocabulary acquisition (reaching the 1,400 character level by the end of the sequence) and oral comprehension of materials in modern standard Chinese (Mandarin).

**Prerequisites & Notes:** CHIN 301

Credits: 4

**CHIN 303 - Third-Year Chinese**

To be taken in sequence. Intensive reading, written vocabulary acquisition (reaching the 1,400 character level by the end of the sequence) and oral comprehension of materials in modern standard Chinese (Mandarin).

**Prerequisites & Notes:** CHIN 302

Credits: 4

**CHIN 330 - Chinese Culture Through Film and Literature**

An introduction to cultural aspects of Chinese through a study of film as oral and visual texts. Film scripts and short stories, especially those from which films have been adapted, are used to enhance reading and discussion skills.

Repeatable to a maximum of 9 credits.

**Prerequisites & Notes:** CHIN 203 or instructor permission

Credits: 3

**CHIN 360 - Business Chinese**

Designed to prepare students to use Chinese in professional settings. Study of vocabulary and protocol specific to business endeavors is emphasized. Textbooks, videos and newspaper articles form the core materials of instruction.

**Prerequisites & Notes:** CHIN 203 or instructor permission

Credits: 3

**CHIN 390 - Introduction to Chinese Language and Linguistics**

An introduction to the phonology, morphology, syntax, lexicon and writing system of the Chinese language.

Explores the relationship between language and society.

Credits: 4

## **Classical Studies**

*Courses numbered X37; X97; 300, 400; 417, 445 are described in the University Academic Policies section of this catalog.*

### **CLST 117 - The Ancient Legacy**

An introduction to the contributions made by Greece and Rome to the European cultural tradition. Five thematic questions and the answers offered by the ancients are to be examined: God or Mortal; Citizen and State; the Great Individual; the life of philosophy and the life of political activity; the Burden of Immortality.

Credits: 5

### **CLST 260 - Masterworks of Ancient Greek Literature**

Survey of the major Greek texts - epic, dramatic and narrative - in translation with emphasis on those works which have shaped the classical tradition.

Credits: 4

### **CLST 270 - Literature of Rome and Her Empire**

Survey of the major literary monuments which serve to define the Roman character and the nature of the Roman Empire at its height.

Credits: 4

### **CLST 350 - Greek Mythology**

A study of Greek myths as a vital and evolving feature of Greek religious and intellectual life from Homer through Hesiod and Aeschylus to Euripides.

Credits: 4

### **CLST 401 - Sanskrit**

Fundamentals of the classical language: pronunciation; reading and writing of devanagari script; grammar.

Credits: 5

### **CLST 410 - The Proto-Indo-European Roots of the Classical Languages**

Introduction to principles of comparative philology and comparative mythology and poetics; survey of the phonology, morphology and syntax of Proto-Indo-European; the major IE branches with special emphasis given to Hellenic, Italic and Indo-Iranian.

**Prerequisites & Notes:** GREK 101 or LAT 101 or CLST 350 or CLST 401.

Credits: 4

### **CLST 450 - Topics in Classical Studies**

Varying topics, such as individual genres (e.g., epic, tragedy) or eras (fifth-century B.C. Athens, the Mediterranean World in the first century A.D.), will be treated from quarter to quarter. See the Timetable of Classes for offerings. Repeatable with different topics with no maximum.

**Prerequisites & Notes:** CLST 260 or CLST 270 or CLST 350 or LBRL 121 or ENG 281

Credits: 3 TO 5

### **CLST 450A - Topics in Classical Studies**

Varying topics, such as individual genres (e.g., epic, tragedy) or eras (fifth-century B.C. Athens, the Mediterranean World in the first century A.D.), will be treated from quarter to quarter. See the Timetable of Classes for offerings. Repeatable with different topics with no maximum.

**Prerequisites & Notes:** CLST 260 or CLST 270 or CLST 350 or LBRL 121 or ENG 281

Credits: 3

### **CLST 450B - Topics in Classical Studies**

Varying topics, such as individual genres (e.g., epic, tragedy) or eras (fifth-century B.C. Athens, the Mediterranean World in the first century A.D.), will be treated from quarter to quarter. See the Timetable of Classes for offerings. Repeatable with different topics with no maximum.

**Prerequisites & Notes:** CLST 260 or CLST 270 or CLST 350 or LBRL 121 or ENG 281

Credits: 3

### **CLST 450C - Topics in Classical Studies**

Varying topics, such as individual genres (e.g., epic, tragedy) or eras (fifth-century B.C. Athens, the Mediterranean World in the first century A.D.), will be treated from quarter to quarter. See the Timetable of Classes for offerings. Repeatable with different topics with no maximum.

**Prerequisites & Notes:** CLST 260 or CLST 270 or CLST 350 or LBRL 121 or ENG 281

Credits: 3

## **Communication**

*Courses numbered X37; X97; 300, 400; 417, 445 are described in the University Academic Policies section of this catalog.*

### **COMM 101 - Fundamentals of Speech**

Functional approach to effective communication. Emphasizes the application of principles to practical problems in speech for persons with little or no previous public speaking experience. Students with prior public speaking experience are advised to take COMM 235 to satisfy GUR requirements or communication major application requirements.

Credits: 4

### **COMM 220 - Communication Theory**

Survey of human communication focuses on communication theories, concepts and principles ranging from intrapersonal to interpersonal, group, organizational, rhetorical, intercultural, international and mass communication.

Credits: 5

### **COMM 224 - Small Group Processes**

Exploration of the dynamics of human interaction in small group settings. Group tasks include the development of problem-solving skills, utilizing topics of current interest.

Credits: 4

### **COMM 225 - Communication, Diversity and Controversy**

This course is designed to foster the skills necessary for civil engagement and effective dialogue on controversial issues. Students will learn to appreciate, integrate, and effectively challenge diverse perspectives on a number of traditionally-divisive topics.

Credits: 4

### **COMM 230 - Introduction to Rhetorical Theory and Criticism**

Through a survey of major rhetorical scholarship from ancient Greek through the present, students are introduced to both rhetorical theories and modes of criticism that guide the field. Emphasis is placed on the important role rhetoric plays in contemporary public discourse and democratic citizenship.

Credits: 5

### **COMM 235 - Exposition and Argumentation**

Theory and practice of principles of reasoned discourse as applied to public discussion of controversial issues. Students with prior background or experience in public speaking should consider COMM 235 as an alternative to COMM 101.

Credits: 4

### **COMM 236 - Intercollegiate Forensics**

Debate, extemporaneous and impromptu speaking, and interpretive reading and other phases of forensics.

Repeatable to a maximum of 6 credits. S/U grading.

Credits: 2

### **COMM 244 - Advocacy Through Media**

Introduction to nonprofit information campaigns, social issues marketing and other forms of advocacy through contemporary mass media. Students will learn basic theory and then engage in applied exercises as well as service learning assignments.

Credits: 4

### **COMM 244S - Advocacy Through Media**

Introduction to nonprofit information campaigns, social issues marketing, and other forms of advocacy through contemporary mass media. Students will learn basic theory and then engage in applied exercises as well as service learning assignments.

Credits: 3

### **COMM 318 - Professional Communication**

This course integrates business writing, public speaking, collaborative problem solving, and diversity training in a professional development context. Includes theory application and skill development. Students will be working in collaboration with organizations on or off campus.

**Prerequisites & Notes:** open to non communication majors

Credits: 5

**COMM 319 - Communication and Healthcare**

This course is designed for healthcare professionals and others interested in communication skills for healthcare contexts. Students will be introduced to the theory and practice of effective and caring communication in the healthcare field, with a focus on strengthening and refining skills for communicating with diverse audiences.

Credits: 3

**COMM 322 - Civil Discourse as Learning Interaction**

This course explores the nature of public civil discourse and provides instruction and practice in writing and speaking across differences for a range of public audiences in an effort to enhance the collective good. By focusing on the theory and practice of civil discourse as a means for accomplishing effective dialogue, students will develop concepts, attitudes, and skills - both oral and written - needed to be engaged learners and citizens in the campus community and beyond. Course requires participation in Western's Teaching-Learning Academy (TLA), which includes students, faculty, and staff who are working collectively to enhance the University learning environment.

**Prerequisites & Notes:** ENG 101

Credits: 4

**COMM 325 - Introduction to Intercultural Communication**

Introduction to intercultural communication. Principles, concepts and various topics in this rapidly growing, important field. Covers the needed skills in communicating effectively with people of diverse cultural backgrounds.

**Prerequisites & Notes:** 4 credits Comparative Gender or Multicultural Studies GUR or COMM 220

Credits: 5

**COMM 327 - Interpersonal Communication**

Focuses on theory and practice in work, family, and social settings. Emphasizes observation, analysis, and skills training in relationship development. Topics include language use, listening, nonverbal behavior and conflict management.

Credits: 5

**COMM 331 - Advanced Public Speaking**

Theory and practice in the art of public discourse.

**Prerequisites & Notes:** COMM 101 or COMM 235.

Credits: 3

**COMM 339 - Practicum in Applied Communication**

Students function in a variety of directed studies and contexts in which they apply their communication skills. Covers putting theory into practice in such areas as small group communication, interpersonal communication, organizational communication, intercultural communication and applied public information strategies. Repeatable to a maximum of 12 credits. S/U grading.

Credits: 1 TO 3

**COMM 350 - Emerging Communication Technologies**

Primary course objective is technological literacy - gaining skills and experience for working with emerging communication technologies. Students will engage in a range of experiential and service learning assignments using various emerging technologies. Secondary objective is technology critique and the study of theories of technology.

Credits: 5

**COMM 398 - Research Methods in Communication**

Course should be taken as soon as possible after admission to the major as it is prerequisite for most 400-level communication courses. Survey of qualitative and quantitative research methods utilized in the field of communication.

Credits: 5

**COMM 416 - Topics in Communication**

In-depth coverage of special topics in communication, rhetoric and mass media. The subject of each individual course and its prerequisite is announced in the Timetable of Classes. Repeatable with different topics to a maximum of 12 credits.

**Prerequisites & Notes:** senior status; COMM 398 or perm of instructor.

Credits: 3 TO 5

**COMM 416G - Interpersonal Conflict Resolution**

Identification of many communication problems inherent in communication processes and insight into increasing rhetorical and behavioral options for resolving interpersonal conflict. 6 weeks.

Credits: 3

**COMM 416R - Communication & Creativity**

This course investigates the question "What techniques enhance creativity and competency in communication?" The course is grounded in the recent research of R. Keith Sawyer, as reflected in his book "Creating Conversations" and the scholarly work of Stephen Nachmanovitch, presented in his book "Free Play". Additionally lectures will cover the contributions of various acknowledged experts on creativity and play. Classes will include exploration of improvisation techniques and reflections on these experiences.

**Prerequisites & Notes:** Major restricted; juniors and seniors.

Credits: 4

**COMM 420 - Advanced Communication Theory**

In-depth examination of advanced theories in human communication. Emphasis on theory development.

**Prerequisites & Notes:** COMM 398 or instructor permission

Credits: 5

**COMM 425 - Issues in Intercultural Communication**

Introduction to dynamic forces that enhance effective communication between persons with various cultural backgrounds. Covers topics such as differences, similarities, values, pride and prejudice, cultural barriers in communication settings, and effectiveness of intercultural communication.

**Prerequisites & Notes:** Department majors only. COMM 325 and COMM 398 or permission of instructor.

Credits: 5

**COMM 427 - Issues in Interpersonal Communication**

Senior seminar that offers an in-depth examination of theories and practices in interpersonal communication.

**Prerequisites & Notes:** COMM 327, COMM 398 or instructor permission

Credits: 5

**COMM 428 - Organizational Communication**

Emphasizes the role of communication as central in human organizing. Describes the relationships among communication theories and other theories of organizational behavior. Applies theories to varied organizational settings.

**Prerequisites & Notes:** COMM 398

Credits: 5

**COMM 430 - Visual Rhetoric**

This course aims to interrogate the relationship between rhetoric and the image. Devoting attention to theories that explore the symbolic and performative dimensions of visual culture, this course introduces advanced students to theories of perception and visual interpretation as they relate to visual communication, media and film studies, cultural studies, art, literature, memory, and the public spectacle.

**Prerequisites & Notes:** Junior status or permission of instructor.

Credits: 5

**COMM 435 - Principles of Persuasion**

Study of principles that influence attitudes and opinions in persuasive situations. Normally offered alternate years.

**Prerequisites & Notes:** COMM 235 and junior status or permission of instructor.

Credits: 4

**COMM 436 - Advanced Forensics and Debate**

Emphasis on intercollegiate debate with opportunity for experience in extemporaneous, impromptu and persuasive speaking. A maximum of 6 credits may be earned in COMM 436; a combined total of 6 credits from COMM 236 and COMM 436 may be applied to the major. S/U grading.

**Prerequisites & Notes:** 6 credits COMM 235 and/or COMM 236

Credits: 2

**COMM 442 - Video Workshop**

Production of the University's cable television show, Western View. Course includes practical application of techniques used in video production. Utilizes digital technology, graphic materials, design and staging. Students will learn the role of producer and director. Repeatable to a maximum of 6 credits. S/U grading.

**Prerequisites & Notes:** recommended prior to registration: JOUR 190, COMM 350 or previous video experience

Credits: 2

**COMM 444 - Critical Media Literacy**

Examination of advanced theories in mass communication and media literacy. Examines social, political, and economic forces that shape media; influences of media on society; and issues of media policy, media advocacy, and media reform.

**Prerequisites & Notes:** JOUR 190 or permission of instructor.

Credits: 5

### **COMM 450 - Communication Pedagogy I**

Serve as undergraduate tutor for students taking communication courses. Learn instructional methods and gain further mastery of course content. Conduct supervised tutoring and feedback for students enrolled in communication courses. S/U grading

**Prerequisites & Notes:** recommendation

Credits: 3

### **COMM 451 - Communication Pedagogy II**

Help supervise teams of undergraduate tutors. Develop leadership, organizational and pedagogical skills. S/U grading.

**Prerequisites & Notes:** COMM 450; recommendation

Credits: 3

### **COMM 454 - Instructional Communication**

This course is designed for prospective elementary, secondary and college teachers and communication trainers/consultants. Communication theories, principles, and skills applicable to the classroom context are addressed as they apply to teaching in general and communication specifically.

**Prerequisites & Notes:** COMM 398 or permission of instructor.

Credits: 5

### **COMM 459 - Field Internship in Communication**

Supervised work in communication with an educational institution, public agency, private enterprise, broadcast station or other appropriate business. Meetings, written reports and a paper related to the internship are required. For students applying for media internships, plan to complete all academic course work before the internship, as this is the usual career pattern for those in that area. Repeatable to a maximum of 12 credits. A maximum of 6 cr may be applied to the COMM major. S/U grading.

Credits: 3-12

### **COMM 492 - Senior Thesis**

Supervised independent research on an advanced topic, leading to a substantial research paper.

**Prerequisites & Notes:** admission to department honors; 24 completed credits in communication including COMM 398

Credits: 5

### **COMM 498 - Communication Ethics**

Examines diverse ethical theories and perspectives pertaining to communication in contexts ranging from the local to the global. Students will have opportunities to reflect on and clarify their own ethical commitments, and to understand these in relation to ethical theories and perspectives in the field of communication studies.

**Prerequisites & Notes:** COMM 398 or instructor permission.

Credits: 4

## **Computer Science**

*Courses numbered X37; X97; 300, 400, 500; 417, 445, 517, 545 are described in the University Academic Policies section of this catalog.*

### **CSCI 101 - Computers and Applications**

Study of computers, computer systems, and computer applications. Computer hardware and software fundamentals. Networking, telecommunications, and the Internet. Hands-on experience with a variety of standard computer applications. Computer-related social and ethical issues. Lab.

Credits: 4

### **CSCI 102 - Computer-Mediated Communications**

Internet skills, with an emphasis on the Internet as a medium of political and business communication, research, cultural exchange and worldwide collaboration. Basic principles of effective Web site organization and design. Lab.

**Prerequisites & Notes:** basic computer literacy

Credits: 3

### **CSCI 103 - Introduction to Computer Game Development**

An introduction to computer game development for students with no programming background. Students use game development software to develop games of varying complexity, including graphics and sound, and extend to more complex games through the use of scripts.

**Prerequisites & Notes:** basic computer literacy, use of keyboard and mouse

Credits: 4

#### **CSCI 104 - Software Installation, Operation and Configuration of Personal Computer Systems**

Overview of computer hardware components. Installing and configuring Windows operating system. Installing and configuring the Linux operating system. Open source software installation. Each student will receive a licensed copy of the current MS Windows operating system and all Microsoft Development Tools (language compilers etc.) which may be used on their own personal computer.

Credits: 4

#### **CSCI 138 - Programming Fundamentals in Visual Basic**

Intended for students wishing to acquire programming skills in connection with natural science or technology. Basic concepts of computer programming using the Visual Basic programming language. Topics include introduction to development environment, introduction to computer architecture, and language elements such as control structures, functions, basic I/O, one-dimensional and parallel arrays, text file I/O, and user-interface design. Emphasis on algorithm development, program solving, and software engineering. Programming is required in implementation of concepts. Lab.

**Prerequisites & Notes:** Math 112 or instructor permission.

Credits: 4

#### **CSCI 139 - Programming Fundamentals in Python**

Intended for students wishing to acquire programming skills in connection with natural science or technology. Basic concepts of computer programming using the Python programming language. Topics include introduction to development environment, introduction to computer architecture, and language elements such as control structures, functions, basic I/O, one-dimensional and parallel arrays, text file I/O, and user-interface design. Emphasis on algorithm development, program solving, and software engineering. Programming is required in implementation of concepts. Lab.

**Prerequisites & Notes:** Math 112 or instructor permission.

Credits: 4

#### **CSCI 140 - Programming Fundamentals in C++**

Intended for students wishing to acquire programming skills in connection with a natural science or technology. Basic concepts of computer programming using the C++ programming language. Topics covered: introduction to computer architecture, and elements of a language such as control structures, functions, basic I/O, one dimensional and parallel arrays, text file I/O. Algorithm development, problem solving and software engineering are emphasized. Programming is required in implementation of concepts. Lab.

**Prerequisites & Notes:** MATH 112 or instructor permission.

Credits: 4

#### **CSCI 141 - Computer Programming I**

Intended for students majoring in computer science. Basic concepts of computer programming using an object oriented programming language. Topics covered: introduction to the development environment, introduction to algorithms, elements of a programming language, including data types, packages, control structures, procedures and functions, basic input and output, arrays and records, text files, strings, variant records. Algorithm development, problem solving and software engineering are emphasized. Programming is required in implementation of concepts. Lab.

**Prerequisites & Notes:** One of: MATH 112, MATH 114, MATH 115, MATH 118, MATH 124, MATH 125, MATH 128, MATH 156

Credits: 4

#### **CSCI 145 - Computer Programming and Linear Data Structures**

Abstract data types, generics, access or pointer types, dynamic memory allocation, recursion, concurrent programming and linear data structures, including stacks, lists and queues. Programming is required in implementation of concepts. Lab.

**Prerequisites & Notes:** CSCI 141 or equivalent; any of : MATH 115, MATH 118, MATH 124

Credits: 4

#### **CSCI 146 - Accelerated Computer Programming**

Intended for those majoring in computer science. Basic concepts of computer programming using object-oriented programming language. Topics covered: introduction to development environment, introduction to computer architecture, and elements of a language such as control structures, functions, basic I/O, one dimensional and parallel arrays, text file I/O. Abstract data types, generics, access or pointer types, dynamic memory allocation, recursion, concurrent programming and linear data structures, including stacks, lists and queues. Algorithm development, problem solving and software engineering are emphasized. Programming is required in implementation of concepts. Lab.

**Prerequisites & Notes:** Permission of transfer advisor.

Credits: 4

### **CSCI 172 - Introduction to Robotics**

This course provides an introduction to robotics for students with no programming background. Lego Mindstorms Team Challenge Set is used to build the robots. Students will learn to construct, control and program these robots. Students will gain first-hand experience in quantitative and symbolic reasoning through the course of learning.

Credits: 4

### **CSCI 202 - Dynamic Web Pages**

Principles and technologies required to produce and distribute Internet ( World Wide Web) content, with a focus on site architecture and client-side dynamic pages; an introduction to server-side processing.

**Prerequisites & Notes:** CSCI 102 or permission of instructor.

Credits: 4

### **CSCI 211 - Discrete Structures and Functional Programming I**

Elementary logic, proofs, sets, functions, relations, inductive proof, grammars, and relational algebras. Programming using a functional language is required in the implementation of concepts.

**Prerequisites & Notes:** CSCI 145 or CSCI 146

Credits: 4

### **CSCI 227 - Computer Organization I**

An overview of basic computer organization and design, data representation, digital logic, Boolean algebra. Combinational circuits, sequential logic circuits, system interconnection structures, processor design issues, instruction set architectures, instruction set design, details about Pentium processor, pipelining and vector processors, Flynn's taxonomy, RISC Processors.

**Prerequisites & Notes:** CSCI 145 or CSCI 146.

Credits: 4

### **CSCI 241 - Data Structures**

Design and implementation of hash tables, general trees, search trees, balanced trees and graphs. Comparison of sorting algorithms. Demonstration of the use of data structures in various applications. Evaluation of the best data structure for a particular task. Programming is required in implementation of concepts.

**Prerequisites & Notes:** CSCI 145 or CSCI 146; MATH 124 or MATH 157.

Credits: 4

### **CSCI 245 - Object-Oriented Programming C++**

Object-oriented design: Universal Modeling Language (UML); implementation of a substantial project in C++ on the UNIX/Linux platform, templates, Standard Template Library.

**Prerequisites & Notes:** CSCI 241

Credits: 4

### **CSCI 302 - Adv Internet Resources w/lab**

Object-oriented design: Universal Modeling Language (UML); implementation of a substantial project in C++ on the UNIX/Linux platform, templates, Standard Template Library.

**Prerequisites & Notes:** CSCI 202 or equivalent

Credits: 4

### **CSCI 305 - Analysis of Algorithms and Data Structures I**

Introduction to the analysis of algorithms and data structures in a mathematically rigorous fashion. Mathematical fundamentals, asymptotic notation, recurrences, loop invariants. Worst-case, probabilistic and amortized analysis techniques applied to sorting algorithms and classic data structures such as heaps, trees and hash tables. Design techniques such as branch and bound, divide and conquer, dynamic programming and greedy algorithms will be introduced as well correctness proofs for algorithms.

**Prerequisites & Notes:** CSCI 211, CSCI 241

Credits: 3

### **CSCI 311 - Discrete Structures and Functional Programming II**

Propositional and predicate logic. Formal and informal proof. Resolution theorem proving. Applications of logic: program correctness, automatic reasoning, logic programming.

**Prerequisites & Notes:** CSCI 211; MATH 124 or MATH 157

Credits: 4

**CSCI 321 - Game Programming**

Introduction to the basics of game design and implementation. Game worlds, storytelling, character development and the user experience. Programming audio, 2D and 3D graphics basics. Networking basics. Game artificial intelligence. Game genres: action, strategy, role-playing, sports, vehicles, simulations, adventure.

**Prerequisites & Notes:** CSCI 241.

Credits: 4

**CSCI 322 - Principles of Concurrent Programming**

Principles of concurrent programming. Algorithms for mutual exclusion. Synchronization and communication techniques: semaphores; monitors; rendezvous; conditional critical regions. Multi-process and multi-threaded programming. Concurrent programming facilities in HLL's.

**Prerequisites & Notes:** CSCI 211, CSCI 241

Credits: 3

**CSCI 330 - Database Systems**

An introduction to the underlying data models and theory of database systems and the design, implementation and manipulation of relational databases.

**Prerequisites & Notes:** CSCI 241

Credits: 3

**CSCI 342 - Web Scripting**

For CSCI majors and non-majors seeking Web programmer certification from the Internet Studies Center. Development of dynamic Web applications. Study of various server-side scripting languages (PHP, Perl, Python, Ruby on Rails) for creating dynamic Web pages and querying and manipulating Databases on the Web.

**Prerequisites & Notes:** CSCI 330.

Credits: 4

**CSCI 343 - Programming Workshop**

A review of standard algorithmic techniques and practice in their rapid application to information processing problems, especially in a team setting. Preparation for participation in regional and national programming competition. May be repeated once for credit.

**Prerequisites & Notes:** CSCI 245.

Credits: 1

**CSCI 347 - Computer Organization II**

Pentium assembly language programming, interfacing assembly language programs to high-level languages, memory design, cache memory, virtual memory, I/O interfacing and communication, interrupts.

**Prerequisites & Notes:** CSCI 227 or ETEC 273; CSCI 241

Credits: 3

**CSCI 351 - Windows Software Development**

The design and development of event driven programming using Win32 API and Visual C#.NET. Use of .NET Framework libraries. Creation of Windows based applications using forms, controls, and GDI+. Introduction to graphical user interfaces and Visual Studio development tools.

**Prerequisites & Notes:** CSCI 245

Credits: 3

**CSCI 352 - Unix Software Development**

The design and development of systems and programs in the Unix environment. Unix operating system fundamental concepts. Unix standards and implementations. System data files. Environment of a Unix process. Unix programming at the system call level. File and terminal I/O, processes, interprocesses communication and signals. Introduction to shell programming, standard Unix development tools and system utilities: awk, m4, cc, lint, make, sed, grep, and others.

**Prerequisites & Notes:** CSCI 245

Credits: 3

**CSCI 367 - Computer Networks I**

Introduction to computer networks; network architecture and design; protocols, management, physical networks; implementation of network protocols, programming projects in protocol usage and applications.

**Prerequisites & Notes:** CSCI 227, CSCI 245

Credits: 3

**CSCI 380 - Numerical Computations**

Computer arithmetic and error analysis, roots of nonlinear equations, solution of system of linear and nonlinear equations, numerical differentiation, numerical quadrature, approximation theory, initial and boundary value

problems.

**Prerequisites & Notes:** CSCI 241, MATH 204

Credits: 4

#### **CSCI 401 - Formal Languages and Automata**

Formal languages, grammars, automata.

**Prerequisites & Notes:** CSCI 211.

Credits: 3

#### **CSCI 402 - Artificial Intelligence**

Introduction to knowledge representation and search. Possible application areas include natural language, perception, learning and expert systems.

**Prerequisites & Notes:** CSCI 211.

Credits: 4

#### **CSCI 403 - Internship in Internet Studies**

Supervised and fully documented Web-based project with an approved business, government agency or not-for-profit organization.

**Prerequisites & Notes:** Only for ISC minors, or students seeking ISC certification. CSCI 202, MIS 314, senior status and permission of instructor; minimum GPA of 2.7.

Credits: 3

#### **CSCI 405 - Analysis of Algorithms and Data Structures II**

Derivation of time and space complexity of algorithms. Typical algorithms investigated include minimum spanning tree, shortest path, network flow and string matching. Advanced treatment of dynamic programming, greedy algorithms and randomized algorithms. Discussion of NP-Completeness. Correctness proofs of algorithms.

**Prerequisites & Notes:** CSCI 305

Credits: 3

#### **CSCI 410 - Programming Languages**

Introduction to the structure of programming languages; syntax and semantics; properties of algorithmic languages; special purpose languages.

**Prerequisites & Notes:** CSCI 401.

Credits: 3

#### **CSCI 420 - Computer Architecture**

Basic processor design: arithmetic logic unit, datapath, control alternatives, pipelining; memory organizations: cache memory, virtual memory; input/output and interfacing; comparative architectures. Student reports.

**Prerequisites & Notes:** CSCI 211, CSCI 245, CSCI 347.

Credits: 4

#### **CSCI 430 - Database Theory**

Data models and their access languages. Design issues: ER diagrams, functional dependency analysis and normalization. Database programming.

**Prerequisites & Notes:** CSCI 211, CSCI 241.

Credits: 4

#### **CSCI 442 - Advanced Web Programming in Java**

For CSCI majors and nonmajors seeking Web programming certification from the Internet Studies Center. Advanced network, applet, and server applications in Java. GUIs, Web spiders and Web search algorithms, security, remote method invocation and Java Beans.

**Prerequisites & Notes:** CSCI 342, CSCI 351 recommended.

Credits: 4

#### **CSCI 450 - Compiler Theory and Design**

Theory and practice of compiler design. Emphasis is on basic theory and methods necessary to design and implement a functional syntax directed compiler.

**Prerequisites & Notes:** CSCI 410

Credits: 4

#### **CSCI 460 - Operating Systems**

Principles of operating systems; concurrent processes; resource management; process management; file systems; protection.

**Prerequisites & Notes:** CSCI 322, CSCI 347, CSCI 352

Credits: 3

**CSCI 461 - Computer Security**

An overview of computer security and detailed study of the theoretical foundations and practical implementations of some aspects of security, including policy specification, the role of cryptography, policy implementation and assurance, security threats and counter-measures.

**Prerequisites & Notes:** CSCI 211, CSCI 367.

Credits: 4

**CSCI 462 - OS Device Drivers**

Operating System kernel programming, system call mechanisms, system call processing, file system internals, device drivers, interrupt processing, methods for controlling hardware from software. Includes study and augmentation of real Operating Systems, both open-source and closed-source.

**Prerequisites & Notes:** CSCI 460.

Credits: 4

**CSCI 467 - Computer Networks II**

Advanced computer networks. Applications including Internet and distributed computing.

**Prerequisites & Notes:** CSCI 367

Credits: 4

**CSCI 480 - Computer Graphics**

Overview of the hardware, software, and techniques used in computer graphics; raster display devices; input devices; display files, 2D and 3D transformations; windowing, clipping; simple surface rendering.

**Prerequisites & Notes:** CSCI 351, MATH 125, MATH 204.

Credits: 4

**CSCI 483 - Computer Animation**

Introduction to traditional animation. 3D modeling and viewing. Motion specification and interpolation. Kinematics of motion. Key framing. Coordinate systems and transformations, Euler angles and quaternions, cubic and B-splines. Articulated figures (forward kinematics), human and animal modeling. Physically based modeling (rigid, and deformable). Rendering. Production-level animation software.

**Prerequisites & Notes:** CSCI 245, MATH 204

Credits: 4

**CSCI 491 - Software Project Requirements Analysis**

Software development life-cycle, project management, requirements analysis, prototyping. Students work in teams performing requirements analysis of a substantial project, culminating in a requirements specification document.

**Prerequisites & Notes:** Department permission

Credits: 3

**CSCI 492 - Software Project Design**

Software design methodologies, object-oriented design with UML, design patterns, test planning. Students work in teams to produce a software design document, based on requirements specification produced in CSCI 491.

**Prerequisites & Notes:** Department permission

Credits: 3

**CSCI 493 - Software Project Implementation**

Software implementation; unit, integration and system acceptance tests; user documentation. Students work in teams to produce a final software product, fully tested with user documentation, based on a requirements specification produced in CSCI 491 and a software design produced in CSCI 492.

**Prerequisites & Notes:** Department permission

Credits: 3

**CSCI 494 - Professional Work Experience**

Academic credit awarded for employment in industry. Students are required to keep a journal and to submit a written report. See Department of Computer Science for information. S/U grading.

**Prerequisites & Notes:** 30 credits in computer science, minimum 2.7 GPA; department permission

Credits: 4

**CSCI 498 - Teaching Practicum**

Classroom experience in computer science teaching. Students will assist faculty in laboratory settings. Repeatable for a maximum of 4 credits.

Credits: 2

**CSCI 509 - Operating System Internals**

An intensive study of operating systems through examination of and experimentation with kernel source code for a modern open-source operating system. Aspects of operating systems to be investigated include process management, resource management, memory allocation, file systems and kernel services.

**Prerequisites & Notes:** CSCI 322, CSCI 352, CSCI 367

Credits: 4

**CSCI 510 - Automata and Formal Language Theory**

Advanced treatment of formal languages and automata; finite state machines; stack machines and Turing Machines; the Chomsky hierarchy; regular, context free, context sensitive languages, recursively enumerable languages.

**Prerequisites & Notes:** CSCI 311 or equivalent

Credits: 4

**CSCI 511 - Analysis of Algorithms**

Systematic study of algorithms and their complexity, searching and sorting, pattern matching, geometric and graph algorithms, NP-complete and intractable problems.

**Prerequisites & Notes:** CSCI 211, CSCI 245; MATH 226 or CSCI 305

Credits: 4

**CSCI 512 - Design and Implementation of Computer Programming Languages**

Evaluation of programming language features, classification of programming languages in terms of expressiveness, complexity, uniformity and orthogonality. Cost of implementing and using programming language in view of compilation and run-time environments. Mapping of programming language features onto computer architectures. Alternative programming methodologies: functional paradigm, imperative programming, logic programming, data flow programming, explicit and implicit concurrency models.

**Prerequisites & Notes:** CSCI 510.

Credits: 4

**CSCI 513 - Systems Programming and Operating Systems Internals**

Systems software such as linkers, loaders, system utility software and operating system internals. Investigation of real operating systems, augmentation or modification of the operating system source code. Process creation and management; interprocess communication; process scheduling; I/O hardware and software; memory management; file system design and implementation; security and protection mechanisms.

**Prerequisites & Notes:** CSCI 352 or CSCI 460.

Credits: 4

**CSCI 514 - Research Methodology in Computer Science**

Research methodology topics identified as appropriate, emphasizing basic and applied research skills. This course will have research as its primary focus and will be taught by persons with research competencies and interests. Course content includes preparation of research studies, reports, and papers. Students are expected to generate a research or survey paper on their own research topic as a final project.

**Prerequisites & Notes:** Graduate Status.

Credits: 4

**CSCI 515 - Parallel Computation**

Topics in concurrent and parallel computation. Possible areas include formal specification methods for parallel systems, semantics and verification of parallel language programs, and analysis and implementation of parallel algorithms.

**Prerequisites & Notes:** CSCI 401 or CSCI 510.

Credits: 4

**CSCI 520 - Advanced Compiler Design**

Theory and practice of compiler design. Detailed consideration of efficient parsing techniques; organization of semantic analysis and code generation phases; machine dependent and independent optimization techniques; organization of runtime environment.

**Prerequisites & Notes:** CSCI 401 or CSCI 510.

Credits: 4

**CSCI 525 - Advanced Topics in Operating Systems**

Various topics as they relate to distributed operating systems. Case study using a distributed operating system to perform experiments in class laboratory.

**Prerequisites & Notes:** CSCI 460 or CSCI 513.

Credits: 4

**CSCI 527 - Embedded Systems**

Design and development of embedded microprocessors in instrumentation, controls, and user appliances.

**Prerequisites & Notes:** CSCI 347 or CSCI 513.

Credits: 4

**CSCI 528 - Corba Applied to Scada Systems**

SCADA systems, middleware, implementation of a small control system using PLCs and CORBA.

**Prerequisites & Notes:** CSCI 367, CSCI 460; or CSCI 513.

Credits: 4

**CSCI 530 - Advanced Database Theory**

Advanced topics in database systems. Possible areas include transaction processing, concurrency control, recovery, security, query optimization, distributed systems, and logic-based systems.

**Prerequisites & Notes:** CSCI 430 or equivalent

Credits: 4

**CSCI 536 - Web Services**

Evolution of middleware and web services, architecture of distributed information systems, SOAP, WSDL, UDDI.

**Prerequisites & Notes:** CSCI 410 or CSCI 512.

Credits: 4

**CSCI 540 - Theory and Practice of Programming Language Design**

Design and implementation of novel programming languages.

**Prerequisites & Notes:** CSCI 410 or CSCI 512.

Credits: 4

**CSCI 570 - Artificial Intelligence**

Advanced topics in artificial intelligence. Possible areas include knowledge representation, LISP or PROLOG, search strategies, heuristics, goal refinement, theorem proving, and symbolic problem solving.

**Prerequisites & Notes:** instructor permission

Credits: 4

**CSCI 571 - Machine Learning Algorithms**

Covers important machine learning research areas such as artificial neural nets, Bayesian learning, data mining, decision tree learning, evolutionary computation, reinforcement learning, version space learning, rough sets, and computational learning theory. Algorithms from these research areas will be analyzed. Each student will select one of the learned algorithms and apply it to the term project.

**Prerequisites & Notes:** Graduate status.

Credits: 4

**CSCI 572 - Robotics**

The materials of this class cover from hardware to software according to students' need and available instructors. Each offer of the class will select one of the two (hardware and software) research areas or a combination of them. The syllabus includes, but is not limited to, architectures, navigation, and motion planning, control, vision, synthesizing, and algorithm design. Students will gain firsthand experience by working on a small robot. They will design algorithms or manipulate the hardware to make the robot do or learn a certain task.

**Prerequisites & Notes:** Graduate status.

Credits: 4

**CSCI 573 - Computational Linguistics**

Formal and computational models of the syntax, semantics and pragmatics of natural languages; rival approaches to semantic and pragmatic representation; applications to database queries and machine translation.

**Prerequisites & Notes:** CSCI 401 or CSCI 510.

Credits: 4

**CSCI 577 - Data Mining**

Techniques for extracting useful information from large data sets; attribute-value learning techniques (decision trees, association rules); relational mining techniques (inductive logic programming, efficient search of relational spaces); probabilistic techniques (Bayesian networks, conditional independence); statistical techniques; sampling strategies; applications in bioinformatics, personalization, information retrieval, web modeling, filtering, and text processing.

**Prerequisites & Notes:** CSCI 510, CSCI 511

Credits: 4

**CSCI 578 - Cryptography**

Selected topics from number theory; simple, homophonic, polyalphabetic substitution ciphers; product ciphers, DES; exponentiation ciphers; knapsack ciphers; key management.

**Prerequisites & Notes:** CSCI 211.

Credits: 4

**CSCI 580 - Advanced Computer Graphics**

Three-dimensional concepts, shading techniques, curves and surfaces, ray tracing, radiosity, texture mapping, fractals.

**Prerequisites & Notes:** CSCI 480 or equivalent

Credits: 4

**CSCI 584 - Scientific Visualization**

Introduction to the computer display of scientific datasets. Topics include visualizing 2D and 3D scalar and vector fields, visualizing nonlinear relationships, and user interface design.

**Prerequisites & Notes:** CSCI 480 or equivalent

Credits: 4

**CSCI 585 - Image Processing**

Digital image fundamentals, image transforms, image enhancements, image restoration, image encoding, representation and description, color image processing, morphological operations.

**Prerequisites & Notes:** CSCI 480.

Credits: 4

**CSCI 590 - Graduate Seminar**

Students are expected to present and discuss state-of-the-art computer science research papers in various topics. All graduate students must present their MS research in this class before graduation. External speakers may be invited. The objectives are to expose students to a wide range of state-of-the-art research topics and to provide opportunities for students to share research experiences. Repeatable to a maximum of 6 credits.

**Prerequisites & Notes:** Graduate student status.

Credits: 1

**CSCI 601 - Area of Specialization Research Experience I**

Work on ongoing research project. Credit given when CS 601, 602 and 603 completed. S/U grading.

**Prerequisites & Notes:** instructor permission

Credits: 4

**CSCI 602 - Area of Specialization Research Experience II**

Work on ongoing research project. Credit given when CS 601, 602 and 603 completed. S/U grading.

**Prerequisites & Notes:** CSCI 601; instructor permission

Credits: 4

**CSCI 603 - Area of Specialization Research Experience III**

Work on ongoing research project. S/U grading.

**Prerequisites & Notes:** CSCI 601, CSCI 602; instructor permission

Credits: 4

**Communication Sciences & Disorders**

*Courses numbered X37; X97; 300, 400, 500; 417, 445, 517, 545 are described in the University Academic Policies section of this catalog.*

**CSD 251 - Introduction to Communication Disorders**

An introduction to the disciplines of speech-language pathology and audiology; survey of speech, language and hearing processes and disorders.

Credits: 3

**CSD 253 - Speech and Hearing Sciences for the Liberal Arts**

Basic concepts of speech production, speech acoustics, hearing and speech perception. Includes lab.

Credits: 4

**CSD 265 - Beginning Sign Language**

Introduction to the theory and practice of (pidgin) sign language.

Credits: 3

**CSD 301 - Writing Lab**

Instruction and practice in writing; includes opportunities for multi-drafting, revision, and reflection. Repeatable up to 2 credits.

**Prerequisites & Notes:** ENG 101.

Credits: 1

**CSD 352 - Anatomy and Physiology of Speech Mechanisms**

Structure and function of organs concerned with audition, respiration, phonation, resonance, articulation.

**Prerequisites & Notes:** Junior or senior status, or permission of instructor.

Credits: 5

**CSD 353 - Speech Science**

Acoustic and articulatory characteristics of the speech signal and their relation to speech production and perception.  
Lab required.

**Prerequisites & Notes:** junior standing, CSD 352, CSD 356, CSD 371

Credits: 5

**CSD 354 - Speech and Language Development in Children**

Typical speech and language acquisition; its impact on the developing child; origins and growth of symbolic processes, developmental norms; factors influencing learning of language and speech.

**Prerequisites & Notes:** Junior or senior status, or permission of instructor.

Credits: 3

**CSD 356 - Phonetics**

Training in recognition and production of sounds of spoken English through use of the International Phonetic Alphabet. Lab required.

**Prerequisites & Notes:** Junior or senior status, or permission of instructor.

Credits: 3

**CSD 361 - Language Disorders, Birth to Five**

Etiologies of language learning disabilities in children from birth to five years; diagnosis and treatment procedures.

**Prerequisites & Notes:** CSD 354

Credits: 4

**CSD 371 - Hearing Science**

Introduction to the nature of sound and its measurement. The structure and function of the auditory mechanism.

**Prerequisites & Notes:** CSD 352

Credits: 3

**CSD 372 - Hearing Disorders**

The nature, cause and treatment of hearing impairment.

**Prerequisites & Notes:** CSD 352

Credits: 3

**CSD 373 - Introduction to Phonology**

Phonological development, symptomatology, etiology and therapy for articulation disorders.

**Prerequisites & Notes:** CSD 251, CSD 352, CSD 356

Credits: 3

**CSD 381 - Physiological and Psychological Bases of Hearing**

The study of the structure and function of the auditory system. Analysis of significant theories in speech acoustics and speech perception. Examination of the effects of hearing impairment on speech perception.

**Prerequisites & Notes:** CSD 353, CSD 371 or instructor permission

Credits: 3

**CSD 401 - Writing Lab**

Instruction and practice in writing; includes opportunities for multi-drafting, revision, and reflection. Repeatable up to 2 credits.

**Prerequisites & Notes:** ENG 101.

Credits: 1

**CSD 450 - Neuroanatomy for Speech Pathology and Audiology**

Normal and abnormal structures of the human nervous system as they pertain to speech, language and hearing.

Particular emphasis on sensory and motor pathways, localization and lateralization.

**Prerequisites & Notes:** CSD 352 or equivalent; senior or graduate standing

Credits: 4

**CSD 451 - Language Disorders II**

Diagnosis and treatment procedures for school-age children with language-learning impairments.

**Prerequisites & Notes:** CSD 354, CSD 361

Credits: 3

**CSD 457 - Clinical Processes**

Current principles, methods and materials used in the assessment and treatment of a variety of communication disorders. Directed observation. Writing proficiency course.

**Prerequisites & Notes:** CSD 354, CSD 361, CSD 373, CSD 451

Credits: 5

**CSD 458 - Application of Clinical Processes to CSD**

Application of the clinical processes to service delivery, documentation, administrative procedures, and professional writing.

**Prerequisites & Notes:** CSD 457, graduate track, permission of instructor.

Credits: 3

**CSD 459 - Lab: Beginning Clinical Practice in Speech-Language Therapy**

Assistant clinician experience. Lab required. S/U grading.

**Prerequisites & Notes:** CSD 458; minimum 25 hours of documented speech-language pathology, audiology and/or aural rehabilitation observation; CSD 458, 459 concurrently with instructor permission

Credits: 1

**CSD 460 - Assess & Intervention in CSD**

Current principles, methods, and application of research-based theories to a dynamic clinical process which includes identification, prevention, assessment, and intervention for communication disorders. Lab required.

**Prerequisites & Notes:** CSD 354, CSD 361, CSD 373, CSD 451

Credits: 4

**CSD 462 - Audiometric Testing**

Introduction to the theory and application of pure tone, immittance and speech audiometry to the assessment of hearing function; implications for rehabilitation.

**Prerequisites & Notes:** CSD 371; graduate track only

Credits: 4

**CSD 463 - Aural Rehabilitation**

Listening training, speech reading, orientation to amplification devices, and coping skills for the aurally handicapped.

**Prerequisites & Notes:** CSD 371

Credits: 4

**CSD 464 - Clinical Practice in Aural Rehabilitation**

Supervised clinical practice in the (re)habilitation of the deaf and hard of hearing. Repeatable to a maximum of 6 credits. S/U grading.

**Prerequisites & Notes:** CSD major with minor in audiology or instructor permission; CSD 458, CSD 459, CSD 463; Minimum of 25 hours of speech-language or audiology or aural rehabilitation observation required

Credits: 2

**CSD 465A - Intermediate Sign Language**

Continued theory and practice of (pidgin) sign language.

**Prerequisites & Notes:** CSD 465

Credits: 2

**CSD 466 - Medical Audiology**

Pathologies of the hearing mechanism and their auditory manifestations. Discussion with physicians regarding diagnosis, referrals and report writing.

**Prerequisites & Notes:** CSD 371, CSD 462

Credits: 3

**CSD 468 - Clinical Practicum in Audiology**

Supervised clinical practice in audiological evaluation. Repeatable to a maximum of 6 credits. S/U grading.

**Prerequisites & Notes:** CSD major with minor in audiology or instructor permission; CSD 371, CSD 462; Minimum

of 25 hours of speech-language or audiology or aural rehabilitation observation required  
Credits: 2

**CSD 482 - Clinical Hearing Technology**

Study of history, development, and use of emerging technologies and special clinical instrumentation for the evaluation of hearing, auditory function, and balance.

**Prerequisites & Notes:** satisfactory completion of CSD 462 or instructor permission

Credits: 3

**CSD 483 - Amplification and Sensory Systems**

Study of history, development, and use of amplification and other sensory devices for treatment of hearing loss and auditory processing deficits.

**Prerequisites & Notes:** satisfactory completion of CSD 462 or instructor permission

Credits: 3

**CSD 485 - Children With Hearing Loss in School**

This course will introduce the student to the needs of the hearing impaired child in the public school environment, the public school laws affecting the placement of such children, and the types of remediation that occur in this setting.

**Prerequisites & Notes:** CSD 352

Credits: 3

**CSD 486 - Infants and Children With Hearing Loss**

Developmental milestones of auditory functions, implications of childhood hearing loss, and observation of pediatric assessment utilizing current evaluation techniques.

**Prerequisites & Notes:** CSD 371, CSD 462, or CSD 371 and permission of the instructor.

Credits: 3

**CSD 487 - Fundamentals of Hearing Conservation**

Noise as a public health hazard. The effect of noise on hearing. Noise abatement, control and protection. Federal and state noise regulations and compensation for noise induced hearing loss (NIHL).

**Prerequisites & Notes:** CSD 371, CSD 462.

Credits: 3

**CSD 488 - Hearing Loss in Adulthood**

Study of the nature and implications of hearing loss across the adult age spectrum. Anatomic and physiologic influences of aging on the auditory system and how these changes influence auditory function and communication will be highlighted.

**Prerequisites & Notes:** satisfactory completion of CSD 462 or instructor permission

Credits: 3

**CSD 490 - Social, Political, Cultural Aspects of Communication Disorders**

Introduction to social, political, and cultural forces impacting communication and communication disorders.

Overview of theories and research tools that guide our observations of these forces. Emphasis on becoming culturally competent in providing educational and health care services to diverse client population.

**Prerequisites & Notes:** CSD 251, CSD 353, CSD 354, CSD 361, CSD 373, and CSD 451

Credits: 3

**CSD 491 - Senior Research Project**

Research-based writing or field project under direction of faculty advisor. Must be taken Fall, Winter and Spring quarters of senior year for 2 credits each quarter. Repeatable to a maximum of 6 credits.

**Prerequisites & Notes:** satisfactory completion of CSD major courses or advisor permission

Credits: 2

**CSD 499 - Field Placement/Observation in Speech-Language Pathology or Audiology**

Off-campus field experience in an approved setting designed to introduce students to management of communication disorders. Subject to availability of suitable site. Repeatable up to 6 credits. S/U grading.

**Prerequisites & Notes:** Completion of undergraduate major required and instructor permission

Credits: 1 TO 6

**CSD 502 - Research Methods in Communication Sciences and Disorders**

Topics include research strategies and designs, measurement issues, evaluation criteria, treatment efficacy, and organization and analysis of data. Introduces students to group and single-subject research designs and qualitative research. Engages students in completing a research project.

Credits: 4

**CSD 510 - Organic Disorders**

A review of the etiologies and nature of cleft palate and cerebral palsy; related communication disorders; diagnostic and intervention approaches.

**Prerequisites & Notes:** CSD 352, CSD 450, CSD 458B or equivalent, or instructor permission

Credits: 3

**CSD 515 - Seminar: Phonology**

Current topics and issues on typical and disordered phonology, and the phonological basis of reading and writing, with a special emphasis on clinical implications of recent research findings.

**Prerequisites & Notes:** CSD 373

Credits: 4

**CSD 549 - Clinical Practicum**

Initial graduate experience in supervised clinical practicum.

**Prerequisites & Notes:** CSD Graduate status

Credits: 2

**CSD 550 - Voice Disorders and Therapy**

Pathological and psychological states affecting voice production. Functional psychogenic and organic problems of pitch, quality and loudness. Experience in diagnosis and evaluation of voice disorders. Developing techniques and learning methods for treatment and therapy. Lab required.

**Prerequisites & Notes:** CSD 351, CSD 352, CSD 450 or equivalent

Credits: 4

**CSD 551 - Survey of Speech Pathology and Audiology**

Examination of relevant issues and recent concepts, techniques and methods in speech-language pathology and audiology. S/U grading.

Credits: 1

**CSD 552 - Diagnostic Practicum in Speech-Language Pathology**

Discussion of the Diagnostic process and current diagnostic literature. Included with this class is an on-campus practicum using specialized methods, tests and instruments used in the assessment and evaluation of a variety of communication disorders.

**Prerequisites & Notes:** CSD 558; instructor permission

Credits: 3

**CSD 553 - Seminar: Preschool Language Development and Disorders**

Current topics and issues on typical and disordered language in preschool children, as well as factors related to language development. Special emphasis on clinical implications of recent research findings.

**Prerequisites & Notes:** CSD 354, CSD 361, CSD 515

Credits: 4

**CSD 554 - Stuttering**

Analysis of current models and recent research on stuttering and cluttering disorders; chief rationale for therapy and evaluation of therapy procedures and results. Review and practice of clinical assessment and intervention.

**Prerequisites & Notes:** CSD 454 or equivalent

Credits: 4

**CSD 555 - Seminar: Language Disorders in the School Age Child**

Current topics and issues on typical and disordered language in school-age children, as well as alternate treatment approaches for older children. Special emphasis on clinical implications of recent research findings.

**Prerequisites & Notes:** CSD 451, CSD 553

Credits: 4

**CSD 556 - Aphasia**

Descriptions, classifications and theoretical issues related to multimodality language-impaired adults following neurogenic brain dysfunction. Some discussion of diagnostic methods.

**Prerequisites & Notes:** CSD 450 or equivalent

Credits: 3

**CSD 557 - Advanced Speech Pathology**

Diagnosis and treatment of laryngectomees and traumatic brain injury. Discussion of issues relating to communication and aging.

Credits: 3

**CSD 558 - Graduate Clinical Practice in Speech-Language Pathology**

Supervised clinical practicum. Must be completed with a grade of B- or better. Repeatable to a maximum of 9 credits.

**Prerequisites & Notes:** Satisfactory completion of CSD 549 and permission of instructor.

Credits: 1 TO 3

**CSD 559 - Speech-Language Pathology Practicum**

Must be completed with a grade of B- or better.

Credits: 2

**CSD 560 - Speech-Language Pathology Practicum**

Supervised clinical practicum. S/U grading. Offered summer only.

**Prerequisites & Notes:** CSD 549, CSD 558

Credits: 2

**CSD 561 - Advanced Audiology I**

Study of basic auditory correlates and advanced diagnostic audiometric procedures.

**Prerequisites & Notes:** CSD 371, CSD 462; instructor permission

Credits: 3

**CSD 562 - Advanced Audiology II**

Theory and application of advanced diagnostic audiometric procedures.

**Prerequisites & Notes:** CSD 561

Credits: 3

**CSD 563 - Seminar: Aural Rehabilitation**

Issues related to the hearing-impaired population.

**Prerequisites & Notes:** CSD 463 or instructor permission

Credits: 3

**CSD 564 - Advanced Clinical Practice in Aural Rehabilitation**

Supervised practice in rehabilitation of the hard of hearing. Must be completed with a grade of B or better.

Repeatable to a maximum of 10 credits.

**Prerequisites & Notes:** CSD 458A, CSD 458B, CSD 463; minimum of 25 hours documented speech-language pathology/audiology and rehabilitation observation

Credits: 2

**CSD 565 - Psychoacoustics**

Application of standard psychophysical techniques and theory of signal detection to audiology research.

**Prerequisites & Notes:** CSD 561 or instructor permission

Credits: 3

**CSD 566 - Auditory Neurophysiology**

The ear as a transducer and analyzer; electrophysiological and mechanical properties of the ear.

**Prerequisites & Notes:** CSD 561; instructor permission

Credits: 3

**CSD 567 - Seminar: Hearing Conservation**

Noise as a public health hazard; the effects of noise on hearing; noise abatement, control and protection; federal and state noise regulations and compensation.

**Prerequisites & Notes:** CSD 562

Credits: 3

**CSD 568 - Advanced Clinical Practicum in Audiology**

To be taken in sequence; and a minimum of 25 hours of documented speech-language pathology/audiology and rehabilitation observations. Clinical practicum designed to advance skills in audiology. Must be completed with a grade of B or better. Repeatable to a maximum of 14 credits.

**Prerequisites & Notes:** CSD 371, CSD 462

Credits: 2

**CSD 569 - Advanced Clinical Practice in Aural Rehabilitation**

Supervised clinical practicum. S/U grading. Offered summer only. Repeatable to 4 credits.

**Prerequisites & Notes:** Satisfactory completion of CSD 458, CSD 459, CSD 463, and permission of instructor.

Credits: 2

**CSD 570 - Medical Audiology**

Pathologies of the hearing mechanism and their auditory manifestations. Discussion with physicians regarding diagnosis, referrals and report writing.

**Prerequisites & Notes:** CSD 371, CSD 462, CSD 561

Credits: 3

**CSD 571 - Hearing Aids I**

History, development and description of hearing aids and other amplification devices. Research into the electro-acoustic characteristics of hearing aids.

**Prerequisites & Notes:** CSD 462

Credits: 3

**CSD 572 - Hearing Aids II**

Evaluation procedures and fitting techniques for dispensing hearing aids and other amplification devices. Auditory training and counseling techniques covered as well as special instrumentation.

**Prerequisites & Notes:** CSD 571

Credits: 3

**CSD 573 - Seminar: Speech Acoustics**

In-depth study of the acoustic speech signal. Analysis of significant theories in speech production/acoustics.

Application of relevant acoustic principles in the evaluation and remediation of communicative disabilities.

**Prerequisites & Notes:** CSD 353 or instructor permission

Credits: 3

**CSD 574 - Seminar: Speech Perception**

Critical analysis of current issues in speech perception. Examination of the effects of communication disabilities on speech perception.

**Prerequisites & Notes:** CSD 353, CSD 573 or instructor permission

Credits: 3

**CSD 575 - Counseling in Communication Disorders**

Contemporary theories and techniques of counseling individuals with communication disorders and their families.

Credits: 3

**CSD 577 - Pediatric Audiology**

Developmental milestones of auditory function, implications of childhood hearing loss and supervised testing of pediatric patients utilizing basic and advanced testing techniques.

**Prerequisites & Notes:** CSD 371, CSD 462, CSD 568; instructor permission

Credits: 3

**CSD 578 - Seminar: Electrophysiological Testing**

Current topics and issues in specialized areas of averaged electro-encephalic audiometry and otoacoustic emissions; research trends and problems. Lab required.

**Prerequisites & Notes:** CSD 561, CSD 568 or instructor permission

Credits: 3

**CSD 579 - Aging and the Ear**

Anatomical and physiological influences of aging on the auditory mechanism and how these changes influence overall auditory function and communication.

**Prerequisites & Notes:** CSD 561, CSD 562

Credits: 3

**CSD 580 - Communication Disorders in the Public Schools**

Role of the professional in organizing and directing a speech-language therapy or audiology program in the public school setting. Required for public school certification.

**Prerequisites & Notes:** Second year graduate standing or instructor permission

Credits: 3

**CSD 581 - Infancy: Development, Disorders and Intervention**

Typical and atypical prenatal and infant development with special focus on the identification and management of infants with special needs. Assessment and treatment practices, including family issues.

Credits: 2

**CSD 582 - Medical Speech Pathology**

Current topics and issues related to the practice of speech pathology in a medical/clinical setting.

**Prerequisites & Notes:** Second year graduate standing or instructor permission

Credits: 2

**CSD 585 - Neuromotor Speech Disorders**

Current literature review and discussion of the nature of neurologically based speech disorders (dysarthrias and apraxia). Examination and practice of clinical intervention methods.

**Prerequisites & Notes:** CSD 450, CSD 556 or equivalent

Credits: 4

**CSD 586 - Diagnosis and Treatment of Adult Language Neurogenic Disorders**

Differential diagnosis assessment tools and theories of diagnostic methods. Treatment approaches for adult neurogenic disorders.

**Prerequisites & Notes:** CSD 450, CSD 556 or equivalent

Credits: 3

**CSD 587 - Seminar: Dysphagia**

Pathology and evaluation of swallowing disorders, diagnostic evaluations, and management/rehabilitative techniques.

**Prerequisites & Notes:** CSD 352, CSD 450, CSD 556, CSD 585

Credits: 1

**CSD 588 - Seminar in Augmentative and Alternative Communication**

Focus on evaluation and intervention for children, adolescence and adults with moderate to severe congenital or acquired disorders in speech and language who require augmentative and alternative models for oral or written communication.

**Prerequisites & Notes:** CSD 552, CSD 553, CSD 555, CSD 558 or instructor permission

Credits: 2

**CSD 589 - Library Research for CSD**

Instruction in finding, examining and evaluating scholarly database information. Ethical, social aspects of information, organization and techniques of research process. Use of the internet sources in obtaining and evaluating medical information. S/U grading.

Credits: 1

**CSD 598 - Internship in Speech-Language Pathology or Audiology**

Supervised, part-time experience providing opportunities to develop and demonstrate clinical competence in an approved setting. Placement is dependent on a suitable site. S/U grading. Repeatable up to 8 credits.

**Prerequisites & Notes:** Completion of plan of study; instructor permission; B or better in last clinic and minimum of 200 clinic clock hours; enroll in clinic the quarter prior to internship and have all administrative and clinical records current

**CSD 599 - Intern Speech/Lang Path/Aud**

Supervised, full-time, off-campus experience providing opportunities to develop and demonstrate clinical competence in an approved setting. Placement is dependent on a suitable site. S/U grading. Repeatable up to 16 credits.

**Prerequisites & Notes:** Completion of plan of study; instructor permission; B or better in last clinic and minimum of 225 clinic clock hours, 25 observation; enroll in clinic the quarter prior to internship and have all administrative and clinical records current

Credits: 8

**CSD 690 – Thesis**

**Repeatable to a maximum of 9 credits.**

Credits: 1 TO 9

**CSD 691 - Non-Thesis Option**

Writing based on research or clinical projects. This report to be used to help satisfy the non-thesis requirement.

Credits: 3

## Dance

Courses numbered X37; X97; 300, 400; 417, 445 are described in the University Academic Policies section of this catalog.

### DNC 100 - Mod-Hop I

Entry level technique class that is a fusion of contemporary dance styles, including hip-hop, African jazz and modern dance. Emphasis on rhythm, conditioning, isolation and individuality. Repeatable to a maximum of 6 credits. S/U grading. Was DNC 139.

Credits: 2

### DNC 101 - Open Ballet

No dance experience required. Basic principles of the ballet as an artistic and physical medium. Introduction to ballet terminology, basic barre exercises, simple combinations in adagio and allegro. Repeatable to a maximum of 6 credits. S/U grading. Was DNC 128.

**Prerequisites & Notes:** No dance experience required.

Credits: 2

### DNC 102 - Open Modern Dance

No dance experience required. The study of the basic principles of movement: space, time and effort. Emphasis on alignment and range of motion, creative movement and an appreciation of dance as an art form. Open to non-minors. Repeatable to a maximum of 6 credits. S/U grading. Was DNC 125.

**Prerequisites & Notes:** No dance experience required.

Credits: 2

### DNC 108 - Introduction to the Fine Arts: The Classics

This course focuses on those artists whose greatness has withstood the test of time, in Art, Dance, Music and Theatre. Guest lecturers, readings, discussions and reflective papers will explore connective threads of those individual artists who have made extraordinary contributions to society and culture.

Credits: 3

### DNC 111 - Ballet I - Level 1

Introduction to the basic principles of the ballet as an artistic and physical medium. Emphasis on French terminology, basic barre exercises, simple combinations in adagio and allegro. Open to non-majors. Repeatable to a maximum of 4 credits. Was DNC 138a.

**Prerequisites & Notes:** Permission of instructor.

Credits: 2

### DNC 112 – Ballet I – Level 2

Builds on principles introduced in DNC 111, including the basic principle of the ballet as an artistic and physical medium. Emphasis on French terminology, basic barre exercises, simple combinations in adagio and allegro. Open to non-majors. Repeatable to a maximum of 4 credits. Was DNC 138b.

**Prerequisites & Notes:** Permission of instructor, DNC 111

Credits: 2

### DNC 113 - Ballet I - Level 3

Builds on principles introduced in DNC 112, including the basic principles of the ballet as an artistic and physical medium. Emphasis on French terminology, basic barre exercises, simple combinations in adagio and allegro. Open to non-majors. Repeatable to a maximum of 4 credits. Was DNC 138c.

**Prerequisites & Notes:** Permission of instructor, DNC 112.

Credits: 2

### DNC 121 - Modern Dance I - Level 1

The study of the basic principles of movement: space, time, effort. Emphasis on alignment and range of motion, creative movement and an appreciation of dance as an art form. Repeatable to maximum of 6 credits.

**Prerequisites & Notes:** Permission of instructor.

Credits: 3

### DNC 122 - Modern Dance I - Level 2

The study of the basic principles of movement: space, time, effort. Emphasis on alignment and range of motion, creative movement and an appreciation of dance as an art form. Repeatable to a maximum of 6 credits.

**Prerequisites & Notes:** Permission of instructor, DNC 121.

Credits: 3

### DNC 123 - Modern Dance I - Level 3

The study of the basic principles of movement: space, time, effort. Emphasis on alignment and range of motion, creative movement and an appreciation of dance as an art form. Repeatable to a maximum of 6 credits.

**Prerequisites & Notes:** Permission of instructor, DNC 122.

Credits: 3

### **DNC 200 - Mod-Hop II**

More advanced exploration of contemporary dance styles, including hip-hop, African jazz, and modern dance. Emphasis on complex rhythm, phrasing and performance. Repeatable to a maximum of 6 credits. Was DNC 239.

**Prerequisites & Notes:** DNC 100 or permission of instructor.

Credits: 2

### **DNC 208 - Contact Improvisation**

This course explores the fundamentals of improvising with another dancer(s), primarily employing the momentum and support derived through physical contact with one's partner. Improvisation and partnering are skills essential to a dancer's development as genuine creators and performers. Repeatable up to 4 credits. S/U grading.

**Prerequisites & Notes:** Dance major or minor, or permission of instructor.

Credits: 2

### **DNC 211 - Ballet II - Level 1**

Further development in principles of ballet. Increased difficulty and terminology. Preparation for advanced levels. Repeatable to a maximum of 6 credits.

**Prerequisites & Notes:** Permission by audition

Credits: 2

### **DNC 212 - Ballet II - Level 2**

Further development in principles of ballet. Increased difficulty and terminology. Preparation for advanced levels. Repeatable to a maximum of 6 credits.

**Prerequisites & Notes:** Permission by audition, DNC 211.

Credits: 2

### **DNC 213 - Ballet II - Level 3**

Further development in principles of ballet. Increased difficulty and terminology. Preparation for advanced levels. Repeatable to a maximum of 6 credits.

**Prerequisites & Notes:** Permission by audition, DNC 212.

Credits: 2

### **DNC 221 - Modern Dance II - Level 1**

Further development in movement principles established in Modern Dance I. Repeatable to a maximum of 6 credits.

**Prerequisites & Notes:** Permission by audition, DNC 121, DNC 122, DNC 123.

Credits: 3

### **DNC 222 - Modern Dance II - Level 2**

Continues with further development in movement principles established in Modern Dance I. Repeatable to a maximum of 6 credits.

**Prerequisites & Notes:** Permission by audition, DNC 221.

Credits: 3

### **DNC 223 - Modern Dance II - Level 3**

Continues with further development in movement principles established in Modern Dance I. Repeatable to a maximum of 6 credits.

**Prerequisites & Notes:** Permission by audition, DNC 222.

Credits: 3

### **DNC 230 - Making Movement Art**

First-year students only. An investigation of how dances are made. Students will be exposed to movement art through readings, lectures, videos, live performances, interviews, out of class observations, and laboratory experiences. Students will also have the opportunity to interact with several dance faculty and guest artists as well as faculty in other departments of the College of Fine and Performing Arts. Was DNC 120.

**Prerequisites & Notes:** First-year students.

Credits: 3

### **DNC 231 - Introduction to Dance in Western Cultures**

An historical and cultural overview, from the primitive to the contemporary, of the development of dance as an art form in Western civilization.

**Prerequisites & Notes:** ENG 101 and 30 credits.

Credits: 3

**DNC 232 - Movement and Culture**

An investigation of movement and dance as a vehicle for understanding culture through movement labs, readings, films and discussions.

Credits: 3

**DNC 242 - Choreography I**

Introduction to basic principles of choreography: articulating a concept, finding movement vocabulary, and developing a structure. Prepares students to handle the rehearsal process from the point of view of a choreographer. Repeatable to a maximum of 6 credits.

**Prerequisites & Notes:** Concurrent enrollment in DNC 221 or instructor permission

Credits: 3

**DNC 243 - Dance and Technology I**

Introduction to sound and video editing software and filming/framing techniques for use in the creation of Dances for Camera and other time based art. Repeatable up to a maximum of 6 credits.

**Prerequisites & Notes:** DNC 242.

Credits: 3

**DNC 251 - Dance Production I**

Practical experience in technical theatre in preparation for an upcoming WWU dance production. Repeatable to a maximum of 2 credits. S/U grading.

**Prerequisites & Notes:** Dance major or minor.

Credits: 1

**DNC 252 - Dance Production II**

Practical experience in technical theater working on a WWU dance production. Repeatable to a maximum of 2 credits.

**Prerequisites & Notes:** Dance major or minor; DNC 251 or concurrent. S/U grading.

Credits: 1

**DNC 257 - Performance**

Direct instruction and experience in performance work. Repeatable to a maximum of 6 credits. S/U grading.

**Prerequisites & Notes:** being cast in a faculty-directed production

Credits: 2

**DNC 311 - Ballet III - Level 1**

Comprehensive barre and center floor work with emphasis on strength, flexibility, stamina, musicality, and performance projection in all areas of the class enchainments. Variations from classical Ballet repertoire may be included. Repeatable to a maximum of 12 credits.

**Prerequisites & Notes:** Permission by audition, DNC 211, DNC 212, DNC 213.

Credits: 3

**DNC 312 - Ballet III - Level 2**

Comprehensive barre and center floor work with emphasis on strength, flexibility, stamina, musicality, and performance projection in all areas of the class enchainments. Variations from classical Ballet repertoire may be included. Repeatable to a maximum of 12 credits.

**Prerequisites & Notes:** Permission by audition, DNC 311.

Credits: 3

**DNC 313 - Ballet III - Level 3**

Comprehensive barre and center floor work with emphasis on strength, flexibility, stamina, musicality, and performance projection in all areas of the class enchainments. Variations from classical Ballet repertoire may be included. Repeatable to a maximum of 12 credits.

**Prerequisites & Notes:** Permission by audition, DNC 312.

Credits: 3

**DNC 321 - Modern Dance III - Level 1**

Advanced studies of movement principles established in Modern Dance II. Repeatable to a maximum of 12 credits.  
Was DNC 335a in a previous catalog.

**Prerequisites & Notes:** Permission by audition, DNC 221, DNC 222, DNC 223 and DNC 339.

Credits: 4

**DNC 322 - Modern Dance III - Level 2**

Advanced studies of movement principles established in Modern Dance II. Repeatable to a maximum of 12 credits.  
Was DNC 335b.

**Prerequisites & Notes:** Permission by audition, DNC 321, DNC 339.

Credits: 4

### **DNC 323 - Modern Dance III - Level 3**

Advanced studies of movement principles established in Modern Dance II. Repeatable to a maximum of 12 credits.  
Was DNC 335c.

**Prerequisites & Notes:** Permission by audition, DNC 322, DNC 339.

Credits: 4

### **DNC 334 - Music and Movement**

An interdisciplinary examination of music and movement that addresses rhythmic acuity for the dancer, accompaniment for the dance teacher and underscoring dance for the choreographer. Repeatable to a maximum of 6 credits.

**Prerequisites & Notes:** DNC 221, DNC 222, DNC 223 or formal music instruction at the 100 level or permission of instructor.

Credits: 2

### **DNC 339 - Functional Alignment**

An internal exploration of functional alignment and its practical application towards movement and dancing. Experiential exercises that will enable the development and increased awareness of anatomical alignment and its relationship to range of motion, flexibility, strength, and movement potential. Introduction to proper anatomical and kinesiological terminology. Repeatable to a maximum of 6 credits. Was DNC 237.

**Prerequisites & Notes:** DNC 121, DNC 122, DNC 123 or permission of instructor.

Credits: 3

### **DNC 340 - Anatomy for Dancers**

An investigation of the human body and how it works. Through lectures, readings and laboratory experiences, students will analyze skeletal systems, individual differences, common dance injuries, and proper conditioning for dancers. Was DNC 236.

**Prerequisites & Notes:** DNC 339 or permission of instructor.

Credits: 4

### **DNC 342 - Choreography II**

Further study of the principles of choreography. In addition to concepts, movement, vocabulary and structure this class involves experimentation with theme and development, use of music, as well as construction/deconstruction/reconstruction of choreographic forms and content. Training the thinking artist and the artistic thinker. Repeatable to a maximum of 8 credits.

**Prerequisites & Notes:** DNC 242.

Credits: 4

### **DNC 343 - Dance and Technology II**

Builds on skills learned in DNC 243 and applies an artistic process to the use of editing software and video equipment; combining visual design, choreographic skills and advanced filming and editing techniques to create Dances for the Camera and other time based art. Repeatable to a maximum of 6 credits.

**Prerequisites & Notes:** DNC 223, DNC 243, DNC 342.

Credits: 3

### **DNC 345 - Fundamentals of Contemporary Partnering**

Students explore elements of contemporary partnering including transfer of weight, momentum/leverage, counter balancing and moving in harmony. The class is not gender specific. The warm-up includes exercises to enhance kinesthetic awareness and to facilitate ease and comfort in lifting and being lifted. Repeatable to a maximum of 6 credits.

**Prerequisites & Notes:** DNC 221, DNC 222, DNC 223 or permission of instructor.

Credits: 2

### **DNC 357 - Repertory**

The process work, which leads to performance, involved in the creation and/or reconstruction of a major choreographic work. Repeatable to a maximum of 8 credits.

**Prerequisites & Notes:** permission by audition

Credits: 2 TO 6

### **DNC 403 - Senior Seminar**

This course is designed for senior Dance majors to focus on skills and knowledge important for a successful transition to graduate school or professional employment in dance.

Credits: 1

**DNC 404 - Capstone Preparation**

This course is designed to assist BFA candidates with their rehearsal processes, as performers and as choreographers, in preparation for and presentation of their culminating Capstone performances.

**Prerequisites & Notes:** BFA degree candidacy, senior status.

Credits: 1

**DNC 421 - Modern Dance IV - Level 1**

A performance approach to dance techniques - phrasing, musicality and clarity of intentions are emphasized at this level. Repeatable to a maximum of 12 credits. Was DNC 435a.

**Prerequisites & Notes:** Permission by audition, DNC 321, DNC 322, DNC 323.

Credits: 4

**DNC 422 - Modern Dance IV - Level 2**

A performance approach to dance techniques - phrasing, musicality and clarity of intentions are emphasized at this level. Repeatable to a maximum of 12 credits. Was DNC 435b.

**Prerequisites & Notes:** Permission by audition, DNC 421.

Credits: 4

**DNC 423 - Modern Dance IV - Level 3**

A performance approach to dance techniques - phrasing, musicality and clarity of intentions are emphasized at this level. Repeatable to a maximum of 12 credits. Was DNC 435c.

**Prerequisites & Notes:** Permission by audition, DNC 422.

Credits: 4

**DNC 430 - Real Life Skills for Dancers**

This course helps students to explore their personal goals, aesthetics involved in goal setting, and to develop a resume and Capstone portfolio. The course will examine emotional and physical well-being as well as graduate education and career opportunities in dance.

**Prerequisites & Notes:** Dance major with junior or senior status.

Credits: 2

**DNC 431 - History of Western Dance Since 1450**

Ballet and modern dance forms of Western culture from the Renaissance into the era of contemporary movement art. Will include reviews of live performances, and study of leading dance artists and their historical significance. This course explores effective writing in the discipline of Dance through reflection, critical analysis, and historical research.

**Prerequisites & Notes:** DNC 231

Credits: 4

**DNC 433 - Creative Movement for Educators With Lab**

Methodologies of teaching creative movement to children. Exploration and integration of the elements of space, time, and effort as reflective of the Essential Academic Learning Requirements in the dance arts.

**Prerequisites & Notes:** Permission of instructor.

Credits: 4

**DNC 434 - Dance Arts in Education**

Materials for the methodology of teaching the formal dance techniques of modern dance and ballet for students of the dance major and additional teaching endorsement. Observations and teaching opportunities included.

**Prerequisites & Notes:** DNC 339, DNC 340; demonstrated competency at advanced level of technique

Credits: 3

**DNC 442 - Advanced Choreography**

Practical application of choreographic process in the performance setting. Experience in collaboration with costume and lighting designers to support and realize choreographic intention by means of the unity of supporting elements. Repeatable to a maximum of 8 credits.

**Prerequisites & Notes:** DNC 342 or instructor permission

Credits: 4

**Decision Sciences**

*Courses numbered X37; X97; 300, 400; 417, 445 are described in the University Academic Policies section of this catalog.*

**NOTE:** Not all courses are offered every year. Several elective courses are offered only once each year. See the online Timetable of Classes for current offerings. Consult department for answers to specific questions.

**DSCI 205 - Business Statistics**

Statistical methods used in business research, analysis and decision making; preparation and presentation of data, frequency distributions, measures of central tendency and dispersion, statistical inference, regression and correlation.

**Prerequisites & Notes:** MATH 156 or MATH 114 or MATH 118, or equivalent.

Credits: 4

#### **DSCI 305 - Applied Business Statistics**

Applications of business statistics to research, analysis, and decision making in business. Regression, correlation, analysis of variance, and nonparametric tests, with emphasis on the use of business-oriented computer statistical packages.

**Prerequisites & Notes:** MATH 157 or MATH 124 or MATH 128; and DSCI 205.

Credits: 4

#### **DSCI 405 - Simulation Models for Decision Making**

Introduction to building computer-based simulation models for business decision making. Data collection and input analysis, model building of both Monte Carlo and discrete event simulations, output analysis and validation, and experimental design. Development of computer models to solve complex business problems in MIS, operations, finance, or marketing.

**Prerequisites & Notes:** DSCI 305 or equivalent; C- or better

Credits: 4

### **Design**

*Courses numbered X37; X97; 300, 400; 417, 445 are described in the University Academic Policies section of this catalog.*

#### **DSGN 211 - Foundations of Visual Communication**

Issues and topics related to the development of visual communication/graphic design with emphasis on the development of typographic and print culture. Was A/HI 211 in previous catalog.

Credits: 3

#### **DSGN 251 - Computers in Visual Problem-Solving**

Methods and techniques for expressing visual/verbal concepts with the use of the computer. Introduction to software programs used for type and image generation and manipulation. Was ART 251 in previous catalog.

**Prerequisites & Notes:** ART 110, ART 120

Credits: 4

#### **DSGN 252 - Drawing and Visualization**

A drawing course which stresses rendering and re-creating real and conceptualized situations through an intense study of objects, environments, the human form in motion and visualization techniques. Was ART 252 in previous catalog.

**Prerequisites & Notes:** ART 110 or equivalent

Credits: 4

#### **DSGN 270 - Graphic Design I**

Introductory lecture/lab class in layout and design with an emphasis on typography. Was ART 270 in previous catalog.

**Prerequisites & Notes:** ART 110, ART 120

Credits: 4

#### **DSGN 312 - Graphic Design in the 20th Century**

History of modern graphic design and illustration.

**Prerequisites & Notes:** DSGN 211 and one from A/HI 240, A/HI 241, A/HI 240a or A/HI 240b.

Credits: 4

#### **DSGN 352 - Illustration**

Concepts and techniques of illustration; idea development, problem solving and printing considerations. Lecture/lab format. Was ART 352 in previous catalog.

**Prerequisites & Notes:** DSGN 252 or equivalent

Credits: 4

#### **DSGN 356 - Web Design and Production**

Methods and concepts of designing for an online experience, including a working knowledge of scripting languages, image optimization, file organization, information architecture, and usability.

**Prerequisites & Notes:** DSGN 371

Credits: 5

#### **DSGN 371 - Design II**

Intermediate lecture/lab class in layout and design with an emphasis on conceptual issues. Was ART 371 in previous catalog.

**Prerequisites & Notes:** DSGN 251, DSGN 252, DSGN 270 or equivalent

Credits: 5

#### **DSGN 372 - Design Production Processes**

Issues and topics in the development of printing technology, traditional and electronic; relationship of design, print and service sectors in the production of print communication.

Credits: 3

#### **DSGN 373 - Design Production Application**

Application of terminology and software in the design and production of a collaborative print project involving relief, digital and offset printing technologies. Was DSGN 372b in previous catalog.

**Prerequisites & Notes:** DSGN 251 or equivalent and concurrent enrollment in DSGN 372 (for design concentrations only)

Credits: 2

#### **DSGN 374 - Publication Design**

Publication design including editorial, newsletter and product catalogs, with emphasis on using the computer as a design tool. Lecture/lab format. Was ART 374 in previous catalog.

**Prerequisites & Notes:** DSGN 251 and DSGN 270 or equivalent

Credits: 5

#### **DSGN 375 - Summer Design Abroad**

Team taught. Opportunity for students to experience design on an international level. Extensive workshop/field trip format combines lectures by prominent designers, visitations to design firms and international corporations as well as opportunities to attend museums and expositions featuring design. Repeatable to a maximum of 14 credits. Offered summers only. Was ART 375 in previous catalog.

Credits: 7

#### **DSGN 377 - Book Arts Production**

Course in the history, methods and practices of book design, structures and their application in the production of limited edition and unique formats employing primarily letterpress and offset printing techniques. Students produce a collaborative book project. Lecture/lab. Was ART 377 in previous catalog. Repeatable to a maximum of 15 credits.

**Prerequisites & Notes:** DSGN 371 or equivalent

Credits: 5

#### **DSGN 379 - Typography**

Focus on the use of type as an informative and expressive visual/verbal element in graphic design. Intermediate problems in typographic communications. Lecture/lab format. Was ART 379 in previous catalog.

**Prerequisites & Notes:** DSGN 371 or equivalent; variable fee

Credits: 5

#### **DSGN 451 - Digital Video**

Concepts and techniques of digital video for artists and designers. Was ART 451 in previous catalog.

**Prerequisites & Notes:** DSGN 356 or equivalent; successful junior portfolio review.

Credits: 5

#### **DSGN 454 - Digital Media Design**

Approaches and concepts in designing for a digital environment, focusing on user-interface, interactivity, and time-based sequence design.

**Prerequisites & Notes:** DSGN 356 or equivalent, and successful junior portfolio review.

Credits: 5

#### **DSGN 457 - Motion Graphic Design**

Concepts and techniques of designing for time-based media, including motion graphics, animation, composting, and sound design.

**Prerequisites & Notes:** DSGN 454

Credits: 5

#### **DSGN 459 - Senior Projects in New Media**

Directed projects in new media aimed at preparing a professional portfolio. Was ART 459 in previous catalog.

**Prerequisites & Notes:** DSGN 457 or equivalent

Credits: 5

**DSGN 470 - Advanced Graphic Design**

Advanced projects in logo design and graphic identity systems. Lecture/lab studio format. Was ART 470 in previous catalog.

**Prerequisites & Notes:** DSGN 379 or equivalent; successful junior portfolio review

Credits: 5

**DSGN 471 - Three-Dimensional Graphic Design**

Concepts and techniques of three-dimensional graphic design - packaging, point-of-purchase, signage, environmental graphic design, sequential graphic design. Lecture/lab format. Was ART 471 in previous catalog.

**Prerequisites & Notes:** DSGN 470 or equivalent

Credits: 5

**DSGN 472 - Materials and Finishing**

Current issues in design production with an emphasis on materials and finishing processes.

**Prerequisites & Notes:** DSGN 377

Credits: 5

**DSGN 473 - Advanced Design Production**

Advanced projects relating to current trends in graphic arts production. Was ART 473 in previous catalog.

**Prerequisites & Notes:** DSGN 373 or equivalent; successful junior portfolio review.

Credits: 5

**DSGN 476 - Senior Projects in Graphic Design**

Directed work in graphic design aimed at preparing pieces for a graphic design portfolio. Was ART 476 in previous catalog.

**Prerequisites & Notes:** DSGN 471 or equivalent

Credits: 5

**DSGN 477 - Senior Projects in Design Production**

Directed work in graphic reproduction aimed at preparing pieces for a graphic reproduction portfolio. Was ART 477 in previous catalog.

**Prerequisites & Notes:** DSGN 473 or equivalent

Credits: 5

**DSGN 479 - Professional Practices in Graphic Design, New Media and Design Production**

Current trends, professional issues and practices. Preparation of a professional portfolio. Repeatable to a maximum of 6 credits. Was ART 479 in previous catalog.

**Prerequisites & Notes:** DSGN 356, DSGN 373, DSGN 379 or equivalent and successful junior portfolio review.

Credits: 3

**East Asian Studies**

*Courses numbered X37; X97; 300, 400; 417, 445 are described in the University Academic Policies section of this catalog.*

**EAST 201 - Introduction to East Asian Civilizations**

The origins and evolution of the political, economic, cultural and social aspects of East Asian civilization in through the early-modern period. Also taught as HIST 280.

**Prerequisites & Notes:** also offered as HIST 280

Credits: 5

**EAST 202 - East Asian History in the Early-Modern Eras and Modern Eras**

Examines political, cultural and social aspects of East Asian civilizations with attention to the early-modern and modern periods. Also taught as HIST 281.

**Prerequisites & Notes:** also offered as HIST 281

Credits: 5

**EAST 210 - Nomads of Eurasia**

Surveys the origins, cultures and languages of the pastoral peoples of Eurasia, including Mongols, Turks, Arabs, peoples of Iran and Afghanistan, as well as the native tribes of Siberia and the North Pacific Rim. Also taught as EUS 210.

**Prerequisites & Notes:** also offered as EUS 210

Credits: 5

**EAST 230 - Modern Chinese Society and Language**

A survey of the characteristics of the Chinese language. A study of the relationships among Chinese culture, contemporary society and language variation.

Credits: 3

**EAST 302 - Methods and Materials in East Asian Studies**

Research methods in East Asian studies; organization of Chinese and Japanese libraries; principal journals, reference tools and scholarly apparatus for various areas of East Asia.

**Prerequisites & Notes:** EAST 201, EAST 202; one year of Chinese or Japanese

Credits: 3

**EAST 313 - Early Inner Asia**

A detailed history of the Eurasian steppe and desert tribes from the earliest times to the rise of the Mongols under Chingiz Khan in the late 12th century. Discusses the complex cultural and political interplay among the early Indo-European, Turkic and Mongol pastoralists as well as their often cataclysmic interaction with the sedentary civilizations of the world.

**Prerequisites & Notes:** EAST 201 or EAST 202 or EAST 210 or HIST 280 or HIST 281 or instructor permission

Credits: 4

**EAST 314 - The Mongols**

Documents the history of the Eurasian steppes from the rise of Chingiz Khan to the present day. Describes the creation of the world's largest empire, its gradual disintegration and its partial absorption by the agricultural societies on its periphery. Includes analysis of recent political events in this area of the world.

**Prerequisites & Notes:** EAST 201 or EAST 202 or EAST 210 or HIST 280 or HIST 281 or instructor permission

Credits: 4

**EAST 367 - Chinese Literature in Translation**

Selected readings in Chinese literary masterpieces from earliest to modern times.

**Prerequisites & Notes:** EAST 201 or EAST 202 or CHIN 103 or LBRL 272 or LBRL 277 or instructor permission

Credits: 5

**EAST 368 - Japanese Literature in Translation**

Selected readings in Japanese literary masterpieces from early modern times to the present.

**Prerequisites & Notes:** EAST 201 or EAST 202 or LBRL 272 or LBRL 275 or instructor permission

Credits: 5

**Early Childhood Education**

*Courses numbered X37; X97; 300, 400; 417, 445 are described in the University Academic Policies section of this catalog.*

**ECE 380 - Foundations of Literacy for Early Childhood Education**

Examines research-based literacy development for children, pre-Kindergarten through grade three. Topics include theoretical perspectives on literacy development; influence of language and culture on literature development; and research-based literacy instruction and materials. Emphasis on assessment of early literacy development.

**Prerequisites & Notes:** Admission to Woodring College of Education or Permission of Instructor

Credits: 4

**ECE 390 - Infant and Toddler Practicum and Seminar**

Child development theories, learning principles and processes for infants and toddlers. Includes observations in early childhood settings to document actions of infants/toddlers to understand how and what children learn. Weekly seminar and practicum.

**Prerequisites & Notes:** Admission to Woodring College of Education or Permission of Instructor

Credits: 4

**ECE 391 - Preschool Practicum and Seminar**

Child development for the ages of three years to eight years. Theories, learning principles and processes for children three to eight years. Includes observations in early childhood settings to document children

**Prerequisites & Notes:** Admission to Woodring College of Education or Permission of Instructor

Credits: 4

**ECE 430 - Creativity & Play in ECE**

Developing the skills and techniques for working with children in the arts. Includes visual art, music, drama, and dance/movement. Emphasis on cognitive and literacy development in the context of play.

**Prerequisites & Notes:** ECE 434 or Permission of Instructor

Credits: 4

**ECE 431 - Fundamentals of Early Childhood Education**

Introduction to the field of early childhood education. Includes historical perspectives, philosophical bases, major theories, professional ethics, developmentally appropriate practices, curricular approaches, types of early childhood settings, role of the teacher and educational issues.

**Prerequisites & Notes:** Admission to Woodring College of Education or Permission of Instructor

Credits: 4

**ECE 432 - Social Studies for Early Childhood Education**

Content, skills, and techniques for teaching social studies in preschool through grade 3. Includes study of integrated curriculum, curriculum unit design.

**Prerequisites & Notes:** ECE 430 or Permission of Instructor

Credits: 4

**ECE 434 - Environments for Early Learning**

Elements important to the design of learning environments for young children. Covers the principles that transform space into engaging places and the relationship of the social and physical environment that support the curriculum. Includes work in early childhood classroom settings to integrate current theory, principles and early childhood education practices.

**Prerequisites & Notes:** ECE 390 or 391 or Permission of Instructor

Credits: 4

**ECE 435 - Child Abuse and Neglect**

Examines multiple issues related to the identification and reporting of young children where abuse and neglect are suspected. Study of child maltreatment, family dynamics and preventive strategies for child, family and community. Examination of ecological perspective and a risk/resilience framework.

**Prerequisites & Notes:** Admission to Woodring College of Education or Permission of Instructor

Credits: 4

**ECE 438 - Family and Community Relationships**

Examines the importance of family partnerships in a variety of early childhood education programs and describes family-centered principles and approaches. Emphasis on the role of families in educational programs, diversity in families, family systems, communication with families, community resources, and conferencing with families.

**Prerequisites & Notes:** Admission to Woodring College of Education or Permission of Instructor

Credits: 4

**ECE 439 - Curriculum Planning in Early Childhood Education**

Approaches for planning integrated and meaningful curriculum in early childhood programs, PreK-primary.

**Prerequisites & Notes:**

ECE 432; Corequisite ECE 495; or Permission of Instructor

Credits: 4

**ECE 495 - Internship – Preschool**

Supervised teaching experience to develop and demonstrate teaching competence at the preschool level. S/U grading.

**Prerequisites & Notes:** Recommendation for supervised teaching

Credits: 6

**ECE 496 - Internship - Primary**

Supervised teaching experience to develop and demonstrate teaching competence at the primary level. S/U grading.

**Prerequisites & Notes:** Recommendation for supervised teaching

Credits: 10

**ECE 498 - Seminar in Early Childhood Education**

Seminar synthesizes the internship experience by providing a forum for discussion of internship objectives and topics.

Repeatable once for credit. Must be taken with both ECE 495 and ECE 496. S/U grading.

**Prerequisites & Notes:** Corequisite ECE 495 or ECE 496

Credits: 2

**Economics**

*Courses numbered X37; X97; 300, 400; 417, 445 are described in the University Academic Policies section of this catalog.*

**ECON 101 - Markets and Society**

An introduction to the U.S. economy and its role in the world economy. Analysis of current economic controversies at home and abroad. Issues may include overall economic performance, problems of hunger and poverty, and the issues of economic insecurity, inequality, and sustainability. The course will examine the emergence of globalization

and regionalism, and their implications for the workers and the environment.

Credits: 4

#### **ECON 140 - The Ecology and Economics of Salmon Recovery**

Focus on the 4 causes of salmon decline (Habitat, Hydropower, Harvest, and Hatcheries) to investigate the interactions between ecology and economics through lectures, reading and independent projects. Also offered as BIOL 140.

Credits: 4

#### **ECON 206 - Introduction to Microeconomics**

An overview of the modern market economy as a system for dealing with the problem of scarcity. Operation and decision-making of economic units; supply, demand and resource allocation; analysis of various market and industry structures; shortages, controls, social costs and benefits; international trade; comparative systems.

**Prerequisites & Notes:** MATH 112 or equivalent

Credits: 4

#### **ECON 207 - Introduction to Macroeconomics**

An overview of the modern market economy as a system for dealing with the problem of scarcity. The analysis of relationships among such variables as national income, employment, inflation and the quantity of money. The roles of government expenditure, taxation and monetary policy; international finance; economic development.

**Prerequisites & Notes:** ECON 206 or ECON 446 or ECON 101; MATH 112 or equivalent

Credits: 4

#### **ECON 301 - Economics Issues**

Applies the tools and concepts learned in introductory micro and macro economics to a variety of contemporary issues. Emphasizes verbal and written communication skills through active participation in classroom activities.

Enrollment priority given to economics majors. (Communications focus course.)

**Prerequisites & Notes:** ECON 206, ECON 207

Credits: 4

#### **ECON 303 - The History of Economic Thought**

Development of economic thought from the Greek philosophers to the present. Emphasis on the micro, macro and critical traditions in economics following Adam Smith.

**Prerequisites & Notes:** ECON 206, ECON 207

Credits: 4

#### **ECON 306 - Intermediate Microeconomics**

An analytical approach to the consumer, the firm and markets. The theory of pricing under conditions of perfect and imperfect market structures; the theory of factor markets.

**Prerequisites & Notes:** ECON 206; MATH 124 or MATH 157 or equivalent

Credits: 4

#### **ECON 307 - Intermediate Macroeconomics**

Examination of the factors that determine the level of income, employment, output and prices in an economic system. Review and analysis of recent U.S. economic policy and performance.

**Prerequisites & Notes:** ECON 207; MATH 124 or MATH 157 or equivalent

Credits: 4

#### **ECON 308 - Sports Economics**

Economic analysis of the sports industry. Topics include the market for sports, the market for labor in sports, owners' goals, league structure, government involvement, and the role of the media and fans in the industry. Emphasis is on professional sports.

**Prerequisites & Notes:** ECON 206

Credits: 4

#### **ECON 309 - Managerial Economics**

Application of economic principles to managerial decision making. Topics may include: Demand, costs and market structure and their relation to pricing, product choice and resource allocation. Cannot be counted towards majors in economics. Cannot be counted towards majors in economics.

**Prerequisites & Notes:** ECON 206; MATH 124 or MATH 157 or equivalent

Credits: 4

#### **ECON 310 - Public Finance**

The efficiency, equity and stabilization impacts of public expenditure and revenue programs; emphasis on problems and institutions at the national level.

**Prerequisites & Notes:** ECON 206, ECON 207

Credits: 4

### **ECON 311 - Money and Banking**

The nature and functions of money and the role of depository institutions and central banks in affecting the supply of money and credit in the U.S. Considers the changing U.S. financial environment and the influence of monetary policy on interest rates, prices and the overall level of economic activity. Cannot be counted towards the Financial Economics major.

**Prerequisites & Notes:** ECON 206, ECON 207

Credits: 4

### **ECON 315 - Health Economics**

An introductory course in health economics. Students will learn about the supply and demand of health services as well as spending on health care. Students will gain knowledge of the health care sector and health economics in the U.S. to allow intelligent discussion/analysis of policy proposals.

**Prerequisites & Notes:** ECON 206, DSCI 205 or permission of instructor.

Credits: 4

### **ECON 317 - European Economic History**

Examines the development and industrialization process in Europe, emphasizing the main topic of what caused the industrialization process in each country. Countries to be studied include England, France, Germany and Russia.

**Prerequisites & Notes:** ECON 206 and ECON 207.

Credits: 4

### **ECON 325 - Labor Market Economics**

Economics of the labor market, including labor force participation, racial and sexual discrimination, the role of unions, collective bargaining, investments in human capital, and the structure of compensation.

**Prerequisites & Notes:** ECON 206

Credits: 4

### **ECON 333 - Introduction to Game Theory**

An analytical approach to the study of strategic interaction. Development of basic theory, including topics such as Nash equilibrium, repeated games, credibility, and mixed strategies. Applications will include markets and competition, auction design, voting, and bargaining.

**Prerequisites & Notes:** ECON 206

Credits: 4

### **ECON 337 - Economics Study Abroad**

This provides economics credit for courses taken abroad in a program approved by WWU. Students must present sufficient documentation to show that the material was successfully completed with a letter grade and is appropriate for upper division elective credit in Economics. S/U grading.

**Prerequisites & Notes:** Enrollment in a WWU-approved study abroad program.

Credits: 4

### **ECON 340 - Economics of Regulation**

This course covers broad questions regarding the benefits and costs of a wide range of regulatory policies such as: antitrust, pricing and entry regulation of public utilities, environmental regulation, and safety regulation. Included the main policy arguments concerning how and why the behavior of business should be restricted by government in its efforts to increase the well-being of the public.

**Prerequisites & Notes:** ECON 101 or ECON 206.

Credits: 4

### **ECON 343 - Population, Environment, and World Agriculture**

Utilizes economic principles to understand the interactions among population growth, food demand, agricultural development, and natural resource utilization, degradation, and conservation.

**Prerequisites & Notes:** ECON 206

Credits: 4

### **ECON 355 - The Political Economy of Language and Culture**

An examination of the economics and politics of language and language policy.

**Prerequisites & Notes:** ECON 206, or admission to Fairhaven College, or permission of instructor.

Credits: 2

**ECON 360 - Introduction to International Business**

The course will introduce students to the theory, practice, and institutions of international economics. Students will learn how the world economy works, the major benefits that it provides to people and nations, and the most serious problems that it faces.

**Prerequisites & Notes:** ECON 206 and ECON 207.

Credits: 4

**ECON 364 - Topics in Canadian Economic History**

Selected issues in the development of the Canadian economy from the 17th century to the present. Examines the importance of resources, agriculture and transportation in the economic growth of Canada.

**Prerequisites & Notes:** ECON 206

Credits: 2

**ECON 365 - The Canadian Economy**

Examination of 20th-century Canadian economic policy. Topics focus on current economic issues in Canada.

**Prerequisites & Notes:** ECON 206, 207

Credits: 4

**ECON 375 - Introduction to Econometrics**

Use of statistical methods to estimate and test economic models. Theory and application of multiple regression techniques, with emphasis on the problems arising in the analysis of economic data.

**Prerequisites & Notes:** ECON 206, ECON 207; MATH 341 or DSCI 205; MATH 124 or MATH 157 or equivalent

Credits: 4

**ECON 380 - Urban Economics**

Economic forces behind urban development, with emphasis on location decisions of households and firms. Economic analysis of urban problems including land use, transportation, housing and urban public finance.

**Prerequisites & Notes:** ECON 206

Credits: 4

**ECON 381 - American Economic History**

American economic development from 17th century to present. Emphasis on resource endowment, social and economic conditions and institutions, growth and development processes, and the role of government.

**Prerequisites & Notes:** ECON 206, ECON 207

Credits: 4

**ECON 383 - Environmental Economics**

Explores the economic basis of environmental issues and policies. An examination of property rights, externalities and the common-property basis of environmental problems. Alternative policies are analyzed, involving such issues as air and water pollution, solid-waste disposal, hazardous substances, wilderness preservation and the protection of endangered species.

**Prerequisites & Notes:** ECON 206

Credits: 4

**ECON 384 - Energy Economics**

The role of energy in the economy and key aspects of energy supply and demand. Topics include the interrelationships among energy use, economic growth, and the environment; conservation; solar and "unconventional" energy sources; world oil markets; regulation of gas and electric utilities; and U.S. energy policy.

**Prerequisites & Notes:** ECON 206

Credits: 4

**ECON 385 - Comparative Economic Systems**

A comparative analysis of the major world economic systems, including a critical appraisal of underlying philosophies, economic theories, structures, and performance. Includes case studies of specific economies, and the study of reform and transformation of economic systems, especially capitalism and socialism.

**Prerequisites & Notes:** ECON 206 or ECON 207

Credits: 4

**ECON 388 - Economics of the European Union**

The European Union (EU) is the most advanced case study in multinational economic integration of our time. Topics covered include the theory of economic integration, institutions of the EU, various current policy and agenda issues, and a look at EU economic relations with the U.S. and world economies.

**Prerequisites & Notes:** ECON 206, ECON 207

Credits: 2

**ECON 389 - Economies of the Pacific Rim**

The Pacific Rim treated as a distinct economic region. Topics include economic development patterns, interdependence, and economic achievements and problems. Specific emphasis on trade, development and policy relations involving the U.S., Japan and the so-called newly industrialized countries.

**Prerequisites & Notes:** ECON 206, ECON 207

Credits: 2

**ECON 390 - Internship in Economics**

Eligibility outlined in departmental internship policy statement. Repeatable to a maximum of 10 credits.

**Prerequisites & Notes:** ECON major; permission required

Credits: 2 TO 10

**ECON 406 - Topics in Microeconomics**

Application of quantitative and theoretical tools in key areas of microeconomics, with emphasis on quantitative models of the consumer, cost and production analysis of the firm, and market analysis. Special topics may include choice under uncertainty, capital markets, game theory, general equilibrium theory, and the economics of information.

**Prerequisites & Notes:** ECON 306; DSCI 205 or MATH 341.

Credits: 4

**ECON 407 - Topics in Macroeconomics**

Examination of current issues in macroeconomic theory and policy. Emphasis on recent U.S. experience, with particular attention given to inflation, unemployment, growth and the balance of payments. Includes extensive reading in current professional journals.

**Prerequisites & Notes:** ECON 306, ECON 307; DSCI 205 or MATH 341.

Credits: 4

**ECON 410 - Benefit-Cost Analysis**

Benefit-cost analysis is an important tool for evaluating the economic impacts of public or private actions. Course provides students with a thorough understanding of the logical underpinnings of benefit-cost analysis and experience in applying benefit-cost analysis to 'real-world' problems.

**Prerequisites & Notes:** ECON 306 or ECON 309 or equivalent.

Credits: 4

**ECON 411 - Monetary Economics**

Examines the theory and implementation of monetary policy. Topics may include the transmission mechanism of monetary policy, interest rate rules, the credibility of policymakers, and exchange rates. Special consideration is given to empirically measuring the impact of money on real economic variables and optimal monetary policy.

**Prerequisites & Notes:** ECON 307, ECON 375.

Credits: 4

**ECON 412 - Economics of Tax Policy**

Positive and normative analysis of tax policy; topics include the taxation of savings, taxation of labor income, taxes on risk-taking and wealth, and optimal income and commodity taxation.

**Prerequisites & Notes:** ECON 306 and ECON 310

Credits: 4

**ECON 430 - Experimental Economics**

This course introduces experiments as a tool in economic analysis. The course will examine experimental methodology and provide a first exposure to various experimental results. The course will stress the interaction of theory and experiment, seeking to relate questions in the theory of markets, games, and decisions to issues in experimental design and the analysis and interpretation of those results.

**Prerequisites & Notes:** ECON 306 or ECON 309; DSCI 205 or MATH 341.

Credits: 4

**ECON 442 - Industrial Organization and Public Policy**

A study of firms and the markets in which they operate. Considerable emphasis placed on strategic interaction among firms. Topics include mergers, predatory pricing, advertising, patents, vertical relationships and antitrust.

**Prerequisites & Notes:** ECON 306 or ECON 309

Credits: 4

**ECON 446 - Economics for the Teacher**

Presentation of basic microeconomic concepts including the operation and decision-making of households and businesses in a market economy. Special consideration is given to the development of classroom teaching strategies involving the use of games, simulations and audiovisual aids.

**Prerequisites & Notes:** Teaching experience or current or expected enrollment in teaching education program  
Credits: 3

**ECON 447 - Methods for Teaching About the National Economy in the Public Schools**

Forces affecting the overall levels of output, employment and prices in the U.S. economy. The economic effects of government policies involving taxes, spending and the money supply. Special consideration is given to the development of classroom teaching strategies involving the use of games, simulations and audiovisual aids.

**Prerequisites & Notes:** ECON 206 or 446 plus teaching experience or current or expected enrollment in teaching education program

Credits: 3

**ECON 448 - Methods for Teaching Personal Finance in the Public Schools**

This course is designed to provide educators with the background and training that they need to successfully integrate personal finance into their classes or to develop and present a new stand alone personal finance course. The on-site portion, typically conducted in a conference setting, will be supplemented by research and a project to be completed after the classroom portion of the course.

**Prerequisites & Notes:** Currently certificated teacher.

Credits: 3

**ECON 462 - International Trade**

The theory of international trade. Alternative approaches for explaining the pattern and terms of trade. An examination of the gains from trade and commercial policy. Includes issues of protectionism, economic integration and strategic trade policy.

**Prerequisites & Notes:** ECON 306 or ECON 309

Credits: 4

**ECON 463 - International Finance**

Balance of payments, adjustment mechanisms, international monetary system and international interdependence. Topics include determinants of exchange rate policy, the relationship between domestic monetary and exchange rate policies, and international policy coordination.

**Prerequisites & Notes:** ECON 307.

Credits: 4

**ECON 465 - Development Economics**

This course will study the special problems faced by the less developed countries of the world and the economic mechanisms that must be taken into account in raising living standards. Topics considered may include population growth, the demographic transition, savings and capital accumulation, education and human capital, health and human capital, institutions and the development process, the role of history and multiple equilibria, the role of expectations and multiple equilibria, and economic integration.

**Prerequisites & Notes:** ECON 306, ECON 307; DSCI 205 or MATH 341.

Credits: 4

**ECON 470 - Economic Fluctuations and Forecasting**

Theory and techniques of forecasting economic trends at the macro, micro and regional levels. Application of regression and time-series methods using PC econometric/forecasting software.

**Prerequisites & Notes:** ECON 306 or ECON 307; ECON 375 or MATH 342

Credits: 4

**ECON 475 - Econometrics**

Further topics in econometrics. Coverage may include systems of simultaneous equations, discrete-choice models, time series analysis, panel data, flexible functional forms, and nonparametric methods.

**Prerequisites & Notes:** ECON 306 or ECON 307; ECON 375 or MATH 342 or MATH 442

Credits: 4

**ECON 482 - Advanced Topics in Environmental Economics**

Examines an extended set of applications in environmental economics, with a focus on deepening the student's understanding of the field. Applications involve current controversies in environmental policy and management, as well as methodological issues. Topics include climate change, solid waste management and recycling, water quality, and other issues of current interest.

**Prerequisites & Notes:** ECON 383 or equivalent

Credits: 4

**ECON 483 - Resource Economics**

Principles of efficient resource allocation over time, distributional equity and cost/benefit analysis. Examines minerals and other exhaustible resources; forests, fisheries and other renewable resources; and public goods such as water and

wilderness.

**Prerequisites & Notes:** ECON 306 or ECON 309

Credits: 4

#### **ECON 491 - Issues in Political Economy**

Discussion and analysis of selected issues of significant economic and political content. Also offered as PLSC 491.

**Prerequisites & Notes:** Senior standing; ECON/PLSC combined major, or ECON major/PLSC minor or instructor permission; also offered as PLSC 491

Credits: 4

#### **ECON 493 - Senior Seminar: Economics, the Environment and Natural Resources**

Discussion and analysis of selected issues in the economics of the environment and natural resources.

**Prerequisites & Notes:** senior standing; ECON/ESTU combined major; also offered as ESTU 493

Credits: 4

### **Educational Administration**

*Courses numbered X37; X97; 300, 400, 500; 417, 445, 517, 545 are described in the University Academic Policies section of this catalog.*

#### **EDAD 501 - Introduction to Educational Research**

Introduction to fundamental concepts and procedures of educational research and evaluation. Interpreting research and evaluation literature and assessing appropriateness of methodology and application of research and evaluation models; utilization of databases for K-12 application in curriculum and decision making.

Credits: 4

#### **EDAD 512 - Policy Studies in Educational Administration**

Introduction to philosophical, ethical, moral and legal bases of educational administration, policy decision-making, and formulation. Study of selected policy development and implementation models in relation to above perspectives.

Credits: 4

#### **EDAD 518 - Current Issues in Education**

Examination and discussion of several current and controversial issues in education. Repeatable with no maximum.

Credits: 1 TO 5

#### **EDAD 538 - Case Studies in School Administration**

Studies to assist students in understanding school administration. Repeatable to a maximum of 6 credits.

Credits: 2 TO 4

#### **EDAD 539 - Educational Leadership**

Roles and responsibilities of persons serving as members of the leadership team in public schools. S/U grading.

**Prerequisites & Notes:** teaching experience or instructor permission

Credits: 4

#### **EDAD 540 - Political and Economic Forces Shaping Education**

A study of major forces and groups at the federal, local and state level which impact education through political and economic means.

Credits: 4

#### **EDAD 541 - Theory in Educational Administration**

The study of major administrative theories and the impact of management, leadership and decision making for school administrators.

Credits: 4

#### **EDAD 542 - Public School Organization and Administration**

Problems and potentials of the principalship.

Credits: 4

#### **EDAD 543 - Supervision in the Public Schools**

Supervision as educational leadership in continuous evaluation and improvement of school practice.

Credits: 4

#### **EDAD 544 - Collective Bargaining in the Public Schools**

Technical structure and protocol of collective bargaining as well as issues and practices.

Credits: 4

**EDAD 546 - Administrative Research Topics**

Identification, study and evaluation of research topics appropriate for building level administrators. Repeatable to a maximum of 6 credits.

Credits: 2 TO 3

**EDAD 547 - Readings in School Administration**

Supervised study focusing on one or more selected topics. Repeatable to a maximum of 6 credits.

Credits: 2 TO 5

**EDAD 548 - School Law**

Legal principles underlying statutes and court decisions related to the schools.

Credits: 4

**EDAD 549 - Seminar in School Personnel Administration**

Professional relationships among certified employees and other school personnel; development and implementation of policies.

**Prerequisites & Notes:** instructor permission

Credits: 4

**EDAD 550 - Developing Staff and Community Relations**

Models for planning, implementing and evaluating professional development and school/community relations programs.

Credits: 4

**EDAD 551 - Systems Approach and Educational Management**

The systems approach as related to educational project planning and management.

Credits: 4

**EDAD 552 - Planning for Curriculum Administration**

Planning and decision-making process as related to development and administration of educational curriculum and innovations.

Credits: 4

**EDAD 553 - Administering Elementary and Secondary Schools**

Program articulation between elementary and secondary schools as well as unique aspects of these schools.

**Prerequisites & Notes:** instructor permission

Credits: 4

**EDAD 554 - Administration and the International School**

An examination of the structure, organization and principles by which Western European schools are financed, staffed and administered. Repeatable to a maximum of 6 credits.

**Prerequisites & Notes:** instructor permission

Credits: 2 TO 6

**EDAD 555 - Seminar in Effective School Practices**

Review and analysis of research findings related to effective school practices.

Credits: 4

**EDAD 556 - Field Study in Educational Administration**

Design, implementation and evaluation of a field project (6 credits maximum/minimum).

**Prerequisites & Notes:** Advancement to candidacy, permission of instructor and submission of outline indicating scope of project.

Credits: 2 TO 3

**EDAD 581 - Entry Seminar - Administrator Professional Certification**

Candidates conduct a self-assessment based on the ISLLC standards with a 360-degree review, and district evaluations, and develop a Professional Growth Plan. This is the first step toward Administrator Professional Certification required by the State of Washington. S/U grading.

**Prerequisites & Notes:** Residency Principal or Program Administrator Certificate; two years contracted experience with current contract. Admission to Administrator Professional Certification Program

Credits: 3

**EDAD 582 - Core Seminar - Administrator Professional Certification**

This course is designed to guide Administrator Professional Certification candidates in implementing their Professional Growth Plan and developing their portfolio. It is the core of a three-part series designed to assist candidates to meet

State Leadership Standards. Repeatable for credit. S/U grading.

**Prerequisites & Notes:** EDAD 581; admission to Administrator Professional Certification Program

Credits: 2

#### **EDAD 583 - Culminating Seminar - Administrator Professional Certification**

This course is designed to prepare Administrator Professional Certification candidates for the final phase of the certification process. Candidates prepare and present their final Portfolio and future Professional Growth Plan (PGP). S/U grading.

**Prerequisites & Notes:** EDAD 581 and EDAD 582; Readiness sign-off by University Supervisor and Mentor.

Credits: 2

#### **EDAD 592 - Field Experience in Administration for the Principal**

Applicants for the Washington State Administration Certificate. Repeatable with no maximum. S/U grading.

**Prerequisites & Notes:** Permission of instructor.

Credits: 2 TO 6

Grade Mode: S/U

#### **EDAD 594 - Practicum in Action Research**

Field-based studies by entire school building staffs to resolve persistent and significant school problems. Course requirements include the development of an approved proposal for action research. May be repeated with different content. Repeatable to a maximum of 9 credits. S/U grading.

**Prerequisites & Notes:** Teaching experience, permission of instructor.

Credits: 3

#### **EDAD 640 - Current Topics in Education**

Studies of current topics in educational administration, personnel administration, interprogram topics. Repeatable with no maximum.

**Prerequisites & Notes:** master's degree; instructor permission

Credits: 1 TO 5

#### **EDAD 641 - Improving Student Learning**

Systematic examination of curriculum and instruction policy development, implementation and maintenance of curriculum models, and development of guidelines for curriculum governance.

**Prerequisites & Notes:** master's degree; EDAD 552 or equivalent

Credits: 4

#### **EDAD 642 - Effective School System Management**

Examination of important school system management theories and models. Development of strategies for management models implementation, evaluation and maintenance.

**Prerequisites & Notes:** master's degree; instructor permission

Credits: 5

#### **EDAD 643 - Advanced Leadership Theory**

Examination of important leadership theories and governance styles as they relate to the role of the K-12 school superintendent. Key focus upon the ethics and fairness of reasoned decision making as a leader.

**Prerequisites & Notes:** master's degree

Credits: 5

#### **EDAD 644 - Public Policy Formulation and Practice**

Exploration of research-based approaches to the development and implementation of public policy. Examines successful approaches to implementation and dissemination.

**Prerequisites & Notes:** master's degree

Credits: 4

#### **EDAD 646 - Field Project in Educational Administration**

Repeatable to a maximum of 8 credits.

**Prerequisites & Notes:** Master's degree, permission of instructor and submission of a one-page outline indicating scope of proposed project.

Credits: 2 TO 5

#### **EDAD 647 - Seminar for School District Leaders**

Current problems and issues facing school administrators.

**Prerequisites & Notes:** master's degree; applicant for Washington State Superintendant's Certificate; instructor permission

Credits: 4

**EDAD 690 - Thesis**

Research study under the direction of a faculty committee. Repeatable to a maximum of 9 credits. S/U grading.

**Prerequisites & Notes:** advancement to candidacy; approval of student's graduate committee

Credits: 1 TO 9

**EDAD 691 - Research Seminar**

Research study under the direction of a faculty committee. Repeatable to a maximum of 6 credits. S/U grading.

**Prerequisites & Notes:** advancement to candidacy; approval of student's graduate committee

Credits: 1 TO 6

**EDAD 692 - Field Experience in Administration for the Superintendent**

Applicants for the Washington State Administrative Certificate. S/U grading.

**Prerequisites & Notes:** Master's degree, permission of instructor.

Credits: 1 TO 6

**Education**

*Courses numbered X37; X97; 300, 400, 500; 417, 445, 517, 545 are described in the University Academic Policies section of this catalog.*

**EDUC 108 - Purposeful Learning**

Seminar course designed for enhancing student understanding and application of the meta-cognitive process of lifelong learning.

**Prerequisites & Notes:** Permission of instructor.

**EDUC 109 - Scholarship of Teaching and Learning**

Survey of concepts foundational to effective teaching and learning from history, sociology, psychology, political science, communication arts and law. Explores the interdependent and synergistic relationship between various academic disciplines and the scholarship of teaching and learning.

Credits: 4

**EDUC 110 - Future Scholarship Seminar**

This course uses readings, videos, guest presentations, field observations and extra-curricular activities to more fully familiarize first quarter freshmen designated as Future Woodring Scholars with academic and student support programs, and to explore career opportunities in the fields of teaching and human services.

**Prerequisites & Notes:** Appointment by Dean of WCE as a Future Woodring Scholar.

Credits: 2

**EDUC 301 - Educational Psychology I: Development and Individual Differences**

Principles of development and individual differences as they relate to both academic and non-academic functioning. Emphasis on implications for P-12 classrooms.

**Prerequisites & Notes:** Admission to Woodring College of Education or permission of department chair.

Credits: 4

**EDUC 302 - Educational Psychology II: Motivation, Learning and Assessment**

Principles of human motivation and learning and their implications for P-12 classrooms; basic statistical and applied concepts used in assessment of student performance.

**Prerequisites & Notes:** EDUC 301.

Credits: 4

**EDUC 309 - Storytelling: Oral Narrative in History, Culture, and Society**

Current trends and interdisciplinary applications of storytelling. Selection, adaptation and presentation of stories for various settings and audiences, with focus on the history of oral narrative traditions, cultural perspectives, and societal impact.

Credits: 4

**EDUC 310 - The Teacher and the Social Order**

Dominant aspects of society as they interact with schools and teaching.

**Prerequisites & Notes:** Admission to Woodring College of Education or permission of instructor or department chair.

Credits: 4

**EDUC 320 - Reader's Theatre in the Classroom**

Adaptation of fiction and nonfiction into script form for K-12 classroom. Emphasis on teaching creative writing, literature appreciation, teamwork and oral skills development.

Credits: 4

**EDUC 409 - Advanced Storytelling**

Training in public storytelling performance in community and educational settings. Emphasizes personal performance development, practical public experience, storytelling teaching methods, and advanced study of the history and current trends in the growing field of storytelling.

**Prerequisites & Notes:** EDUC 309 or permission of instructor.

Credits: 3

**EDUC 450 - Teacher Assistance Program**

Focuses on induction for first and second-year teachers on to the profession and supports professional practice known to support student learning. Repeatable to a maximum of 4 credits. S/U grading.

**Prerequisites & Notes:** Contracted first or second-year teacher.

Credits: 2

**EDUC 451 - Professional Certification Pre-Assessment Seminar**

Candidates form a Professional Growth Team and develop a Professional Growth Plan in accordance with state guidelines. Through seminar discussion and alignment of professional practice with the researched knowledge base of the profession. S/U grading.

**Prerequisites & Notes:** Admission to the Professional Certification Program.

Credits: 3

**EDUC 452 - Professional Certification Core**

Development of portfolio evidence aligned with Professional Certification Standards and Criteria. Selection of elective credit courses/workshops that further professional development toward goals written in the prerequisite seminar. S/U grading.

**Prerequisites & Notes:** Satisfactory completion of EDUC 451 and formal admission to the Professional Certification program.

Credits: 3

**EDUC 453 - Professional Certification Linking Class**

Create an organized and "at standard" portfolio of evidence to meet Professional Certification standards. S/U grading. Repeatable to a maximum of 3 credits. S/U grading.

**Prerequisites & Notes:** Permission of instructor.

Credits: 1

**EDUC 454 - Culminating Seminar**

Final course in the Professional Certificate sequence. Candidates discuss and present evidence of continuous student performance progress monitoring strategies. Formal presentation of professional development activities related to the goals written earlier in the program and identification of next professional development plans. S/U grading.

**Prerequisites & Notes:** Successful completion of the Pre-Assessment and Core components in the Professional Certification Program.

Credits: 2

**EDUC 455 - Effective Teaching Module IV**

Candidates complete program outcomes by submitting "at standard" performance indicators that are embedded in instructional and classroom management plans. Creation of an annotated bibliography of research-based effective teaching strategies, facilitated student use of technology and complete a draft of a Professional Growth Plan. S/U grading.

**Prerequisites & Notes:** Alternate Certificate Modules I, II, III

Credits: 3

**EDUC 456 - Alternate Route Internship**

A mentored teaching experience to develop and demonstrate the knowledge and skills learned in the accompanying EDUC 455 course. S/U grading.

**Prerequisites & Notes:** Concurrent enrollment in EDUC 455.

Credits: 3

**EDUC 457 - National Board Preparation, Part I**

Development of the first National Board entry focused on professional accomplishments and outreach to families and community. Participation in cohort group discussions and group evaluation of entry drafts. S/U grading.

**Prerequisites & Notes:** Candidacy for National Board Certification

Credits: 3

**EDUC 458 - National Board Preparation, Part II**

Candidates participate in discussions of "at standard" performance, timelines and differences between analytic, reflective and descriptive writing. Submission of all entries to the National Board and completion of Assessment

Center tests in a certificate area by a nationally established deadline. S/U grading.

**Prerequisites & Notes:** Candidacy for National Board Certification

Credits: 3

#### **EDUC 459 - Professional Certification Advanced Track**

Advanced Track Candidates for Professional Teacher Certification will complete Pre-Assessment requirements and present work sample evidence to verify that all Professional Certificate Standards have been met. Candidates who successfully present portfolio evidence will be affirmed as having met Professional Certificate requirements.

Candidates without complete portfolio will complete Core and Culminating Seminar requirements. S/U grading.

**Prerequisites & Notes:** admission to Professional Certification Program, teaching certification from non-Washington State and 5 years of teaching experience before entering Washington

Credits: 4

#### **EDUC 460 - Portfolio Development**

This is a standards-based program. Candidates will prepare a portfolio of evidence in alignment with Washington State's ProTeach Portfolio assessment process based on Professional Certificate Standards and Criteria. A successful portfolio is a requirement in order to transition from a temporary Residency Certificate to a permanent Professional Certificate. A Professional Certificate or National Board Certification is a requirement for continuing employment in the public school system. Repeatable up to a maximum of 8 credits. S/U grading.

**Prerequisites & Notes:** Enrollment in the Professional Certificate Support Program.

Credits: 2

#### **EDUC 501 - Introduction to Educational Research**

Introduction to the concepts and procedures of contemporary education research. Locating and interpreting research literature; formulating research problems and hypotheses. Selecting research designs, including quantitative and qualitative approaches. Use of correlational, causal comparative, quasi-experimental, experimental, single subject, descriptive, case study, and various qualitative methodologies.

**Prerequisites & Notes:** Must take within first 12-16 credit hours under advisement.

Credits: 4

#### **EDUC 505 - Creating Classrooms for Learning**

Advanced studies in culturally responsive curriculum, instruction and assessment.

**Prerequisites & Notes:** EDUC 501.

Credits: 4

#### **EDUC 534 - Assessing Educational Quality**

Developing criteria and designing procedures for measuring input process and product resulting from special or innovative programs, community factors, options in administrative and instructional organization; for coordinators and research workers in the public schools.

**Prerequisites & Notes:** EDUC 501 or permission of instructor.

Credits: 3

#### **EDUC 690 - Thesis**

Research study under the direction of a faculty committee. Repeatable to a maximum of 5 credits. S/U grading.

**Prerequisites & Notes:** Advancement to candidacy and approval of the student's committee.

Credits: 1 TO 5

#### **EDUC 691 - Research Seminar and Inquiry Project**

Research study under the direction of a faculty committee. Repeatable to a maximum of 5 credits. S/U grading.

**Prerequisites & Notes:** Advancement to candidacy and approval of the student's graduate committee.

Credits: 1 TO 5

### **Geography**

*Courses numbered X37; X97; 300, 400, 500; 417, 445, 517, 545 are described in the University Academic Policies section of this catalog.*

#### **E GEO 201 - Human Geography**

Regional patterns of population and settlement; spatial analysis of economic, social and political organization.

Credits: 4

#### **E GEO 201S - Human Geography**

Regional patterns of population and settlement; spatial analysis of economic, social and political organization.

Credits: 3

**EGEO 203 - Physical Geography**

Principles and techniques in analysis of areal distributions in the natural environment; landforms, water, climate, soils, vegetation.

**Prerequisites & Notes:** minimum of one university-level natural science GUR

Credits: 4

**EGEO 209 - Geography and World Affairs**

Geographical analysis of selected demographic, economic, political and social problems of the contemporary world.

Credits: 2

**EGEO 250 - Geographic Information Systems Survey**

Introduction to computer-based tools for describing, analyzing and providing decision making on geographical issues. Provides a survey of computer- and Web-based tools such as GIS, electronic atlases, thematic mapping systems, computer cartography and remote sensing through lectures and hands-on activities.

Credits: 2

**EGEO 301 - Research and Writing**

Source materials, research and writing techniques; emphasis on the nature and development of geography and planning.

**Prerequisites & Notes:** EGEO 201, EGEO 203 or instructor permission

Credits: 3

**EGEO 305 - Analysis of Spatial Data**

Intermediate level statistical techniques commonly used in solving geographic problems.

**Prerequisites & Notes:** MATH 240 or SOC 207; EGEO 201, EGEO 203

Credits: 4

**EGEO 310 - Developing World**

Analysis of selected geographical problems of major countries and regions of Africa, Asia and Latin America; population pressure, agricultural productivity; resource appraisal and utilization; urban-industrial growth; urban and regional planning.

**Prerequisites & Notes:** EGEO 201

Credits: 4

**EGEO 311 - Population and Resources**

World distribution of population; patterns of population composition, fertility and mortality. Inter- and intra-regional migrations; resources and population growth.

**Prerequisites & Notes:** EGEO 201 or SOC 321

Credits: 4

**EGEO 312 - Geography of the World Economy**

Location analysis of economic activities; interrelationships of resources, industry, trade and transportation.

**Prerequisites & Notes:** EGEO 201, ECON 206 or instructor permission

Credits: 4

**EGEO 314 - Urbanization: Processes and Patterns**

Geographic focus upon the development, functions and problems of the modern city with emphasis on American patterns.

**Prerequisites & Notes:** EGEO 201

Credits: 4

**EGEO 320 - The United States: Society & Environment**

Topical and regional approaches to selected elements of the physical environment and cultural and economic characteristics of the nation.

**Prerequisites & Notes:** EGEO 201 or instructor permission

Credits: 3

**EGEO 321 - Africa: Society and Environment**

Resources, people, regions; economic, social and political development of Africa. Emphasis on areas south of Sahara. Offered alternate years.

**Prerequisites & Notes:** EGEO 201 or instructor permission

Credits: 3

**EGEO 322 - The Middle East: Society and Environment**

Environments, economies and societies of Southwest Asia and North Africa; emphasis on current problems.

**Prerequisites & Notes:** EGEO 201 or instructor permission

Credits: 3

**EGEO 323 - South Asia: Society and Environment**

Systematic analysis of the physical and human environments of South Asia; emphasis on developmental problems.

**Prerequisites & Notes:** EGEO 201 or instructor permission

Credits: 3

**EGEO 324 - East Asia: Society and Environment**

Survey of physical environment sustainability, peoples, regions and resources of East Asia; problems and prospects.

**Prerequisites & Notes:** EGEO 201 or EAST 201 or EAST 202 or instructor permission

Credits: 3

**EGEO 327 - The Pacific Northwest: Society and Environment**

Examination of distribution and character of economic activity, population plus settlement and role of climate, landforms and resources in distributions. Offered alternate years.

**Prerequisites & Notes:** EGEO 201 or EGEO 203 or instructor permission

Credits: 3

**EGEO 328 - Canada: Society and Environment**

Characteristics and distribution of population, economic activities, various aspects of the physical environment, sustainability and the resource base are examined and analyzed to provide an understanding and appreciation of Canada.

**Prerequisites & Notes:** EGEO 201 or C/AM 200 or instructor permission.

Credits: 3

**EGEO 330 - Geography of Landforms**

Spatial and temporal variation of landforms; regional analysis of landforms and quaternary reconstructions; relationships of landforms with physical and human systems; applied geomorphology. Field trips.

**Prerequisites & Notes:** EGEO 203; GEOL 101 recommended

Credits: 4

**EGEO 331 - Climatology**

Climatic processes, including patterns of climates at various scales; applied climatology; climatic change.

**Prerequisites & Notes:** EGEO 203; PHYS 101 or PHYS 114 recommended

Credits: 4

**EGEO 332 - The Soil Environment**

A soil science perspective on soils as a natural body. Introduction to the physical and chemical characteristics of soil, the description and classification of soils under the USDA system, and the processes of soil formation.

Credits: 4

**EGEO 350 - Introduction to Geographic Information Systems**

An introduction to geographic information systems (GIS), examining the nature of spatial data and a basic theory of data manipulation and display, data sources, input, manipulation, and analysis, as well as data output, and basic cartographic production.

**Prerequisites & Notes:** Huxley major or instructor permission

Credits: 4

**EGEO 351 - Map Reading and Analysis**

Interpretation of map symbols and content at different scales; introduction to coordinate systems and map projections; analysis of different types of maps and charts.

Credits: 3

**EGEO 352 - Computer Cartography**

Map layout, design and production using computer techniques. Methods and limitations of graphic communication are emphasized.

**Prerequisites & Notes:** EGEO 201 or EGEO 203; EGEO 305 or ESCI 340, or concurrent; EGEO 350.

Credits: 2

**EGEO 362 - Land Resource Analysis**

The physical, biological, economic and institutional factors affecting, conditioning and controlling man's use of land.

**Prerequisites & Notes:** EGEO 201 or ESTU 369

Credits: 3

**EGEO 363 - Natural Hazards Planning**

The identification and analysis of the causes and consequences of earth and atmospheric hazards upon humans. For each type of natural hazards we will discuss methods for structural (e.g., retaining wall systems) and non-structural (e.g., critical areas zoning) mitigation. Case studies will involve current international, federal, state and local hazard mitigation policies, plans, and programs.

**Prerequisites & Notes:** EGEO 203 or GEOL 211; ESTU 369 or concurrent, or instructor permission.

Credits: 4

**EGEO 406 - Teaching of Geography**

**Prerequisites & Notes:** EGEO 201 plus 5 additional EGEO credits

Credits: 3

**EGEO 412 - Regional Environmental and Economic Resource Modeling**

Spatial resource assessment and planning models, including quality of life, shift-share, input-output and linear programming under resource constraints, and demographic projections.

**Prerequisites & Notes:** EGEO 305 or ESTU 370; or instrutor permission.

Credits: 4

**EGEO 414 - The Urban Environment**

Comparative patterns and processes of urban-economic change in the industrial and non-industrial world. Emphasis on urban environmental development issues and conflict.

**Prerequisites & Notes:** EGEO 201, EGEO 203, EGEO 314

Credits: 4

**EGEO 421 - Borderlands**

Investigation of issues associated with the growing importance of the United States border regions, especially our northern border; selected trans-border environmental, sustainability, economic and urban topics.

**Prerequisites & Notes:** EGEO 320 or EGEO 327 or EGEO 328 or C/AM 200 or instructor permission

Credits: 4

**EGEO 423 - Pacific Rim**

Investigation of issues associated with the growing importance of Pacific Rim nations; selected environmental, sustainability, economic, urban and cultural topics.

**Prerequisites & Notes:** EGEO 320 or EGEO 324 or EGEO 327 or EGEO 328 or instructor permission

Credits: 4

**EGEO 425 - Colonial Landscapes of the Pacific Northwest**

Description and analysis of the impact of European imperialism on the development of Pacific Northwest landscapes. Focus upon Native, British, American, and Canadian actions and territorial claims.

**Prerequisites & Notes:** One of EGEO 327, EGEO 328, EGEO 421, EGEO 423, HIST 391 or instructor permission

Credits: 4

**EGEO 431 - Water Resources**

The role of water in the environment; the nature of water use and resulting problems; processes which underlie comprehensive water resource planning and basin management; data analysis and presentation. Offered alternate years.

**Prerequisites & Notes:** EGEO 330 or EGEO 331; EGEO 305

Credits: 4

**EGEO 432 - Soil Landscapes**

Advanced topics in soils, including the functional relationships between climate, soils and vegetation, soil erosion, landscape patterns of soils, and the application of soils in paleoenvironmental reconstruction. Students will undertake research projects in the field.

**Prerequisites & Notes:** EGEO 332 or permission of instructor.

Credits: 4

**EGEO 433 - Climate and Biophysical Processes**

The role and nature of biophysical processes and their significance to the spatial and temporal patterns at various scales; the functional relationships between climate, soils and vegetation; approaches to land systems analysis focusing upon land system interactions.

**Prerequisites & Notes:** EGEO 330, EGEO 331, ESCI 301 or ESTU 301

Credits: 4

#### **EGEO 434 - Biogeography**

Study of the spatial distribution patterns of organisms through the integration of the many factors that have interacted to determine these patterns.

**Prerequisites & Notes:** EGEO 203, and either EGEO 331, ESCI 325 or permission of instructor.

Credits: 3

#### **EGEO 450 - Intermediate Geographic Information Systems**

The collection, storage, analysis and display of spatially referenced data to produce information essential for planning and making decisions in public agencies and private businesses. Principles and concepts of GIS design and operation; practical experience in GIS application through lab assignments.

**Prerequisites & Notes:** EGEO 305 or ESCI 340 or concurrent; EGEO 350 or ESTU 401; EGEO 352 or concurrent; or approved substitute; or instructor permission.

Credits: 4

#### **EGEO 451 - GIS Databases**

The design and development of cartographic databases for use in geographic information systems; interactive image editing, production of check-plots, and file processing to form geographic entity files. Exploration of alternative cartographic products via computer mapping software.

**Prerequisites & Notes:** EGEO 450

Credits: 4

#### **EGEO 452 - Advanced GIS**

Analysis and application of cartographic techniques and geographic information systems to practical mapping and resource management projects.

**Prerequisites & Notes:** EGEO 451

Credits: 4

#### **EGEO 453 - GIS Processing and Analysis**

Provides a student with an introduction to advanced GIS geoprocessing using spatial models and object-oriented scripting. Intended for students familiar with GIS concepts and computer applications; the course is project based. Through lectures, demonstrations, and hands-on exercises, participants will learn different methods for automating spatial data processing tasks including data management, geoprocessing, analytic workflows and data delivery.

**Prerequisites & Notes:** ESTU 401 or EGEO 450 or permission of instructor.

Credits: 3

#### **EGEO 461 - Natural Resources Management**

Techniques for the biophysical and socioeconomic analysis of natural environments; emphasizes the variety of perspectives from which management policies can be developed and modeling tools can be made available.

**Prerequisites & Notes:** EGEO 305 and EGEO 362 or EGEO 363

Credits: 4

#### **EGEO 462 - Transportation Systems and Planning**

Locational and network analysis and modeling of local, regional and national systems. Also, investigation of alternatives to traditional transportation modes.

**Prerequisites & Notes:** EGEO 305 or ESTU 370 or instructor permission

Credits: 3

#### **EGEO 499A - Seminar**

Student faculty interaction on topics of general interest. Repeatable for credit with no maximum. S/U grading.

**Prerequisites & Notes:** Admission to Huxley College or permission of instructor

Credits: 1

#### **EGEO 499B - Seminar**

Student faculty interaction on topics of general interest. Repeatable for credit with no maximum. S/U grading.

**Prerequisites & Notes:** admission to Huxley College or permission of instructor.

Credits: 1

#### **EGEO 499C - Seminar**

Student faculty interaction on topics of general interest. Repeatable for credit with no maximum. S/U grading.

**Prerequisites & Notes:** admission to Huxley College or permission of instructor.

Credits: 1

**EGEO 499D - Seminar**

Student faculty interaction on topics of general interest. Repeatable for credit with no maximum. S/U grading.

**Prerequisites & Notes:** admission to Huxley College or permission of instructor.

Credits: 1

**EGEO 499E - Seminar**

Student faculty interaction on topics of general interest. Repeatable for credit with no maximum. S/U grading.

**Prerequisites & Notes:** Admission to Huxley College or permission of instructor.

Credits: 1

**EGEO 499F - Seminar**

Student faculty interaction on topics of general interest. Repeatable for credit with no maximum. S/U grading.

**Prerequisites & Notes:** Admission to Huxley College or permission of instructor.

Credits: 2

**EGEO 499G - Seminar**

Student faculty interaction on topics of general interest. Repeatable for credit with no maximum. S/U grading.

**Prerequisites & Notes:** Admission to Huxley College or permission of instructor.

Credits: 2

**EGEO 499H - Seminar**

Student faculty interaction on topics of general interest. Repeatable for credit with no maximum. S/U grading.

**Prerequisites & Notes:** Admission to Huxley College or permission of instructor.

Credits: 2

**EGEO 499I - Seminar**

Student faculty interaction on topics of general interest. Repeatable for credit with no maximum. S/U grading.

**Prerequisites & Notes:** Admission to Huxley College or permission of instructor.

Credits: 2

**EGEO 499J - Seminar**

Student faculty interaction on topics of general interest. Repeatable for credit with no maximum. S/U grading.

**Prerequisites & Notes:** Admission to Huxley College or permission of instructor.

Credits: 2

**EGEO 499K - Seminar**

Student faculty interaction on topics of general interest. Repeatable for credit with no maximum. S/U grading.

Credits: 2

**EGEO 499L - Seminar**

Student faculty interaction on topics of general interest. Repeatable for credit with no maximum. S/U grading.

**Prerequisites & Notes:** Admission to Huxley College or permission of instructor.

Credits: 2

**EGEO 499M - Seminar**

Student faculty interaction on topics of general interest. Repeatable for credit with no maximum. S/U grading.

**Prerequisites & Notes:** Admission to Huxley College or permission of instructor.

Credits: 2

**EGEO 499N - Seminar**

Student faculty interaction on topics of general interest. Repeatable for credit with no maximum.

**Prerequisites & Notes:** Admission to Huxley College or permission of instructor.

Credits: 1

**EGEO 499O - Seminar**

Student faculty interaction on topics of general interest. Repeatable for credit with no maximum.

**Prerequisites & Notes:** Admission to Huxley College or permission of instructor.

Credits: 1

**EGEO 499P - Seminar**

Student faculty interaction on topics of general interest. Repeatable for credit with no maximum.

**Prerequisites & Notes:** Admission to Huxley College or permission of instructor.

Credits: 1

**EGEO 499Q - Seminar**

Student faculty interaction on topics of general interest. Repeatable for credit with no maximum.

**Prerequisites & Notes:** Admission to Huxley College or permission of instructor.

Credits: 1

**EGEO 499R - Seminar**

Student faculty interaction on topics of general interest. Repeatable for credit with no maximum.

**Prerequisites & Notes:** Admission to Huxley College or permission of instructor.

Credits: 1

**EGEO 499S - Seminar**

Student faculty interaction on topics of general interest. Repeatable for credit with no maximum.

**Prerequisites & Notes:** Admission to Huxley College or permission of instructor.

Credits: 2

**EGEO 499T - Seminar**

Student faculty interaction on topics of general interest. Repeatable for credit with no maximum.

**Prerequisites & Notes:** Admission to Huxley College or permission of instructor.

Credits: 2

**EGEO 499U - Seminar**

Student faculty interaction on topics of general interest. Repeatable for credit with no maximum.

**Prerequisites & Notes:** Admission to Huxley College or permission of instructor.

Credits: 2

**EGEO 499V - Seminar**

Student faculty interaction on topics of general interest. Repeatable for credit with no maximum.

**Prerequisites & Notes:** Admission to Huxley College or permission of instructor.

Credits: 2

**EGEO 499W - Seminar**

Student faculty interaction on topics of general interest. Repeatable for credit with no maximum.

**Prerequisites & Notes:** Admission to Huxley College or permission of instructor.

Credits: 2

**EGEO 499X - Seminar**

Student faculty interaction on topics of general interest. Repeatable for credit with no maximum.

**Prerequisites & Notes:** Admission to Huxley College or permission of instructor.

Credits: 2

**EGEO 499Y - Seminar**

Student faculty interaction on topics of general interest. Repeatable for credit with no maximum.

**Prerequisites & Notes:** Admission to Huxley College or permission of instructor.

Credits: 2

**EGEO 499Z - Seminar**

Student faculty interaction on topics of general interest. Repeatable for credit with no maximum.

**Prerequisites & Notes:** Admission to Huxley College or permission of instructor.

Credits: 2

**EGEO 501 - History and Philosophy of Geography**

Study of geography as a core discipline; its origins and trends in the understanding of multifaceted environmental problems.

Credits: 3

**EGEO 502 - Geographic Frameworks for Resource Analysis**

Examination of the geographic theories and analytical frameworks used in the study of the environment.

**Prerequisites & Notes:** EGEO 501

Credits: 4

**EGEO 503 - Research Problems**

Formulation and development of hypotheses for a thesis, and the development of the necessary methodology; preparation of bibliography and review of literature.

**Prerequisites & Notes:** EGEO 501, EGEO 502

Credits: 4

**E GEO 504 - Geographic Methods and Techniques**

Advanced methods of gathering and analyzing data and information for the solution of geographic, regional planning, and landscape problems.

**Prerequisites & Notes:** E GEO 305 or equivalent, E GEO 501, E GEO 502

Credits: 5

**E GEO 522 - Resource Assessment and Management in the Physical Environment**

**Prerequisites & Notes:** E GEO 501

Credits: 3

**E GEO 533 - Climate and Biophysical Processes**

Investigation into the role and nature of biophysical processes and their significance to the spatial and temporal patterns at various scales. Topics examine the functional relationships between climate, soils, landforms and vegetation.

Credits: 4

**E GEO 535 - Environmental Problems and Regional Development**

Cities and regions as complex systems of interdependent natural and human elements; key problems and approaches to their solution through planning.

**Prerequisites & Notes:** 5 credits graduate level

Credits: 5

**E GEO 551 - Research Problems**

Formulation and development of hypotheses for a thesis. Development of the necessary methodology; preparation of bibliography and review of literature.

Credits: 4

**E GEO 552 - Advanced GIS**

Analysis and application of cartographic techniques and geographic information systems to practical mapping and resource management projects.

**Prerequisites & Notes:** instructor permission

Credits: 4

**E GEO 590 - Graduate Colloquium**

Current trends and issues in geographic research.

Credits: 1

**E GEO 595 - Teaching Practicum**

Experience in teaching a lecture or laboratory course in geography. Repeatable. S/U grading.

**Prerequisites & Notes:** relevant course work

Credits: 1 TO 3

**E GEO 690 - Thesis**

Thesis research in geography under faculty direction. Repeatable up to 36 credits. S/U grading.

**Prerequisites & Notes:** Permission of the thesis advisory committee.

Credits: 1 TO 12

**Elementary Education**

*Courses numbered X37; X97; 300, 400, 500; 417, 445, 517, 545 are described in the University Academic Policies section of this catalog.*

**ELED 370 - Introduction to Teaching**

Exploring theoretical and practical approaches to culturally responsive teaching and planning for instruction which engages diverse students in substantive, worthwhile learning. Includes practicum experiences in an elementary or middle school classroom.

**Prerequisites & Notes:** admission to elementary education; corequisite: ELED 380, IT 444A

Credits: 5

**ELED 372 - Introduction to Teaching Seminar**

Exploring theoretical and practical approaches to culturally responsive teaching and planning for instruction which engages diverse students in substantive, worthwhile learning. Not open to students who have received credit for ELED 370.

**Prerequisites & Notes:** Admission to Woodring College's Elementary Teacher Outreach Programs. Co-requisite: ELED 373

Credits: 4

**ELED 373 - Introduction to Teaching - Practicum**

Practicum experiences in an elementary or middle school classroom related to the content of ELED 372. Not open to students who have received credit for ELED 370. S/U grading.

**Prerequisites & Notes:** Admission to Woodring College's Elementary Teacher Education Outreach Programs. Co-requisite: ELED 372

Credits: 1

**ELED 380 - Literacy I: Foundations**

Terminology and concept development of the language of literacy; introduction to assessment, curriculum, and instruction of literacy teaching and learning.

**Prerequisites & Notes:** Co-requisite: ELED 370, IT 444A

Credits: 4

**ELED 386 - Practical Assessment in the Elementary Classroom I**

Develop skills in using assessment methodology to enhance teaching. Topics include assessment models, basic premises, the value of sound assessment procedures, and an examination of the thought processes of educational evaluation.

**Prerequisites & Notes:** Admission to Woodring College Elementary Teacher Education Outreach Programs.

Credits: 2

**ELED 387 - Practical Assessment in the Elementary Classroom II**

Refine skills in using assessment methodology to enhance teaching. Topics include application of assessment models and analysis of student performance using sound assessment procedures.

**Prerequisites & Notes:** Admission to Woodring College Elementary Teacher Education Outreach Programs; ELED 386.

Credits: 2

**ELED 390 - Early Childhood Practicum and Seminar**

Observation, participation and related seminars in pre-kindergarten (infant, toddler, and/or preschool) sites. S/U grading

**Prerequisites & Notes:** Permission of Instructor.

Credits: 3

**ELED 405 - Books and Materials for Elementary Schools**

Reading and evaluation of books and materials for elementary children; emphasizes wide reading, book selection, literary analysis, correlation with the curriculum, current content trends and innovative uses. Formerly offered as LIBR 405.

Credits: 4

**ELED 407 - Books and Materials for Young Adults**

Reading and uses of books for adolescents and their curriculum; multicultural and self-concept literature; realistic and mystical fiction and poetry; literary analysis.

Credits: 4

**ELED 424 - Language Arts in the Elementary Curriculum**

Functions and programs of language arts in the curriculum including reading, writing, speaking, listening.

**Prerequisites & Notes:** SPED 420

Credits: 4

**ELED 425 - Social Studies for the Elementary School**

Social studies methods, resources, multicultural literature, curriculum, objectives, planning and exposure to contributions of social sciences. Includes practicum experiences in an elementary or middle school classroom.

**Prerequisites & Notes:** ELED 320

Credits: 5

**ELED 426 - Social Studies Methods**

Social studies methods, resources, multicultural literature, curriculum, objectives, planning and exposure to contributions of social sciences. No practicum experience is included in this course.

**Prerequisites & Notes:** SPED 420

Credits: 4

**ELED 435 - Child Abuse and Neglect**

Development of skills for working with children from abusive or neglectful home environments. Content deals with helping educators help children increase their self esteem and cope with their environments.

Credits: 3

**ELED 438 - School-Home-Community Relationships**

Problems of communication and interaction among teachers, parents, and paraprofessionals, administrators, and community; conferencing, planning meetings, community survey. PR publications, use of mass media.

Credits: 1 TO 3

**ELED 456 - Literacy Assessment**

Explores classroom-based literacy assessment, with a focus on reading, writing, and oral language; includes 20 hour practicum.

**Prerequisites & Notes:** ELED 480 and ELED 481 or permission of instructor.

Credits: 4

**ELED 464 - Multicultural Education for Teachers**

Preparation for teaching in a multicultural society. Participants will learn how to design a curriculum that reflects diversity and an instructional methodology that promotes the learning of diverse students.

Credits: 4

**ELED 470 - Developing Teaching**

Strengthening teaching understandings, skills, and dispositions with an emphasis on learners and learning in classroom contexts, subject matter knowledge and pedagogy, and developing and sustaining a productive and inclusive classroom culture and organization. Includes practicum experiences in an elementary or middle school classroom.

**Prerequisites & Notes:** ELED 370

Credits: 5

**ELED 471 - Documenting Teaching**

Capstone experience for the preparation of a Teacher Work Sample documenting the candidate

**Prerequisites & Notes:** ELED 470

Credits: 5

**ELED 472 - Developing Teaching Seminar**

Strengthening teaching understandings, skills, and dispositions with an emphasis on learners and learning in classroom contexts, subject matter knowledge and pedagogy, and developing and sustaining a productive and inclusive classroom culture and organization. Not open to students who have received credit for ELED 470.

**Prerequisites & Notes:** Admission to Woodring College's Teacher Education Outreach Programs; ELED 372 and ELED 373; Co-requisite: ELED 473

Credits: 3

**ELED 473 - Developing Teaching - Practicum**

Practicum experiences in an elementary or middle school classroom related to the content of ELED 472. Not open to students who have received credit for ELED 470. S/U grading.

**Prerequisites & Notes:** Admission to Woodring College's Teacher Education Outreach Programs; ELED 372 and ELED 373; Co-requisite: ELED 472.

Credits: 2

**ELED 474 - Documenting Teaching Seminar**

Capstone experience for the preparation of a final electronic portfolio documenting experiences in learning to teach and the ability to impact elementary student growth and learning. Not open to students who have received credit for ELED 471.

**Prerequisites & Notes:** Admission to Woodring College's Teacher Education Outreach Programs; ELED 472 and ELED 473; Co-requisite: ELED 475.

Credits: 3

**ELED 475 - Documenting Teaching - Practicum**

Practicum experiences in an elementary or middle school classroom related to the content of ELED 474 and participation in a collegial learning community. Not open to students who have received credit for ELED 471. S/U grading.

**Prerequisites & Notes:** Admission to Woodring College's Teacher Education Outreach Programs; ELED 472 and ELED 473; Co-requisite: ELED 474.

Credits: 2

**ELED 478 - Literacy: Fluent Communicators Seminar**

Understanding the components and structure of a comprehensive literacy program for addressing reading, writing, listening, and speaking in the elementary classroom, with a particular focus on developing and supporting fluent communicators. Not open to students who have received credit for ELED 481.

**Prerequisites & Notes:** Admission to Woodring College's Teacher Education Outreach Programs; ELED 380; Co-

requisite: ELED 479.

Credits: 4

#### **ELED 479 - Literacy: Fluent Communicators - Practicum**

Practicum experiences in an elementary or middle school classroom related to the content of ELED 478. Not open to students who have received credit for ELED 481. S/U grading.

**Prerequisites & Notes:** Admission to Woodring College Elementary Teacher Outreach Programs; ELED 380. Co-requisite: ELED 478.

Credits: 2

#### **ELED 480 - Literacy: Beginning Communicators**

Application of theoretical and research-based concepts of literacy. Teaching and learning of emergent/beginning communicators in a pluralistic society. Includes practicum experiences in an elementary or middle school classroom.

**Prerequisites & Notes:** ELED 370 or ECE 391 for ECE major, or ENG 370 for English-Elementary major; English-Elementary major must take pre/corequisites ENG 440, ENG 441

Credits: 5

#### **ELED 481 - Literacy: Fluent Communicators**

Understanding the components and structure of a comprehensive literacy program for addressing reading, writing, listening, and speaking in the elementary classroom, with a particular focus on developing and supporting fluent communicators. Includes practicum experiences in an elementary or middle school classroom.

**Prerequisites & Notes:** ELED 480

Credits: 5

#### **ELED 485 - Basic Reading Instruction**

Basic reading instruction in grades K-8; methods and materials for teaching reading, reading readiness; word attack skills, word reading skills, comprehension skills; grouping; lesson planning.

**Prerequisites & Notes:** ELED 320

Credits: 3 TO 4

#### **ELED 486 - Literacy Difficulties in the K-12 Classroom**

Analysis, correction and prevention of literacy difficulties in K-12 classrooms; refinement of group and informal assessment; supervised practicum with pupils having mild difficulties in reading, writing, and/or oral language.

**Prerequisites & Notes:** Permission of instructor.

Credits: 4

#### **ELED 488 - Individualized Reading Instruction**

Principles and practices of individualized reading with emphasis on problems in organizing classroom programs for meeting individual interests and needs.

Credits: 1 TO 5

#### **ELED 489 - Language Structure and Reading Development**

Examines the structure of language and its development in children with consideration of how this structure and development are critical to effective reading instruction.

Credits: 4

#### **ELED 490 - Teaching Laboratory**

Diagnosis of students, lesson preparation, videotaped peer teaching, analysis of teaching, lesson redesign.

**Prerequisites & Notes:** SEC 471 or SEC 571 or program advisor permission

Credits: 4

#### **ELED 490A - September Experience**

Observation and participation in the opening of school. S/U grading.

**Prerequisites & Notes:** department permission

Credits: 2 TO 3

#### **ELED 491 - September Experience**

Observation and participation in the opening of school. S/U grading.

**Prerequisites & Notes:** Department permission.

Credits: 2 TO 3

#### **ELED 492 - Practicum: Experience in Literacy Methods**

In-school experience observing and teaching reading and language arts. S/U grading.

**Prerequisites & Notes:** ELED 480 and ELED 481.

Credits: 4

**ELED 494 - Internship - Elementary**

Supervised teaching experience to develop and demonstrate teaching competence at the primary and/or intermediate grades. Repeatable to 24 credits. S/U grading.

**Prerequisites & Notes:** recommendation for supervised teaching

Credits: 2 TO 18

**ELED 495 - Internship - Early Childhood Education**

Observation and participation in the opening of school. S/U grading.

**Prerequisites & Notes:** Department permission.

Credits: 2 TO 24

**ELED 505 - Books and Materials: Use and Evaluation**

Study and selection of children's and adolescent literature (fiction and poetry). Literary criticism. Use of various media.

**Prerequisites & Notes:** ELED 405 or permission

Credits: 4

**ELED 518 - Current Issues in Education**

Examination and discussion of several current issues in Elementary Education. Repeatable to a maximum of 5 credits.

Credits: 1 TO 5

**ELED 521 - Seminar in Elementary Curriculum**

Advanced study of curriculum planning and development, including design, materials and problems in curriculum change. Independent research is expected.

**Prerequisites & Notes:** Completion of teaching certificatoin requirements; elementary K-8 teaching endorsement

Credits: 4

**ELED 530 - Play and the Child**

Examination of the nature and role of play in the cognitive, affective, physical and social development of the child. Attention given to the educative functions of play and implications of those functions for curriculum and instruction.

**Prerequisites & Notes:** graduate standing or teaching experience

Credits: 4

**ELED 531 - Seminar in Early Childhood Education**

In-depth exploration of programs, theories and significant recent research in early childhood education.

Credits: 4

**ELED 531A - Advanced Seminar in Early Childhood Education**

Specific problems are drawn from the field and content organized according to student need.

**Prerequisites & Notes:** ELED 531, ELED 596A

Credits: 4

**ELED 533 - Advanced Seminar in Elementary Education**

Advanced study of individual research topics in elementary education.

**Prerequisites & Notes:** advancement to candidacy

Credits: 4

**ELED 535 - Research Analysis of Current Issues in Elementary Education**

Examination and analysis of research underlying current issues and problems in elementary education.

**Prerequisites & Notes:** Completion of teaching certification requirements; elementary K-8 teaching endorsement;

EDUC 501

Credits: 4

**ELED 538 - Current Issues in Assessment and Evaluation in Elementary Literacy Education**

Examines current theory, research, and practice in classroom-based literacy assessment and evaluation; includes supervised practicum.

**Prerequisites & Notes:** ELED 480 and ELED 481 or instructor permission

Credits: 4

**ELED 539 - Master's Seminar**

Preparation and presentation of a seminar paper on a problem or issue in education.

**Prerequisites & Notes:** Completion of teaching certification requirements; elementary K-8 endorsement; advancement to candidacy; ELED 501, ELED 521, ELED 535; EDF 512, EDF 513

Credits: 4

**ELED 555 - Middle School Curriculum Designs and Instructional Strategies**

Current trends in middle-level education; includes a review of developing curriculum ideas endorsed by the National Middle School Association. Physical, social and emotional growth of early adolescents; instructional strategies for middle-level schools; requires topical or action research project.

Credits: 4

**ELED 569A - Issues in Inclusive Early Education**

Current issues and best practices in early childhood program design and implementation. Emphasis on family-centered, play-based interagency models that serve children of all abilities. Applied research focus.

**Prerequisites & Notes:** admission to graduate school or instructor permission

Credits: 3

**ELED 569B - Assessment of Young Children (Birth-8 Years)**

Issues and resources for accurate and appropriate assessment of young children. Current best practices in instructionally relevant assessment, monitoring child progress and evaluating overall program success. Alternative strategies for assessing the very young child, family needs and special populations. Emphasis on critical evaluation of instruments, psychometric adequacy and technical aspects of test development.

**Prerequisites & Notes:** admission to graduate school or instructor permission

Credits: 4

**ELED 569C - Inclusive Curriculum in Early Childhood**

Curriculum development and adaptation for infants, toddlers, and preschool children. Includes available resources, best practices with the developmentally young and play-based criteria. Focus on model program curricular approaches, the use of daily routines and parent-child interaction as a context and content for curriculum, and peer-mediated learning strategies. Emphasis on efficacy research and the impact of various curricular models.

**Prerequisites & Notes:** admission to graduate school or instructor permission

Credits: 3

**ELED 583 - Literacy and Children's Literature**

Teaching basic reading skills through the use of children's books; selection and analysis of children's books in order to teach literacy, from beginning or pre-word recognition levels through junior/senior high level.

**Prerequisites & Notes:** teaching experience

Credits: 4

**ELED 584 - Teaching the Integrated Language Arts**

Teaching activities designed to foster continuing development of literacy, in part, through stressing interrelationships between the various forms of language.

**Prerequisites & Notes:** graduate standing or teaching experience

Credits: 4

**ELED 585 - Seminar in Literacy Education**

Literacy education research and its application to classroom practices, to individual problems in the teaching of reading, to supervision and administration of reading programs.

Credits: 3 TO 4

**ELED 586 - Seminar for Literacy Specialists**

Summary course in the Masters in Literacy, focuses on the role of the future literacy specialist in the analysis, correction, and prevention of literacy difficulties. Designed to refine the teacher leader's knowledge of assessment, evaluation, planning, and teaching of readers, writers, and language users. Includes a 20 hour practicum.

**Prerequisites & Notes:** ELED 518 or permission of instructor.

Credits: 5

**ELED 587 - Improvement of Instruction in Literacy**

Teaching developmental reading; methods, materials, theory.

**Prerequisites & Notes:** minimum of one previous course in teaching reading or teaching experience

Credits: 4

**ELED 589 - Language Acquisition and Literacy Development**

Exploration of current theories in language acquisition, linguistics and psycholinguistics, and implications for early childhood education and literacy instruction.

**Prerequisites & Notes:** graduate standing or teaching experience

Credits: 4

**ELED 594E - Practicum in Reading Diagnosis and Remediation**

Assessment and correction of reading difficulties: supervised practica in use of diagnostic reading tests.

Credits: 4

**ELED 594F - Practicum in Reading Diagnosis and Remediation**

Remedial instruction of children with reading problems: clinical practicum.

Credits: 4

**ELED 690 - Thesis**

Research study under the direction of a faculty committee. Repeatable to a maximum of 9 credits. S/U grading

**Prerequisites & Notes:** advancement to candidacy; student's graduate committee approval

Credits: 1 TO 9

**ELED 691 - Research Seminar**

Graduate research under the direction of a program advisor/committee. Repeatable to a maximum of 6 credits. S/U grading.

**Prerequisites & Notes:** student's graduate committee/program advisor approval

Credits: 1 TO 6

## English

Courses numbered X37; X97; 300, 400, 500; 417, 445, 517, 545 are described in the University Academic Policies section of this catalog. For more information about the courses and sections to be offered this year and next, please consult the online Timetable of Classes and the English department's Website, [www.wwu.edu/depts/english](http://www.wwu.edu/depts/english) for the English department course descriptions and information on majors and minors.

**ENG 100 - Introduction to College Writing**

A writing course that offers practice in reading complex texts, writing with fluency and using the conventions of standard written English. Regularly scheduled conferences with instructor required. S/U grading.

Credits: 5

**ENG 101 - Writing and Critical Inquiry**

A computer-mediated composition course designed to help students, through extended inquiry in reading, writing, and discussion, develop and practice those critical and reflective habits of mind that will serve them personally, academically, and professionally. Introduces students to the processes of analysis and revision with the aim of increasing students' knowledge and control of the specific conventions writers use to clearly formulate and communicate their ideas to different audiences. Regularly scheduled conferences with instructor required. Students needing to satisfy Block A of the communications section of the General University Requirements are required to do so prior to completion of 45 credits.

**Prerequisites & Notes:** may not be taken concurrent with ENG 100

Credits: 5

**ENG 201 - Writing in Humanities**

Advanced instruction and practice in writing using ideas, texts and questions from a specified topic in the humanities. Areas and focus vary with section.

**Prerequisites & Notes:** ENG 101 or 4/5 AP English Language Exam or 710 on the SAT or 28 on the ACT.

Credits: 5

**ENG 202 - Writing About Literature**

A writing course that uses reading, analysis, and discussion of literary and other imaginative texts to teach students how to construct multi-draft, critical papers characteristic of the discipline of English Studies.

**Prerequisites & Notes:** ENG 101 and sophomore or above status

Credits: 5

**ENG 214 - Introduction to Shakespeare**

Analysis, interpretation and discussion of a selected number of Shakespeare's plays: histories, comedies, tragedies and romances.

Credits: 5

**ENG 215 - Introduction to British Literature**

Analysis, interpretation and discussion of a range of texts in British literature with attention to cultural contexts.

Credits: 5

**ENG 216 - Introduction to American Literature**

Analysis, interpretation and discussion of a range of texts in American literature with attention to cultural contexts.

Credits: 5

**ENG 227 - Introduction to Gay, Lesbian, Bisexual and Transgender Literature**

Analysis, interpretation and discussion of a range of texts by gay, lesbian, bisexual and transgendered authors.

Credits: 5

**ENG 234 - Introduction to African-American Literature**

Analysis, interpretation and discussion of written, spoken and visual texts by African-American men and women from the 18th century to the present.

Credits: 5

**ENG 235 - Introduction to American Indian Literatures**

Analysis, interpretation and discussion of written, spoken and visual texts in English and translation by writers and storytellers of Native American descent.

Credits: 5

**ENG 236 - Introduction to Asian-American Literatures**

Analysis, interpretation and discussion of written and visual texts in English and translation by and about Asian-Americans.

Credits: 5

**ENG 238 - Society Through Its Literature**

A thematic approach to literature, with different themes exploring the relationship between literary forms and society. Repeatable once as an elective with different topics. May be taken only once for GUR credit.

Credits: 5

**ENG 239 - Introduction to Latina/o Literatures**

Analysis, interpretation and discussion of a range of texts in English and in translation by Latina/o authors.

Credits: 5

**ENG 270 - Introduction to Language and Society**

A thematic approach to the study of language use in society, with different themes exploring the relationship between language, meaning, and the social contexts in which they occur. May be taken only once for GUR credit.

Credits: 5

**ENG 281 - Introduction to Global Literatures: Ancient**

Readings from ancient literatures throughout the world.

Credits: 5

**ENG 282 - Introduction to Global Literatures: Medieval**

Readings from medieval literatures throughout the world.

Credits: 5

**ENG 283 - Introduction to Global Literatures: Modern**

Readings from modern literatures throughout the world.

Credits: 5

**ENG 301 - Writing Studies**

Inquiry and practice in the theory, ideology, and ethics of writing in private, public and academic contexts. Focuses on issues of genre, audience, and stylistic and discursive conventions of writing. Emphasis on expressive, analytical, critical, and collaborative forms of writing as appropriate.

**Prerequisites & Notes:** ENG 101; ENG 201 or ENG 202 or second writing course; junior standing

Credits: 5

**ENG 302 - Introduction to Technical and Professional Writing**

Introduction to major contemporary strategies and conventions used in written and oral communication for multiple audiences in professional settings. Covers a variety of written forms used in the preparation and design of technical and business documents, critical analyses of these forms and practices, and the ethical and social implications of a technical writer's choices.

**Prerequisites & Notes:** ENG 101; junior standing.

Credits: 5

**ENG 304 - Critical Introduction to Poetry**

Reading and discussion of a variety of poetic texts to strengthen students' interpretive skills. Explores the formal elements and cultural contexts of poetry, and introduces a range of critical approaches.

**Prerequisites & Notes:** ENG 202

Credits: 5

**ENG 307 - Literature and Culture I: Pre-16th Century**

Analysis, interpretation and discussion of texts in English or in translation composed before the 16th century.

Repeatable once as an elective with different topics.

**Prerequisites & Notes:** ENG 202

Credits: 5

**ENG 308 - Literature and Culture II: 16th and 17th Centuries**

Analysis, interpretation and discussion of texts in English or in translation from the 16th- and 17th-century cultures.

Repeatable once as an elective with different topics.

**Prerequisites & Notes:** ENG 202

Credits: 5

**ENG 309 - Literature and Culture III: 18th and 19th Centuries**

Analysis, interpretation and discussion of texts in English or in translation from the 18th- and 19th-century cultures.

Repeatable once as an elective with different topics.

**Prerequisites & Notes:** ENG 202

Credits: 5

**ENG 310 - Literature and Culture IV: 19th and 20th Centuries**

Analysis, interpretation and discussion of texts in English or in translation from the 19th- and 20th-century cultures.

Repeatable once as an elective with different topics.

**Prerequisites & Notes:** ENG 202

Credits: 5

**ENG 311 - Literature and Culture V: 20th and 21st Centuries**

Analysis, interpretation and discussion of texts in English or in translation from the 20th- and 21st-century cultures.

Repeatable once as an elective with different topics.

**Prerequisites & Notes:** ENG 202

Credits: 5

**ENG 312 - Film and Culture**

Examines various topics through film as a medium of cultural representation. Repeatable once with different topics.

**Prerequisites & Notes:** ENG 202

Credits: 5

**ENG 313 - History of Critical and Cultural Theory**

An introduction to critical and cultural theories in a historical context.

**Prerequisites & Notes:** ENG 202

Credits: 5

**ENG 327 - Studies in Historically Marginalized Literatures**

Analysis, interpretation and discussion of texts in English or in translation from cultures, ethnic communities, or minority authors who have been historically excluded from national literary canons.

**Prerequisites & Notes:** ENG 202

Credits: 5

**ENG 335 - Literary and Creative Expressions Across Cultures**

Analysis of texts of Asia, Africa, the Middle East and Latin America, and of multicultural experiences in North America and Britain. Repeatable once as an elective with different topics. May be taken only once for GUR credit.

**Prerequisites & Notes:** ENG 101

Credits: 5

**ENG 336 - Scriptural Literatures**

Analysis of literary texts in one or more religious traditions; study of scriptural literature as a source of cultural paradigms.

**Prerequisites & Notes:** ENG 101

Credits: 5

**ENG 338 - Women and Literature**

Study of women's texts in various cultures, including thematic and stylistic development within cultural context.

**Prerequisites & Notes:** ENG 101

Credits: 5

**ENG 339 - Mythology and Literature**

Comparative study of the patterns, motifs and techniques in world mythologies as they recur and evolve in poetry, drama, fiction, creative nonfiction, film and electronic media in English and translation.

**Prerequisites & Notes:** ENG 202

Credits: 5

**ENG 340 - Comparative Literature**

Studies in genre, periods and periodization, translation theory, thematology, geo-thematics, international literary relations, literary movements, and comparative media. Repeatable once as an elective with different topics.

**Prerequisites & Notes:** ENG 202

Credits: 5

**ENG 347 - Studies in Young Adult Literature**

Studies in literature written for and/or by young adults. May focus on literary history, genres, theme, critical approaches or specific authors. Class assignments and discussion may focus on using this literature with young adults in secondary schools and in a home setting.

**Prerequisites & Notes:** ENG 202

Credits: 5

**ENG 350 - Introduction to Creative Writing**

Examines the fundamentals of at least two genres, such as fiction, nonfiction, playwriting, or poetry. The course will include both lectures, focused on model texts, and workshop-style discussions, focused on student work.

**Prerequisites & Notes:** ENG 101

Credits: 5

**ENG 351 - Introduction to Fiction Writing**

Examines the fundamental tools available to writers of fiction: point of view, dialog, characterization and voice. The course introduces the terms and protocol of workshop critique.

**Prerequisites & Notes:** ENG 101

Credits: 5

**ENG 353 - Introduction to Poetry Writing**

Introduction to the techniques of poetry writing, including craft, practice and modeling.

**Prerequisites & Notes:** ENG 101

Credits: 5

**ENG 354 - Introduction to Creative Nonfiction Writing**

An introductory course in writing nonfiction prose, such as personal essay, memoir, autobiography, travel writing, and other forms.

**Prerequisites & Notes:** ENG 101

Credits: 5

**ENG 364 - Introduction to Film Studies**

Overview of the conventions and techniques of narrative cinema with some readings in film theory.

**Prerequisites & Notes:** ENG 202

Credits: 5

**ENG 370 - Introduction to Language**

Overview of language structure and use. Topics include phonology, morphology, syntax and semantics, how language is acquired, and how it changes over space and time. Emphasis on English as a global language.

**Prerequisites & Notes:** ENG 101

Credits: 5

**ENG 371 - Studies in Rhetoric and Rhetorical Analysis**

Selected issues in ancient and modern rhetorical theory; rhetorical analysis of a variety of texts.

**Prerequisites & Notes:** ENG 101 and junior status.

Credits: 5

**ENG 401 - Senior Seminar in Writing and Rhetoric**

Senior writing seminar and inquiry into topics from the fields of composition and rhetoric.

**Prerequisites & Notes:** ENG 101; one course from ENG 301, ENG 302 or ENG 371, and senior standing

Credits: 5

**ENG 402 - Advanced Technical and Professional Writing**

Writing-intensive class focusing on advanced problems of technical communications and their solutions. Strategies for identifying target readers and meeting their informational needs. Special emphasis on a technical writer's responsibilities and the ethical, social and technical issues surrounding electronic publishing.

**Prerequisites & Notes:** ENG 302

Credits: 5

**ENG 406 - Topics in Critical and Cultural Theory**

An advanced course that examines one or more critical or cultural theories.

**Prerequisites & Notes:** ENG 313 plus two from: ENG 304-347, ENG 364, ENG 370, ENG 371

Credits: 5

**ENG 408 - Cultural Studies**

An advanced course that applies semiotic and/or textual approaches to a wide range of cultural issues. Repeatable once with different topics.

**Prerequisites & Notes:** ENG 313 plus two from: ENG 304-347, ENG 364, ENG 370, ENG 371

Credits: 5

**ENG 410 - Studies in Literary History**

A wide variety of studies in literary history. Repeatable once as an elective with different topics.

**Prerequisites & Notes:** ENG 202 plus three from: ENG 304-347, ENG 364, ENG 370, ENG 371

Credits: 5

**ENG 415 - Special Topics in National Literatures**

Studies in a variety of topics, canons or national literatures, such as Irish, Canadian, African, Native or Asian American. Repeatable once as an elective with different topics.

**Prerequisites & Notes:** ENG 202 and three courses from: ENG 304-347, ENG 364, ENG 370, ENG 371; possible additional prerequisite relevant to topic.

Credits: 5

**ENG 418 - Senior Seminar**

An advanced seminar offering an in-depth exploration of specialized topics. Requires students to develop scholarly projects integrating course material with their own literary, historical, and theoretical interests. This course is not repeatable.

**Prerequisites & Notes:** Senior Status; ENG 313 plus two from: ENG 304-347, ENG 364, ENG 370, ENG 371

Credits: 5

**ENG 423 - Studies in Major Authors**

Studies in the texts of a writer or writers in English or in translation. Repeatable once as an elective with different authors.

**Prerequisites & Notes:** ENG 202 and three courses from: ENG 304-347, ENG 364, ENG 370, ENG 371; possible additional prerequisite relevant to topic.

Credits: 5

**ENG 436 - The Structure of English**

Introduction to English sentence structure. Topics include clause structure, modification, complementation, and syntactic principles such as movement, coordinating and pronominalization.

**Prerequisites & Notes:** ENG 370 or instructor permission

Credits: 5

**ENG 438 - Cultural History of English**

Examines the cultural, linguistic and literary influences on the development of Old, Middle, Early Modern and present-day English.

**Prerequisites & Notes:** ENG 370 or instructor permission

Credits: 5

**ENG 439 - Topics in Language and Linguistics**

Explores topics in language and linguistics of interest to students of English literature, creative writing and English education. Repeatable once as an elective with different topics.

**Prerequisites & Notes:** ENG 370 or instructor permission

Credits: 5

**ENG 440 - Teaching English Language Arts in the Elementary School**

Survey of theory and practice, resources and methods of assessment for teaching English language arts in the elementary school.

**Prerequisites & Notes:** ENG 202; ENG 370

Credits: 5

**ENG 441 - Children's Literature for the Elementary and Middle School Teacher**

Examination of the variety and diversity of literature written for children and adolescents; exploration of book format, major genres, and works by notable authors and illustrators.

**Prerequisites & Notes:** ENG 202

Credits: 5

**ENG 442 - Studies in Literacy and Learning**

Focuses on a variety of historical, cultural, political and pedagogical issues regarding the nature and definitions of literacy and what it means to be literate in different contexts. Examines the role of schools in general and the English curriculum in particular for fostering the development of literacy/literacies.

**Prerequisites & Notes:** One course from ENG 301, ENG 302, ENG 370 or ENG 371.

Credits: 5

**ENG 443 - Teaching English Language Arts in the Secondary Schools I**

Survey of theory, practice, resources and methods of assessment for the teaching of English language arts.

**Prerequisites & Notes:** Senior status

Credits: 5

**ENG 444 - Teaching English Language Arts in the Secondary Schools II**

Continuation of the survey of theory, practice, resources and methods of assessment for the teaching of English language arts. This course may include a two-week, one period a day teaching practicum in a middle or high school.

**Prerequisites & Notes:** ENG 443

Credits: 5

**ENG 446 - Teaching Writing in the Elementary School**

Examination of how children learn to write, the process of writing, current issues in teaching writing, and methodology and strategies to teach writing in the elementary school.

**Prerequisites & Notes:** ENG 440, ENG 441; or instructor permission

Credits: 5

**ENG 451 - Creative Writing Seminar - Fiction**

An advanced course in the writing of fiction. Repeatable with different instructors to a maximum of 10 credits.

**Prerequisites & Notes:** ENG 351

Credits: 5

**ENG 453 - Creative Writing Seminar - Poetry**

An advanced course providing disciplined expression in a variety of modes of writing poetry. Repeatable with different instructors to a maximum of 10 credits.

**Prerequisites & Notes:** ENG 353

Credits: 5

**ENG 454 - Creative Writing Seminar - Creative Nonfiction**

An advanced workshop course in the writing of nonfiction, building on skills learned in prior courses. Repeatable with different instructors to a maximum of 10 credits.

**Prerequisites & Notes:** ENG 354

Credits: 5

**ENG 455 - Living Writers**

An advanced course that combines study of the craft of writing in contemporary works of poetry, fiction, and/or nonfiction and literary expression. May include oral performances and lectures by visiting writers.

**Prerequisites & Notes:** One from: ENG 351, ENG 353, ENG 354

Credits: 5

**ENG 456 - Special Topics in Fiction Writing**

Intensive reading, writing and workshops in one or more specific modes of fiction, such as fantasy, flash fiction, or adapting fictional works to other media.

**Prerequisites & Notes:** ENG 351

Credits: 5

**ENG 457 - Special Topics in Poetry Writing**

Intensive study of poetic texts in traditional and experimental forms. Opportunity to compose in a variety of poetic forms. Study of appropriate models.

**Prerequisites & Notes:** ENG 353

Credits: 5

**ENG 458 - Special Topics in Creative Nonfiction Writing**

Intensive reading, writing and workshop in one or more specific modes of nonfiction, such as memoir, travel writing, autobiography and the personal essay.

**Prerequisites & Notes:** ENG 354

Credits: 5

**ENG 459 - Editing and Publishing**

Focuses on a variety of professional editing and publishing procedures, opportunities and venues; politics of the literary marketplace; and careers available to writers.

**Prerequisites & Notes:** ENG 351, ENG 353 or ENG 354

Credits: 5

**ENG 460 - Special Topics I Creative Writing - Multi-Genre**

Intensive study of topics in creative writing that cross genre boundaries, or that critique those boundaries.

Opportunities to compose experimental or hybrid works. Repeatable with different instructors to a maximum of 10 credits.

**Prerequisites & Notes:** ENG 351, 353 or 354

Credits: 5

**ENG 461 - Internship in English: Professional Identity**

Students will intern in a local organization and participate in weekly seminar meetings designed to contribute to their internship experience and their own professional identities.

**Prerequisites & Notes:** Senior status (135 credits) and Instructor approval.

Credits: 5

**ENG 462 - Topics in Technical and Professional Writing**

A rhetorical examination of various specific topics confronting technical and professional writers in a rapidly changing technological world. Topics change annually. Repeatable once.

**Prerequisites & Notes:** ENG 302 or equivalent experience; senior standing

Credits: 5

**ENG 464 - Topics in Film Studies**

Examines various specific topics in film studies and theory. Repeatable once with different topics.

**Prerequisites & Notes:** ENG 364 or instructor permission

Credits: 5

**ENG 501 - Literary Theories and Practices**

Examination of theories as they affect the practice of literary criticism and scholarship. Some attention to methods of research and documentation in English studies. Practicum in critical writing.

Credits: 5

**ENG 502 - Seminar in the Writing of Fiction**

Individual projects in fiction along with examination of recently published works of fiction. May be repeated under advisement.

Credits: 5

**ENG 504 - Seminar in the Writing of Poetry**

Individual projects in poetry along with examination of recently published volumes of poetry. May be repeated under advisement.

Credits: 5

**ENG 505 - Seminar in the Writing of Nonfiction**

Individual projects in nonfiction along with examination of classic and modern models of nonfiction. May be repeated under advisement. NOTE: Graduate seminars in playwriting are available from the Department of Theatre Arts.

Credits: 5

**ENG 506 - Seminar in Creative Writing: Multigenre**

Studies in the theory and practice of creative writing that can encompass more than one genre, create hybrid genres, or cross genre lines. May be repeated under advisement.

Credits: 5

**ENG 509 - Internship in Writing, Editing and Production**

Under advisement, students may receive credit while working as interns in both on-campus and off-campus assignments appropriate to their career plans. Repeatable to 5 credits. S/U grading.

Credits: 1 TO 5

**ENG 510 - Seminar: Topics in Rhetoric**

Rhetorical theory and composition. Topics from classical tradition and modern developments. Applications for teaching of language, literature and composition. Repeatable with different topics.

Credits: 5

**ENG 513 - Seminar in Teaching College Composition**

Offered once a year in the fall.

**Prerequisites & Notes:** appointment as a teaching assistant or instructor permission

Credits: 5

**ENG 515 - Studies in Literary and Critical Theory**

Examines major theorists or movements in literary and critical theory. Repeatable with different topics.

Credits: 5

**ENG 520 - Studies in Poetry**

Examines the characteristics, history, uses and criticism of poetry. Repeatable with different topics.

Credits: 5

**ENG 525 - Studies in Fiction**

Examines the characteristics, history, uses and criticism of fiction. Repeatable with different topics.

Credits: 5

**ENG 530 - Studies in Drama**

Examines the characteristics, history, uses and criticism of drama. Repeatable with different topics.

Credits: 5

**ENG 535 - Studies in Nonfiction**

Examines the characteristics, history, uses and criticism of nonfiction. Repeatable with different topics.

Credits: 5

**ENG 540 - Studies in Global Literatures**

Examines interrelations in global literatures, involving topics such as war, imperialism, religion, feminism, migration, and the politics of language. Repeatable with different topics.

Credits: 5

**ENG 550 - Studies in American Literatures**

Examines writers, periods and topics drawn from the full diversity of literature written in America. Repeatable with different topics.

Credits: 5

**ENG 560 - Studies in British Literature**

Examines writers, periods and topics drawn from the full diversity of British literature. Repeatable with different topics.

Credits: 5

**ENG 565 - Studies in Post-Colonial Literatures**

Examines post-World War II literatures of, for example, Africa, India and the Caribbean. Repeatable with different topics.

Credits: 5

**ENG 570 - Topics in Cultural Studies**

Examines the relationship between culture and texts and applies semiotic and/or textual approaches to a wide range of issues in cultural studies. Repeatable with different topics.

Credits: 5

**ENG 575 - Studies in Womens Literature**

Examines writers, movements and topics in women's writing that may cut across genres and nationalities. Repeatable with different topics.

Credits: 5

**ENG 580 - Studies in Film**

Examines the codes and conventions of cinema with attention to critical theory. Repeatable with different topics.

Credits: 5

**ENG 594 - Practicum in Teaching**

Supervised teaching for MA candidates. Repeatable with different topics. Each topic repeatable to a maximum of 5 credits.

**Prerequisites & Notes:** ENG 501

Credits: 2 TO 5

**ENG 598 - Research in the Teaching of English**

Various announced topics in the teaching of language, literature, composition, technical writing, and creative writing. Repeatable with different topics to a maximum of 10 credits. Each topic repeatable to a maximum of 5 credits.

**Prerequisites & Notes:** admission to MA program or teaching experience

Credits: 1 TO 5

**ENG 690 - Thesis Writing**

Repeatable to a maximum of 5 credits.

Credits: 2 TO 5

**Environmental Sciences**

*Courses numbered X37; X97; 300, 400, 500; 417, 445, 517, 545 are described in the University Academic Policies section of this catalog.*

**ESCI 101 - Environmental Studies: A Scientific Approach**

An introduction to environmental studies which stresses a scientific approach toward understanding the nature and scope of contemporary problems in man's environment. The course reflects application of physical, chemical, biological and geologic principles to define ecological change, both natural and man-made.

Credits: 3

**ESCI 204 - The Oceans: Topics in Marine Science**

Introduction to marine life and environments from the polar regions to the tropics and from the near surface to the ocean depths. Examines the role of the ocean in controlling climate and supporting a great diversity of life forms. Considers all the major marine ecosystems, their use by humans and the impacts of humans.

**Prerequisites & Notes:** 2 quarters college-level natural science courses; MATH 112

Credits: 4

**ESCI 205 - Distinguished Scholar Program Seminar: DS**

Seminar and field course work with various Environmental topics. Equivalent to ESTU 205 and repeatable with different topics up to 4 credits combined. S/U grading.

**Prerequisites & Notes:** Admission to Huxley College Distinguished Scholars Program

Credits: 1

**ESCI 302 - Environmental Pollution**

Examination of human-induced environmental perturbations of air, land and water occurring on local, regional and global scales.

**Prerequisites & Notes:** CHEM 115 or CHEM 121; one quarter of biology; MATH 114

Credits: 4

**ESCI 306 - Introduction to Huxley College**

An introduction to Huxley faculty, programs, resources and community. Explains how the study of the environment is approached in and across disciplines at Huxley College. S/U grading.

**Prerequisites & Notes:** Huxley major

Credits: 1

**ESCI 309 - Exploring Environmental Data**

Principles of graphing and exploring environmental data. Class will cover data entry, verification, and quality control; univariate, bivariate, and multivariate graphic techniques; parametric and nonparametric summary and descriptive statistics, and an introduction to correlation analysis. Offered alternate years.

**Prerequisites & Notes:** ESCI 320, ESCI 310, ESCI 325, or BIOL 325; MATH 114, MATH 156, or MATH 124

Credits: 3

**ESCI 310 - Environmental Systems**

Interaction of biotic systems with earth's physical systems; principles of ecology and natural systems; ecosystem structure, function and management. Should not be taken by students who have completed or intend to enroll in ESCI 325 or BIOL 325.

**Prerequisites & Notes:** CHEM 121; one quarter of biology; MATH 114

Credits: 4

**ESCI 315 - Art, Science and Ethics of Flyfishing**

The goals of this course are to learn how to fly fish and to use fly fishing as a window into environmental studies and, more specifically, into the structure and function of river ecosystems and how people interact with them. Class format includes lectures, discussions, and laboratory and field exercises to gain insight into stream ecology and to understand relations of science, ethics, and environmental management. Offered summer only.

**Prerequisites & Notes:** Knowledge of ecology or permission of instructor.

Credits: 3

**ESCI 320 - Explorations in Environmental Studies**

Introduction to solving environmental problems in a social and scientific context, applications of analytical, written, verbal and quantitative skills to address environmental concerns in an interdisciplinary manner.

Credits: 4

**ESCI 321 - Oceanography**

Principles of oceanography, with emphasis on a description of the marine environment as an entity. Physics, chemistry and biology of the ocean.

**Prerequisites & Notes:** One quarter of biology; CHEM 121; MATH 115; physics recommended

Credits: 4

**ESCI 322 - Oceanography Laboratory**

A laboratory course supplementing lectures in oceanography, especially ESCI 321 and GEOL 340. Emphasis on the coastal ocean as ecological habitat, and physical oceanography - waves, tides and currents.

**Prerequisites & Notes:** pre/co-requisite: ESCI 321

Credits: 2

**ESCI 325 - Fundamentals of Ecology**

Investigation of the complex interactions of organisms with each other and with their physical surroundings, explored in the context of populations, communities, ecosystems and landscapes.

**Prerequisites & Notes:** BIOL 204, BIOL 205 and BIOL 206; CHEM 121, CHEM 122 and CHEM 123.

Credits: 3

**ESCI 328 - Introduction to Ecosystem Management**

Identification of non-market ecosystem values required of ecosystem management. Site specific inventory and assessment of resource values, methods of collecting, storing, displaying and interpretation of resource data. The use of GIS as a resource management tool. Laboratory time will focus on identifying resource values of parks, natural preserves and other areas with high resource values. Course offered only at Huxley on the Peninsulas.

**Prerequisites & Notes:** ESCI 302 or ESCI 310 or one year of biology or instructor permission

Credits: 5

**ESCI 330 - Natural History of the Pacific Northwest**

A field-oriented introduction to the geology, climate and ecosystems of the Pacific Northwest, with a focus on the biology and the ecology of important organisms.

**Prerequisites & Notes:** ESCI 310 or one year of biology or instructor permission

Credits: 4

**ESCI 333 - Introduction to Environmental Toxicology**

Explore the foundations of how environmental pollutants affect biological health. Topics include source and exposure routes of pollutants, basics of quantitative toxicology, effects of exposures, risk perception, and environmental regulations as they relate to toxicology.

**Prerequisites & Notes:** One course general biology, one course general chemistry, or instructor permission

Credits: 4

**ESCI 340 - Biostatistical Analysis**

Study, at an introductory and intermediate level, of data analysis and statistical tests commonly used in the biological and environmental sciences. Descriptive statistics, hypothesis testing, analysis of variance, regression and correlation, experimental design. Calculator required.

**Prerequisites & Notes:** BIOL 204, BIOL 205 and BIOL 206; CHEM 121, CHEM 122 and CHEM 123.

Credits: 5

**ESCI 361 - Water Quality**

Water quality principles, problems, and issues; standard methods of assessing water quality; practical approaches in solving water-related problems.

**Prerequisites & Notes:** One year general biology and one year general chemistry, or one quarter biology and CHEM 115 and ESCI 310 or ESCI 302

Credits: 3

**ESCI 362 - Water Quality Lab**

Standard laboratory methods of water quality analysis including physical parameters, dissolved oxygen, biological oxygen demand, phosphorus, nitrogen, total and fecal coliform, and heavy metals. Techniques include Winkler titrations, spectrophotometric methods, bioassays, linear regression analysis, and use of computer models.

**Prerequisites & Notes:** ESCI 361; or permission of instructor.

Credits: 2

**ESCI 380 - Energy and Environment**

How do our choices in energy production impact the global and local environment? What does the future hold in terms of human use of energy? This class emphasizes the physical principles behind energy and the effects of energy on the environment. We will explore the interdependence of world economies and environment as well as look at individual opinions and choices on energy related issues.

**Prerequisites & Notes:** BIOL 101, CHEM 121, and MATH 114

Credits: 3

**ESCI 392 - Introduction to Global Change**

There are six and a half billion people and we are changing the global environment at a pace unknown to history. We will unravel some of the linkages between biophysical systems, ecological responses, and human activities. We will cover changes to the climate, but also take a step back to appreciate the incredible suite of simultaneous global changes taking place in biotic diversity, hydrologic and chemical cycles, and human assimilation of Earth's energy.

**Prerequisites & Notes:** CHEM 121, BIOL 101, MATH 114

Credits: 3

**ESCI 402 - Topics in Environmental Studies**

Presentations by WWU faculty, researchers from other institutions, and Huxley College graduate students on a wide variety of topics in environmental studies. A written critique of selected presentations required. Questions, discussions and interactions encouraged. Informal brown bag lunch format. Repeatable to a maximum of 3 credits. S/U grading.

**Prerequisites & Notes:** Huxley major

Credits: 1

**ESCI 407 - Forest Ecology**

Ecology and analysis of forest ecosystems. Investigates the interactions of ecosystem components, specifically soil, plant and animal processes, with an emphasis on Pacific Northwest forests. Includes investigative field and lab studies of local ecosystems.

**Prerequisites & Notes:** ESCI 325 or BIOL 325; ESCI 340 or BIOL 340; or equivalent

Credits: 5

**ESCI 408 - Field Methods in Wildlife Ecology**

Rationale and practice of methods to study vertebrates in the field. Emphasis on terrestrial environments. Students design and conduct field research projects.

**Prerequisites & Notes:** ESCI 325 or BIOL 325; ESCI 340; or equivalent

Credits: 5

**ESCI 410 - Forestry-Fish Interactions**

Examination of the ways in which forestry and fisheries management practices interact, with emphasis on Pacific Northwest ecosystems. Topics covered include basic principles of watershed and riparian ecology, habitat requirements and ecology of salmonid fishes, effects of forest management and other land use practices on stream habitat, and strategies for mitigating adverse impacts.

**Prerequisites & Notes:** ESCI 310 or ESCI 325 or BIOL 325, or instructor permission.

Credits: 3

**ESCI 411 - Forest and Fish Assessment**

A project-oriented course based on laboratory and field investigations of riparian and in-stream habitats and their fish communities. Small groups will undertake investigations of local streams through the use of commonly accepted assessment practices.

**Prerequisites & Notes:** Enrollment in ESCI 410 or permission of instructor.

Credits: 2

**ESCI 421 - Fisheries Management Lab**

Field and laboratory experience in typical fisheries management techniques. Especially directed toward marine and freshwater sampling, population identification and quantification, and estimation of management parameters.

**Prerequisites & Notes:** ESCI 325.

Credits: 2

**ESCI 423 - Past Environments of the Pacific Northwest**

Introduction to the concepts of paleoecology techniques used to study ancient environmental and ecosystems and current research. Focus on changes in the northwestern United States during the Holocene. Lecture/lab format. Students will reconstruct past plant assemblages of the Pacific Northwest, examine fire regimes and build tree-ring chronologies using ancient trees.

**Prerequisites & Notes:** CHEM 121, CHEM 122, CHEM 123; BIOL 204, BIOL 205, BIOL 206; MATH 124.

Credits: 4

**ESCI 425 - Environmental Biology of Fishes**

An examination of the physiological, morphological and behavioral adaptations of fishes to the wide array of aquatic environments as demonstrated by various taxonomic and ecological groups.

**Prerequisites & Notes:** ESCI 325 or BIOL 325

Credits: 3

**ESCI 426 - Marine Invertebrates and Their Environment**

Classroom and field study of marine invertebrates and adaptation to their environment. Emphasis on identification and study of the diverse Puget Sound marine fauna.

**Prerequisites & Notes:** BIOL 206 or equivalent.

Credits: 5

**ESCI 428 - Freshwater Algae Bioindicators**

Introduction to the taxonomy and ecology of freshwater algae, with an emphasis on the role of freshwater algae as bioindicators of environmental pollution. Offered alternate years.

**Prerequisites & Notes:** ESCI 325 or BIOL 325, and ESCI 361 or permission of instructor

Credits: 4

**ESCI 429 - Stream Ecology**

Ecology and analysis of streams with emphasis on physical and chemical properties in relation to biotic communities. Processing of organic matter by stream invertebrates and fish communities. Perturbation by high organic loading or chemical pollutants and recovery processes. Reservoirs as hybrid systems. Field and laboratory exercises in sampling and analysis of stream ecosystems.

**Prerequisites & Notes:** ESCI 325 or BIOL 325; ESCI 361 and ESCI 362.

Credits: 5

**ESCI 430 - Limnology and Limnology Lab**

Ecology and analysis of lakes and standing water bodies, with emphasis on the physical, chemical and biological factors that determine biological productivity. Human impacts on lakes.

**Prerequisites & Notes:** ESCI 325 or BIOL 325; ESCI 361 and ESCI 362.

Credits: 5

**ESCI 431 - Watershed Biogeochemistry**

Transfer, cycling, and interaction of carbon, nutrients, and other elements within and between terrestrial and aquatic ecosystems. Physical, chemical and biological influences on transfers. Computer simulation modeling of processes in an ecosystem context.

**Prerequisites & Notes:** ESCI 325 or BIOL 325; ESCI 361A or EGEO 432

Credits: 3

**ESCI 432 - Topics in Marine Ecology**

Primary literature is used to introduce students to important and current topics in marine ecology.

**Prerequisites & Notes:** ESCI 321

Credits: 4

**ESCI 433 - Population Biology**

Introduction to theory and application of population biology, with emphasis on population ecology. Study of structure, distribution, and dynamics of populations. Applications to population conservation and management.

**Prerequisites & Notes:** ESCI 325 or BIOL 325; MATH 124; ESCI 340; MATH 125 recommended.

Credits: 3

**ESCI 435 - Landscape Ecology**

The study of landscape patterns across temporal and spatial scales; emphasis on their organization, functional interactions and dynamics. Application of landscape principles to land management problems.

**Prerequisites & Notes:** ESCI 325 or BIOL 325; ESCI 340 or BIOL 340; or equivalent

Credits: 4

**ESCI 435A - Landscape Ecology**

The study of landscape patterns across temporal and spatial scales; emphasis on their organization, functional interactions and dynamics. Application of landscape principles to land management problems.

**Prerequisites & Notes:** ESCI 325 or BIOL 325; ESCI 340 or BIOL 340; or equivalent

Credits: 4

**ESCI 435B - Landscape Ecology Lab**

Computer-based lab in landscape ecology.

**Prerequisites & Notes:** ESCI 435A or concurrent; ESCI 325, ESCI 340; or equivalent

Credits: 1

**ESCI 436 - Environmental Impact Assessment**

Objective evaluation and formal description of a real natural system or geographic region. Class preparation of a unified document summarizing physical, biological and social aspects of a study area. Review of pertinent laws and EIS documents. Also offered as ESTU 436.

**Prerequisites & Notes:** Senior status.

Credits: 5

**ESCI 439 - Conservation of Biological Diversity**

Examination of causes and consequences of declines in biodiversity due to human activities. Review of conflicts arising from multiple-use management of natural resources. Survey and evaluation of conservation efforts directed at single species and at ecosystems. Optional field trips.

**Prerequisites & Notes:** ESCI 325 or BIOL 325

Credits: 4

**ESCI 440 - Wetlands Ecology**

An ecosystem approach to investigating the hydrologic, chemical and biological interactions that are unique to wetland systems. Students will take several field trips to bogs, swamps, marshes and estuaries in the area to become familiar with diverse wetland habitats and to illustrate the principals covered in class.

**Prerequisites & Notes:** ESCI 340 and ESCI 325 or concurrent

Credits: 5

**ESCI 441 - GIS and Environmental Modeling**

An overview of statistical and simulation models and their use to address applied problems in ecology and natural resource management. Geographical Information Systems are used as a tool for these models and for the display and analysis of model output. **Prerequisites & Notes:** one 300-level or above statistics course; one natural resource management or ecology course; one GIS course

Credits: 3

**ESCI 442 - Introduction to Remote Sensing**

An introduction to remote sensing concepts and techniques for monitoring the earth's surface features. Special emphasis on mapping land use and land cover and on quantifying aspects of vegetation structure and composition. Labs are based on the use of data from airborne and spaceborne multispectral scanners and LIDAR.

**Prerequisites & Notes:** Completion of a 300-level course in either ESCI, ESTU, EGEO, BIOL, GEOL, ANTH, or permission of instructor.

Credits: 5

**ESCI 444 - Biogeochemistry of Marine Sediments**

Introduces concepts in chemical oceanography and methodology of studying sediments and their chemistry.

**Prerequisites & Notes:** ESCI 321

Credits: 4

**ESCI 455 - Environmental Toxicology I**

Physiological and biochemical effects of common pollutants found in our environment. Mechanism of action of individual pollutants, including cellular damage at molecular level.

**Prerequisites & Notes:** ESCI 302 or ESCI 333 or permission of instructor.

Credits: 4

**ESCI 456 - Environmental Toxicology II**

Second course in environmental toxicology series. Covers toxicity testing, biomonitoring, data analysis and environmental risk assessment.

**Prerequisites & Notes:** ESCI 455 or instructor permission

Credits: 4

**ESCI 457 - Environmental Toxicology Laboratory I**

Protocols and procedures for evaluating the toxicity of chemicals and environmental samples using a variety of organisms and end point responses. Emphasis on organisms at the biochemical level. Introduction to quality assurance/quality control principles.

**Prerequisites & Notes:** ESCI 455 or concurrent.

Credits: 4

**ESCI 458 - Environmental Toxicology Laboratory II**

Protocols and procedures for evaluating toxicological effects of chemicals and other stressors on aquatic and terrestrial organisms, measuring a variety of responses besides mortality. Emphasis on impacts at the organism-level and applying results to determine short and long-term effects at populations and community levels.

**Prerequisites & Notes:** ESCI 456 or concurrent or permission of instructor.

Credits: 4

**ESCI 459 - Aquatic Toxicology**

Effects of toxic compounds on aquatic organisms. Acute and chronic responses of organisms to aquatic toxicants, and current literature on population, community and ecosystem aquatic toxicology.

**Prerequisites & Notes:** ESCI 455 or ESCI 456 or a minimum of 4 credits in 400-level aquatic ecology courses

Credits: 3

**ESCI 460 - Contaminant Movement in Environment**

Physical, chemical, and biological processes that govern movement of contaminants in the environment and ultimate fate of these contaminants. Aspects of these processes that will be investigated include concentration, persistence, reactivity and portioning among environmental media (air, water, soil, sediment and biota). These processes will be used as a basis of simple mathematical expressions used to determine contaminant behavior in the environment. Environmental risks to biological receptors will also be investigated.

**Prerequisites & Notes:** Completion of Huxley ESCI prerequisites; ESCI 361A; CHEM 251 or equivalent recommended; or instructor permission.

Credits: 4

**ESCI 462 - Air Pollution**

Types of air pollutants, their measurement and effects. Removal of air pollutants from gas streams. Air pollution meteorology and dispersion. Air pollution laws and standards. Air resources management.

**Prerequisites & Notes:** CHEM 121; ESCI 302.

Credits: 4

**ESCI 463 - Wetlands for Wastewater Treatment**

This class will begin with brief introductions to conventional wastewater treatment methods (primary, secondary and tertiary) and chemistry as it relates to wetlands and wastewater treatment. Through assigned readings, we will then examine the use of both natural and constructed wetlands for the treatment of municipal wastewater, acid mine drainage, stormwater runoff, and agricultural wastewater. Each student will also be responsible for carrying out a research project using the campus stormwater wetland as a study site.

**Prerequisites & Notes:** Huxley or MESP major, or instructor permission

Credits: 3

**ESCI 470 - Ecological Restoration**

Investigates the theory and practice of ecological restoration, including methods for evaluating the success of restoration projects. Incorporates physical and ecological as well as economic and cultural considerations. Students work in groups on actual restoration projects.

**Prerequisites & Notes:** Senior status.

Credits: 4

**ESCI 480 - Applications in Energy Production**

This class is designed to bring students into contact with the industries where energy is produced. In this field-based class we will visit conventional and alternative energy facilities and learn how energy is produced and delivered to consumers. We will pay particular attention to the basic physics, chemistry and biology of energy systems as well as their impacts on the environment.

**Prerequisites & Notes:** ESCI 380

Credits: 4

**ESCI 490 - Environmental Risk Assessment**

Principles and methods of quantitative environmental risk assessment, data analysis and risk communication.

**Prerequisites & Notes:** Senior status. One 300 or 400 level toxicology course strongly recommended.

Credits: 4

**ESCI 491 - Oceanography of Puget Sound**

Focuses on estuarine circulation and its relation to biological and chemical processes in Puget Sound. Students conduct a capstone research project integrating oceanography and public policy. As a capstone, course is for Seniors only.

**Prerequisites & Notes:** ESCI 321

Credits: 4

**ESCI 492 - Climate Change**

Study the basics of climate change science at global and regional scales. We will evaluate the probable impact on natural ecosystems, resources (food, water and energy) and society.

**Prerequisites & Notes:** BIOL 204, BIOL 205, BIOL 206; CHEM 121, CHEM 122, CHEM 123; MATH 124

Credits: 4

**ESCI 495 - Teaching Practicum**

Experience in teaching a lecture or laboratory course in environmental sciences. Repeatable to a maximum of 4 credits. S/U grading.

**Prerequisites & Notes:** relevant course work; instructor permission

Credits: 1 TO 3

**ESCI 498A - Senior Thesis**

The Senior thesis makes an original contribution to knowledge by using primary research methods of an academic discipline. In cooperation with a faculty adviser, skills are developed in synthesizing prior knowledge, formulating a question or hypothesis, gathering new data or identifying existing information, analysing results and drawing conclusions. The approach may be theoretical, historical, laboratory or field based. Two bound copies of the senior thesis, in an approved format, are submitted by the student, and one of them is kept in Wilson Library. Repeatable to a maximum of 15 credits.

Credits: 1 TO 15

**ESCI 498B - Internship**

The internship provides the student with a supervised work and learning experience in a paid employment or unpaid voluntary, environmentally relevant, professional setting. The sponsoring organization may be non-profit; academic; private-sector; or local, state or federal government. The experience is documented in an internship report conforming to an approved format. Two bound copies of the report are submitted by the student, and one of them is kept in Wilson Library. Repeatable to a maximum of 15 credits. S/U grading.

**Prerequisites & Notes:** Permission of instructor.

Credits: 1 TO 15

**ESCI 498C - Senior Project**

Applies knowledge and skills to a practical problem or situation in environmental research, education, or resource management. In cooperation with the faculty advisor, develops expertise in planning, development, implementation, management, and completion of an independent project. Approach may be laboratory, computer, field, or community based. The student presents a written report, digital presentation, seminar, performance, or physical product appropriate to the project, as approved by the faculty advisor. Repeatable to a maximum of 15 credits.

Credits: 1 TO 15

**ESCI 498D - International Study**

International study exposes the student to environmental concerns, situations, and problems in cultural and geographical setting of a foreign country. The experience fosters broadening the student's awareness of human and natural impacts on the environment, and natural and cultural contexts of environmental issues. The experience must contain a significant independent research or problem-solving component. Credits from non-Huxley programs may be substituted to partially or fully meet the requirement, provided prior approval of the faculty adviser is documented in a '498 contract.' The student presents a written report, film, digital presentation, or seminar appropriate for the project, as approved by the faculty adviser. Repeatable to a maximum of 15 credits. S/U grading.

**Prerequisites & Notes:** Permission of instructor.

Credits: 1 TO 15

**ESCI 499A - Seminar**

Student-faculty interaction on topics of general interest. Repeatable for credit with no maximum. S/U grading.

**Prerequisites & Notes:** admission to Huxley College or instructor permission

Credits: 1

**ESCI 499B - Seminar**

Student-faculty interaction on topics of general interest. Repeatable for credit with no maximum. S/U grading.

**Prerequisites & Notes:** admission to Huxley College or instructor permission

Credits: 1

**ESCI 499C - Seminar**

Student-faculty interaction on topics of general interest. Repeatable for credit with no maximum. S/U grading.

**Prerequisites & Notes:** admission to Huxley College or instructor permission

Credits: 1

**ESCI 499D - Seminar**

Student-faculty interaction on topics of general interest. Repeatable for credit with no maximum. S/U grading.

**Prerequisites & Notes:** admission to Huxley College or instructor permission

Credits: 1

**ESCI 499E - Seminar**

Student/faculty interaction on topics of general interest. Repeatable for credit with no maximum. S/U grading.

**Prerequisites & Notes:** admission to Huxley College or instructor permission

Credits: 1

**ESCI 499F - Seminar**

Student-faculty interaction. Repeatable for credit with no maximum. S/U grading.

**Prerequisites & Notes:** admission to Huxley College or instructor permission

Credits: 2

**ESCI 499G - Seminar**

Student-faculty interaction. Repeatable for credit with no maximum. S/U grading.

**Prerequisites & Notes:** admission to Huxley College or instructor permission

Credits: 2

**ESCI 499H - Seminar**

Student-faculty interaction. Repeatable for credit with no maximum. S/U grading.

**Prerequisites & Notes:** admission to Huxley College or instructor permission

Credits: 2

**ESCI 499I - Seminar**

Student-faculty interaction. Repeatable for credit with no maximum. S/U grading.

**Prerequisites & Notes:** admission to Huxley College or instructor permission

Credits: 2

**ESCI 499J - Seminar**

Student-faculty interaction. Repeatable for credit with no maximum. S/U grading.

**Prerequisites & Notes:** admission to Huxley College or instructor permission

Credits: 2

**ESCI 499K - Seminar**

Student-faculty interaction. Repeatable for credit with no maximum. S/U grading.

**Prerequisites & Notes:** admission to Huxley College or instructor permission

Credits: 2

**ESCI 499L - Seminar**

Student-faculty interaction. Repeatable for credit with no maximum. S/U grading.

**Prerequisites & Notes:** admission to Huxley College or instructor permission

Credits: 2

**ESCI 499M – Seminar**

Student-faculty interaction. Repeatable for credit with no maximum. S/U grading.

**Prerequisites & Notes:** admission to Huxley College or instructor permission

Credits: 2

**ESCI 499N - Seminar**

Student-faculty interaction on topics of general interest. Repeatable for credit with no maximum.

**Prerequisites & Notes:** admission to Huxley College or instructor permission

Credits: 1

**ESCI 499O - Seminar**

Student-faculty interaction on topics of general interest. Repeatable for credit with no maximum.

**Prerequisites & Notes:** admission to Huxley College or instructor permission

Credits: 1

**ESCI 499P - Seminar**

Student-faculty interaction on topics of general interest. Repeatable for credit with no maximum.

**Prerequisites & Notes:** admission to Huxley College or instructor permission

Credits: 1

**ESCI 499Q - Seminar**

Student-faculty interaction on topics of general interest. Repeatable for credit with no maximum.

**Prerequisites & Notes:** admission to Huxley College or instructor permission

Credits: 1

**ESCI 499R - Seminar**

Student-faculty interaction on topics of general interest. Repeatable for credit with no maximum.

**Prerequisites & Notes:** admission to Huxley College or instructor permission

Credits: 1

**ESCI 499S - Integration of Environmental Science and Policy**

This seminar will investigate the integration of science and policy within EPA and other Federal agencies such as US Forest Service, US Geological Survey, NOAA and NASA. The course will be an introduction to the process of science, a review of Kuhn, Popper and Oreskes, and the interaction between observational and experimental data, theory and simulation. Policy formulation under several federal level programs will be introduced. Detailed examination of several case studies will be presented by the students. During the quarter local policy makers-shapers will also be invited to discuss their experiences in melding science and policy.

**Prerequisites & Notes:** Environmental Science Major or permission.

Credits: 2

**ESCI 499T - Seminar**

Student-faculty interaction. Repeatable for credit with no maximum.

**Prerequisites & Notes:** admission to Huxley College or instructor permission

Credits: 2

**ESCI 499U - Seminar**

Student-faculty interaction. Repeatable for credit with no maximum.

**Prerequisites & Notes:** admission to Huxley College or instructor permission

Credits: 2

**ESCI 499V - Seminar**

Student-faculty interaction. Repeatable for credit with no maximum.

**Prerequisites & Notes:** admission to Huxley College or instructor permission

Credits: 2

**ESCI 499W - Seminar**

Student-faculty interaction. Repeatable for credit with no maximum.

**Prerequisites & Notes:** admission to Huxley College or instructor permission

Credits: 2

**ESCI 499X - Seminar**

Student-faculty interaction. Repeatable for credit with no maximum.

**Prerequisites & Notes:** admission to Huxley College or instructor permission

Credits: 2

**ESCI 499Y - Seminar**

Student-faculty interaction. Repeatable for credit with no maximum.

**Prerequisites & Notes:** admission to Huxley College or instructor permission

Credits: 2

**ESCI 499Z - Seminar**

Student-faculty interaction. Repeatable for credit with no maximum.

**Prerequisites & Notes:** admission to Huxley College or instructor permission

Credits: 2

**ESCI 501 - Research in Environmental Science**

Philosophy and ethics of research; funding sources; proposal writing; research methodology; oral and written communication of research results; analytical and computer resources available at WWU.

Credits: 3

**ESCI 502 - Experimental Design**

Elements of good experimental design, including modeling experiments and evaluating appropriate analysis techniques. Course draws heavily from current literature discussing appropriate use of statistics in experimental studies. Emphasis is on the application of univariate designs in ecological studies.

**Prerequisites & Notes:** minimum of one 300-level statistics course

Credits: 4

**ESCI 503 - Statistical Ecology**

Covers graphical, descriptive and basic inferential statistics; nonparametric procedures; regression, correlation, and analysis of variance; and multivariate classification and ordination. Emphasis on using a variety of statistical tools to analyze ecological data sets. Uses advanced statistical software; computer literacy is helpful but not required.

**Prerequisites & Notes:** minimum of one 300-level biostatistics course; minimum of 10 credits in ecology

Credits: 4

**ESCI 507 - Advanced Forest Ecology**

Ecology and analysis of forest ecosystems. Investigates the interactions of ecosystem components, specifically soil, plant and animal processes with an emphasis on Pacific Northwest forests. Includes investigative field and lab studies of local ecosystems.

**Prerequisites & Notes:** ESCI 325 or BIOL 325; ESCI 340 or BIOL 340; or equivalent

Credits: 5

**ESCI 521 - Biological Oceanography**

Course will provide a process-oriented view of marine pelagic ecosystems. Areas covered may include biogeography, energetics, food webs, biogeochemical cycles, fisheries oceanography. Laboratory and field work will emphasize current oceanographic techniques. Repeatable once.

**Prerequisites & Notes:** Graduate status; at least one year of biology, including ecology.

Credits: 5

**ESCI 522 - Estuarine Ecology**

Structure and function of estuarine ecosystems with emphasis on the effect of physical and chemical factors on biological systems. Current management issues resulting from human impacts on estuaries.

**Prerequisites & Notes:** course in general ecology, oceanography or limnology

Credits: 5

**ESCI 523 - Past Environments of the Pacific Northwest**

Introduction to the central concepts of paleoecology, the techniques paleoecologists use to study ancient environments and ecosystems, and some of the current research in the field. Focus on changes in the northwestern United States but the class will include a broad study of global paleoclimate.

**Prerequisites & Notes:** ESCI 325 or equivalent.

Credits: 4

**ESCI 529 - Advanced Stream Ecology**

Ecology and analysis of streams with emphasis on physical and chemical properties in relation to biotic communities. Offered concurrently with ESCI 429. Graduate students must enroll in graduate laboratory section.

**Prerequisites & Notes:** minimum of 10 credits in general chemistry

Credits: 5

**ESCI 530 - Advanced Limnology**

Advanced study of the physical, chemical and biological properties of lakes.

**Prerequisites & Notes:** Minimum of 10 credits of general chemistry.

Credits: 5

**ESCI 533 - Advanced Population Biology**

Study of the structure, distribution, and dynamics of populations. Emphasis is on both empirical and theoretical approaches to studying populations.

**Prerequisites & Notes:** ESCI 325 or BIOL 325; MATH 124; BIOL 321; MATH 125 recommended

Credits: 4

**ESCI 535 - Advanced Landscape Ecology**

The advanced study of landscape patterns across temporal and spatial scales with emphasis on their organization, functional interactions and dynamics. Application of landscape principles to land management problems.

**Prerequisites & Notes:** ESCI 325, ESCI 340 or equivalent

Credits: 4

**ESCI 535B - Advanced Landscape Ecology Lab**

Computer-based lab in landscape ecology.

**Prerequisites & Notes:** ESCI 535A concurrent

Credits: 1

**ESCI 536 - Environmental Impact Assessment Practicum**

Preparation of an objective assessment description of a real natural area including the search for public documentation, evaluation of coverage and specific new analyses. Coordinating role in task group data assembly and editorial review of draft project summaries. Experience directly related to professional responsibilities in the environmental field. Review of assessment utilization in the EIS format and of significant legislation.

Credits: 4

**ESCI 538 - Coastal Ecosystems Mgmt**

Preparation of an objective assessment description of a real natural area including the search for public documentation, evaluation of coverage and specific new analyses. Coordinating role in task group data assembly and editorial review of draft project summaries. Experience directly related to professional responsibilities in the environmental field. Review of assessment utilization in the EIS format and of significant legislation.

Credits: 4

**ESCI 539 - Advanced Conservation of Biological Diversity**

Advanced study of causes and consequences of declines in biodiversity due to human activities. Review of conflicts arising from multiple-use management of natural resources. Survey and evaluation of conservation efforts directed at single species and at ecosystems. Discussion of primary conservation literature. Optional field trips.

**Prerequisites & Notes:** ESCI 325 or BIOL 325

Credits: 5

**ESCI 540 - Wetlands Ecology**

Uses an ecosystem approach to investigate the hydrologic, chemical and biological interactions that are unique to wetland systems. Students will take several field trips to bogs, swamps, marshes and estuaries in the area to become familiar with diverse wetland habitats and to illustrate the principals covered in class.

**Prerequisites & Notes:** ESCI 502 or concurrent

Credits: 5

**ESCI 541 - GIS and Environmental Modeling**

An overview of statistical and simulation models and their use to address applied problems in ecology and natural resource management. Geographical Information Systems are used as a tool for developing input data for these models and for the display and analysis of model output.

**Prerequisites & Notes:** One 300-level or above statistics course; one ecology or natural resource management course; one GIS course

Credits: 3

**ESCI 542 - Remote Sensing**

Concepts and applications of remote sensing techniques for monitoring earth surface features. Special emphasis on mapping land use and land cover and on quantifying aspects of vegetation structure and composition. Labs are based on the use of data from airborne and spaceborne multispectral scanners and LIDAR.

**Prerequisites & Notes:** Graduate Status

Credits: 5

**ESCI 555 - Advanced Environmental Toxicology I**

Physiological and biochemical effects of major pollutants found in the environment; influence of various nutrients on pollutant toxicity.

**Prerequisites & Notes:** ESCI 302, CHEM 375; or instructor permission

Credits: 4

**ESCI 556 - Advanced Environmental Toxicology II**

Second course in environmental toxicology series. Covers toxicity testing, biomonitoring, data analysis and environmental risk assessment.

**Prerequisites & Notes:** ESCI 455 or ESCI 555 or instructor permission

Credits: 4

**ESCI 557 - Advanced Environmental Toxicology Laboratory I**

Protocols and procedures for evaluating the toxicity of chemicals and environmental samples using a variety of organisms and end point responses. Emphasis on organisms at the biochemical level.

**Prerequisites & Notes:** pre/co-requisite: ESCI 555 or instructor permission

Credits: 3

**ESCI 558 - Advanced Environmental Toxicology Laboratory II**

Protocols and procedures for evaluating the toxicological effects of chemicals and other stressors on aquatic and terrestrial organisms measuring a variety of responses besides mortality. Emphasis on impacts at the organism level and applying results to determine short- and long-term effects at population and community levels.

**Prerequisites & Notes:** pre/co-requisite: ESCI 556 or instructor permission

Credits: 3

**ESCI 559 - Aquatic Toxicology**

Evaluation of the effects of toxic compounds on aquatic organisms. Acute and chronic responses to aquatic toxicants. Current trends in organismal, community and ecosystem aquatic toxicology.

**Prerequisites & Notes:** ESCI 555 or ESCI 556 or minimum of 4 credits in 400-level courses in aquatic ecology

Credits: 3

**ESCI 562 - Advanced Air Pollution**

Types of air pollutants, their measurements and effects. Removal of air pollutants from gas streams. Air pollution meteorology and dispersion. Air pollution laws and standards. Air resources management.

**Prerequisites & Notes:** ESCI 302; general chemistry; two quarters of calculus

Credits: 4

**ESCI 590 - Advanced Environmental Risk Assessment**

Principles and methods of quantitative environmental risk assessment, data analysis and risk communication.

**Prerequisites & Notes:** Graduate status.

Credits: 4

**ESCI 592 - Climate Change**

Magnitude and extent of climatic change and its probable impact on natural ecosystems resources (food, water and energy) and society. Evaluates possible actions which could minimize the impacts.

Credits: 4

**ESCI 595 - Teaching Practicum**

Experience in teaching a lecture or laboratory course in environmental studies. Repeatable. S/U grading.

**Prerequisites & Notes:** relevant course work

Credits: 1 TO 3

**ESCI 599 - Graduate Environmental Studies Seminar**

Selected topics across the spectrum of environmental studies (e.g., toxicology, watershed studies, applied ecology, geography, environmental education, etc.). Repeatable to a maximum of 6 credits. S/U grading.

Credits: 1 TO 2

**ESCI 690 - Thesis Research**

Thesis research in environmental science under faculty direction, an integral part of the MS in environmental science. Repeatable up to 36 credits. S/U grading.

**Prerequisites & Notes:** thesis advisory committee permission

Credits: 1 TO 12

**Environmental Studies**

*Courses numbered X37; X97; 300, 400, 500; 417, 445, 517, 545 are described in the University Academic Policies section of this catalog.*

**ESTU 118 - College Quest - Environmental Studies**

Study of various environmental topics. Supported through Extended Education & Summer Programs, College Quest youth program is offered exclusively to high school students (grades 10-12). Not available to Huxley majors.

Repeatable to 4 credits. S/U Grading

Credits: 1 TO 2

**ESTU 202 - Introduction to Environmental Studies and Sustainability**

A basic overview of environmental issues in the United States and globally. An emphasis will be placed on environmental and human sustainability in a social science context.

Credits: 3

**ESTU 205 - Distinguished Scholar Program Seminar: DS**

Seminar and field course work with various Environmental topics. Equivalent to ESCI 205 and repeatable with different topics up to 4 credits combined. S/U grading.

**Prerequisites & Notes:** Admission to Huxley College Distinguished Scholars Program.

Credits: 1

**ESTU 303 - Human Ecology and Sustainability**

Study of the interactions between human and natural systems, and their outcomes on sustainability. Topics include human effects on natural systems, energy use, and population, within solving environmental problems.

**Prerequisites & Notes:** ESTU 202 or Huxley major prerequisites or instructor permission

Credits: 4

**ESTU 304 - Environment and Resource Policy**

An examination of environmental and resource policy in the United States. What is policy, how is it made and how does it change? The history of environmental policy is examined, and current environmental policy surveyed. Federal, state, regional and local jurisdictions and how they interact in the policy arena are examined. Primary forces affecting environmental policy are reviewed and analyzed. Several case studies are presented.

**Prerequisites & Notes:** ESTU 202 or Huxley major or written permission of instructor

Credits: 4

**ESTU 305 - Environmental History and Ethics**

A concern for nature has slowly emerged as human population has grown, understanding of nature has progressed, and the impact of human activity on natural systems has increased. This course reviews how various human activities have historically depended on and interacted with the natural world. It traces how these interactions have resulted in the emergence of what the ecologist Aldo Leopold termed the land ethic. The focus will be on how science and politics have interacted as a land ethic in American environmental history.

**Prerequisites & Notes:** Huxley major prerequisites or instructor permission

Credits: 4

**ESTU 320 - Explorations in Environmental Studies**

Introduction to solving environmental problems in a policy context, applications of analytical, written, verbal and quantitative skills to address environmental concerns in an interdisciplinary manner.

**Prerequisites & Notes:** Huxley major or permission of instructor.

Credits: 4

**ESTU 330 - History and Theory of Emergency Planning**

This course provides a broad introduction to the historical and theoretical perspectives of emergency management policies and practices. Students will learn how theories are used to inform the practice of disaster and emergency management. Fundamental principles of risk, vulnerability, and emergency planning are examined relative to natural, technologic, and health-related hazards, from an interdisciplinary perspective. Federal, state, and municipal legislation and regulations will be examined for their implications on mitigation, preparedness, response and recovery. Students will understand the roles and professional responsibilities of emergency managers in preparing and implementing all-hazards plans and policies.

**Prerequisites & Notes:** ESTU 304 or ESTU 369 or admission to the Planning and Environmental Policy major or permission of instructor.

Credits: 4

**ESTU 368 - Plan Graphics: Methods in Urban Planning Design Graphics**

Introduction to the application of graphic design technology to plan design using computer aided design, publication layout, image presentation, and video editing software.

**Prerequisites & Notes:** Declaration of Major in Planning and Environmental Policy.

Credits: 2

**ESTU 369 - Introduction to Planning**

Principles and practices in urban development and public planning in the United States. Concepts of planning as a community process and professional activity. Evolution of planning ideas in response to changing social, economic, and environmental conditions within the American political framework. Survey of the specialized fields in planning practice, emphasizing the emerging field of environmental planning.

**Prerequisites & Notes:** admission to Huxley or instructor permission

Credits: 3

**ESTU 370 - Processes and Methods in Planning**

Processes in community goal making, formulation of comprehensive land use plans, and the strategies employed in plan implementation. Methods and analytical techniques used in public planning. The role of the planner in political decision making.

**Prerequisites & Notes:** ESTU 369

Credits: 3

**ESTU 371 - Environmental Education**

An introduction to environmental education and a review of current thinking and practices in this dimension of education. Focus on goals and principles, content, settings, methods and processes of environmental education through reading, discussion and project work.

**Prerequisites & Notes:** admission to Huxley College or instructor permission

Credits: 4

**ESTU 372 - The Environmental Education Curriculum**

Critical review of curricula that have been developed. The need for environmental education is assessed, learning objectives are examined and strategies for attaining these objectives studied. The qualities of the ideal environmental education curriculum are identified by students, based on their research into the matter.

**Prerequisites & Notes:** ESTU 371

Credits: 4

**ESTU 376 - The History of Conservation in America**

A review of the story of conservation in America from the colonial period to the present. Emphasis is on the development of ideas about land and natural resources in America-how they should be allocated, valued and used. What currents of thought and action led to the concept "conservation" in the late 19th century? How did this concept develop and appear in government policy, and how did policy and bureaucracy involving this concept evolve? These questions are explored through the writings of the principals involved.

**Prerequisites & Notes:** ESTU 305 or instructor permission

Credits: 4

**ESTU 380 - History and Politics of Planning**

Survey of the origins, development and significance of the planning movement in the United States and the profession that emerged from it. The seminal innovators, practices and achievements in American planning.

**Prerequisites & Notes:** ESTU 369 or instructor permission

Credits: 3

**ESTU 385 - Environmental Sociology**

Uses sociological concepts to analyze human-environmental interactions. Topics include humans as part of the ecosystem, natural resource dependent communities, population growth and environmental quality, the environmental and anti-environmental movements, limits to growth and energy use, garbage and other wastes, sustainable development and economic growth, sociological and economic perspectives on alternative environmental futures.

**Prerequisites & Notes:** any from: ESTU 202, SOC 221, SOC 251, SOC 255, SOC 260, SOC 268

Credits: 5

**ESTU 401 - Applications in GIS**

Applied use of GIS software to existing databases for analysis and final outputs as maps, tables and charts. Mastery of the software will be at the beginner's level, mastery of GIS techniques will be at the thematic mapping level. Data will be drawn from electronic databases and include tabular, cartographic, and remotely sensed.

**Prerequisites & Notes:** EGEO 350; 12 upper division credits in environmental studies or permission of instructor.

Credits: 3

**ESTU 402 - Topics in Environmental Studies**

Presentations by WWU faculty, researchers from other institutions, and Huxley College graduate students on a wide variety of topics in environmental studies. A written critique of selected presentations required. Questions, discussions and interactions encouraged. Informal brown bag lunch format. Repeatable to a maximum of 3 credits. S/U grading.

**Prerequisites & Notes:** Huxley major

Credits: 1

**ESTU 403 - Topics in Planning**

Survey of diverse roles of professional planners in the public and private sector, including multiple levels of government, non-governmental organizations, and specialized private consulting firms; examination of interaction between these professional planning organizations with broader governmental structures; investigation of their involvement with political, social, economic and environmental issues. Course will include field trips.

**Prerequisites & Notes:** ESTU 369.

Credits: 3

#### **ESTU 410 - Agroecology and Sustainable Agriculture**

Ecological concepts and principles applied to design and management of sustainable food production systems. Consideration given to food and farm politics and economics, as well as the experience of place and policies for relocalization. Includes case studies and laboratory/field experience in sustainable agriculture, horticulture and strategies for resilience. Offered alternate years.

**Prerequisites & Notes:** senior standing

Credits: 4

#### **ESTU 411 - Agroecology and Sustainable Agriculture Practicum**

Laboratory/field experience, and project work in agroecology and sustainable agriculture design that integrates ecological principles within socio-cultural and economic frameworks. Consideration of soil and plant ecology, farm planning to maximize biodiversity, and integrated nutrient systems that comprise best management practices. Required field trips. Offered in alternate years.

**Prerequisites & Notes:** ESTU 410

Credits: 4

#### **ESTU 415 - Planning for Sustainable Communities**

Synthesis and application of principles, practices and policies in sustainable development and the design of projects, processes, and products using a systems approach to promote social, economic and environmental sustainability. Students apply sustainable design techniques to local, regional and international community problems.

**Prerequisites & Notes:** ESTU 369; admission to Sustainable Design minor or Huxley College; and instructor permission.

Credits: 4

#### **ESTU 418 - Social Impact Assessment**

Utilizing sociological findings and research methods, this course prepares the student to do social impact assessment separately and with environmental, technical, economic as well as other types of assessments. Working in teams, students do an SIA project of a proposed project or policy change. Focus is on measuring and understanding community-level social change in advance of the event. SIA is done within the framework of SEPA (State Environmental Policy Act) and NEPA (National Environmental Policy Act). A field trip and site visits are required.

**Prerequisites & Notes:** SOC 210 and Senior Status and completion of analysis coursework within major.

Credits: 5

#### **ESTU 420 - Environmental Politics**

History of environmental problems and their cause. The administrative and political responses to them.

Contemporary difficulties in formulating and applying environmental policy. Political and administrative changes needed to meet the environmental challenge. Offered alternate years. Also offered as PLSC 420.

**Prerequisites & Notes:** ESTU 202 or ESTU 304; PLSC 101 or PLSC 250

Credits: 5

#### **ESTU 430 - Disaster Risk Reduction**

This course introduces students to the assessment of disasters, focusing primarily on the social aspects of disasters.

The course deals with the question 'What causes a disaster?

**Prerequisites & Notes:** EGEO 363 or permission of instructor.

Credits: 4

#### **ESTU 432 - Disaster Reduction and Emergency Planning Studio**

The course provides students with an opportunity to apply their knowledge and skills in disaster reduction and emergency planning, with an emphasis on community-based approaches. Students will work in groups with a client (or clients) on a quarter-long project of practical significance. Students will be exposed to best practices through case studies across disaster reduction and emergency planning. Project management, client interactions, report writing, and communicating technical information to diverse audiences will be emphasized.

**Prerequisites & Notes:** ESTU 330 or permission of instructor

Credits: 4

#### **ESTU 436 - Environmental Impact Assessment**

Objective evaluation and formal description of a real natural system or geographic region. Class preparation of a unified document summarizing physical, biological and social aspects of a study area. Review of pertinent laws and EIS documents. Also offered as ESCI 436.

**Prerequisites & Notes:** senior standing; completion of analysis course work in major or instructor permission

Credits: 5

**ESTU 439 - Conservation of Biological Diversity**

Objective evaluation and formal description of a real natural system or geographic region. Class preparation of a unified document summarizing physical, biological and social aspects of a study area. Review of pertinent laws and EIS documents. Also offered as ESCI 436.

**Prerequisites & Notes:** ESCI 325 or BIOL 325

Credits: 4

**ESTU 440 - Ecotourism and Sustainable Development**

Examination of ecotourism as a form of natural resource use that attempts to balance conservation and development. Focuses on ecotourism in terms of ecological principles, environmental impacts and its role in indigenous community-based planning and sustainable development. Offered alternate years.

**Prerequisites & Notes:** ESCI 303 or instructor permission

Credits: 3

**ESTU 441 - Parks and Protected Areas**

Examination of the history and philosophy of protected area systems worldwide, the role and limitations of parks and protected areas in biodiversity and nature protection, and emerging alternative approaches to conservation. Reviews issues in park design and management, land use trends (particularly in developing countries), alternative land protection strategies and techniques, and concepts such as buffer zones, sustainable use and multiple use. Offered alternate years.

**Prerequisites & Notes:** ESTU 303 or ESCI 439 or instructor permission.

Credits: 3

**ESTU 442 - Public Land Policy**

Overview of publicly-owned lands (Forest Service, Park Service, Bureau of Land Management, wildlife refuges, wilderness areas) in the United States. Coverage of material includes administrative history, major players, policy changes over time, administration of these lands, and analysis of current events.

**Prerequisites & Notes:** ESTU 304 or ESTU 464 or permission of instructor.

Credits: 3

**ESTU 443 - Land Use Law**

Land use planning is an attempt to reconcile the fundamental conflict between individual property rights and collective environmental goals. Examines the American legal system's role in framing and resolving this dilemma. Provides an understanding of the legal framework that creates the unique "bottom up" land use regulatory system, in which state and local government share primary authority over most land use decisions. Also examines the practical and philosophical implications of federal constitutional restrictions on local government land use authority including Supreme Court "takings" cases and cases evaluating claims of housing discrimination.

**Prerequisites & Notes:** ESTU 369 or instructor permission

Credits: 4

**ESTU 444 - Environmental Dispute Resolution**

Workshop in which students practice a range of dispute resolution techniques. Students will participate in negotiations, mediation, "round table" discussions and/or other dispute resolution techniques. Course considers several fact patterns involving disputes over natural resource and environmental issues. Students will study and, in some cases, research the facts and will be assigned roles to represent during dispute resolution sessions. The goal is to provide students with an opportunity to experience at first hand and to analyze the roles, limitations, advantages and disadvantages of different approaches to environmental problem-solving.

**Prerequisites & Notes:** ESTU 304 or ESTU 464 or ESTU 468 or instructor permission.

Credits: 4

**ESTU 463 - Environmental Policy Analysis**

This course is an introduction to the policymaking process and environmental policy analysis. Topics include: approaches to the study of public policy, policy formulation and adoption, methods for the assessment of environmental policy alternatives, ethics and policy analysis, environmental policy implementation and evaluation, and the utilization of policy analysis in decision-making.

**Prerequisites & Notes:** ESTU 304 or permission of instructor.

Credits: 4

**ESTU 464 - United States Environmental Policy**

Analysis and assessment of United States national institutions, legislation, administrative procedures, regulations and the consequences of environmental laws. Use of federal documents on laws and regulations.

**Prerequisites & Notes:** PLSC 101 or PLSC 250 or ESTU 304 or ESTU 305 or instructor permission

Credits: 4

**ESTU 465 - International Environmental Policies**

Examines transboundary international environmental issues, problems affecting the environmental "commons" (such as oceans and the atmosphere), and issues relating to sustainable development, including aid and trade.

**Prerequisites & Notes:** ESTU 304 or permission of instructor.

Credits: 4

**ESTU 466 - U.S. and Washington State Environmental Regulations**

This course introduces students to United States and Washington state environmental regulations - their origin, content, implementation and modification. Students will learn how to use government documents, the glossary of regulations and will learn how the regulators and the regulated work with the regulations.

**Prerequisites & Notes:** ESTU 304 or ESTU 464 or instructor permission

Credits: 4

**ESTU 467 - Natural Resource Policy**

Explores issues, politics, and conflicts in the area of natural resource policy, including endangered species, water rights and allocation, forest policy, public lands, and/or wetlands. Offered alternate years.

**Prerequisites & Notes:** ESTU 304 or ESTU 464 or instructor permission.

Credits: 3

**ESTU 468 - Environmental Law**

Introduction to the approaches and content of U.S. environmental law, with particular emphasis on the regulation of toxic and hazardous substances. Introduces students to issues relating to administrative processes and litigation, as well as to the study of statutes, regulations and cases.

**Prerequisites & Notes:** ESTU 304 or ESTU 464 or ESTU 466 or instructor permission.

Credits: 4

**ESTU 469 - Canadian Environmental Policy**

Study of Canadian environmental policy, with emphasis on comparative study with U.S. environmental policy. Case study method is used both for issues and geographic (provincial) areas. Because Canada is very involved in international attempts to deal with environmental issues, the course includes consideration of Canada's involvement, both governmental and nongovernmental, in international environmental issues. Also offered as PLSC 470. Offered alternate years.

**Prerequisites & Notes:** ESTU 304 or EGEO 328 or political science major or instructor permission

Credits: 4

**ESTU 470 - Planning Studio**

Analysis and synthesis of significant socioeconomic biophysical and cultural resources used in planning; preparation of a land-use or other plan for a selected region.

**Prerequisites & Notes:** ESTU 370

Credits: 6

**ESTU 471 - Campus Planning Studio**

Introduction to campus planning as applied to the WWU campus community. Planning requirements under the Growth Management Act and approaches to coordinating planning with the surrounding community. Selected research topics relative to Western's master planning process. A studio course emphasizing the application of sustainability principles in campus planning, development and operations. Repeatable to a maximum of 6 credits.

**Prerequisites & Notes:** ESTU 304 or ESTU 369, or equivalent or instructor permission.

Credits: 2

**ESTU 472 - Planning Theory**

Survey of the philosophy, methods, critical thinking, and analytical techniques used in public planning. Synthesis of the theories drawn from several disciplines and applied to planning. Emphasis on the application of explanatory concepts in planning decision-making.

**Prerequisites & Notes:** ESTU 370 or ESTU 380 or instructor permission

Credits: 3

**ESTU 473 - Environmental Interpretation**

An overview of the field of environmental interpretation and how it relates to environmental education. Focus is on gaining an understanding of the basic elements of the interpretive process and on becoming familiar with interpretive approaches and methods. Introduces design and technical components.

**Prerequisites & Notes:** Huxley Major

Credits: 4

**ESTU 474 - Outdoor Education**

Classroom and field study of outdoor education, and approach to environmental education. Reviews traditional outdoor learning methods, as well as new developments and programs such as Outward Bound and adaptations thereof. Includes field experience in various outdoor settings.

**Prerequisites & Notes:** ESTU 371, ESTU 372; ESTU 476, ESTU 483, ESTU 484 concurrent

Credits: 4

**ESTU 475 - Native American Planning and Natural Resources Policy**

Survey of political and jurisdictional considerations, treaty rights, and social and environmental conditions facing tribal communities in their pursuit of self-governance and sustainability. Historic federal Indian policy, court rulings and the consideration of off-reservation treaty rights in regional planning. Approaches to intergovernmental cooperation for sustainable natural resources management.

**Prerequisites & Notes:** ESTU 304 or ESTU 369 or instructor permission.

Credits: 3

**ESTU 476 - Experiential Learning in Environmental Education**

Potential of experiential learning for environmental education. Experiential learning theory and its application to specific settings. Simulation gaming, role playing, awareness exercises. Problems of evaluation of this type of learning are given special consideration. Field work required.

**Prerequisites & Notes:** ESTU 371, ESTU 372; ESTU 474, ESTU 483, ESTU 484 concurrent

Credits: 4

**ESTU 477 - The American Literature of Nature and Place**

Describes and explores the tradition of writing about the outdoors in American literature. The writings of Thoreau, Burroughs, Muir, Leopold, Carson, Eiseley, Borland, Beston and others are read and discussed.

**Prerequisites & Notes:** Junior standing or instructor permission.

Credits: 4

**ESTU 478 - Field Seminars in Environmental Studies**

Study of various environmental topics and issues of the Pacific Northwest. Course is supported through Extended Education & Summer Programs/Continuing Education North Cascades Institute. Specific topics designed for adult learners. Not available to Huxley College majors. Repeatable for credit with no maximum. S/U grading.

Credits: 1 TO 6

**ESTU 478A - Forest Ecology**

Study of various environmental topics and issues of the Pacific Northwest. Available only off campus under the aegis of Continuing Education. Not available to Huxley majors. Repeatable for credit with no maximum. S/U grading.

Credits: 1

**ESTU 478B - Journal Keeping & Travel Writing**

Study of various environmental topics and issues of the Pacific Northwest. Available only off campus under the aegis of Continuing Education. Not available to Huxley majors. Repeatable for credit with no maximum. S/U grading.

Credits: 1

**ESTU 478C - Ethnobotany of Water Landscape**

Study of various environmental topics and issues of the Pacific Northwest. Available only off campus under the aegis of Continuing Education. Not available to Huxley majors. Repeatable for credit with no maximum. S/U grading.

Credits: 1

**ESTU 478D - Amphibians of the NW**

Study of various environmental topics and issues of the Pacific Northwest. Available only off campus under the aegis of Continuing Education. Not available to Huxley majors. Repeatable for credit with no maximum. S/U grading.

Credits: 1

**ESTU 478E - Water color II**

Study of various environmental topics and issues of the Pacific Northwest. Available only off campus under the aegis of Continuing Education. Not available to Huxley majors. Repeatable for credit with no maximum. S/U grading.

Credits: 1

**ESTU 478F - Field Geology**

Study of various environmental topics and issues of the Pacific Northwest. Available only off campus under the aegis of Continuing Education. Not available to Huxley majors. Repeatable for credit with no maximum. S/U grading.

Credits: 1

**ESTU 478G - Summer Birds of Okanogan**

Study of various environmental topics and issues of the Pacific Northwest. Available only off campus under the aegis of Continuing Education. Not available to Huxley majors. Repeatable for credit with no maximum. S/U grading.  
Credits: 1

**ESTU 478H - Marine Ecology**

Study of various environmental topics and issues of the Pacific Northwest. Available only off campus under the aegis of Continuing Education. Not available to Huxley majors. Repeatable for credit with no maximum. S/U grading.  
Credits: 1

**ESTU 478I - Northwest Mushroom Ecology**

Study of various environmental topics and issues of the Pacific Northwest. Available only off campus under the aegis of Continuing Education. Not available to Huxley majors. Repeatable for credit with no maximum. S/U grading.  
Credits: 1

**ESTU 478J - Nature Writer's Retreat**

NCL field course. S/U grading.  
Credits: 2

**ESTU 478K - Forest Canopy Ecology**

NCL field course. S/U grading.  
Credits: 1

**ESTU 478L - Natural History Essay**

NCL field course. S/U grading.  
Credits: 1

**ESTU 478M - NW Marine Ecosystems**

NCL field course. S/U grading.  
Credits: 1

**ESTU 478N - Beginning Watercolor**

NCL field course. S/U grading.  
Credits: 1

**ESTU 478O - Plant Identification**

NCL field course. S/U grading.  
Credits: 1

**ESTU 478P - Geology of the North Cascades**

NCL field course. S/U grading.  
Credits: 1

**ESTU 478Q - Drawing From Nature**

NCL field course. S/U grading.  
Credits: 1

**ESTU 478R - Ecology of Northwest Bats**

NCL field course. S/U grading.  
Credits: 1

**ESTU 479 - Environmental Interpretation Methods**

Opportunity to develop skills in designing and producing interpretive media. Familiarity with and application of basic techniques, tools and equipment are the primary focus. Student projects result in the development of such projects as audio-visual presentations, displays and brochures.

**Prerequisites & Notes:** ESTU 473 or instructor permission  
Credits: 4

**ESTU 480 - The Planet Staff**

Practical involvement in writing, photography, illustration, design and production of a student environmental magazine issued once each quarter. Repeatable up to 9 credits.

**Prerequisites & Notes:** JOUR 207 or instructor permission  
Credits: 3

**ESTU 481 - Environmental Journalism**

Goal is to equip students to report and write clearly, critically and constructively on environmental and natural resource issues. Emphasis on writing articles for publication involves reading, discussion, and much research and writing.

**Prerequisites & Notes:** JOUR 207; ESCI 101 or ESTU 202

Credits: 4

**ESTU 482 - Editing the Planet**

Publication editing and development; creating and implementing budget and advising on budget decisions; acting as mentor to assigned staff members; preparing reports and presentations for class and instructor; assisting with and taking part in workshops; office management and security; learning personnel communication skills; using advanced publication software and technology; making self-evaluation and production reports for advisor. Repeatable to a maximum of 12 credits. This course may not be taken concurrently with a staff course.

**Prerequisites & Notes:** Open to Editors only.

Credits: 4

**ESTU 483 - Field Methods in Environmental Education**

Students visit environmental learning sites and programs where they observe, critique and participate as instructors.

Develops skill in presentation, field leadership, environmental interpretation and instructional evaluation.

**Prerequisites & Notes:** ESTU 371, ESTU 372; ESTU 474, ESTU 476, ESTU 484 concurrent

Credits: 5

**ESTU 484 - Natural History for Environmental Education**

Classroom and field study of the natural history of the Pacific Northwest as it relates to environmental education. A spring block course.

**Prerequisites & Notes:** ESTU 371, ESTU 372; ESTU 483, ESTU 474, ESTU 476 concurrent

Credits: 4

**ESTU 486 - Community-Based Environmental Education**

Theory, research and practice of working in an inclusive community context to define, study, and facilitate social-environmental change. Study of participatory techniques and systematic approaches to behavior analysis and change. Requires working in an interdisciplinary group to examine problems and education-based contributions to solutions.

**Prerequisites & Notes:** environmental studies or environmental science major with completion of environmental studies core courses; take within 3 quarters of graduation

Credits: 5

**ESTU 487 - Conservation Psychology**

Principles of psychology applied to environmental problem-solving situations. Relationship between behavior and motivational, cognitive, social, moral-developmental, and cultural-psychological variables across the life span.

**Prerequisites & Notes:** Permission of instructor.

Credits: 4

**ESTU 488 - History of Conservation in America**

Explores the emergence and significance of the idea of resource conservation in American history. Traces arguments about the nature of nature, and the policy decisions regarding allocation of resources derived therefrom. How did idea of resource conservation appear in government policy and institutions? Uses case studies of land, wildlife, water, and soil conservation, and of resource agencies like the federal National Park Service, Forest Service and their state counterparts.

**Prerequisites & Notes:** ESTU 305 or instructor permission

Credits: 4

**ESTU 489 - Managing International Ecosystems**

A research seminar that examines how economic, environmental, social and political agendas affect the shared international ecosystem - Georgia Basin/Puget Sound. Course focuses on the interest of various stakeholders and the efforts taken to manage the cross-border environmental issues. The course involves cross-border travel and field work and thus participants require a passport. In some years, the course will involve collaborations with students and faculty from Canadian universities. Also offered as C/AM 489 and PLSC 489.

**Prerequisites & Notes:** Junior status or permission of instructor.

Credits: 5

**ESTU 495 - Teaching Practicum**

Experience in teaching a lecture or laboratory course in environmental studies. Repeatable to a maximum of 4 credits. S/U grading.

**Prerequisites & Notes:** relevant course work

Credits: 1 TO 3

#### **ESTU 496 - Environmental Stewardship**

A field-oriented capstone course for environmental studies majors nearing graduation. Students work in interdisciplinary teams to apply their knowledge and skills to solve complex problems in real world situations.

**Prerequisites & Notes:** Completion of Huxley core courses, senior standing

Credits: 5

#### **ESTU 498A - Senior Thesis**

A special project carried out under the supervision of a faculty adviser and documented in thesis form according to guidelines supplied by the college. May reflect a single study topic or be part of a major investigation which may take the form of field work, or laboratory, library or community research. Repeatable to a maximum of 15 credits.

Credits: 1 TO 15

#### **ESTU 498B - Internship**

Supervised work experience relevant to environmental studies and appropriate to the student's program. The one- to three-month experience is documented by a written report prepared according to guidelines supplied by the college.

Repeatable to a maximum of 15 credits. S/U grading.

Credits: 1 TO 15

#### **ESTU 498C - Senior Project**

A special project carried out under supervision of a faculty adviser and documented in non-thesis form suitable to the project. May take the form of some environmental or community activity having either a physical or programmatic result.

Repeatable to a maximum of 15 credits. S/U grading.

Credits: 1 TO 15

#### **ESTU 498D - Foreign Study**

While enrolled as a major in Huxley College, a student who has undertaken a college-level foreign language study may study for one quarter in a country utilizing that language. Foreign study must be approved in advance and carried out under the supervision of the student's adviser, must follow the foreign study guidelines for the student's major, and relate to the student's course of study at Huxley College. The results of the study must be reported in written, taped, filmed or graphically portrayed form. Repeatable to a maximum of 15 credits. S/U grading.

Credits: 1 TO 15

#### **ESTU 499 - Environmental Problems in Rural Regions**

While enrolled as a major in Huxley College, a student who has undertaken a college-level foreign language study may study for one quarter in a country utilizing that language. Foreign study must be approved in advance and carried out under the supervision of the student's adviser, must follow the foreign study guidelines for the student's major, and relate to the student's course of study at Huxley College. The results of the study must be reported in written, taped, filmed or graphically portrayed form. Repeatable to a maximum of 15 credits. S/U grading.

Credits: 2

#### **ESTU 499A - Seminar**

Student-faculty interaction on topics of general interest. Repeatable for credit with no maximum. S/U grading.

**Prerequisites & Notes:** admission to Huxley College or instructor permission

Credits: 1

#### **ESTU 499B - Seminar**

Student-faculty interaction on topics of general interest. Repeatable for credit with no maximum. S/U grading.

**Prerequisites & Notes:** admission to Huxley College or instructor permission

Credits: 1

#### **ESTU 499C - Seminar**

Student-faculty interaction on topics of general interest. Repeatable for credit with no maximum. S/U grading.

**Prerequisites & Notes:** admission to Huxley College or instructor permission

Credits: 1

#### **ESTU 499D - Seminar**

Student-faculty interaction on topics of general interest. Repeatable for credit with no maximum. S/U grading.

**Prerequisites & Notes:** admission to Huxley College or instructor permission

Credits: 1

**ESTU 499F - Seminar**

Student-faculty interaction on topics of general interest. Repeatable for credit with no maximum. S/U grading.

**Prerequisites & Notes:** admission to Huxley College or instructor permission

Credits: 2

**ESTU 499G - Seminar**

Student-faculty interaction on topics of general interest. Repeatable for credit with no maximum. S/U grading.

**Prerequisites & Notes:** admission to Huxley College or instructor permission

Credits: 2

**ESTU 499H - Seminar**

Student-faculty interaction on topics of general interest. Repeatable for credit with no maximum. S/U grading.

**Prerequisites & Notes:** admission to Huxley College or instructor permission

Credits: 2

**ESTU 499I - Seminar**

Student-faculty interaction on topics of general interest. Repeatable for credit with no maximum. S/U grading.

**Prerequisites & Notes:** admission to Huxley College or instructor permission

Credits: 2

**ESTU 499J - Seminar**

Student-faculty interaction on topics of general interest. Repeatable for credit with no maximum. S/U grading.

**Prerequisites & Notes:** admission to Huxley College or instructor permission

Credits: 2

**ESTU 499K - Seminar**

Student-faculty interaction on topics of general interest. Repeatable for credit with no maximum. S/U grading.

**Prerequisites & Notes:** admission to Huxley College or instructor permission

Credits: 2

**ESTU 499L - Seminar**

Student-faculty interaction on topics of general interest. Repeatable for credit with no maximum. S/U grading.

**Prerequisites & Notes:** admission to Huxley College or instructor permission

Credits: 2

**ESTU 499M - Seminar**

Student-faculty interaction on topics of general interest. Repeatable for credit with no maximum. S/U grading.

**Prerequisites & Notes:** admission to Huxley College or instructor permission

Credits: 2

**ESTU 499N - Seminar**

Student-faculty interaction on topics of general interest. Repeatable for credit with no maximum.

**Prerequisites & Notes:** admission to Huxley College or instructor permission

Credits: 1

**ESTU 499O - Seminar**

Student-faculty interaction on topics of general interest. Repeatable for credit with no maximum.

**Prerequisites & Notes:** admission to Huxley College or instructor permission

Credits: 1

**ESTU 499P - Seminar**

Student-faculty interaction on topics of general interest. Repeatable for credit with no maximum.

**Prerequisites & Notes:** admission to Huxley College or instructor permission

Credits: 1

**ESTU 499Q - Seminar**

Student-faculty interaction on topics of general interest. Repeatable for credit with no maximum.

**Prerequisites & Notes:** admission to Huxley College or instructor permission

Credits: 1

**ESTU 499R - Seminar**

Student-faculty interaction on topics of general interest. Repeatable for credit with no maximum.

**Prerequisites & Notes:** admission to Huxley College or instructor permission

Credits: 1

**ESTU 499T - Seminar**

Student-faculty interaction on topics of general interest. Repeatable for credit with no maximum.

**Prerequisites & Notes:** admission to Huxley College or instructor permission

Credits: 2

**ESTU 499U - Seminar**

Student-faculty interaction on topics of general interest. Repeatable for credit with no maximum.

**Prerequisites & Notes:** admission to Huxley College or instructor permission

Credits: 2

**ESTU 499V - Seminar**

Student-faculty interaction on topics of general interest. Repeatable for credit with no maximum.

**Prerequisites & Notes:** admission to Huxley College or instructor permission

Credits: 2

**ESTU 499W - Seminar**

Student-faculty interaction on topics of general interest. Repeatable for credit with no maximum.

**Prerequisites & Notes:** admission to Huxley College or instructor permission

Credits: 2

**ESTU 499X - Seminar**

Student-faculty interaction on topics of general interest. Repeatable for credit with no maximum.

**Prerequisites & Notes:** admission to Huxley College or instructor permission

Credits: 2

**ESTU 499Y - Seminar**

Student-faculty interaction on topics of general interest. Repeatable for credit with no maximum.

**Prerequisites & Notes:** admission to Huxley College or instructor permission

Credits: 2

**ESTU 499Z - Conservation Photography**

This seminar is intended to provide an in-depth look at the relationship of photographic imagery to the environment issues, nature preservation and human ecology as a way of understanding human ideas about the environment.

Students will explore different types of imagery through a series of creative assignments, present their images to the class and engage the group in discussion of the results.

**Prerequisites & Notes:** admission to Huxley College or instructor permission

Credits: 2

**ESTU 524 - Environmental Politics and Policy**

Survey of the field of environmental politics and policy. Examination of how political scientists have addressed environmental issues by focusing on questions raised, methods used and conclusions reached. Approach will be comparative in examining research on different countries. Also offered as PLSC 524.

Credits: 5

**ESTU 536 - Environmental Impact Assessment Practicum**

Preparation of an objective assessment description of a real natural area including the search for public documentation, evaluation of coverage and specific new analyses. Coordinating role in task group data assembly and editorial review of draft project summaries. Experience directly related to professional responsibilities in the environmental field. Review of assessment utilization in the EIS format and of significant legislation.

Credits: 4

**ESTU 553 - American Environmental History**

Readings seminar focusing on the literature on the history of the interaction of nature and society in America.

Concentration on methods in environmental history. Also offered as HIST 553.

Credits: 4

**ESTU 554 - World Environmental History**

The organizing theme of this seminar will be that of "exchange" - biological and cultural - of organisms and ideas about what to do with them. By focusing on the problem of the history of exchanges of organisms and ideas about the environment around the globe, the seminar will at the same time illuminate other themes in world environment history. Also offered as HIST 554.

Credits: 5

**ESTU 571 - Environmental Education Foundations**

Examination of the principles and processes of education about and for the environment. Review of theory and practice of environmental education in a variety of programmatic settings.

Credits: 4

**ESTU 572 - Introduction to Place-Based Environmental Education**

Explores ways to teach about a place in the context of environmental education. Includes examination of fundamental concepts and skills of environmental education and review of the subject matters which are the content of place-based environmental education curricula. These include natural history and its interpretation and the cultural and social history of a place and its interpretation. Students will examine methods of acquiring knowledge comprising this subject matter.

**Prerequisites & Notes:** admission to MEd natural science/science education, environmental studies residency option or other master's program in environmental education

Credits: 4

**ESTU 573 - Resource Issues in the North Cascades**

Using the North Cascades region as a microcosm, the course explores the major natural resource issues of the region, the values and goals of stakeholders in those issues, and mandates, histories, and values of the public agencies that deal with those issues. Emphasis on how environmental educators may present such issues to students at various developmental stages.

**Prerequisites & Notes:** admission to environmental education master's program

Credits: 4

**ESTU 574 - Cultural Studies of the North Cascades**

Examines the cultural history of the North Cascades region from the earliest aboriginal habitation to the present. Studies human impact on the region and various cultural orientations to it. Explores how cultural studies and interpretation of a landscape can be transferred to other landscapes, and how cultural studies may be incorporated into environmental education programs focusing on a place.

**Prerequisites & Notes:** ESTU 572, ESTU 573

Credits: 4

**ESTU 575 - Assessment, Evaluation and Research in Environmental Education**

Critical review and analysis of approaches to research, evaluation and assessment in environmental education.

Application of research approaches, designs and methods in practical settings.

Credits: 4

**ESTU 576 - Natural History and Science of the North Cascades**

Studies the natural history of the North Cascades to understand the basic ecological, hydrological, and geological principles operating there. Explores diverse processes of scientific inquiry that have been applied to study the landscape. Includes examination of how natural history and scientific inquiry into natural processes may be incorporated into interdisciplinary environmental education programs.

**Prerequisites & Notes:** ESTU 572, ESTU 573

Credits: 4

**ESTU 577 - Nonprofit Administration for Environmental Educators**

Examines the nature and qualities of nonprofit educational organizations and of models of nonprofit administration. Leadership, management, and partnership principles and strategies will be studied. Topics include all aspects of running an educational nonprofit organization, including financial management, fund raising, and organizational development and evaluation. Working with the public and private sector partners will be explored.

**Prerequisites & Notes:** ESTU 572, ESTU 573

Credits: 4

**ESTU 578 - Practicum in Teaching Natural and Cultural History**

Supervised field experience in teaching about natural and cultural history in an environmental learning center setting.

**Prerequisites & Notes:** ESTU 572, ESTU 573, ESTU 574, ESTU 575, ESTU 576, ESTU 577; SCED 513

Credits: 4

**ESTU 581 - Professional Writing and Presentation**

Capstone course for students completing master's work in environmental education. Reflection on program; writing and presentation of research and curriculum projects during the course of the master's program.

**Prerequisites & Notes:** ESTU 572-577, ESTU 587-589, instructor permission

Credits: 5

**ESTU 587 - Conservation Psychology**

Critical examination of the psychological and educational research bases for environmental education. Introduction to research methods used to integrate environmental behavior change, learning about the environment, development of environmental responsibility, and formation of ecological ethics, across the lifespan. Course employs lecture, discussion, student presentation, and research practica.

Credits: 4

**ESTU 588 - Language, Discourse and Environment**

This course focuses on the relationship between the metaphorical nature of language and discourse, with an end to better understand different views of the natural environment.

Credits: 4

**ESTU 589 - Curriculum in Environmental Education**

Examination of all aspects of curriculum for environmental education, especially in the non-formal setting of environmental learning centers, nature centers and outdoor schools. Curriculum theory and methodology appropriate to these settings will be studied, as will processes of curriculum design. Current programs and materials will be reviewed. Students will practice the skills of preparing curriculum and learning materials.

Credits: 5

**ESTU 595 - Teaching Practicum**

Experience in teaching a lecture or laboratory course in environmental studies. S/U grading.

**Prerequisites & Notes:** relevant course work, instructor permission

Credits: 1 TO 3

**ESTU 598 - Research Project**

Research in the field of environmental education for students pursuing the non-thesis option of the M.Ed. natural science/science education program (environmental education specialization).

**Prerequisites & Notes:** Completion of 15 credits in 500-level toward MEd in natural science/science education

Credits: 6

**ESTU 599 - Graduate Environmental Studies Seminar**

Selected topics across the spectrum of environmental studies (e.g., toxicology, watershed studies, applied ecology, geography, environmental education, etc.). Repeatable to a maximum of 6 credits. S/U grading.

Credits: 1 TO 2

**ESTU 690 - Thesis Research**

Thesis research in environmental studies under faculty direction. Repeatable to a maximum of 12 credits. S/U grading.

**Prerequisites & Notes:** Permission of the thesis advisory committee

Credits: 1 TO 12

**ESTU 691 - Field Project**

Development of an educational program, preparation of curriculum or production of educational materials. May be done off campus between periods of residence work. Repeatable to a maximum of 12 credits. S/U grading.

**Prerequisites & Notes:** Completion of 15 credits at the 500 level and approval of student's committee in the MEd in Environmental Education Program.

Credits: 1 TO 12

**Engineering Technology**

*Courses numbered X37; X97; 300, 400, 500; 417, 445, 517, 545 are described in the University Academic Policies section of this catalog.*

**ETEC 110 - Engineering Design Graphics I**

Introduction to the engineering design process. Course topics include the design process, ideation sketching, communication drawing, documentation drawing, three-dimensional Computer-Aided Design for product development.

Credits: 3

**ETEC 111 - Engineering Design Graphics II**

Second course in engineering design graphics. Includes further study of the design process, creating design specifications, Computer-Aided Design and Drafting for parametric modeling, assembly modeling and technical drawing, rapid prototyping.

**Prerequisites & Notes:** ETEC 110 or equivalent; variable lab fee; limited to ETEC department, Manufacturing Management and pre-Engineering majors during Phase I

Credits: 3

**ETEC 112 - Introduction to Engineering, Design and Graphics**

Introduces students to the field of engineering, the design process and communication of ideas with graphics.

Includes team design projects, drawing instruction and assignments, overviews of the different engineering disciplines, engineering history, case studies of engineering feats and failures, and how things are made.

Credits: 3

**ETEC 113 - Introduction to Computer-Aided Design**

Introduction to parametric, Computer-Aided Design. Covers sketching and feature-based modeling in the creation of 3D parts for engineered products, assembly modeling and drafting. Emphasizes modeling of machined and plastic components and generation of drawings with proper dimensioning and GDT.

**Prerequisites & Notes:** ETEC 112 or concurrent.

Credits: 4

**ETEC 212 - Introduction to Technology for Educators**

The areas of information, physical, biological, and power and energy technologies are explored through the application of design/problem-solving activities which engage students in firsthand experiences with technology.

**Prerequisites & Notes:** variable lab fee

Credits: 3

**ETEC 213 - Design Development for Technology Education**

Basic design fundamentals applied to technology education teaching. Development of creativity with application to school projects and design problems.

**Prerequisites & Notes:** technology education major or instructor permission; variable lab fee

Credits: 3

**ETEC 214 - Sophomore Industrial Design I**

Introductory industrial design studio course explores the use of different media and techniques to create innovative solutions for two- and three-dimensional design problems. Emphasis on fundamental design principles, ability to express new ideas, and awareness of the consumer market.

**Prerequisites & Notes:** ETEC 231; limited to industrial design majors during Phase I

Credits: 5

**ETEC 215 - History of Industrial Design**

A historical overview of mass-produced products, the designers who created them, and their influence on our culture and society. International perspective covering significant events from the Industrial Revolution to the present.

**Prerequisites & Notes:** variable lab fee; limited to industrial design majors during Phase I

Credits: 3

**ETEC 216 - Sophomore Industrial Design II**

Second industrial design studio course focusing on more difficult design problems and using a more comprehensive design methodology. Additional emphasis on idea generation, human factors, basic mechanics and fabrication of models.

**Prerequisites & Notes:** ETEC 110, ETEC 214; limited to industrial design majors during Phase I

Credits: 5

**ETEC 220 - Introduction to Engineering Materials**

The relationship between the properties, structure and processes of engineering materials is discussed. Emphasis on the fundamentals of selecting materials based on engineering design criteria. Also offered as part of the new Materials Science Minor core as MSCI 201.

**Prerequisites & Notes:** MATH 115 or MATH 118, CHEM 121 or CHEM 125; PHYS 114 or PHYS 121 or concurrent.

Credits: 4

**ETEC 221 - Welding**

Basic concepts in welding to include shielded metal arc welding, oxy-acetylene welding, welding symbols, heat treatment, soldering and brazing, survey of processes.

**Prerequisites & Notes:** ETEC 220; variable lab fee

Credits: 3

**ETEC 222 - Foundry, Forming and Joining**

Survey of the principles and practices employed in contemporary metal-casting and forming industries. Emphasis is placed on applications of the concept of design for manufacturability.

**Prerequisites & Notes:** ETEC 220; variable lab fee; limited to Industrial Technology-CAD/CAM and Manufacturing Engineering Technology majors during Phase I

Credits: 4

**ETEC 223 - Machine Metal Processes**

Basic concepts and skills in machine metal processes.

**Prerequisites & Notes:** MATH 114; ETEC 111 or concurrent.

Credits: 4

**ETEC 224 - Applied Engineering Statics**

Principles and basic concepts of statics including: vector analysis applied to equilibrium of rigid body systems and subsystems, force and moment resultants, free body diagrams, internal forces and friction. Analysis of basic structural and machine systems and components. Shear and moment diagrams. Fundamentals of linear algebra and the solution of simultaneous systems.

**Prerequisites & Notes:** MATH 125 or concurrent; PHYS 121 or departmental permission.

Credits: 4

**ETEC 225 - Strength of Materials**

Internal response of structural members to forces; principal stresses and strains; combined stresses.

**Prerequisites & Notes:** ETEC 220, ETEC 224; MATH 125; variable lab fee

Credits: 5

**ETEC 226 - Engineering Dynamics**

Kinematics and kinetics of particles and rigid bodies, including methods of work and energy, and impulse and momentum.

**Prerequisites & Notes:** ETEC 224, MATH 224

Credits: 4

**ETEC 231 - Design Problems in Woodworking**

Technology education and industrial design majors are given priority enrollment. Wood as a material for solving a variety of design problems.

**Prerequisites & Notes:** ETEC 110 recommended.

Credits: 4

**ETEC 270 - Electronics Seminar**

Introduction to careers in electronics. Seminars presented by industrial representatives and Western faculty. Topics include sales and customer service, product development and design, manufacturing, entrepreneurial opportunities, marketing, and an introduction to computer tools. S/U grading.

Credits: 1

**ETEC 271 - Circuit Analysis I**

Fundamental properties of electrical components and their use in DC and AC circuits. Use of basic laws and theorems in circuit analysis and design. Laboratory experiments with electrical components and circuits.

**Prerequisites & Notes:** MATH 114 or concurrent.

Credits: 5

**ETEC 272 - Electronic Devices and Circuits**

A first course in electronic devices and circuits. Fundamental properties of semiconductor devices and their behavior in electronic circuits. Laboratory experiments in construction, testing, investigation and troubleshooting.

**Prerequisites & Notes:** ETEC 271

Credits: 4

**ETEC 273 - Digital Electronics**

Introductory digital electronics with emphasis on basic digital concepts, Boolean algebra, digital integrated circuit devices and the major functional units from building block approach. Laboratory with applications, constructing, testing and troubleshooting of digital circuits.

**Prerequisites & Notes:** ETEC 271, Electronics Engineering Technology major or written permission

Credits: 4

**ETEC 274 - Fundamentals of Microprocessors**

Introduction to microprocessors and programming concepts. Study of structured programming, instruction sets, hardware and interfacing techniques. Laboratory experiments with popular units.

**Prerequisites & Notes:** ETEC 273, Electronics Engineering Technology major or written permission

Credits: 5

**ETEC 280 - Power Mechanics**

Design principles of major power sources: including Otto cycle, Clerk cycle, Diesel, Wankel, Stirling cycle and Rankine cycle engines.

Credits: 5

**ETEC 281 - Power Transmission**

Principles and practices of mechanical transmission of power. Gear drive, chain drive, belt drive, overrunning clutches, universal joints, synchromesh transmissions and limited slip differentials are covered in theory and practice.  
Credits: 5

**ETEC 301 - Materials for Design**

Fundamentals of materials technology for industrial design majors. Properties and processing of materials with an emphasis on plastics.

**Prerequisites & Notes:** ETEC 110; industrial design or technology education major or permission.

Credits: 5

**ETEC 305 - Computer-Aided Design Animation**

Development of design animations. Students will utilize a computer-aided design package to produce renderings and animations.

**Prerequisites & Notes:** ETEC 110 or written permission; variable lab fee

Credits: 4

**ETEC 311 - Perspective and Rendering I**

First half of course explores perspective systems, shadow construction, reflections and other aspects of technical drawing as they apply to industrial design. Second half applies perspective skills to realistic marker rendering of materials and products as well as rapid visualization as an informal means of expressing new ideas quickly.

**Prerequisites & Notes:** ETEC 110 or concurrent with junior standing or one of the following with permission of instructor: EGEO 350, EGEO 352, ESTU 401.

Credits: 4

**ETEC 312 - Industrial Design CAD Skills**

Computer-intensive course focusing on solid modeling, advanced rendering techniques, vector-based drawing and raster-based image editing relevant to industrial design that will enable students to present and communicate product design concepts skillfully.

**Prerequisites & Notes:** ETEC 311 or concurrent or permission of instructor.

Credits: 4

**ETEC 313 - Architectural Concepts and Residential Planning**

Historical development; considerations of design; analysis of needs; utilization of sites; preparation of plans.

**Prerequisites & Notes:** ETEC 110; variable lab fee

Credits: 5

**ETEC 314 - Junior Industrial Design I**

Studio course work emphasizing a comprehensive design methodology which includes market research, problem identification, idea generation, implementation and presentation. Additional focus on a team approach.

**Prerequisites & Notes:** Acceptance into junior industrial design program.

Credits: 5

**ETEC 315 - Perspective and Rendering II**

Advanced applications of perspective and rendering will include further exploration in various media including the use of computers in generating product images.

**Prerequisites & Notes:** ETEC 311; limited to Industrial Design majors during Phase I

Credits: 4

**ETEC 316 - Junior Industrial Design II**

Studio course work focusing on the development of a concept from the research phase to a three-dimensional model that is submitted to a national competition. Emphasis on concise project explanation, descriptive drawings and quality photo-documentation of model.

**Prerequisites & Notes:** ETEC 314

Credits: 5

**ETEC 318 - Junior Industrial Design III**

Studio course work focusing on a collaborative project with industry. Assignments are jointly directed by the instructor and industry. Students are expected to relate to the industry sponsor as their client and perform their work professionally.

**Prerequisites & Notes:** ETEC 316

Credits: 5

**ETEC 322 - Numerical Control Operations**

Laboratory-intensive course which provides students with the opportunity to design, program and produce NC and CNC manufactured parts.

**Prerequisites & Notes:** ETEC 111, ETEC 220, ETEC 223, MATH 115; variable lab fee; limited to Industrial Technology - CAD/CAM, Manufacturing Engineering Technology and Plastics Engineering Technology majors during Phase I

Credits: 4

**ETEC 323C - Advanced CAD (Catia)**

Advanced topics in computer-aided design. Topics include parametric modeling, assembly modeling, collaborative design and computer-aided manufacturing.

**Prerequisites & Notes:** ETEC 111; variable lab fee; limited to Industrial Technology - CAD/CAM majors during Phase I

Credits: 4

**ETEC 325 - Manufacturing Process Planning**

Process planning for manufacturing. Determination of process steps. Workstation design, including ergonomic, safety, and health considerations. Introduction to engineering economics.

**Prerequisites & Notes:** ETEC 223; MATH 245 or concurrent or equivalent.

Credits: 4

**ETEC 326 - Fluid Power**

Fluid properties, basic principles of pneumatic and hydraulic power components and systems, control techniques, and fluid system analysis and design.

**Prerequisites & Notes:** MATH 125; CSCI 140 or equivalent; ETEC 225, ETEC 351 or concurrent.

Credits: 4

**ETEC 327 - Manufacturing Economics**

Examines many techniques to factor cost into manufacturing decisions. Topics covered include capital allocation, product cost estimating, work measurement, value engineering and budgeting.

**Prerequisites & Notes:** MATH 115, ETEC 223

Credits: 3

**ETEC 329 - Virtual Simulation**

Development of the basic skills needed to perform simulation construction in the virtual environments provided within IGRIP, ASSEMBLY, and ERGO. Topics include user interface, importing and exporting files, creating parts and devices, programming, loading and running simulation, system setup and collision, and motion kinetics and analysis functions.

**Prerequisites & Notes:** ETEC 223; variable lab fee

Credits: 4

**ETEC 333 - Polymer Technology**

Polymer science and analysis of basic plastics materials; experience in product design, tooling, and processing of thermoplastic.

**Prerequisites & Notes:** ETEC 220; ETEC 110 recommended.

Credits: 5

**ETEC 334 - Reinforced Plastics/Composites**

Polymer and reinforcement systems; material testing; mold design and development; laboratory involvement in reinforced plastics production processes.

**Prerequisites & Notes:** ETEC 333; variable lab fee

Credits: 5

**ETEC 335 - Tooling for Plastics Processing**

Design and construction of various types of production molds that are used for processing plastics in final shape. Product design in relationship to molding techniques and various techniques and materials used to construct the molds are the major units of study.

**Prerequisites & Notes:** ETEC 322, ETEC 333; ETEC 338 or instructor permission; variable lab fee

Credits: 3

**ETEC 337 - Secondary Operations**

Introduction to materials and processes used for secondary operations. Topics such as color theory, surface treatments, composition and applications of coatings, assembly processes and decorating processes. Laboratory work in various secondary operations.

**Prerequisites & Notes:** Co-requisite: ETEC 333

Credits: 3

**ETEC 338 - Injection Molding**

Theory and practice of injection molding. Analysis of machine functions, processing parameters, production tooling, process control systems, quality assurance, automation, theology of polymers, heat transfer. Extensive lab experience.

**Prerequisites & Notes:** ETEC 333; PHYS 122.

Credits: 4

**ETEC 341 - Engineering and Society**

Explores the relationship between the engineering profession and society, and the role of communication in engineering. Proposals, reports, documentation of procedures, presentations, and communication to multiple audiences will be discussed and practiced.

**Prerequisites & Notes:** ENG 101, ETEC 223 or ETEC 271 or equivalent.

Credits: 3

**ETEC 344 - Industrial Quality Assurance**

Quality assurance as applied to industrial manufacturing operations. One-fourth of this course is used to enhance and expand on applied statistics.

**Prerequisites & Notes:** MATH 240 or MATH 245; variable lab fee

Credits: 4

**ETEC 351 - Electronics for Engineering Technology I**

Analysis of basic electric circuits, design of simple analog and digital circuits including power supplies, transistor amplifiers, operational amplifiers, timers and logic devices. Laboratory reinforces the circuit concepts presented in the classroom and promotes competent use of basic electronic instruments. Cannot be taken for credit by EET majors.

**Prerequisites & Notes:** MATH 115 or 118.

Credits: 4

**ETEC 352 - Electronics for Engineering Technology II**

Analysis and design of advanced analog and digital circuits, three-phase power, magnetic circuits, transformers, DC and AC motors. Cannot be taken for credit by EET majors.

**Prerequisites & Notes:** ETEC 351 and PHYS 123.

Credits: 4

**ETEC 354 - Electronics for Engineering Technology III**

The characteristics and use of typical transducers and sensors used to monitor or control industrial processes. Study of programmable logic controllers and other microprocessor-based systems used to monitor and control industrial processes. Cannot be taken for credit by EET majors.

**Prerequisites & Notes:** ETEC 352; Electronic Engineering Technology majors cannot take for credit

Credits: 4

**ETEC 361 - Advanced Cad: Pro/Engineer**

Advanced topics in computer-aided design and parametric modeling, including advanced part design, top-down assembly design, and modeling and simulation of mechanisms.

**Prerequisites & Notes:** ETEC 111

Credits: 4

**ETEC 362 - Advanced Cad: Surface Modeling**

Advanced topics in computer-aided design and parametric modeling with a focus on surface modeling for creating complex and free-form shapes.

**Prerequisites & Notes:** ETEC 111

Credits: 4

**ETEC 371 - Circuit Analysis II**

A second course in DC and AC circuits with increased emphasis on mathematical techniques used in electrical circuit analysis and design. Use of network theorems, vector analysis techniques, polyphase circuits and additional topics. Structured laboratory with emphasis on measurement, theory and applications, test equipment, verification of circuit laws, data analysis and formal report preparation.

**Prerequisites & Notes:** ETEC 271, MATH 124

Credits: 5

**ETEC 372 - Electronic Analysis and Design**

A second course in electronic devices and circuits with increased emphasis on mathematical modeling and techniques used in analysis and design. Study of semiconductor theory and devices, small and large signal amplifier configurations, hybrid-pi models, frequency response and multistage circuits. Laboratory with emphasis on practical design, construction, testing and evaluation. Formal report preparation.

**Prerequisites & Notes:** ETEC 272, ETEC 371; Electronics Engineering Technology major or written permission  
Credits: 5

#### **ETEC 373 - Digital Systems**

An upper-division course in digital system analysis and design including the study of sequential/state machine design techniques and applications with an emphasis on VHDL and ASIC devices. Laboratory projects with formal reports.

**Prerequisites & Notes:** ETEC 272, ETEC 273 or CSCI 227  
Credits: 5

#### **ETEC 374 - Microprocessor Applications**

Upper-division study of microprocessors, support devices, and peripheral equipment and their integration into microcomputer systems. Study of various hardware configurations and interfacing techniques. Application-oriented laboratory experiments and design problems.

**Prerequisites & Notes:** ETEC 274 or CSCI 227; ETEC 373  
Credits: 5

#### **ETEC 375 - Electronic Systems**

A study designed to acquaint the student with the operation of electronic systems. Feedback systems, multi-phase power systems and solid state control systems. Structured laboratory with emphasis on experimental verification of results, original design, data analysis and formal report preparation.

**Prerequisites & Notes:** ETEC 272  
Credits: 5

#### **ETEC 376 - Electrical Power**

A study of electrical power concepts and components. Topics will include complex numbers, three-phase power systems, DC and AC motors and generators, control system components and power electronics. Laboratory investigation of characteristics of above components and systems.

**Prerequisites & Notes:** ETEC 371 and PHYS 123 or concurrent; or written permission.  
Credits: 4

#### **ETEC 377 - Instrumentation**

An introduction to electronic instrumentation techniques. Topics include sensors, signal conditioning circuits and noise reduction. Sensor topics include force, torque, pressure, acceleration and temperature. Signal conditioning topics include bridge circuits, amplifiers, filters and analog-to-digital conversion. Laboratory investigation of characteristics of above components and systems.

**Prerequisites & Notes:** ETEC 379  
Credits: 4

#### **ETEC 378 - Network Analysis**

General analysis of linear networks using classical methods, Laplace transforms and computer-aided methods. Topics include single element transients, first- and second-order circuits, transfer function analysis and Bode plots.

**Prerequisites & Notes:** ETEC 371; MATH 321 or concurrent; Electronics Engineering Technology major or written permission.  
Credits: 4

#### **ETEC 379 - Active Linear and Non-Linear Circuits**

Upper-division treatment of active linear and non-linear circuits. Analysis, design, testing, and evaluation of electronic circuits and subsystems with primary emphasis on the application of integrated circuit components and modules. Computer modeling of complex electronic circuits with frequency response, sensitivity and worse-case analysis. Laboratory projects with formal report preparation.

**Prerequisites & Notes:** ETEC 375, ETEC 378 or written permission  
Credits: 5

#### **ETEC 380 - Advanced Power Mechanics**

Efficiency determinants, power measurement, development of concepts introduced in ETEC 280. Engine and chassis dynamometer testing and port air flow testing.

**Prerequisites & Notes:** ETEC 280  
Credits: 3

#### **ETEC 381 - Advanced Power Transmission**

Principles of automatic transmission function, hardware and controls are covered. Practical approach to manual transmission design including structural housings, geartrain, bearing selection and shift system elements.

**Prerequisites & Notes:** ETEC 225, ETEC 281.  
Credits: 3

**ETEC 382 - Automotive Electronics**

Basic principles of automotive communication networks and control systems, operation and calibration of sensors and actuators, vehicle wiring harness design considerations, wiring diagrams, diagnostics and troubleshooting.

**Prerequisites & Notes:** ETEC 280 and ETEC 351. Variable lab fee.

Credits: 3

**ETEC 402 - Cooperative Work/Study**

Supervised study of technical problems associated with production and/or management in business and industry. Credit varies according to individual employment circumstances, the degree requirements of the applicant and the extent to which employment is related to major. Repeatable to a maximum of 9 credits.

Credits: 1 TO 9

**ETEC 405 - Communications Circuits**

A study of communications concepts including analog and frequency modulation and detection methods, r.f. amplifier and oscillator circuits and transmitter and receiver principles. Structured laboratory with emphasis on experimental verification of principles, use of specialized equipment, data analysis and formal report preparation.

**Prerequisites & Notes:** ETEC 375; MATH 321 or concurrent; Electronics Engineering Technology major or written permission.

Credits: 4

**ETEC 412 - Industrial Design Internship**

Faculty-supervised industrial design internship with an approved firm, manufacturer or design consultancy. The internship requires a total of 10 weeks (may be more than one internship) of practical application of industrial design skills in a business, public or industrial setting.

**Prerequisites & Notes:** ETEC 318 or permission of instructor.

Credits: 4

**ETEC 414 - Senior Industrial Design I**

Studio course work with a strong focus on art and craftsmanship. Through the design of various products, a validation of artistic expression and technical skills will be realized.

**Prerequisites & Notes:** ETEC 318

Credits: 5

**ETEC 415 - Industrial Design Internship Presentation**

Follow-up course to ETEC 412. A formal presentation of a recently completed industrial design internship which includes a visual presentation and report.

**Prerequisites & Notes:** ETEC 412

Credits: 1

**ETEC 415A - Industrial Design Internship**

Faculty supervised industrial design internship with an approved firm, manufacturer, or design consultancy. The internship requires a total of 10-weeks (may be more than one internship) practical application of industrial design skills in a business, public, or industrial setting.

**Prerequisites & Notes:** ETEC 414C or permission of instructor.

Credits: 4

**ETEC 415B - Industrial Design Internship Presentation**

Follow up course to ETEC 415a. A formal presentation of a recently completed industrial design internship which includes a visual presentation and report.

**Prerequisites & Notes:** ETEC 415A.

Credits: 1

**ETEC 416 - Senior Industrial Design II**

Studio course work with a strong focus on the functional and engineering aspects of industrial design. Emphasis on manufacturability of products with importance placed on materials and processes.

**Prerequisites & Notes:** ETEC 414

Credits: 5

**ETEC 418 - Senior Industrial Design III**

Studio course work with a strong focus on entrepreneurship. Business aspects of industrial design are explored and applied in the design projects.

**Prerequisites & Notes:** ETEC 416

Credits: 5

**ETEC 419 - Directed Research in Drafting/Design**

Research problem in drafting or design conducted under supervision. Repeatable 3 times to a maximum of 9 credits.

**Prerequisites & Notes:** ETEC 111

Credits: 1 TO 3

**ETEC 420 - Manufacturing Automation and Robotics**

An introduction to the automation of manufacturing and assembly operations. Topics include design process and design for assembly, parts feeding, sensors and actuators for automation, fundamentals of robotics, including robot programming, programmable logic controllers for industrial applications, and machine vision systems.

**Prerequisites & Notes:** ETEC 322, ETEC 326; ETEC 351 or ETEC 374; variable lab fee

Credits: 4

**ETEC 422 - Manufacturing Project Definition**

Selection, definition and analysis of a problem suitable for senior project, prior to actual project development. Includes consideration of project parameters and implications, analysis of alternative solutions and justification of selected solution. Culminates in writing of formal senior project proposal.

**Prerequisites & Notes:** ETEC 341, ETEC 444 or concurrent

Credits: 2

**ETEC 424 - Manufacturing Implementation**

Follow-up to ETEC 422. Manufacture a product or design an industrial process. Project will be fully documented, including final report and presentation, with performance specifications, functional description, schematics, cost analysis, parts list, photographs, diagrams, and charts.

**Prerequisites & Notes:** ETEC 422; variable lab fee

Credits: 4

**ETEC 425 - Machine Design**

Design and modeling of machine components (gears, bearings, shafts, etc.) with an emphasis on industrial practices. Theoretical dynamics also is included.

**Prerequisites & Notes:** ETEC 225

Credits: 4

**ETEC 426A - Advanced Computer Numerical Control - Surfacing and Contours**

CNC programming techniques and requirements for manufacturing components on CNC machining centers, emphasizing programming and applications of three-dimensional surfaces and contours.

**Prerequisites & Notes:** ETEC 322; variable lab fee

Credits: 3

**ETEC 426B - Advanced Computer Numerical Control - Mill/Turn**

CNC programming techniques and requirements for manufacturing components on CNC turning centers, emphasizing programming and applications where live tooling can be applied.

**Prerequisites & Notes:** ETEC 322; variable lab fee

Credits: 3

**ETEC 426C - Advanced Computer Numerical Control - Hi-Speed Machining**

CNC programming techniques and requirements for manufacturing components on CNC turning centers, emphasizing programming and applications where high-speed machining can be applied.

**Prerequisites & Notes:** ETEC 322; variable lab fee

Credits: 3

**ETEC 426D - Advanced Computer Numerical Control - EDM**

CNC programming techniques and requirements for manufacturing components on EDM machines, emphasizing programming and applications where Wire EDM and Ram EDM can be applied.

**Prerequisites & Notes:** ETEC 322; variable lab fee

Credits: 3

**ETEC 427 - Tool Design**

Design of special tooling used in manufacturing processes to include, but not limited to, inspection gauges, fixtures, jigs, assembly fixtures, punch and dies.

**Prerequisites & Notes:** ETEC 222, ETEC 322, ETEC 325; variable lab fee.

Credits: 4

**ETEC 428 - Advanced Manufacturing Laboratory**

Students will work together in a team to develop and operate a limited manufacturing run for a product of their own design. This course allows students to implement knowledge they have learned in an industrially styled environment.

**Prerequisites & Notes:** ETEC 420 or instructor permission; variable lab fee

Credits: 3

#### **ETEC 429 - Directed Research in Manufacturing**

Research under supervision within one of the areas of manufacturing technology. Repeatable 3 times to a maximum of 9 credits.

**Prerequisites & Notes:** variable lab fee

Credits: 1 TO 3

#### **ETEC 430 - Plastics Senior Project - Definition**

Selection, definition, and analysis of a problem suitable for senior project, prior to actual project implementation. Includes consideration of implications, analysis of alternative solutions, justification and detailed development of selected solution. Investigation is detailed in a formal written senior project proposal.

**Prerequisites & Notes:** senior status, ETEC 341; ETEC 444 or concurrent.

Credits: 2

#### **ETEC 431 - Plastics Product Design**

Design principles related to design of plastics products. Analysis of functional requirements, structural properties, aesthetic qualities and cost relationships. Experience in product design and material evaluation.

**Prerequisites & Notes:** ETEC 335, ETEC 338; variable lab fee

Credits: 3

#### **ETEC 432 - Plastics Senior Project - Implementation**

Implementation of project proposed in ETEC 430. Manufacture of a tool, prototype, or product, design an industrial process, investigation of a material.

**Prerequisites & Notes:** ETEC 430; variable lab fee

Credits: 4

#### **ETEC 433 - Engineering Polymers**

Structure, properties, processing and applications of engineering polymers. Advanced analysis and testing of polymers for engineering applications.

**Prerequisites & Notes:** ETEC 338 or instructor permission; variable lab fee

Credits: 3

#### **ETEC 434 - Advanced Composites**

Advanced polymer matrix and reinforcement systems; structural design and analysis; advanced composites processes and automated production systems.

**Prerequisites & Notes:** ETEC 225, ETEC 334, or instructor permission; variable lab fee

Credits: 3

#### **ETEC 436 - Polymer Compounding**

Principles of polymer formulation and modification. Additives and modifiers, compounding processes and equipment. Use of experimental design in compound formulation.

**Prerequisites & Notes:** ETEC 433, ETEC 444, CHEM 251; variable lab fee

Credits: 3

#### **ETEC 438 - Directed Research in Plastics**

Selection, development and research, under supervision, within one of the areas of plastics engineering technology. Repeatable 3 times to a maximum of 9 credits.

**Prerequisites & Notes:** ETEC 333, ETEC 433 or ETEC 434 or ETEC 335; variable lab fee

Credits: 1 TO 3

#### **ETEC 439 - Directed Research in Woods**

Selection, development and research, under supervision, within one of the areas of wood technology. Repeatable 3 times to a maximum of 9 credits.

**Prerequisites & Notes:** ETEC 231; variable lab fee

Credits: 1 TO 3

#### **ETEC 444 - Data Analysis and Design of Experiments**

A practical approach to Design of Experiments and the analysis of data, including analysis of variance, linear, multiple linear, and nonlinear regression. Emphasis on the proper use and interpretation of the techniques in solving engineering problems rather than on theoretical development. Application of these tools using spreadsheet software.

**Prerequisites & Notes:** ETEC 344 or instructor permission; competence in Excel

Credits: 4

**ETEC 454 - Embedded Systems**

The advanced study of microcontroller-based hardware and software applied to real-time embedded systems. Includes embedded software design, programming microcontrollers in C, real-time kernels and kernel services, hardware and software applications and testing techniques.

**Prerequisites & Notes:** ETEC 374, CSCI 140

Credits: 4

**ETEC 455 - Communication Systems**

Upper-division study of modern communications concepts from a systems point of view. Fourier transforms, spectral analysis, analog modulation and detection methods, transmission line theory, radiation and propagation, antennas, and microwave concepts. Structured laboratory with emphasis on measurement theory and applications, test equipment, data analysis and formal report preparation.

**Prerequisites & Notes:** ETEC 405; ETEC 378, PHYS 223, PHYS 233 or concurrent; Electronics Engineering Technology major or written permission.

Credits: 4

**ETEC 457 - Automatic Control Systems**

A study of analog control systems and techniques using operational mathematics. Laplace transforms, servo components, transfer functions, signal flow graphs, second-order systems, frequency response analysis, stability criteria and compensation. Laboratory investigation of control components and systems and computer modeling of control systems.

**Prerequisites & Notes:** ETEC 378

Credits: 4

**ETEC 461 - CAD Automation**

Introduces the use of programming techniques for creating and manipulating 3D parametric, surface and assembly models in a Computer-Aided Design system. Project work will require the development of an automation solution for product design or manufacturing problem of interest.

**Prerequisites & Notes:** CSCI 138, CSCI 140 or CSCI 141; ETEC 322, ETEC 361 or ETEC 362

Credits: 4

**ETEC 471 - Project Definition**

Students define objectives and prepare project proposals for ETEC 474.

**Prerequisites & Notes:** ETEC 374; variable lab fee

Credits: 2

**ETEC 474 - Microcomputer-Based Design**

Analysis and design of smart microcomputer-based instrument and control systems. Design and implementation of a microcomputer-based system.

**Prerequisites & Notes:** ETEC 374, ETEC 471

Credits: 4

**ETEC 475 - Digital Communications**

An upper-division study of modern digital communications concepts and techniques. Topics include sampling, quantizing, digital modulation and detection methods, baseband signaling and line codes, bandpass signaling, synchronization and error detection. Several case examples are presented throughout the course.

**Prerequisites & Notes:** ETEC 374, ETEC 455

Credits: 4

**ETEC 479 - Directed Research in Electronic Technology**

Advanced study in problems chosen and conducted under supervision. Repeatable 3 times to a maximum of 9 credits.

Credits: 1 TO 3

**ETEC 480 - Advanced Emission Control**

Emission mechanisms and control strategies in spark and compression ignition engines, emissions testing, and the regulatory and societal reasons for emissions control.

**Prerequisites & Notes:** ETEC 280, ETEC 380

Credits: 3

**ETEC 481 - Gaseous Fuels**

Study of the various technologies involved in gaseous fuels. Topics include: LPG, CNG and hydrogen as alternative fuels for vehicles, solving the exhaust emissions of gaseous fuels, fuel injection and gaseous fuels, conversion systems, and the infrastructure needed to support gaseous fuels as an alternative to gasoline and diesel fuels.

**Prerequisites & Notes:** ETEC 380

Credits: 4

**ETEC 484 - Vehicle Design**

Suspension design; chassis design, spring rates, tire design parameters; automobile aerodynamics; and brake system.

**Prerequisites & Notes:** ETEC 280, ETEC 380; ETEC 225 or concurrent, or permission of instructor.

Credits: 5

**ETEC 486 - Advanced Vehicle Design**

Advanced body design, ergonomics, aerodynamics, climate control, aesthetic design of automobile interiors and exteriors. Practical work includes wind tunnel model construction and testing.

**Prerequisites & Notes:** ETEC 484

Credits: 5

**ETEC 488 - Technology Education: Safety Principles and Practices**

Basic course in safety practices for technology education teachers in grades 1-12 and for vocational teachers who must meet state certification requirements.

Credits: 2

**ETEC 489 - Directed Research in Power Mechanics**

Advanced study in problems chosen and conducted under supervision. Repeatable 3 times to a maximum of 9 credits.

**Prerequisites & Notes:** ETEC 280, ETEC 380. Variable lab fee.

Credits: 1 TO 3

**ETEC 491 - History and Philosophy of Vocational Education**

Evolving issues, objectives, programs and legislation in vocational education.

Credits: 3

**ETEC 493 - Technology Education: Methods**

Competency-based approach to principles, practices and problems in teaching technology education and vocational laboratory courses.

**Prerequisites & Notes:** admission to technology education professional block; variable lab fee

Credits: 3

**ETEC 494 - Technology Education: Curricular Approaches**

An examination of the rationales, content and formats of the new technology education curricula, with strategies for change from traditional industrial arts.

**Prerequisites & Notes:** admission to technology education professional block

Credits: 3

**ETEC 496 - Community and Industrial Resources**

A study of those resources available in the community and how they can be used to enhance the educational experience of students engaged in formal schooling. Repeatable 3 times to a maximum of 9 credits.

Credits: 1 TO 3

**ETEC 590 - Principles of Technology I**

A methods course for teachers preparing to teach the first year of the nationally validated high school course, Principles of Technology. Involves introduction to science and technical content, the curriculum and support teaching materials, and experience with all laboratory experiments. NOTE: This course is not applicable to a master's degree.

**Prerequisites & Notes:** teaching experience in physics or technology education or math

Credits: 4

**ETEC 591 - Principles of Technology II**

A methods course for teachers preparing to teach in the second year of the nationally validated high school course, Principles of Technology. Involves introduction to science and technical content, the curriculum and support teaching materials, and experience with all of the laboratory experiments. NOTE: This course is not applicable to a master's degree.

**Prerequisites & Notes:** teaching experience in Principles of Technology I

Credits: 5

**ETEC 592A - Electronics**

Development of content, laboratory activities, resource materials and teaching aids useful in revising, improving, and implementing technology education curriculum. Repeatable to a maximum of 3 credits.

**Prerequisites & Notes:** public school teaching experience in technology education; variable lab fee

Credits: 1 TO 3

**ETEC 592B - Drafting/Design**

Development of content, laboratory activities, resource materials and teaching aids useful in revising, improving, and implementing technology education curriculum. Repeatable to a maximum of 3 credits.

**Prerequisites & Notes:** public school teaching experience in technology education; variable lab fee

Credits: 1 TO 3

**ETEC 592C - Metals**

Development of content, laboratory activities, resource materials and teaching aids useful in revising, improving, and implementing technology education curriculum. Repeatable to a maximum of 3 credits.

**Prerequisites & Notes:** public school teaching experience in technology education; variable lab fee

Credits: 1 TO 3

**ETEC 592D - Plastics**

Development of content, laboratory activities, resource materials and teaching aids useful in revising, improving, and implementing technology education curriculum. Repeatable to a maximum of 3 credits.

**Prerequisites & Notes:** public school teaching experience in technology education; variable lab fee

Credits: 1 TO 3

**ETEC 592E - Power Mechanics**

Development of content, laboratory activities, resource materials and teaching aids useful in revising, improving, and implementing technology education curriculum. Repeatable to a maximum of 3 credits.

**Prerequisites & Notes:** public school teaching experience in technology education; variable lab fee

Credits: 1 TO 3

**ETEC 592F - Woods**

Development of content, laboratory activities, resource materials and teaching aids useful in revising, improving, and implementing technology education curriculum. Repeatable to a maximum of 3 credits.

**Prerequisites & Notes:** public school teaching experience in technology education; variable lab fee

Credits: 1 TO 3

**ETEC 592G - Visual Communication**

Development of content, laboratory activities, resource materials and teaching aids useful in revising, improving, and implementing technology education curriculum. Repeatable to a maximum of 3 credits.

**Prerequisites & Notes:** public school teaching experience in technology education; variable lab fee

Credits: 1 TO 3

**ETEC 592H - Photography**

Development of content, laboratory activities, resource materials and teaching aids useful in revising, improving, and implementing technology education curriculum. Repeatable to a maximum of 3 credits.

**Prerequisites & Notes:** public school teaching experience in technology education; variable lab fee

Credits: 1 TO 3

**ETEC 592J - Man/Technology**

Development of content, laboratory activities, resource materials and teaching aids useful in revising, improving, and implementing technology education curriculum. Repeatable to a maximum of 3 credits.

**Prerequisites & Notes:** public school teaching experience in technology education; variable lab fee

Credits: 1 TO 3

**ETEC 592K - Manufacturing**

Development of content, laboratory activities, resource materials and teaching aids useful in revising, improving, and implementing technology education curriculum. Repeatable to a maximum of 3 credits.

**Prerequisites & Notes:** public school teaching experience in technology education; variable lab fee

Credits: 1 TO 3

**ETEC 592M – Construction**

Development of content, laboratory activities, resource materials and teaching aids useful in revising, improving, and implementing technology education curriculum. Repeatable to a maximum of 3 credits.

**Prerequisites & Notes:** public school teaching experience in technology education; variable lab fee

Credits: 1 TO 3

**ETEC 592N - Computer Applications**

Development of content, laboratory activities, resource materials and teaching aids useful in revising, improving, and implementing technology education curriculum. Repeatable to a maximum of 3 credits.

**Prerequisites & Notes:** public school teaching experience in technology education; variable lab fee

Credits: 1 TO 3

**ETEC 593 - Technology Education Methods**

An application of principles, practices and problem solutions in the development and implementation of teaching methods appropriate for technology education. S/U grading.

**Prerequisites & Notes:** graduate with technology education/industrial arts major

Credits: 3

**ETEC 594 - Technology Education: Curricular Approaches**

An application of rationales, content and formats in the development and implementation of curriculum materials for technology education. S/U grading.

**Prerequisites & Notes:** graduate with technology education/industrial arts major

Credits: 3

**ETEC 691 - Research Seminar**

Graduate research or final project under direction of graduate committee or program advisor.

Credits: 9

**Eurasian Studies**

*Courses numbered X37; X97; 300, 400; 417, 445 are described in the University Academic Policies section of this catalog.*

**EUS 201 - Introduction to Russian Civilization**

Survey of the history and culture of the Russian people from the earliest times to the present.

Credits: 5

**EUS 210 - Nomads of Eurasia**

Surveys the origins, cultures and languages of the pastoral peoples of Eurasia, including the Mongols, Turks, Arabs, peoples of Iran and Afghanistan, as well as the native tribes of Siberia and the North Pacific Rim.

Credits: 5

**EUS 310 - Origins of Europe**

Explores the origins and distribution of modern European peoples and their languages by gathering evidence from archeology, paleoecology, paleoclimatology, DNA studies, comparative linguistics, folklore, as well as early history. Provides a broad-based knowledge of European ethnogenesis.

**Prerequisites & Notes:** EUS 201 or EUS 210

Credits: 4

**EUS 450 - Topics in Eurasian Studies**

Variable topics in Eurasian Studies, including folklore, linguistics, area studies. Repeatable for credit.

**Prerequisites & Notes:** EUS 201 or EUS 210 or instructor permission

Credits: 3

**Extended Education**

*Courses numbered X37; X97; 300, 400; 417, 445 are described in the University Academic Policies section of this catalog.*

*No more than 15 credits of courses taken in the EXT prefix can be applied toward a degree at Western Washington University.*

*Extension tuition and fee rates apply.*

**EXT 129 - Writing Conventions**

Vocabulary of language, standard writing conventions, and the process of effective writing. Practice in identifying proper English usage and in developing fluent, professional writing.

Credits: 3

**EXT 370 - Principles and Practices of Emergency Management**

An introduction to society's organized response to natural and technological hazards and disasters. Explore the history and evolution of the profession and investigate the organization of emergency management systems in public and private sectors.

Credits: 4

**EXT 371 - Practical Applications of Emergency Management**

Study the theory and techniques involved in developing an emergency management plan for a public or private sector organization. Explore the processes involved in data gathering, hazard identification and vulnerability assessment, plan development, training and exercise. Students will prepare a draft emergency program development plan for the organization of their choice.

Credits: 3

**EXT 372 - Law and Policy of Emergency Management**

Discusses the legal processes related to emergency management and their effect on social change, delivery systems, and affected populations. Readings encompass the intent, development, and use of legislative, judicial, administrative, and policy/procedural systems within Federal, State, and local levels of government.

Credits: 3

**EXT 424E - Current Educational Topics: Patterns, Functions, and Algebraic Thinking**

Designed to model a learning environment that meets the needs of all students, helping them become successful problem solvers who are able to use Math as a powerful tool for making sense of situations and information in the real world.

Credits: 4

**EXT 424G - Current Educational Topics: Numerical Reasoning**

Designed as part of a series of mathematics content courses for educators. Participants will have opportunities to deepen their understanding of the mathematics of number. Participants will work as independent problem solvers in small collaborative groups within a classroom environment that fully models what we want for students. Performance assessment (WASL-type scoring rubrics, learning logs, observations and on demand assessment tasks) will be used to judge the quality of student work. In addition to doing and learning mathematics, participants will have professional articles to read and synthesize each evening, with group discussions of the articles held each morning. The course is designed so that teachers have opportunities to learn important mathematics and to experience and examine characteristics of an optimal environment. This fourth in a series of courses will provide educators with an opportunity to more fully understand number theory while continuing to prepare them to fundamentally restructure their classrooms so that mathematics instruction is fully aligned with the goals and intent of the National Council of Teachers of Mathematics' "Curriculum and Evaluation Standards" (1980), the NCTM "Professional Teaching Standards" (1990), and Washington State's Essential Learnings in Mathematics.

Credits: 4

**EXT 424H - Current Educational Topics: Probability and Data Analysis**

Designed as part of a series of mathematics content courses for educators. Participants will have opportunities to deepen their understanding of the mathematics of probability and data analysis. Participants will work as independent problem solvers and in small collaborative groups within a classroom environment that fully models what we want for students. Performance assessment (portfolios, WASL-type scoring rubrics, learning logs, observations and on demand assessment tasks) will be used to judge the quality of student work. In addition to doing and learning mathematics, participants will study the research and literature on the brain, and mathematics learning. They will have professional articles to read and synthesize each evening, with group discussions of the articles held each morning. The course is designed so that teachers have opportunities to learn important mathematics and so that they experience and examine characteristics of an optimal learning environment. This third in a series of courses will provide educators with deep level experiences with concepts in probability and data while preparing them to fundamentally restructure their classrooms so that mathematics instruction is fully aligned with the goals and intent of the 'National Council of Teachers of Mathematics' "Curriculum and Evaluation Standards" (1980), the NCTM "Professional Teaching Standards" (1990), and Washington State's Essential Learnings in Mathematics.

Credits: 4

**EXT 424I - Current Educational Topics: Geometry and Proportional Reasoning**

Designed as part of a series of mathematics content courses for educators. Participants will have opportunities to deepen their understanding of the mathematics of geometry and measurement with a particular focus on proportional reasoning. Participants will work as independent problem solvers and in small collaborative groups within a classroom environment that fully models what we want for students. Performance assessment (portfolios, WASL-type scoring rubrics, learning logs, observations and on demand assessment tasks) will be used to judge the quality of student work. In addition to doing and learning mathematics, participants will study the research and literature on the brain, and mathematics learning. They will have professional articles to read and synthesize each evening, with group discussions of the articles held each morning. The course is designed so that teachers have opportunities to learn important mathematics and so that they experience and examine characteristics of an optimal learning environment. This second in a series of courses will provide educators with a deep level of understanding of geometry, measurement and proportional reasoning while preparing them to fundamentally restructure their classroom so that mathematics instruction is fully aligned with the goals and intent of the National Council of Teachers of Mathematics 'Curriculum and Evaluation Standards (1989)', 'Professional Teaching Standards' (1990), and Washington State Essential Learnings in Mathematics.

Credits: 4

**EXT 450A - Current Topics for Professionals: Principles and Practices of Project Management**

This course, which is tailored for the business leader, education professional, and office administrator, provides the conceptual framework and practical tools to effectively plan and manage the activities of small, medium and complex projects. Students identify a project of their own and use project management tools and methods to prepare a detailed project plan. S/U grading only.

Credits: 1 TO 5

**EXT 450B - Current Topics for Professionals: Web Design and Development Certificate, Part 1**

Class will focus on providing an essential and solid foundation in HTML using an easy to learn approach. Learn how to format text, place photographs and web graphics, create page backgrounds, set up text and image hyper links and how to set up web page templates using HTML tables. Acquire professional page and site design skills and learn about proven design layouts that work, a user-friendly navigation scheme, how to prepare JPG and GIF images for web using Adobe PhotoShop, and how to set up an active website on a remote web server. S/U grading only.

Credits: 2

**EXT 450C - Current Topics for Professionals: Web Design and Development Certificate, Part 2**

Class will focus on providing an essential and solid foundation in HTML using an easy to learn approach. Learn how to format text, place photographs and web graphics, create page backgrounds, set up text and image hyper links and how to set up web page templates using HTML tables. Acquire professional page and site design skills and learn about proven design layouts that work, a user-friendly navigation scheme, how to prepare JPG and GIF images for web using Adobe PhotoShop, and how to set up an active website on a remote web server. S/U grading only.

**Prerequisites & Notes:** EXT 450B Web Design 1 or permission of instructor.

Credits: 2

**EXT 450D - Current Topics for Professionals: Web Design and Development Certificate, Part 3**

Class will focus on providing an essential and solid foundation in HTML using an easy to learn approach. Learn how to format text, place photographs and web graphics, create page backgrounds, set up text and image hyper links and how to set up web page templates using HTML tables. Acquire professional page and site design skills and learn about proven design layouts that work, a user-friendly navigation scheme, how to prepare JPG and GIF images for web using Adobe PhotoShop, and how to set up an active website on a remote web server. S/U grading only.

**Prerequisites & Notes:** EXT 450B & 450C, or permission of instructor.

Credits: 2

**EXT 450E - Current Topics for Professionals: Family Mediation Training**

Family Mediation Training teaches mediators how to help families resolve conflicts, with a primary focus on helping couples through a dissolution. You will learn how to handle emotionally volatile situations, help parents focus on the needs of their children in order to create and modify parenting plans that work for everyone as well as tips and techniques for dealing with difficult family cases.

Credits: 2

**EXT 450F - Current Topics for Professionals: Basic Mediation Training**

Basic Mediation teaches alternative dispute resolution theory and practice to people who want to add mediation techniques and to those who intend to apply for the mediation certification program. Topics include an introduction to mediation practice, the role of the mediator, and an eight stage model of mediation, conflict theory and management, communication skills for mediators and negotiation methods.

Credits: 4

**EXT 450G - Current Topics for Professionals: Project Management Professional Preparation**

Prepare for professional certification exams. Covers the triad of project management: cost, scope, and schedule. Focus is on integrating the nine key areas of project management. Successful project management involves the consistent application of proven processes, methodologies, and policies, and their management control, to ensure projects are completed within budget, on schedule, and with quality design, features and functionality. S/U grading only.

Credits: 3

**EXT 450H - Microsoft Project Management Software**

Teaches basic and intermediate MS Project skills in the context of Project Management fundamentals in a hands-on lab environment. Students will learn to create files, templates, and reports in order to manage projects and tasks. S/U grading only.

Credits: 1

**EXT 450P - The Marine Naturalist**

Marine Naturalist Training is a marine focused course sponsored by The Whale Museum in Friday Harbor, WA. The course is endorsed for naturalist certification by the Washington/B.C. based Whale Watch Operators Association Northwest. Certification from the course allows graduates to join the newly forming Salish Sea Association of Marine Naturalists (S.S.A.M.N.). S/U grading.

Credits: 2

**EXT 450R - Rediscovery Teachers Institute**

The purpose of this course is to train teachers in the interactive games and experiential/inquiry based teaching techniques that are addressed in the course text: *Rediscovery: Ancient Paths – New Directions and As If The Earth Matters*. That training will take place over a two-day period as outlined below. During the course participants will be taught how to understand scientific concepts and principles that are needed to advance student learning; and how to stimulate students to analyze local, regional, national, or global problems or challenges and employ scientific design to solve those problems. S/U grading.

Credits: 2

**EXT 450T - Introduction to SQL Server 2005/2008 and Transact SQL**

This course introduces the key concepts in relational database models and their implementation in Microsoft SQL Server. It focuses on developing the basic SQL server skills that would be needed for developers, administrators or people attempting to migrate data from Access to SQL Server. S/U grading.

Credits: 1

**EXT 450U - Moving from MS Access to SQL Server**

This course covers in detail the steps and processes involved in moving data and applications from Microsoft Access over to Microsoft SQL Server. S/U grading.

**Prerequisites & Notes:** EXT 450T or instructor permission.

Credits: 1

**EXT 450V - MSQl Server 2005/2008 for Developers**

This course is intended for people who function as Developers of SQL Server systems.

**Prerequisites & Notes:** EXT 450T or permission of instructor.

Credits: 3

**EXT 460 - Principles and Practices of Emergency Management**

Introduction to society's organized response to natural and technological hazards and disasters. Explore the history and evolution of the profession and investigate the organization of emergency management systems in public and private sectors. Required for Emergency Management certificate completion.

Credits: 3

**EXT 463 - Social Issues in Emergency Management in the 21st Century**

The effects of contemporary social issues and conflicts upon the development and delivery of emergency management systems in the United States are outlined. Gain an understanding of the varying constraints and motivations of people. Lessons in the response of cross-cultural, religious, and special needs populations before, during, and after a disaster are provided.

**Prerequisites & Notes:** EXT 370, 371, 372; or instructor permission

Credits: 4

**EXT 464 - Group Dynamics and Facilitation of Emergency Management Systems**

Evaluate group systems in relation to the effective implementation of emergency management systems. Review solutions for organizational problems and assess the role of conflict management in an emergency management setting.

**Prerequisites & Notes:** EXT 370, 371 & 372 or instructor permission.

Credits: 3

**EXT 465 - Impact of Disaster**

Investigates the impact and consequences of post-traumatic stress on victims, families, emergency workers, and community members resulting from natural disasters, human-made emergencies, or societal violence.

**Prerequisites & Notes:** EXT 370, 371, 372; or instructor permission.

Credits: 4

**EXT 466 - Interpersonal Communication in Disaster Service**

Examine the interpersonal dynamics of verbal and written communication in relation to emergency management. Analyze communication issues including, listening effectively, understanding nonverbal communication, speaking in public, and working with the media.

**Prerequisites & Notes:** EXT 370, 371, 372; or instructor permission.

Credits: 3

#### **EXT 467 - Emergency Management and the Challenge of Terrorism**

Provides an introduction to the hazards posed by terrorism and the response to terrorism through the lens of the duties and functions inherent in the role of the emergency manager.

**Prerequisites & Notes:** EXT 370, 371, 372; or instructor permission.

Credits: 3

#### **EXT 494 - Emergency Management Service Learning Internship**

Open only to students of the Emergency Management Certificate. Internship is designed primarily for students who have had little exposure to the field of emergency management. Students find their own placement to gain hands-on practical experience with a public, private, or non-profit organization. Program provides guidance and goals. S/U grading. Repeatable to a maximum of six credits.

**Prerequisites & Notes:** EXT 370, 371, 372 or permission of instructor, and a minimum of 18 credits in the cert program.

Credits: 2

#### **EXT 495 - Professional Research Project in Emergency Management**

Professional research project designed primarily for students who have extensive career experience in the emergency management field. Self-guided project designed to enhance knowledge of a particular subject area relevant to the student's current career responsibilities. Project supervised academically by program faculty. S/U grading only.

Repeatable to a maximum of 6 credits.

**Prerequisites & Notes:** EXT 370, 371 & 372, or permission of instructor, and completed a min of 18 credits in cert program. Open only to students of the Emergency Management Certificate.

Credits: 2

### **Fairhaven**

*Courses numbered X37; X97; 300, 400; 417, 445 are described in the University Academic Policies section of this catalog.*

**Fairhaven's 2010-2011 Curriculum.** The courses and studies listed in this catalog will be offered during the 2010-2011 academic years. Additional classes will be announced and described in the *Fairhaven College Quarterly Class Description* booklet, available at Fairhaven College Office.

At Fairhaven, new courses are constantly being developed by faculty and account for about one-half of the course offerings.

#### **FAIR 101A - An Introduction to Interdisciplinary Study at Fairhaven College**

Provides a framework for Fairhaven College's interdisciplinary philosophy and practices. Students will be introduced to the Fairhaven community, mission, educational philosophies, and their complementary processes leading toward graduation. S/U grading.

**Prerequisites & Notes:** admission to Fairhaven College; required of all new students in the first quarter of enrollment at Fairhaven

Credits: 1

#### **FAIR 201 - Intermediate Foundations**

Focus on critical learning skills, academic writing, aspects of educational theory, curricular structures and individualized learning. Individualized attention to writing and independent study skills. S/U grading.

**Prerequisites & Notes:** some college experience; admission coordinator permission

Credits: 6

#### **FAIR 201A - Critical and Reflective Inquiry**

This interdisciplinary seminar engages students in the processes of critical and reflective thinking, reading and writing. It is a place to explore what these processes are, why they are valued, how they work, and where they fit into a Fairhaven education. Exploration of these processes will be rooted in a topical and methodological approach of the professor's choosing. S/U grading.

**Prerequisites & Notes:** Admission to Fair College; required of all new students in the first quarter of enrollment at Fairhaven.

Credits: 5

#### **FAIR 202A - Core: Humanities and the Expressive Arts I**

Explores the assumptions and practices which inform human inquiry and creativity in literature, philosophy and the arts. S/U grading.

Credits: 5

#### **FAIR 203A - Social Relationships and Responsibility: Theories and Critiques**

This interdisciplinary seminar is an introduction to modern social theory. Employs critical social theories to explore social relationships and examine society from positions of race, class, gender and sexuality, focusing specifically on

the rights, responsibilities and obligations of individuals and communities. Integral to this examination are the experiences of those excluded from the Western ideals of freedom and equality that, arguably, form the basis of liberal democracy. S/U grading.

**Prerequisites & Notes:** admission to Fairhaven College; required of all new students in the first or second quarter of enrollment at Fairhaven

Credits: 5

#### **FAIR 206A - Core: Science and Our Place on the Planet I**

Science and technology are systematic, self-critical, intellectual activities by which a culture seeks to understand and benefit from the physical phenomena of its world. This course addresses science in Western culture - its social and philosophical implications, its technological applications, its potential and its limitations. S/U grading.

Credits: 5

#### **FAIR 210 - History, Culture and Society**

Analysis of social institutions: theories or issues with reference to their history, structure or meaning; cultural unity and diversity. Repeatable with various topics. S/U grading.

Credits: 1 TO 6

#### **FAIR 211B - The American Legal System**

The American legal system and how it affects individuals and society. The structure and evolving nature of the legal system, legal reasoning and the role of courts in government. Skill development in reading and analyzing court opinions. S/U grading.

Credits: 5

#### **FAIR 212C - Introduction to Political Economy**

Study of the American macroeconomic system from two perspectives: orthodox and critical; application of both theoretical frameworks to problems in modern society. S/U grading.

Credits: 5

#### **FAIR 212E - Coast to Coast on a Piece of Toast: Hoboism in America**

Explores phenomenon of "riding the rails" in America, with an emphasis on American labor, race, politics and creative expression and influences on literature, music, and art. S/U grading.

Credits: 3

#### **FAIR 213B - Topics in Popular Culture**

Introductory course looking at critical interpretations of popular culture theory as it relates to particular popular culture phenomena from an interdisciplinary perspective. Topics may include reality television, soap operas, celebrity and tabloid magazines, advertising, and more. Repeatable with different topics. S/U grading.

**Prerequisites & Notes:** FAIR 201A or concurrent registration.

Credits: 2 TO 5

#### **FAIR 213D - Slave Narratives and Other Testimonies of the Old South**

An introductory, interdisciplinary approach to early African American history and the history of the Old South. Using slave autobiographies, WPA interviews, free black testimonies and memoirs in addition to contemporary historical works, we will reconstruct, analyze and deconstruct the history of Southern life and culture during the Antebellum era through the Civil War. S/U grading.

Credits: 3

#### **FAIR 214B - Interdisciplinary Topics in American Experience**

Significant events, movements, art genres, history or other phenomena in American society. Uses multiple approaches, not limited to the traditional disciplines, to interpret course material. Examples of topics include a particular art form, the Ku Klux Klan etc. Repeatable with different topics. S/U grading.

Credits: 3 TO 4

#### **FAIR 214E - Historian as Detective**

Introduction to the challenges of investigation. Assignments develop specific research skills, an understanding of evidence and the nature of historical knowledge. Use of reference tools, historical fiction, essays and readings in classical historians: Herodotus, Thucydides, Tacitus, Gibbon. S/U grading.

Credits: 5

#### **FAIR 215F - The Asian-American Experience**

The history of Asians in the United States, the development of communities and the effects of the encounter between Asian cultures and the developing American cultural context. Also offered as AMST 205. S/U grading.

**Prerequisites & Notes:** also offered as AMST 205.

Credits: 3

**FAIR 216B - Testimonies of the New South**

An interdisciplinary, introductory-level course examining the social, cultural, economic changes that occurred in the South after the Civil War to the early 1900s. The primary source of documentation will be autobiographies, speeches, literature and commentaries made by black and white southerners who experienced these changes at that time. This course is a continuation of Fair 213D. S/U grading.

Credits: 3

**FAIR 218C - The Hispano/a-American Experience**

The development of the Hispano/a-American community, with emphasis on its history, its social and political institutions, and the effects of education, continuing immigration and economic stratification. Also offered as AmSt 203. S/U grading.

Credits: 3

**FAIR 219D - The African-American Experience**

An overview of African-American history from an interdisciplinary perspective. Emphasis is on the struggle for social and political equality in a developing capitalist economy. The contemporary social, economic and political life of African Americans will also be examined. S/U grading.

Credits: 3

**FAIR 220 - Language, Literature and Communications**

Literature as expression of the human experience; creative and expository writing; structure, technique and technology of communication; semantics. Repeatable with various topics. Some of the offerings in this section are listed below. Additional topics will be listed in the Fairhaven College Quarterly Class Description booklet. S/U grading.

Credits: 1 TO 6

**FAIR 221G - Graphic Novels**

In-depth exploration of the work of a particular author (or authors) of graphic novels. Emphasis on studying how narrative works in graphic novels. Repeatable with different topics. S/U grading.

Credits: 3

**FAIR 221J - College Writing**

Directed toward the student who wishes to improve expository writing skills. Theory, practice and criticism of student work. S/U grading.

Credits: 4

**FAIR 222G - Imaginative Writing: Poetry**

S/U grading.

Credits: 4

**FAIR 222H - Imaginative Writing: Fiction**

S/U grading.

Credits: 4

**FAIR 223G - Elements of Style**

An examination of the rules and principles of English composition, including grammar, punctuation, word usage, sentence construction, and strategies for proofreading and revision. Repeatable 3 times. S/U grading.

Credits: 1

**FAIR 223K - Collecting Personal Narratives: The Art of the Interview**

Introduction to skills in listening, questioning, and critical approaches to critiquing interviews. S/U grading.

Credits: 4

**FAIR 224M - Writing Arguments**

Examination of how to construct a logical argument in written form. S/U grading.

Credits: 4

**FAIR 225G - Presentational Speaking**

An opportunity to develop strategies for effective presentations in a variety of contexts. S/U grading.

Credits: 3

**FAIR 226H - Words**

An etymological exploration of words: their origins, roots, history, evolution, connotations, and usage. S/U grading.

Credits: 4

**FAIR 227J - Waking**

A literary and experiential examination of walking. S/U grading.

Credits: 4

**FAIR 228K - Comics and Diversity**

Examines how various peoples and experiences are depicted in comics. Explores why an artist would choose to render experiences such as the Jewish experience in the Holocaust, history of African-Americans, and the contemporary lesbian experience in comics. S/U grading.

**Prerequisites & Notes:** FAIR 202a or 200-level English course

Credits: 3

**FAIR 230 - Nature, Science and the Environment**

Analysis of systems for understanding, describing and predicting the world of nature; environmental concerns and social policy. Repeatable with various topics. Some of the offerings in this section are listed below. Additional topics will be listed in the Fairhaven College Quarterly Class Description booklet. S/U grading.

Credits: 1 TO 6

**FAIR 231N - Introduction to Applied Human Ecology: Sustainable Systems**

Study of relationships between human systems and the environment with an emphasis on the principle of sustainability. Study of models of sustainable development and appropriate technology complement practical applications in the Outback Farm/Wetland/Outdoor Learning Center. Student participation in instruction. S/U grading.

Credits: 3

**FAIR 232P - User-Friendly Statistics**

Basic statistical techniques (sampling, distributions, graphing, hypothesis testing, test of correlation and significance) in the context of real-world issues of concern to nontechnical majors, along with skills for evaluating and critiquing statistical arguments and discerning statistical abuse. S/U grading.

Credits: 4

**FAIR 240 - Human Development, Personal Identity and Socialization**

Studies in historical, social, educational, cultural, psychological and physiological components of human development, personal identity and social roles. Repeatable with various topics. Some of the offerings in this section are listed below. Additional topics will be listed in the Fairhaven College Quarterly Class Description booklet. S/U grading.

Credits: 1 TO 6

**FAIR 242R - The Art of Play: Reclaiming Imagination and Spontaneity for the Adult**

The practice of adult play with focus on methods to reclaim imagination and spontaneity. Providing an intellectual and interdisciplinary framework for understanding the nature of play through readings in philosophy, anthropology and psychology. S/U grading.

Credits: 4

**FAIR 243T - Awareness Through the Body**

An experiential introduction to the discipline of somatics and to traditions of somatic practice. Attention is paid both to theories and experiences of the body and its immediate environment. S/U grading.

Credits: 4

**FAIR 243U - Topics in Mind and Body**

An interdisciplinary exploration of the interface between mind, body and psyche; including, but not limited to, studies in somatics, movement, dance, sensory awareness, cross-cultural or integrative wellness paradigms, consciousness, death and dying. Approaches may be experiential, historical, education, theoretical, cultural, political and transpersonal. Repeatable with different topics to a maximum of 15 credits. S/U grading.

Credits: 3 TO 5

**FAIR 250 - Arts, Self-Expression and Creativity**

The creative process in theory and practice; the role of art and artists in society; analyzing expressive forms within cultural context. Repeatable with various topics. Some of the offerings in this section are listed below. Additional topics will be listed in the Fairhaven College Quarterly Class Description booklet. S/U grading.

Credits: 1 TO 6

**FAIR 252V - Introduction to Drawing**

Studio course introducing experimental drawing mediums and style. Assigned projects emphasize the possibilities of extending traditional concepts concerning the parameters of drawing. Students set and solve their own experiential

creative problems. S/U grading.

Credits: 4

#### **FAIR 254X - Introduction to Relief Printing**

Introduction to basic relief printing techniques with emphasis on narrative image-making and composition. Woodblocks, linoleum blocks and plexiglass plates will be employed for understanding printing techniques. S/U grading.

Credits: 4

#### **FAIR 255Y - Folk Music Experience**

Focus on group performance of music from the American folk tradition, practicing instruments, learning songs, and researching folk music issues, performers, and/or songs and meeting weekly to play music together. Repeatable to a maximum of 8 credits. S/U grading.

Credits: 1

#### **FAIR 258W - Introduction to Acrylic Painting**

Acrylic painting techniques and elements of form composition and color using still life, photographs and live models. S/U grading.

Credits: 4

#### **FAIR 260 - History, Culture and Society**

Analysis of social institutions: theories or issues with reference to their history, structure or meaning; cultural unity and diversity. Repeatable with various topics. S/U grading.

Credits: 1 TO 6

#### **FAIR 261E - Race In/To the Movies I: Race Relations on Film 1900-1950**

Explores race relations in America between 1900 and 1950 using film as one source of historical documentation. Films such as Birth of a Nation, Broken Blossoms and The Scar of Shame will demonstrate how movies both reflect and reinforce contemporary perceptions of inter- and intra-race relations. Readings will place the films into a broader historical context. S/U grading.

Credits: 4

#### **FAIR 262F - Swimming with the Sharks: The Life of a Lawyer**

Explores, through guest speakers, what it means to become an attorney: education options, career choices, and possible roles of lawyers in society. Offered alternate years. S/U grading.

Credits: 2

#### **FAIR 263B - The American Indian Experience**

The social and cultural evolution of the First Peoples of the Americas. Focus on such aspects as education, self-determination, health issues and urbanization as they have an impact on native indigenous populations. Also offered as AMST 202. S/U grading.

**Prerequisites & Notes:** also offered as AMST 202

Credits: 3

#### **FAIR 270B - Intro to Digital Video Production**

This class will introduce basic camera use and video editing in the digital medium. Students will script, shoot, and edit 5 assignments using Final Cut Studio 2. Projects range from a 30-second commercial to a 3-5 minute final video on the student's choice of topic. S/U grading.

Credits: 2

#### **FAIR 270H - Audio Recording I**

Audio Recording Techniques I explores the techniques, tools, and technology used in multi-track recording. S/U grading.

Credits: 4

#### **FAIR 275 - Cooperative Special Interest Studies**

Faculty- or student-initiated small special interest study groups formed around particular topics, themes, issues or activities. Repeatable with various topics. Topics will be listed in the Fairhaven College Quarterly Class Description booklet as they are offered. S/U grading.

Credits: 1 TO 6

#### **FAIR 280 - Practicum**

By arrangement: fall, winter and spring. Fairhaven College independent study permit card required for registration. Learning through practical involvement outside the classroom; general exposure and experience. Repeatable. S/U grading.

**Prerequisites & Notes:** approval by two or more Fairhaven faculty members

Credits: 1 TO 6

**FAIR 303A - Core: Interdisciplinary Concentration Seminar**

Application of procedures and assistance in ordering one's course of study into an effective concentration proposal. Credit awarded upon filing the proposal. S/U grading.

**Prerequisites & Notes:** FAIR 101a, FAIR 201a, FAIR 203a and FAIR 305a. Required of students in Interdisciplinary Concentration.

Credits: 5

**FAIR 305A - Core: Writing and Transition Conference**

Development of a portfolio of writing and demonstration of writing competency and readiness to pursue Concentrated Studies, in consultation with faculty. See Student Guide to Fairhaven College for procedure. Partially satisfies the all-University writing proficiency requirement. S/U grading.

**Prerequisites & Notes:** FAIR 101a and FAIR 201a.

Credits: 3

**FAIR 307A - Conflict Resolution**

Theories of alternative dispute resolution with emphasis on skill of listening respectfully to different points of view. Focus on methods of addressing conflicts around power, privilege and law in context of the adversarial American legal system. S/U grading.

**Prerequisites & Notes:** admission to Fairhaven Law and Diversity program

Credits: 3

**FAIR 308A - Legal Research and Analysis**

Explores evaluative legal writing including use of legal citation. Case reading, analysis and synthesis will be stressed. Students will learn the formal structure of a legal memorandum. S/U grading.

**Prerequisites & Notes:** admission to Fairhaven Law and Diversity program

Credits: 5

**FAIR 309A - Legal Writing and Analysis**

Various substantive law topics with a focus on case analysis. S/U grading.

**Prerequisites & Notes:** admission to Fairhaven Law and Diversity program

Credits: 5

**FAIR 310 - History, Culture and Society**

Analysis of social institutions: theories or issues with reference to their history, structure or meaning; cultural unity and diversity. Repeatable with various topics. S/U grading.

Credits: 1 TO 6

**FAIR 310D - Peace Corps Experience**

Examination of the Peace Corps program and its volunteers, including motives, duty to society, and conflicting values of race, gender, sexual orientation, religion and wealth. Repeatable. S/U grading.

**Prerequisites & Notes:** FAIR 203A or permission of instructor.

Credits: 4

**FAIR 310G - Identity/Conflict N. Ireland**

S/U grading.

**Prerequisites & Notes:** FAIR 204 or equivalent, or cultural anthropology or instructor permission

Credits: 4

**FAIR 310N - American Indians in the Cinema**

S/U grading.

Credits: 5

**FAIR 310W - American Indian Celebrations**

Cultural background and history of some American Indian celebrations. Films, readings, discussion, and sharing individual research. Will attend several Native celebrations in the area. This course is offered during the Summer quarter. S/U grading.

**Prerequisites & Notes:** AMST course or instructor permission.

Credits: 3

**FAIR 311C - Alternatives in Education**

Exploration of various alternative education and school reform movements including philosophy, politics, implementation, financing and historical context. Some of the models which may be discussed include: Montessori,

Steiner (Waldorf), home schooling, free schools, single culture or gender school programs, New American Schools Development Corporation. Repeatable with different topics. S/U grading.

Credits: 4

#### **FAIR 312D - Issues in International Studies**

Explores issues of concern to selected nations. May also include global scope. Examples of topics include globalization, reinventing development, and environmental issues in economically poor countries. Repeatable with various topics. S/U grading.

**Prerequisites & Notes:** FAIR 203a or instructor permission.

Credits: 3 TO 6

#### **FAIR 312E - Transgender Identities and Histories**

An overview of the transgender, transsexual, and intersex communities, focusing on the development of identity (male, female, "other"). This course will look at the narratives of trans people and the history of the communities, as well as the questions raised about the nature of gender identity formation. S/U grading.

**Prerequisites & Notes:** FAIR 201A and FAIR 203A.

Credits: 4

#### **FAIR 313E - Gay, Lesbian, Bisexual and Transgender Issues in Education**

Explores challenges for gay, lesbian, bisexual, transgendered students, teachers and families in the education system including social and development considerations, the impact of mediated heterosexism, politics of schooling. Also explores roles of allies and curriculum transformation. S/U grading.

**Prerequisites & Notes:** FAIR 219D or AMST 242

Credits: 4

#### **FAIR 314B - Advanced Interdisciplinary Topics in American Experience**

Study of events, movements, art genres, or other phenomena in America. Employs interdisciplinary approaches and social theory to deeply explore topics. Topics might include the art deco movement, nativist movements, or war. Repeatable with different topics. S/U grading.

**Prerequisites & Notes:** FAIR 203A

Credits: 4

#### **FAIR 314E - Studying Korea: Modern History, Culture, and People**

Survey of modern history and culture of Korea with a focus on Korean people through psychological and anthropological perspectives. S/U grading.

**Prerequisites & Notes:** FAIR 203A or equivalent 200 level course in social science.

Credits: 4

#### **FAIR 315C - Over the Top: The Great War**

Presents an interdisciplinary exploration of World War I. Uses multi-media resources to present the music, literature, art, and history of the war and to assess its global significance. S/U grading.

**Prerequisites & Notes:** 20th Century history course or instructor permission.

Credits: 4

#### **FAIR 315F - Work**

An interdisciplinary study which examines the meaning, value, history and changing nature of our work. S/U grading.

**Prerequisites & Notes:** study in social science or humanities

Credits: 4

#### **FAIR 319B - Current Issues in Law**

A look at one or two current legal issues being addressed by US courts (including federal, state and/or tribal) today. Study of the cases surrounding the legal issue, popular opinion about the issue, and current cases testing the legal issue. Examples of possible topics include abortion, immigration, criminal law and procedure. Repeatable with different topics. S/U grading.

**Prerequisites & Notes:** FAIR 201A, FAIR 203A, FAIR 211B

Credits: 2 TO 5

#### **FAIR 319E - Advanced Topics in Popular Culture**

Advanced course studying major popular culture theorists and applying those theories to the study of popular culture from an interdisciplinary perspective. Repeatable with different topics. S/U grading.

**Prerequisites & Notes:** FAIR 201A and FAIR 203A

Credits: 2 TO 5

**FAIR 320 - Language, Literature and Communications**

Literature as expression of the human experience; creative and expository writing; structure, technique and technology of communication; semantics. Repeatable with various topics. Some of the offerings in this section are listed below. Additional topics will be listed in the Fairhaven College Quarterly Class Description booklet. S/U grading.

Credits: 1 TO 6

**FAIR 321 - Documentary Video Production**

Production of a short documentary video using S-VHS A/B roll time-code editing. Theory and history of documentary film, lighting, sound, interviewing concerns, visual metaphor, voice-over, music, and toaster transitions will all be covered. Using time-code logs, students will script and rough cut their videos before the final edits. S/U grading.

Credits: 5

**FAIR 322K - Publication: from Prospectus to Press**

A practical examination of how to write a book, from creating a prospectus, to editing drafts, to delivering a final product, to a press. You will gain hands-on experience by working on the instructor's book in progress. S/U grading.

**Prerequisites & Notes:** Fair 201A and one additional course in writing.

Credits: 3 TO 5

**FAIR 322M - Memoirs and Memory: Childhood in America**

Using literature, film and theoretical readings, investigates the "idea" of childhood and, using other cultures and historical periods as lenses, examines how today's American society constructs the ideal and implements the reality. S/U grading.

**Prerequisites & Notes:** FAIR 201A and FAIR 203A or equivalent or instructor permission

Credits: 4

**FAIR 323G - Imaginative Writing II**

An opportunity to continue development of creative skills in fiction, poetry or writing for children, including the revision of promising works for publication. Repeatable with different topics. S/U grading.

**Prerequisites & Notes:** FAIR 222G or FAIR 222H, creative writing course, or instructor permission.

Credits: 4

**FAIR 323H - Elements of Style II**

An exploration into the art of syntax and sentence-making. Builds on the exercises and concepts examined in Fair 223g Elements of Style. S/U grading.

**Prerequisites & Notes:** FAIR 223g or permission of instructor.

Credits: 1

**FAIR 324 - Shakespeare's Works and World**

S/U grading.

Credits: 4

**FAIR 324H - Poetry and Lyric**

Exploration of both poetry and song lyrics with a focus on similarities and differences of compositional intent. Reading, listening and writing to explore how constraints and conventions of form shape poems and songs. S/U grading.

**Prerequisites & Notes:** FAIR 202A or equivalent or poetry course.

Credits: 4

**FAIR 325G - Maps**

An interdisciplinary exploration of maps and mapmaking. Emphasis on the history of maps, diverse ways of mapping, cross-cultural expressions of space, and hands-on creation of individual and communal maps. S/U grading.

**Prerequisites & Notes:** Fair 202a or instructor permission.

Credits: 4

**FAIR 325J - Studies in Myth and Mythology**

Literary and artistic archetypes, world mythology, comparative cosmology, symbols and the unconscious. Repeatable with various topics. S/U grading.

**Prerequisites & Notes:** Background in humanities or cultural history.

Credits: 4

**FAIR 326K - Studies in Film**

Topics in film studies involving particular subject matters, social themes, genres or historical considerations. Recent topics include women in film, film from novels, history of documentary film. Repeatable with different topics. S/U grading.

**Prerequisites & Notes:** film class

Credits: 2 TO 5

#### **FAIR 328M - American Lives**

Examines the lives and work of Americans. Subjects may include artists, environmentalists, writers, scientists, civil rights activists, athletes, children, and so on. Repeatable with different topics. S/U grading.

**Prerequisites & Notes:** FAIR 202A or instructor permission.

Credits: 4

#### **FAIR 330 - Nature, Science and the Environment**

Analysis of systems for understanding, describing and predicting the world of nature; environmental concerns and social policy. Repeatable with various topics. Some of the offerings in this section are listed below. Additional topics will be listed in the Fairhaven College Quarterly Class Description booklet. S/U grading.

Credits: 1 TO 6

#### **FAIR 330D - Natural History and Environmental Issues of NW Washington**

S/U grading.

Credits: 5

#### **FAIR 330E - Ethnobotany**

Study of relationships of plants to culture including plant identification, historic uses of plants, and methods used in preparation of oils, tinctures, salves, dyes, baskets, and more. S/U grading.

**Prerequisites & Notes:** FAIR 206A or equivalent.

Credits: 4

#### **FAIR 331N - Natural History**

An experiential and literary investigation into the science of natural history, its roots, and the diverse ways it is being applied to our contemporary lives and world. S/U grading.

**Prerequisites & Notes:** FAIR 206A or equivalent or instructor permission.

Credits: 5

#### **FAIR 331P - Studying Nature Through Photography**

Photography will be used as a tool for the study of nature. Students will develop their photography skills and then apply them in conjunction with field biology research. S/U grading.

**Prerequisites & Notes:** Fair 206A or permission.

Credits: 4

#### **FAIR 332N - Current Environmental Topics**

The interdisciplinary context of current environmental issues, including the scientific basis for concern. Examples include acid rain, loss of genetic diversity, climate modification by logging, global warming, ozone depletion, overpopulation, nuclear waste disposal. Repeatable with various topics. S/U grading.

**Prerequisites & Notes:** FAIR 206A or instructor permission.

Credits: 2 TO 5

#### **FAIR 332Q - Topics in Applied Conservation Biology**

Analysis of the environment through the applied lens of conservation biology which seeks to explain patterns of scarcity and diversity in nature and identify guidelines and priorities for maintaining species and natural communities. The approach of the course will be philosophical as well as empirical. This course is repeatable with different topics. S/U grading.

**Prerequisites & Notes:** Fair 206A or equivalent, a course in biology or ecology, and upper level standing, or instructor's permission.

Credits: 4 TO 8

#### **FAIR 334B - Accountability for Gross Human Rights Violations**

This course examines different approaches taken by countries and the international community in dealing with past serious violations of human rights, and the process by which formerly repressive States transform themselves into societies based on democracy and the rule of law. S/U grading.

**Prerequisites & Notes:** FAIR 203A

Credits: 4

#### **FAIR 334C - International Human Rights**

This course examines the idea of human rights, its historical, philosophical and legal origins. It explores the notion of universal rights and examines the relativity debate. It will introduce students to rights that are guaranteed and selective substantive rights will be examined - civil and political rights; economic, social and cultural rights, and other classes of rights. Other considerations include national, regional and international institutions created to supervise

implementation of and compliance with those rights. It will also consider the role of non-governmental organizations and activists who seek to enforce human rights. S/U grading.

**Prerequisites & Notes:** FAIR 203a or instructor permission.

Credits: 4

#### **FAIR 334D - State Failure and State Collapse**

Exploration of State failure and State collapse; considers the causes and consequences of State collapse and related issues of anarchy, civil war and the emergence of strong non-State actors. It also examines the regional implications of State collapse and the possibility of predicting and preventing failure and collapse. Student cannot receive credit for both this course and Fair 334e. S/U grading.

**Prerequisites & Notes:** FAIR 203A or permission of instructor.

Credits: 5

#### **FAIR 334E - State Collapse and State Reconstruction**

Exploration of State failure and collapse and the prospects for reconstruction in these States. It examines the causes and consequences of State failure and collapse; the possibility of predicting and preventing failure or collapse; and various State rebuilding models. Focuses on contemporary cases of failure and collapse and State reconstruction. Student cannot receive credit for both this course and either FAIR 334D or FAIR 334G. S/U grading.

**Prerequisites & Notes:** FAIR 203A or permission of instructor.

Credits: 5

#### **FAIR 334F - International Law**

Introduction to public international law, which governs the relations of States and increasingly, other non-State actors. Covers the basic doctrines of public international law and the international legal system, which will be applied to contemporary issues of international law. S/U grading.

**Prerequisites & Notes:** FAIR 203A or permission of instructor.

Credits: 5

#### **FAIR 334G - State Reconstruction**

This course considers the prospects for rebuilding failed and collapsed States. It examines various state-building models and focuses on contemporary cases of reconstruction in the aftermath of failure and collapse, and other post-conflict reconstruction situations. Students cannot receive credit for both this course and FAIR 334E. S/U grading.

**Prerequisites & Notes:** FAIR 334D or permission of instructor.

Credits: 4

#### **FAIR 334N - Topics in Evolutionary Biology**

Explores evolutionary theory, the history of evolutionary thought, and the relevance of biological evolution to the modern human condition. Repeatable with different topics. S/U grading.

**Prerequisites & Notes:** FAIR 206A.

Credits: 4 TO 8

#### **FAIR 334P - Field Studies in Science**

Systematic studies of quantitative natural history, employing field techniques from biology, chemistry, physics, and interdisciplinary science. Repeatable to a maximum of 20 credits. S/U grading.

**Prerequisites & Notes:** FAIR 206A.

Credits: 3 TO 8

#### **FAIR 334Q - The Science and Music of Natural Sounds**

Recording sounds in local natural settings with a focus on how and why animals produce sound, how sound travels through the environment, how we can use the sound for biological survey work and to estimate environmental degradation, how urban sounds differ from natural areas, and using recordings to compose and perform music. S/U grading.

**Prerequisites & Notes:** FAIR 206A or instructor permission.

Credits: 5

#### **FAIR 335B - Global Inquiry**

Preparation for global studies and travel abroad. S/U grading.

**Prerequisites & Notes:** FAIR 201a or equivalent

Credits: 1

#### **FAIR 335N - Visioning Sustainable Futures**

A critical examination of alternative futures envisioned by various writers representing the world views of diverse cultures and communities of interest, in light of present-day sociopolitical, economic and environmental realities. Repeatable with different topics. S/U grading.

**Prerequisites & Notes:** FAIR 201A or ENG 101, and prior course work or experience in sociopolitical issues or

environmental issues from sociopolitical perspective.

Credits: 4 TO 5

#### **FAIR 335P - Quantitative Methods, Critical Thinking in the Natural and Social Sciences**

Examination and application of quantitative methods while extending critical thinking skills essential to effective experimental design and the critical evaluation of quantitative information. Includes identification of quantifiable variables, working with numerical data, statistical analysis, graphing, use of spreadsheets and analytical modeling. Repeatable with different topics. S/U grading.

**Prerequisites & Notes:** FAIR 206A.

Credits: 4 TO 5

#### **FAIR 336B - Topics in Social Issues**

An interdisciplinary exploration of specific topics in the social sciences, including studies in economics, political science, international studies, social theory, ethnicity, race, culture, gender, class, law, psychology, and social activism. Repeatable with different topics. S/U grading.

**Prerequisites & Notes:** FAIR 203a or equivalent

Credits: 4 TO 5

#### **FAIR 336N - Topics in Science**

The interdisciplinary exploration of specific topics in science, including health, reproductive science, ecology, energy, natural history, animal studies, botany, sustainability, the history of science, and science and society. Repeatable with different topics. S/U grading.

**Prerequisites & Notes:** FAIR 206a or equivalent

Credits: 4 TO 5

#### **FAIR 336V - Topics in Art**

An interdisciplinary exploration of specific topics in the arts, including music, art, creativity, dance, theatre, and performance. Approaches may be historical, theoretical, literary, cultural, or political, or through studio work.

Repeatable with different topics. S/U grading.

**Prerequisites & Notes:** FAIR 202a or equivalent

Credits: 4 TO 5

#### **FAIR 338P – Cultural and Biological Perspectives on Pregnancy and Childbirth**

The biology of pregnancy and childbirth, including the development of the fetus, morphological, physiological and psychological changes women experience during pregnancy and childbirth, and the co-evolutionary relationship between mothers and fetuses. Explores childbirth from cross-cultural and historical perspectives, and focuses on the ways American medicine has viewed and treated childbirth and recent changes in American childbirth practices. S/U grading.

**Prerequisites & Notes:** FAIR 203A and FAIR 206A or instructor permission.

Credits: 5

#### **FAIR 339N - Environmental Issues of Indigenous Peoples of North America**

Explores the history, ethics, politics, and biology of environmental issues facing the world's indigenous peoples. Examine local and international case studies that involve Native hunting and fishing rights, land rights issues, and pollution issues. S/U grading.

**Prerequisites & Notes:** FAIR 206A or instructor permission.

Credits: 5

#### **FAIR 340 - Human Development, Personal Identity and Socialization**

Studies in historical, social, educational, cultural, psychological and physiological components of human development, personal identity and social roles. Repeatable with various topics. Some of the offerings in this section are listed below. Additional topics will be listed in the Fairhaven College Quarterly Class Description booklet. S/U grading.

Credits: 1 TO 6

#### **FAIR 340P - Sustainable Forestry**

An examination of the development of forestry as an applied science in Europe & the U.S. and of forest management worldwide, asking what common conditions favor or promote sustainable approaches to forest management? Critical examination of sustainability itself as a guiding concept in natural resource management. Taught every other year. S/U grading.

**Prerequisites & Notes:** FAIR 206A or permission of instructor.

Credits: 4

**FAIR 341R - Psychology of Mindfulness and Well-Being**

Numerous studies show that "mindfulness," an ancient practice now widely used in the West, offsets stress and leads to health, focus, and feelings of well-being. This course examines the origins, techniques and effects of mindfulness. S/U grading.

**Prerequisites & Notes:** FAIR 206 or equivalent or instructor permission

Credits: 5

**FAIR 341S - Psychology of Personality**

This course provides an introduction to the major theories in the field of psychology to understand human personality. This course will focus on psychoanalytic, behavioral, humanistic, and social-cognitive perspectives. Also important current trends in psychology (positive psychology and cultural theories of personality) will be discussed. S/U grading.

**Prerequisites & Notes:** FAIR 203a; course in psychology or equivalent

Credits: 4

**FAIR 341T - Awareness Through the Body II**

A continuation of FAIR 243T (formerly FAIR 243) with deeper attention, intellectual and experiential, to the philosophical concepts introduced in the first course, to psychophysical integration, and to the underlying principles and theories in somatics. S/U grading.

**Prerequisites & Notes:** FAIR 243R or instructor permission.

Credits: 4

**FAIR 342 - Depression: Causes, Cultures, and Treatments**

An examination of biochemical, clinical, and cultural explanations for depression and questions regarding why depression is becoming so widespread. Issues will include the increase of depression symptoms worldwide, gender differences in depression, and specific treatments. S/U grading.

Credits: 4

**FAIR 342P - Statistical Analysis and Research Methods**

This course is designed to provide critical and analytic thinking skills through basic statistical analyses and research methods used in social sciences. Topics will include Correlation Analysis, Analysis of Variance, and Multiple Regressions, and computer lab using SPSS program. S/U grading.

**Prerequisites & Notes:** FAIR 203a; one social science course

Credits: 4

**FAIR 342U - The Body Speaks: Culture and Eating Disorders**

Examines eating disorders in the United States and developing countries from cultural and gender perspectives, as well as controversies regarding origins and treatments. S/U grading.

**Prerequisites & Notes:** previous course in psychology or instructor permission.

Credits: 4

**FAIR 343R - Death and Dying**

The implications of one's death for philosophy, culture, art, literature, aging, economics, psychology, medicine and living. Draws upon books, essays, films, field trips and personal experience. S/U grading.

Credits: 5

**FAIR 343U - Adv Topics in Mind and Body**

An advanced examination of specific mind-body topics. Repeatable with different topics. S/U grading.

**Prerequisites & Notes:** FAIR 201A

Credits: 3 TO 5

**FAIR 344U - Cross-Cultural Psychology**

Introducing non-Western perspective of human behaviors. Culture's influences on human thinking, feeling, and action. Learning diversity in understanding societies and human beings. Repeatable with different topics. S/U grading.

**Prerequisites & Notes:** any psychology course

Credits: 4

**FAIR 347U - Psychology of Women**

Major theories of psychology of women. S/U grading.

**Prerequisites & Notes:** previous courses in psychology or women studies

Credits: 5

**FAIR 348R - Psychology of Racism**

Psychological study of racism. Topics include social psychological analysis of different types of racism, related social psychological theories (cultural racism, group identity theory, social dominance theory, group conflict theory, etc.), and exposure to psychological solutions to cope with racism. S/U grading.

**Prerequisites & Notes:** FAIR 203A or instructor permission.

Credits: 4

**FAIR 349T - Social Psychology and Film**

Learning social psychological theories through film (e.g., conformity, inter-group conflicts, aggression, etc.) and the application of social psychological theories to actual social situations. The psychological influence of media. S/U grading.

**Prerequisites & Notes:** 200-level Psychology class.

Credits: 3

**FAIR 349V - Art During Wartime**

This class will explore how various artists, composers and filmmakers have expressed enthusiasm and disdain for war and its injustices throughout history. We will discuss potential contemporary applications for art during wartime and create three art projects based upon reading and discussions. S/U grading.

**Prerequisites & Notes:** FAIR 202a or equivalent

Credits: 4

**FAIR 350 - Arts, Self-Expression and Creativity**

The creative process in theory and practice; the role of art and artists in society; analyzing expressive forms within cultural context. Repeatable with various topics. Some of the offerings in this section are listed below. Additional topics will be listed in the Fairhaven College Quarterly Class Description booklet. S/U grading.

Credits: 1 TO 6

**FAIR 351W - Printmaking Narratives**

Exploration of and experimentation with advanced printmaking techniques emphasizing the four-color technique. Relief, intaglio, drypoint, woodcut collagraph and monotype illustrating personal narratives and themes. S/U grading.

**Prerequisites & Notes:** FAIR 254X or two design or two studio art courses.

Credits: 4

**FAIR 352V - Public Art**

Exploration of difference of public art from private or commercial art, how to determine success, and the larger social discourse on the role of art in society, through readings, research and creation of, or proposals for, public art works. S/U grading.

**Prerequisites & Notes:** Fair 202A, Art Studio, Art History courses or instructor permission.

Credits: 4

**FAIR 352X - Doing Theatre**

A practical workshop for theatre artists, concentrating on intensive study of scenework for actors, but providing opportunity for directors, video artists and designers to practice their crafts in a setting which integrates all the arts of the theatre. S/U grading.

**Prerequisites & Notes:** previous work in theatre arts, TV or film, or instructor permission

Credits: 4

**FAIR 352Y - Visual Art Workshop**

Bi-weekly critiques, field trips to museums, galleries and local artists' studios, study of a contemporary artist, and participation in a group exhibition. S/U grading.

**Prerequisites & Notes:** Concurrent enrollment in a visual art independent study.

Credits: 2 TO 5

**FAIR 353V - Art in Public Sphere**

Explore history and concepts behind public art, create proposals and models for public art projects, and research artists who work within public space. S/U grading.

**Prerequisites & Notes:** Introduction to drawing and one of: FAIR 355Y, FAIR 359V, FAIR 355W, or permission.

Background in art history recommended.

Credits: 4

**FAIR 353X - New Media and Contemporary Art**

Exploration of how new mediums such as the internet, video, digital photography, sound and performance, are used by artists to create challenging and socially relevant art. S/U grading.

**Prerequisites & Notes:** FAIR 202A, some experience in studio art, or permission of instructor.

Credits: 4

**FAIR 353Y - Songwriting Workshop**

Examination of the elements of songwriting: discussing techniques, strategies and blocks; the roles and inter-relationships of melody, rhythm, and lyric; and song forms and styles. Through a series of exercises, development of a portfolio of songs. S/U grading.

Credits: 4

**FAIR 354V - Scriptwriting Workshop I**

Practice in the art and craft of writing for the dramatic media: theater, film, television and radio. Intensive writing and rewriting experience with a supportive group of other writers. S/U grading.

**Prerequisites & Notes:** previous course work or experience with creative writing or instructor permission

Credits: 4

**FAIR 355W - Installation Art**

Contemporary subjects will be addressed in three-dimensional spaces using combined mediums, such as video, audio, paintings, and found objects. S/U grading.

**Prerequisites & Notes:** 200-level or higher studio art class

Credits: 3 TO 5

**FAIR 355Y - Art and Social Activism**

We will explore the work of numerous contemporary artists who address social and political concerns with their art. We will look at how artists engage community and enrage the status quo, as well as strategies used to get a message out in the public realm. Will create art projects that address social concerns of students' choice. S/U grading.

**Prerequisites & Notes:** FAIR 202A or instructor permission.

Credits: 4

**FAIR 356V - Exploring Dreams Through Painting and Drawing**

Investigating personal dreams and exploring symbolism and context through art. Mixed media approach to art projects and study of artists who address and explore dream symbolism. S/U grading.

**Prerequisites & Notes:** Introduction to drawing or equivalent; familiarity with art history

Credits: 4

**FAIR 356X - Dreams, Imagination and Creativity**

A study, through readings, discussion, experiences, of the content and interrelationships between dreams, imagination and creativity to enhance the intuitive dimension of daily life. Extending the range of imagination through practice: visualization techniques, artistic expression, journal writing. S/U grading.

**Prerequisites & Notes:** FAIR 203A or FAIR 243R or instructor permission.

Credits: 4

**FAIR 357Y - Theatre/Film Production**

An opportunity to work with intensive instruction on production of student-written dramas or films. Repeatable twice. S/U grading.

**Prerequisites & Notes:** previous work in theatre or film production or instructor permission

Credits: 4

**FAIR 358V - Art in the Environment**

Examination of historical and contemporary environmental art works. Development of site-specific individual and group projects that relate to social, political or personal issues. Working on various environmental issues through direct contact with community groups. Repeatable three times. S/U grading.

**Prerequisites & Notes:** Three studio art courses or instructor permission; ART 190 recommended

Credits: 4

**FAIR 358W - Advanced Acrylic Painting**

Expanding on techniques, skills and ideas with a focus on development and repetition of themes within the work. S/U grading.

**Prerequisites & Notes:** FAIR 258W.

Credits: 4

**FAIR 360 - History, Culture and Society**

Analysis of social institutions: theories or issues with reference to their history, structure or meaning; cultural unity and diversity. Repeatable with various topics. S/U grading.

Credits: 1 TO 6

**FAIR 361E - Race In/To the Movies II: Race Relations on Film: 1950-1980**

Explores race relations in America between 1950 and 1980, using film as one source of historical documentation. Films such as *Raisin in the Sun*, *Twelve Angry Men* and various "Blaxploitation" movies will demonstrate how movies

both reflect and reinforce contemporary perceptions on inter- and intra-race relations. Readings will place the films into a broader historical context. S/U grading.

**Prerequisites & Notes:** FAIR 261E or other film studies class.

Credits: 4

#### **FAIR 362F - We're Not for Sale: History of Asian Women in America**

Explores the history and experiences of Asian women in America from the mid-19th century to the present. S/U grading.

**Prerequisites & Notes:** FAIR 215F or AMST 205 or course in history of American women.

Credits: 4

#### **FAIR 363B - Suzie Wong to Miss Saigon: Asian Presence in Hollywood**

Explores the different perspectives of, and attitudes toward, Asian Americans and Asians in America from 1915 to the present, using film as a main source of historical documentation. S/U grading.

Credits: 4

#### **FAIR 364C - El Movimiento Chicano**

Examines the sociohistorical, political and cultural characteristics of the Chicana/o Movement from 1848 to present. Formation and symbolic evolution of the United Farmworkers' Movement, the Chicana/o cultural renaissance of the '60s and '70s, the Chicana/o student movement for educational liberation and the roots of the Chicana/feminist and lesbian movements from the '70s through the '90s. S/U grading.

**Prerequisites & Notes:** FAIR 203A or FAIR 218C or AMST 203 or HIST 463.

Credits: 4

#### **FAIR 365C - Contemporary Voices of Latin American Resistance**

This course will look at the formative structure of Latin American leftist, political ideology by examining the writings of Theotonio Dos Santos, Paolo Freire, Che Guevara, Jose Marti and Antonio Gramsci. It will further focus on contemporary authors and the present course of Latin American politics by reflecting upon the political beliefs and perspectives of such authors as: Comandante Marcos, Elena Poniatowska, Eduardo Galeano, Hugo Chavez, Evo Morales, Luiz Ignacio Lula Da Silva and Michelle Bachelet. S/U grading.

**Prerequisites & Notes:** FAIR 203A or permission of instructor.

Credits: 4

#### **FAIR 365D - Issues in Contemporary Mexican Society**

Examines economic, political and educational issues presently impacting the Republic of Mexico. Emphasis on examining the role of indigenous movements within Mexico and the impact which immigration shares between Mexico and the United States. Repeatable with different topics. S/U grading.

**Prerequisites & Notes:** FAIR 218C or AMST 203 or course in Mexican history or culture recommended.

Credits: 4

#### **FAIR 366E - Comparative Cultural Studies**

Interaction of immigrant and indigenous cultures with the developing American cultural patterns. Emphasis on modes and concepts of interaction, especially related to African Americans, Native Americans, Asian Americans and Latinos. Also offered as AMST 301. S/U grading.

**Prerequisites & Notes:** also offered as AMST 301

Credits: 4

#### **FAIR 367B - Issues in Political Economy**

Upper division seminar in political economy. Course themes may include, but are not limited to: labor market stratification by race and gender; trade and globalization; human and political development; varieties of capitalism; and varieties of welfare states. Repeatable with different topics. S/U grading.

**Prerequisites & Notes:** FAIR 203A or permission.

Credits: 3 TO 6

#### **FAIR 369C - Vietnam War Redux**

Historic and contemporary experiences of Native Americans and other minorities in United States Armed Forces to examine issues of race, class and gender in society. S/U grading.

**Prerequisites & Notes:** FAIR 215f, FAIR 414b or instructor permission

Credits: 4

#### **FAIR 369D - American War Stories: The Great War to Iraq**

This seminar presents an exploration of the major stories (literature, cinema, arts) and social movements produced by American wars. Rather than a traditional history of the wars aimed at discovering how and why someone lost and why others won, the seminar examines the impacts war has had on American and opponents' veterans, families, arts and ideals. We will learn how war affects people at the individual and family level, how movements of support and

resistance develop and what have been the wars' major influences on popular culture. S/U grading.

**Prerequisites & Notes:** FAIR 203A or permission of instructor.

Credits: 4

#### **FAIR 370 - History, Culture and Society**

Analysis of social institutions: theories or issues with reference to their history, structure or meaning; cultural unity and diversity. Repeatable with various topics. S/U grading.

Credits: 1 TO 6

#### **FAIR 370H - Audio Recording II**

Audio Recording Techniques II takes the concepts introduced in Fair 275h, Audio Recording Techniques I, and allows the student to apply and practice them in a "hands-on" manner, with the goal of becoming familiar and competent in the use of all the gear in the Fairhaven Recording Studio. S/U grading.

**Prerequisites & Notes:** FAIR 270H or permission of instructor.

Credits: 4

#### **FAIR 370P - Intro to Pro Tools**

This course will introduce students to mixing and editing audio with Digidesign's Pro Tools LE software. S/U grading.

**Prerequisites & Notes:** FAIR 370H or permission of instructor.

Credits: 2

#### **FAIR 370Q - Pro Tools HD Recording**

This class will give students with advanced recording experience the opportunity to record and mix on an industry standard Pro Tools HD system. Students will enhance their knowledge of Pro Tools and learn how to use the software in conjunction with a large-format analog mixing console. Repeatable up to 6 credits. S/U grading.

**Prerequisites & Notes:** FAIR 370P

Credits: 2

#### **FAIR 370T - World Issues Group Study**

What do we, as engaged citizens, know and understand about global issues and ourselves in a world faced with the complex issues of growing economic disparities, fragile democracies, environmental degradation, wars on terrorism, militarism and homeland security, civil liberties, racial profiling, globalization, and ethnic/religious conflicts? What is our awareness of and participation in local and global efforts for peace and justice? In addition to the weekly forums of speakers, videos, and discussions that are open to the campus and Bellingham community, registered students in the class will participate in weekly research and discussion of the issues. S/U grading.

**Prerequisites & Notes:** FAIR 270T or FAIR 203A, or a social science GUR course.

Credits: 3

#### **FAIR 371B - Topics in Middle East Studies**

Seminar in Middle East studies. Course themes may include, but are not limited to, a survey of the history and political economy of the Modern Middle East; the colonial past and present in the Middle East; Orientalism; US policy toward the Middle East; State-society Relations in the Middle East; and case studies of specific countries and conflicts. Repeatable with different topics. S/U grading.

**Prerequisites & Notes:** FAIR 203A or permission.

Credits: 3 TO 6

#### **FAIR 371E - Nations and Nationalism**

Survey course on the development of national identity since the late eighteenth century and the rise of the nation-state. Focus on the slippage between national and ethnic identities and the predicaments of stateless nations. Comparative case studies of various nationalisms in the United States, Europe, and the post-colonial world. S/U grading.

**Prerequisites & Notes:** FAIR 203A or permission of instructor.

Credits: 5

#### **FAIR 372F - Race and Society Within the Latino Caribbean**

The purpose of the course is to examine the past and present context of how race and cultural fusion have been experienced among peoples and nation states within the Latino Caribbean. Particular emphasis will be placed on the various ways in which racial/cultural identities are complicated by questions of gender, religion, politics, class and sexuality both in the Caribbean as well as those Latino-a Caribbean populations now residing in the United States. S/U grading.

**Prerequisites & Notes:** One of ANTH 101, ANTH 104, ANTH 201, FAIR 201a, FAIR 203a, AMST 203 or HIST 273.

Credits: 4

**FAIR 374B - The Cultural Creation of Identity**

How ethnic, racial and cultural identity is created by society. Includes a study of the social construction of identity from a scholarly perspective, but will also require the student to examine his or her own personal identity. S/U grading.

**Prerequisites & Notes:** FAIR 203A or instructor permission.

Credits: 5

**FAIR 375 - Cooperative Special Interest Studies**

Faculty- or student-initiated small special interest study groups formed around particular topics, themes, issues or activities. Repeatable with various topics. Topics will be listed in the Fairhaven College Quarterly Class Description booklet as they are offered. S/U grading.

Credits: 5 TO 6

**FAIR 376G - Gender and the Law**

Exploration of the effects of gender on rights and status in the legal system and limitations imposed through judicial interpretation of the 14th and 1st amendments to the Constitution. S/U grading.

**Prerequisites & Notes:** FAIR 211B or PLSC 250 or instructor permission.

Credits: 4

**FAIR 377D - Whatcom Civil Rights Project**

Working in conjunction with the Whatcom Human Rights Task Force, the Whatcom Civil Rights Project (WCRP) provides pro bono legal assistance and advocacy to victims of discrimination. Gain the skills necessary to participate in WCRP by learning interviewing skills, how to write organized summaries of fact and law, and how to present cases orally. Major civil rights laws such as the Americans with Disability Act and Title VII of the Civil Rights Act of 1964 will be covered. S/U grading.

**Prerequisites & Notes:** FAIR 201A or any writing intensive course.

Credits: 3

**FAIR 378E - Whatcom Civil Rights Practicum**

Staff a weekly shift of 9intake interviews for the Whatcom Civil Rights Project. Interview victims of civil rights discrimination, write a summary of the facts and law, and present the case orally to an attorney panel. Repeatable to a maximum of 15 credits. S/U grading.

**Prerequisites & Notes:** instructor permission

Credits: 2 TO 5

**FAIR 378F - Court Watch**

Observation of courts to learn judicial process and trends. Repeatable up to 15 credits. S/U grading.

**Prerequisites & Notes:** FAIR 203a or equivalent or instructor permission

Credits: 1 TO 5

**FAIR 380 - Language, Literature and Communications**

Literature as expression of the human experience; creative and expository writing; structure, technique and technology of communication; semantics. Repeatable with various topics. Some of the offerings in this section are listed below. Additional topics will be listed in the Fairhaven College Quarterly Class Description booklet. S/U grading.

Credits: 1 TO 6

**FAIR 381G - Topics in Literature**

An exploration of writers, periods, genres, theories or comparative studies which engage the student in the careful reading and critical discussion of literature, and in writing clearly about the works and issues involved. Repeatable with different topics. S/U grading.

Credits: 3 TO 5

**FAIR 384J - Writing Nature**

Workshop on creative nonfiction writing focusing on natural history, nature, wildness, environment, conservation, science, medicine, landscape or place. S/U grading.

**Prerequisites & Notes:** FAIR 201A or instructor permission.

Credits: 5

**FAIR 386 - The Narrative Voice**

S/U grading.

Credits: 4

**FAIR 386E - Topics in Humanities**

An interdisciplinary exploration of specific topics in the humanities, including history, philosophy, religion, literature, and mythology. Repeatable to a maximum of 15 credits with different topics. S/U grading.

**Prerequisites & Notes:** FAIR 202a or equivalent

Credits: 4 TO 5

**FAIR 387K - Grant Writing Workshop**

Focuses on the basics of grant writing, including seeking funding sources, reading and interpreting funding guidelines, developing and refining proposals, and tricks of the trade. Development of, either individually or as a group, two small grant proposals. S/U grading.

Credits: 4

**FAIR 388M - Oral History**

Study in methods for conducting, editing, and interpreting oral interviews. S/U grading.

**Prerequisites & Notes:** FAIR 223 or instructor permission

Credits: 4

**FAIR 391E - American Indian Resistances**

Examines Native American resistances to European colonization including historical background of military efforts and pan-Indian revitalization and messianic movements. S/U grading.

**Prerequisites & Notes:** FAIR 263B or FAIR 399B or AMST 202 or AMST 315, or course in Native American studies or instructor permission.

Credits: 4

**FAIR 393B - Rights, Liberties and Justice in America**

Study of American ideas of rights and liberties; what they mean in practice; competing principles and ideologies at work in the arena of constitutional rights; history of our justice system with regard to rights and liberties and directions it seems to be heading. S/U grading.

**Prerequisites & Notes:** upper-division courses in social science or history highly recommended

Credits: 4

**FAIR 395C - Commercial Relationships**

The world of commercial relationships including corporations, regulatory agencies, employment practices, and financial institutions with an emphasis on terminology and fundamental concepts. S/U grading.

**Prerequisites & Notes:** admission to Fairhaven Law and Diversity program or instructor permission

Credits: 4

**FAIR 396D - Power, Privilege and the Law**

Reading the law critically with a special sensitivity to the ways in which legal techniques, rhetorical strategies and legal precedent reproduce patterns of power and privilege that subordinate people based on categories of identity. Explores issues pertaining to racial and ethnic groups, gender and sexual orientation, poverty and disabilities. S/U grading.

**Prerequisites & Notes:** study in social sciences; FAIR 204 or FAIR 211 recommended

Credits: 4

**FAIR 398F - The U.S. Social Welfare System**

A study of the historical development of the U.S. Social Welfare system, with particular focus on the development of the child welfare systems. S/U grading.

**Prerequisites & Notes:** FAIR 203 or instructor permission

Credits: 4

**FAIR 399B - Contemporary American Indian Issues**

Presents selected issues that impact Indian-White relations. Emphasis on case studies of issues of sovereignty, land claims, treaty rights, cultural appropriation, economic development, health, education, and environment. Also offered as AMST 315. Repeatable with various topics. S/U grading.

**Prerequisites & Notes:** AMST 202 or FAIR 263 or HIST 275; also offered as AMST 315

Credits: 4

**FAIR 401A - Core: Senior Project**

Independent study required of students undertaking an Interdisciplinary Concentration. See the Fairhaven College Guidelines for Concentrations for more information. S/U grading.

Credits: 1 TO 18

**FAIR 403A - Core: Advanced Seminar**

Required of all Fairhaven College students. A forum in which students are required to reflect on, summarize and evaluate their major or concentration programs and to consider their education in relation to the world they are entering. Course must be taken in final quarter before graduation. S/U grading.

**Prerequisites & Notes:** Required by all FA students. Senior status.

Credits: 4

**FAIR 407A - Legal Writing and Analysis II**

Explores persuasive legal writing, building on the legal research and writing skills gained in the previous seminars by researching and writing an appellate brief on a current legal issue. S/U grading.

**Prerequisites & Notes:** admission to Fairhaven Law and Diversity program

Credits: 5

**FAIR 408A - Oral Advocacy**

Explores oral advocacy, culminating in a moot court exercise on a current legal topic. S/U grading.

**Prerequisites & Notes:** admission to Fairhaven Law and Diversity program

Credits: 4

**FAIR 409A - Advanced Seminar: Legal Profession and Ethics**

Professional ethics for attorneys and their intersection with personal ethics. Role-play interacting with clients, employers and opposing counsel in difficult ethical situations and sharing experiences in concurrent internships. S/U grading.

**Prerequisites & Notes:** admission to Fairhaven Law and Diversity program

Credits: 4

**FAIR 410 - History, Culture and Society**

Analysis of social institutions: theories or issues with reference to their history, structure or meaning; cultural unity and diversity. Repeatable with various topics. Some of the offerings in this section are listed below. Additional topics will be listed in the Fairhaven College Quarterly Class Description booklet as they are offered. S/U grading.

Credits: 1 TO 6

**FAIR 412D - Pre-Colombian Mesoamerica Societies**

Examines the spiritual, political and social contexts of pre-Columbian mesoamerican societies. Emphasis is on understanding of ascendant cultures such as the Mayas, Toltecas, and Mexca Aztecas, and examination of the Popol Vuh, Tonatiuh, Curanderismo and the connections between spiritualism and calendric cycles. Provides linkages between pre-Columbian thought and culture and present-day Mexico and Central America. Repeatable with different topics. S/U grading.

**Prerequisites & Notes:** AMST 203 or FAIR 218C or FAIR 364C or FAIR 365D.

Credits: 4

**FAIR 412E - Advanced Topics in Law**

Investigation of an area of the law using a law school class format and text. Examples of topics include Federal Indian Law II, Property Law, Contracts, Current Issues in the U.S. Supreme Court, and critical legal studies. Repeatable with different topics. S/U grading.

**Prerequisites & Notes:** FAIR 201A, FAIR 203A, FAIR 211B or permission of instructor.

Credits: 2 TO 5

**FAIR 412V - The Art of the Other**

This class will explore the work of contemporary artists from Asia, Africa, the Middle East, as well as the Americas, focusing primarily on artists addressing and commenting upon concerns such as globalization, politics, and post-colonialism. S/U grading.

**Prerequisites & Notes:** One 300 level studio art course plus one of the following: FAIR 215f, FAIR 218c, FAIR 219d, FAIR 263b or equivalent.

Credits: 4

**FAIR 413E - Curers, Clients and Culture: Cross Cultural Perspectives on Health and Illness**

Examines health belief systems in cross-cultural perspective, including the roles of practitioner and patient; explanation, diagnosis and treatment of disease; the impact of modernization on non-Western medical systems, and ethnicity and health care in the U.S. S/U grading.

**Prerequisites & Notes:** cross-cultural study or instructor permission

Credits: 5

**FAIR 414B - Vietnam on Film**

Exploration of the cinematic interpretations of the Southeast Asian war as a process of rationalizing and renegotiating American interests and history to suit contemporary political and cultural purposes. S/U grading.

**Prerequisites & Notes:** FAIR 369C or HIST 104 or evidence of familiarity with Vietnam War or instructor permission.  
Credits: 4

**FAIR 419F - Cross-Cultural Shamanism**

Cross-cultural comparison of the roles, recruitment, techniques and performances of shamans, those ceremonial practitioners who move in a state of ecstasy between various spiritual realms. The relationships between healing, magic, sorcery and alternative states of consciousness in cultural context. S/U grading.

**Prerequisites & Notes:** FAIR 203A or ANTH 201; FAIR 413E or ANTH 424 recommended.

Credits: 5

**FAIR 420 - Language, Literature and Communications**

Literature as expression of the human experience; creative and expository writing; structure, technique and technology of communication; semantics. Repeatable with various topics. Some of the offerings in this section are listed below. Additional topics will be listed in the Fairhaven College Quarterly Class Description booklet. S/U grading.

Credits: 1 TO 6

**FAIR 421H - Advanced Topics in Literature**

In-depth consideration of a small number of works, with theoretical or comparative analysis and intensive work with critical discussion and writing. Repeatable with different topics. S/U grading.

**Prerequisites & Notes:** 300-level course work in literature

Credits: 3 TO 5

**FAIR 422J - Art of the Essay**

An advanced course in the art of writing essays. Repeatable to a maximum of 12 credits. S/U grading.

**Prerequisites & Notes:** FAIR 201A and 202A, and 300-level writing course.

Credits: 4

**FAIR 422K - Advanced Legal Writing and Analysis**

Explores persuasive legal writing, researching and writing an appellate brief on a current legal issue. S/U grading.

**Prerequisites & Notes:** FAIR 201A and FAIR 211B

Credits: 4

**FAIR 423K - Space, Place and Imagination**

An advanced exploration of the relationship between who we are and where we are, between self and place, imagination and landscape. S/U grading.

**Prerequisites & Notes:** 300-level Humanities course.

Credits: 5

**FAIR 430 - Nature, Science and the Environment**

Analysis of systems for understanding, describing and predicting the world of nature; environmental concerns and social policy. Repeatable with various topics. Some of the offerings in this section are listed below. Additional topics will be listed in the Fairhaven College Quarterly Class Description booklet. S/U grading.

Credits: 1 TO 6

**FAIR 433P - Advanced Topics in Evolutionary Biology**

Explores advanced and specific topics in evolutionary theory, the history of evolutionary thought, and/or the application of biological evolution to the modern human experience. Repeatable with different topics to a maximum of 8 credits. S/U grading.

**Prerequisites & Notes:** FAIR 206A and 300 level course in evolution.

Credits: 1 TO 8

**FAIR 434P - Advanced Studies in Field Science**

In-depth quantitative field study, including study design, data collection and analysis, and the writing of a scientific paper to report the findings. Repeatable with various topics. S/U grading.

**Prerequisites & Notes:** FAIR 206A, or equivalent, or instructor permission.

Credits: 5 TO 8

**FAIR 435Q - Advanced Marine Bird Population Ecology**

Participation in all aspects of an ongoing study of Northwestern Washington marine bird populations, including study design, field work, data analysis, and scientific writing. Repeatable to a maximum of 30 credits. S/U grading.

**Prerequisites & Notes:** FAIR 434P or instructor permission.

Credits: 2 TO 15

**FAIR 436B - Advanced Topics in Social Issues**

An advanced examination of specific topics in the social sciences. Repeatable with different topics. S/U grading.

**Prerequisites & Notes:** FAIR 203a; 300-level social science course or equivalent

Credits: 4 TO 8

**FAIR 436N - Advanced Topics in Science**

An advanced examination of specific topics in science. Repeatable with different topics. S/U grading.

**Prerequisites & Notes:** FAIR 206a; 300-level science course or equivalent

Credits: 4 TO 8

**FAIR 436V - Advanced Topics in Art**

An advanced examination of specific topics in the arts. Repeatable with different topics. S/U grading.

**Prerequisites & Notes:** FAIR 202a; 300-level art course

Credits: 4 TO 8

**FAIR 440 - Human Development, Personal Identity and Socialization**

Studies in historical, social, educational, cultural, psychological and physiological components of human development, personal identity and social roles. Repeatable with various topics. Some of the offerings in this section are listed below. Additional topics will be listed in the Fairhaven College Quarterly Class Description booklet. S/U grading.

Credits: 1 TO 6

**FAIR 440N - Ethnoecology: Conservation and Development**

Exploration of the role of traditional ecological knowledge in maintaining and restoring healthy ecological relationships between communities and the environment. Taught every other year. S/U grading.

**Prerequisites & Notes:** FAIR 206A or equivalent or permission of instructor.

Credits: 3

**FAIR 441U - The Relational Self: Theories and Research**

Study of new paradigms of the self, including revisions of familiar concepts of identity, self-knowledge and self-esteem. S/U grading.

**Prerequisites & Notes:** previous courses in psychology or instructor permission

Credits: 4

**FAIR 442T - Culture and Emotion**

Examination of culture's influence on the experience, expression, and interpretation of emotions. Theories in cultural psychology, cross-cultural comparisons of basic emotions, and understanding indigenous emotions in non-Western cultures. S/U grading.

**Prerequisites & Notes:** minimum of two 200-level courses in psychology, sociology or anthropology

Credits: 4

**FAIR 444U - Depression: Causes, Cultures and Treatments**

An examination of biochemical, clinical and cultural explanations for depression and questions regarding why depression is becoming so widespread. Issues will include the increase of depression symptoms worldwide, gender differences in depression and specific treatments. S/U grading.

**Prerequisites & Notes:** previous psychology courses or instructor permission

Credits: 4

**FAIR 446T - Culture and Self**

Study of culture's influence on self, especially focusing on cross-cultural differences and similarities in self-concepts and constructs. Learning mediation by culturally shaped self in behaviors, emotions and cognition. S/U grading.

**Prerequisites & Notes:** minimum of two 200-level psychology courses (social psychology preferred)

Credits: 4

**FAIR 448T - Risk and Resilience in Adolescent Girls: Development, Culture and Identity**

A consideration of latest literature on female adolescent development, including diversity. S/U grading.

**Prerequisites & Notes:** Previous courses in psychology or women studies.

Credits: 5

**FAIR 449R - Political Psychology**

Exploration of social psychological analyses of politics and political behaviors of lay people both at individual and social levels. Study of classical and contemporary psychological theories such as political attitude change, group think, mob behavior, and conformity. Topics will include war, genocide, terrorism, nationalism, and ethnic/racial conflicts. S/U grading.

**Prerequisites & Notes:** At least two science courses.

Credits: 4

#### **FAIR 450 - Arts, Self-Expression and Creativity**

The creative process in theory and practice; the role of art and artists in society; analyzing expressive forms within cultural context. Repeatable with various topics. Some of the offerings in this section are listed below. Additional topics will be listed in the Fairhaven College Quarterly Class Description booklet. S/U grading.

Credits: 1 TO 6

#### **FAIR 450A - Zimbabwean Music: Culture and Context**

Participation in The Zimbabwean Music Festival and exploration of the diverse aspects of Zimbabwean performing arts, culture, and education. Attend workshops on marimba, choral music, dance, percussion, culture and language, as well as evening concerts. This course is offered during the Summer quarter only. S/U grading.

**Prerequisites & Notes:** Background in cross-cultural study

Credits: 2

#### **FAIR 451X - Resistance Art of the Indigena**

Examines contemporary visual and literary arts of indigenous peoples of Canada and the United States. Emphasis on artwork that reflects personal and cultural histories, government and state relations, and Western misrepresentation of Native peoples in the media and academia. S/U grading.

**Prerequisites & Notes:** FAIR 218C or AMST 202 or FAIR 399B or AMST 315; studio art courses or experience above 200-level

Credits: 4

#### **FAIR 452W - Thematic Life Drawing**

Exploration of advanced drawing techniques and development of personal themes based on understanding of current art trends and philosophies. S/U grading.

**Prerequisites & Notes:** intermediate drawing course required (i.e. ART 203, ART 301, ART 304); Art History and FAIR 351W highly recommended.

Credits: 4

#### **FAIR 453V - New Media Workshop**

Use of software, video, sound recording, etc., to create art projects. Discussion of issues and ideas related to new media and study of artists. S/U grading.

**Prerequisites & Notes:** FAIR 359v, FAIR 355y, or FAIR 355w or instructor permission.

Credits: 4

#### **FAIR 454Y - Scriptwriting Workshop II**

Advanced practice in the art and craft of writing for dramatic media: theatre, film, television, radio. Emphasis on sharpening forms and styles, and on preparing scripts for production. Repeatable to a maximum of 12 credits. S/U grading.

**Prerequisites & Notes:** FAIR 354V; previous 200-level work in scriptwriting any medium, or instructor permission  
Credits: 4

#### **FAIR 455V - Advanced Printmaking**

Advanced printmaking techniques illustrating various themes developed by students in consultation with instructor, with an emphasis on technique and aesthetics. S/U grading.

**Prerequisites & Notes:** FAIR 254X, FAIR 351W.

Credits: 4

#### **FAIR 457W - Advanced Theatre/Film Production**

An opportunity to hone advanced production skills in theatre/film in an intense and supportive learning environment. Repeatable twice. S/U grading.

**Prerequisites & Notes:** instructor permission

Credits: 4

#### **FAIR 458W - Studio Painting: Theory and Practice**

Studio Painting allows students to combine their acquired formal painting skills with more social and theoretical content. Students will also be required on occasion to write response papers on various readings as well as give an in-depth research presentation on an artist of their choice. Students are also required to maintain a sketchbook with a minimum of 50 sketches, write an artist statement, photograph their work, and upload digital images to various digital galleries available on the web. Repeatable. S/U grading.

**Prerequisites & Notes:** FAIR 358w or equivalent or instructor permission.

Credits: 4

**FAIR 463C - Federal Indian Law**

S/U grading.

**Prerequisites & Notes:** FAIR 204 recommended

Credits: 4

**FAIR 464 - Advanced Topics in American Indian Studies**

Interdisciplinary examination of major topics in Indian/White relations such as gaming, treaty rights, sovereignty, or education. Repeatable with different topics. S/U grading.

**Prerequisites & Notes:** instructor permission

Credits: 3 TO 5

**FAIR 464D - Advanced Topics in American Indian Studies**

Interdisciplinary examination of major topics in Indian/White relations such as gaming, treaty rights, sovereignty, or education. Repeatable with different topics. S/U grading.

**Prerequisites & Notes:** Permission of instructor.

Credits: 3 TO 5

**FAIR 475 - Cooperative Special Interest Studies**

Faculty- or student-initiated small special interest study groups formed around particular topics, themes, issues or activities. Repeatable with various topics. Topics will be listed in the Fairhaven College Quarterly Class Description booklet as they are offered. S/U grading.

Credits: 1 TO 6

**FAIR 480 - Internship**

By arrangement: fall, winter and spring. Fairhaven College independent study permit card required for registration. Practicum in an area related to one's course of study; addresses specific roles or responsibilities. S/U grading.

**Prerequisites & Notes:** approval of two or more Fairhaven faculty

Credits: 1 TO 15

**FAIR 486E - Advanced Topics in the Humanities**

An advanced examination of specific topics in the humanities. Repeatable with different topics. S/U grading.

**Prerequisites & Notes:** FAIR 202a or equivalent; 300-level Humanities course

Credits: 4 TO 8

**FAIR 499 - Special Problems in Interdisciplinary Studies**

Investigation of problems and issues through advanced interdisciplinary study. Repeatable with various topics. Topics will be listed in the Fairhaven College Quarterly Class Description booklet as they are offered. S/U grading.

**Prerequisites & Notes:** upper-division status or instructor permission

Credits: 1 TO 15

**FAIR 499A - Human Rights, World Visions**

The scope and history of human rights through film and readings, to broaden understanding of human rights and how they impact us as both local and world citizens. S/U grading.

**Prerequisites & Notes:** Fair 203a or equivalent or instructor permission.

Credits: 4

**FAIR 499B - Special Problems in Interdisciplinary Studies**

Investigation of problems and issues through advanced interdisciplinary study. Repeatable with various topics. Topics will be listed in the Fairhaven College Quarterly Class Description booklet as they are offered. S/U grading.

**Prerequisites & Notes:** upper-division status or instructor permission

Credits: 10 TO 15

**Finance**

Courses numbered X37; X97; 300, 400; 417, 445 are described on page 35 of this catalog. **NOTE:** Not all courses are offered every year. Many elective courses are offered only once each year. See the online Timetable of Classes for current offerings. Consult department for answers to specific questions.

**FIN 215 - Personal Finance**

(Not intended for students who plan to be finance majors.) Sources of personal income, saving and consumer spending patterns. Development of techniques for planning and budgeting consumption expenditures and saving, with special emphasis on the use of saving allocations to achieve personal goals; real property, insurance, financial investment, retirement, estate and tax planning.

Credits: 4

**FIN 216 - Personal Investments**

(Not intended for students who plan to be business administration majors.) Description of securities markets and trading of stocks and bonds. Characteristics of other investments including options, convertible securities, mutual funds and tangible investments. Investment risk and portfolio management.

Credits: 3

**FIN 341 - Principles of Finance**

Core principles of financial management and goal of businesses, financial institutions and markets, time value of money, capital budgeting, stock and bond valuation, capital structure, risk and return, and financial analysis and planning.

**Prerequisites & Notes:** ACCT 245, DSCI 205, MIS 220 or equivalent. Sophomore status.

Credits: 4

**FIN 345 - Real Estate**

Real estate law; government regulation of real estate use; development, marketing and financing of commercial and residential real estate.

**Prerequisites & Notes:** Major restricted, MGMT 271, FIN 341

Credits: 4

**FIN 346 - Risk and Insurance**

Personal and organizational risk and the means by which such risk may be minimized, transferred or otherwise managed to avoid serious financial loss.

**Prerequisites & Notes:** Major restricted, FIN 341.

Credits: 4

**FIN 440 - Investments**

Operation of securities markets and investment risk and return. Analysis of security characteristics and the issues of portfolio selection and management.

**Prerequisites & Notes:** Major restricted, FIN 341

Credits: 4

**FIN 441 - Intermediate Financial Management**

An integrated approach to financial management including study of intermediate-level financial theory and its application to financial decision making under uncertainty.

**Prerequisites & Notes:** Major restricted, DSCI 305 or ECON 375; FIN 341

Credits: 4

**FIN 442 - Multinational Corporate Finance**

Introduction to multinational corporate financial management. International financial operations, capital structure and investment decisions, currency risk, hedging, and related topics with consideration of institutional, ethical, regulatory, demographic, cultural and financial environment issues.

**Prerequisites & Notes:** Major restricted, FIN 341; FIN 440 or IBUS 370.

Credits: 4

**FIN 443 - Topics in Finance**

Varying topics in finance such as financial planning, capital budgeting, working capital management and multinational corporate finance. Repeatable with various topics to a maximum of 8 credits.

**Prerequisites & Notes:** Major restricted, Vary by topic; instructor permission required.

Credits: 4

**FIN 444 - Financial Institutions and Markets**

Structure and functions of the money and capital markets; the saving investment process and financial intermediaries; supply and demand for loanable funds and the level and structure of interest rates.

**Prerequisites & Notes:** Major restricted, FIN 341

Credits: 4

**FIN 446 - Options and Futures Markets**

Advanced study of option strategies, option pricing models and efficiency of options markets. Description of futures markets hedging theory and practice. Emphasis on role of options and futures in management of risk.

**Prerequisites & Notes:** Major restricted, DSCI 305 or ECON 375, FIN 440

Credits: 4

**FIN 447 - Commercial Bank Management**

Management of commercial banks and similar depository institutions, emphasizing the measurement and control of risk in asset and liability management. Issues in contemporary banking.

**Prerequisites & Notes:** Major restricted, FIN 444

Credits: 4

**FIN 448 - Investment Analysis and Management**

Advanced study of recent developments in financial theory and presentation of empirical evidence relative to the determination of investment value of financial assets. Emphasis on management of investment portfolios in efficient markets. Special topics of current interest.

**Prerequisites & Notes:** Major restricted, DSCI 305 or ECON 375, FIN 440, FIN 444

Credits: 4

**FIN 449 - Cases in Financial Management**

Case studies are utilized to develop insight and provide experience in the application of financial theory and practice to such decision-making areas as working capital management, capital budgeting, capital structure determination and dividend policy.

**Prerequisites & Notes:** Major restricted, FIN 441; knowledge of spreadsheets

Credits: 4

**FIN 456 - Commercial Real Estate Investment**

Investment strategy, selection, financing, appraisal of income properties such as rentals, apartments condos, office buildings, shopping centers and other secure purpose real estate.

**Prerequisites & Notes:** Major restricted, FIN 345

Credits: 4

**FIN 460 - Finance Apprenticeship**

Finance-related employment, plus research and/or special project experience. Emphasis is on applying finance principles in an academically guided setting. Minimum requirements include a written proposal, daily/weekly journals of activities, and a comprehensive final report. Personal selling and clerical activities are not acceptable. Four credits may be applied as one elective in the finance concentration, but credits may not be applied to the financial economics major. Repeatable to a maximum of 12 credits.

**Prerequisites & Notes:** Major restricted. FIN 341, FIN 440

Credits: 4

**FIN 466 - Option Trading Strategies**

Focuses on experiential learning with each student creating and managing a portfolio of securities and options. A live paper trading platform offers real world trading experiences at real time market prices. Lectures and instructor guidance develops personal and professional knowledge and skills in using financial securities and derivatives markets.

**Prerequisites & Notes:** FIN 446

Credits: 4

**FIN 490 - Internship in Finance**

Practical application of skills and theories learned in the classroom through work or special project experience in private or public organizations. Repeatable to a maximum of 12 credits.

**Prerequisites & Notes:** Major restricted, Business Administration majors only

Credits: 1 TO 4

**French**

*Courses numbered X37; X97; 300, 400; 417, 445 are described in the University Academic Policies section of this catalog.*

**FREN 101 - Elementary French**

To be taken in sequence. Fundamentals of speaking, reading, writing and understanding French.

Credits: 5

**FREN 102 - Elementary French**

To be taken in sequence. Fundamentals of speaking, reading, writing and understanding French.

**Prerequisites & Notes:** FREN 101

Credits: 5

**FREN 103 - Elementary French**

To be taken in sequence. Fundamentals of speaking, reading, writing and understanding French.

**Prerequisites & Notes:** FREN 102

Credits: 5

**FREN 104 - Review of Elementary French**

Designed for students with two years of high school French or equivalent to prepare them for the intermediate level through review and development of basic structure and vocabulary. Also for students needing a review of the first year.

**Prerequisites & Notes:** FREN 103 or two years of high school French or equivalent

Credits: 5

**FREN 201 - Intermediate French**

To be taken in sequence. Continuation of skill development begun in elementary French, with additional work in vocabulary acquisition and grammar.

**Prerequisites & Notes:** FREN 103 or FREN 104 or equivalent

Credits: 5

**FREN 202 - Intermediate French**

To be taken in sequence. Continuation of skill development begun in elementary French, with additional work in vocabulary acquisition and grammar.

**Prerequisites & Notes:** FREN 201 or equivalent

Credits: 5

**FREN 203 - Intermediate French**

To be taken in sequence. Continuation of skill development begun in elementary French, with additional work in vocabulary acquisition and grammar.

**Prerequisites & Notes:** FREN 202 or equivalent

Credits: 5

**FREN 301 - Grammar Review**

Study of language and structure, vocabulary building, use of reference tools and writing styles.

**Prerequisites & Notes:** FREN 203 or equivalent

Credits: 4

**FREN 302 - Written Exposition**

Practice in written expression of various kinds: resumes, analyses de texte, personal and formal correspondence as well as fiction.

**Prerequisites & Notes:** FREN 301

Credits: 3

**FREN 314 - Phonetics**

Emphasizes improvement of pronunciation, contrasts English and French pronunciations and teaches phonetic transcription.

**Prerequisites & Notes:** FREN 203 or equivalent

Credits: 4

**FREN 331 - Civilisation et Culture Francaises**

An introduction to the culture and civilization of France from historical and modern perspectives. Readings, discussions, films, oral and written assignments in French.

**Prerequisites & Notes:** FREN 301 or equivalent

Credits: 4

**FREN 332 - Civilisation et Culture du Quebec**

An introduction to Quebec culture and civilization from historical and modern perspectives. Readings, discussions, films, oral and written assignments in French.

**Prerequisites & Notes:** FREN 301 or equivalent

Credits: 3

**FREN 340 - Introduction to French Literature I**

An introduction to literary analysis, explication de texte involving poetry, prose and drama from the works of major authors of the Middle Ages and Renaissance.

**Prerequisites & Notes:** FREN 301 or equivalent

Credits: 4

**FREN 341 - Introduction to French Literature II**

An introduction to literary analysis, explication de texte involving poetry, prose and drama from works of major authors of the 17th and 18th centuries.

**Prerequisites & Notes:** FREN 301; FREN 340 recommended

Credits: 4

**FREN 342 - Introduction to French Literature III**

Introduction to literary analysis, explication de texte involving poetry, prose and drama from works of major authors of the 19th and 20th centuries.

**Prerequisites & Notes:** FREN 301 or equivalent

Credits: 4

**FREN 385 - Culture and Conversation**

French and Francophone cultures as seen in various media. Discussion of aspects of these cultures. Required for the major. Repeatable to a maximum of 12 credits.

**Prerequisites & Notes:** FREN 301 or equivalent

Credits: 4

**FREN 401 - Elements de Stylistique**

Extensive practice in writing and in analyzing grammatical, stylistic and textual forms.

**Prerequisites & Notes:** FREN 302, FREN 314

Credits: 3

**FREN 402 - French for Business**

Extensive practice writing and analyzing French as used for professional purposes including business case studies, correspondence and contracts. May replace FREN 401 with permission of instructor.

**Prerequisites & Notes:** FREN 301 plus two additional 300-level French courses

Credits: 4

**FREN 405Q - Communication et Discours: Quebec**

Credits: 3

**FREN 410 - Ecriture Feminine Francophone**

Introduces students to a variety of texts written by women from the Francophone world (from Belgium to North Africa, French Antilles to Canada), and explores social, cultural and literary topics such as bi- and multiculturalism, native cultures vs. exogenous cultures, colonization, women's writing and condition, attitudes toward France and the French language, and exile and memory reconstruction.

**Prerequisites & Notes:** FREN 401 and one of FREN 340, FREN 341 or FREN 342.

Credits: 3

**FREN 420 - Histoire de la Langue Francaise**

A cultural and linguistic survey of the development of the French language from its origins to the present.

**Prerequisites & Notes:** FREN 401 and one of FREN 340, FREN 341, FREN 342.

Credits: 3

**FREN 425 - Teaching-Learning Processes in Elementary French**

Practicum in course preparation, classroom and language laboratory procedures, materials, evaluation and counseling. Repeatable. S/U grading.

**Prerequisites & Notes:** Written permission and two upper-division french courses

Credits: 2

**FREN 440 - Etude Sociolinguistique**

Discusses the current developments of French in relation to community identity in times of globalization and late modernity. Examines the sociocultural forces that cause language variation and change, as well as people's attitudes vis à vis French in the Francophone world. Also introduces students to current sociolinguistic research methods.

**Prerequisites & Notes:** FREN 314, FREN 401 and one of FREN 340, FREN 341 or FREN 342.

Credits: 3

**FREN 450Q - Seminar: Theatre Quebecois**

Credits: 3

**FREN 460 - French Cinema**

Part I: Historical overview of French cinema from 1895 to 1945. Part II: Historical overview of French cinema from 1945 to present.

**Prerequisites & Notes:** FREN 401 and one of FREN 340, FREN 341 or FREN 342.

Credits: 4

## **General Studies**

*Courses numbered X37; X97; 300, 400; 417, 445 are described in the University Academic Policies section of this catalog.*

### **GSTU 410 - Writing Capstone: Framework for Your Future**

Students create a reflective writing portfolio that traces individual intellectual journey and provides ground work for projecting beyond graduation. Students examine artifacts from their undergraduate career to uncover their own history of ideas. Includes both formal and informal writing with opportunities for revision based on feedback.

**Prerequisites & Notes:** General Studies Majors only.

Credits: 4

### **GSTU 471 – Internship**

Supervised professional experience emphasizing functional proficiency under joint sponsorship of University and agency personnel. All students participate at the work site for at least 12 hours per week in the type of activities specified in the internship contract. S/U grading.

**Prerequisites & Notes:** General studies majors only; permission of instructor.

Credits: 5

## **Geology**

*Courses numbered X37; X97; 300, 400, 500; 417, 445, 517, 545 are described in the University Academic Policies section of this catalog.*

### **GEOL 101 - Introduction to Geology**

Major ideas of modern geoscience; the study of rocks and minerals, plate tectonics, geologic time, the hydrologic cycle; processes that have produced the Earth and its landforms. Some lecture sections will be focused on specific topics within the geological sciences, such as planetary geology, climate and climate change, or National Parks. Includes lab. Prospective geology majors, students who had high school geology, and those planning to take GEOL 212 should take GEOL 211 in lieu of GEOL 101.

**Prerequisites & Notes:** MATH 107 or MATH 112; register for lecture and lab; no labs first week.

Credits: 4

### **GEOL 201 - Science Literacy**

Topics will vary somewhat with different instructors, but may include: Understanding the nature of science and what discriminates science from other ways of knowing. Discriminating among good science, junk science, and pseudoscience. Elementary statistics and how they can mislead. Logical fallacies. Scientific topics in the news (e.g., creationism vs. evolutionism).

Credits: 3

### **GEOL 202 - Plate Tectonics and Continental Drift**

Emergence of the theory of plate tectonics and its revolutionary impact on geologists thinking about the history of the earth; an instance of scientific discovery. For non-science majors.

**Prerequisites & Notes:** GEOL 101 or equivalent

Credits: 4

### **GEOL 204 - Geology and Society**

Thematic approach to geology, with different themes exploring the relationship between scientific ways of knowing, and geology in particular, with society. Repeatable once as an elective with different topics. May be taken only once for GUR credit.

**Prerequisites & Notes:** GEOL 101 or BIOL 101 or CHEM 101 or PHYS 101 or permission of instructor.

Credits: 3

### **GEOL 211 - Physical Geology**

Course for science and geology majors, in which the origin, composition and structure of earth are explored. Identification of common rocks and minerals; the evolution of the surface features and structures of continents and interpretation of landforms from maps are emphasized. Will include substantial quantitative work. Students intending to major in Geology or affiliated sciences should take GEOL 211 in lieu of GEOL 101. Successful completion of both GEOL 101 and GEOL 211A may substitute for GEOL 211 in all Geology Department requirements.

**Prerequisites & Notes:** MATH 114 or higher; high school or college chemistry; labs start first Thursday of the quarter; optional field trip with transportation fee.

Credits: 5

### **GEOl 211A - Physical Geology Review**

This is a laboratory-only course for students who wish to enter the Geology major or minor, or take upper division Geology courses, and have had a general introduction to geology. Emphasis on rock and mineral identification, geologic structures, map interpretation. Successful completion of both GEOL 101 and GEOL 211A or SCED 202 and GEOL 211A may substitute for GEOL 211 in all Geology Department requirements. Geology 211A may not be used to fulfill general education requirements.

**Prerequisites & Notes:** GEOL 101 or SCED 202 with a grade of B- or better, MATH 114 and high school or college chemistry.

Credits: 2

### **GEOl 212 - Historical Geology**

Evolution of the major features of the earth's surface and of life; history of the ocean basins, continents and mountain belts related to the theory of plate tectonics; geologic history of North America and the Pacific Northwest.

**Prerequisites & Notes:** GEOL 211

Credits: 4

### **GEOl 213 - GIS in Geology**

An introduction to the fundamental elements of geographic information systems (GIS) for spatial data analysis in geology. Emphasis on data sources and ArcGIS tools for data input, display, manipulation, analysis, and output.

**Prerequisites & Notes:** Geology major status or instructor permission

Credits: 3

### **GEOl 214 - Environmental Geology**

Explores the interactions between geological phenomena and human society. Topics include geologic hazards such as earthquakes, landslides, floods and volcanic eruptions, as well as the effects of human activities on earth systems, such as ground water contamination, resource limits, and global warming.

**Prerequisites & Notes:** GEOL 101 or GEOL 211

Credits: 3

### **GEOl 252 - The Earth and Its Weather**

An introduction to meteorology from a global viewpoint. A study of the earth's atmosphere, including weather observation and forecasting. Measurement and description of atmospheric properties.

**Prerequisites & Notes:** GEOL 101, CHEM 101 or PHYS 101

Credits: 4

### **GEOl 301 - Geology Writing Co-Requisite**

This course is a writing-intensive supplement to a geology course where students will explore research topics and learn to write scientific papers about those topics. Repeatable up to 3 credits.

**Prerequisites & Notes:** Concurrent registration in either GEOL 308, GEOL 309, GEOL 310, GEOL 311, GEOL 314, or GEOL 340

Credits: 1

### **GEOl 303 - Dinosaurs and Their Environment**

Dinosaurs and their world; their biology, behavior, evolution, and what the world was like during their reign.

**Prerequisites & Notes:** GEOL 101

Credits: 3

### **GEOl 306 - Mineralogy**

Introduction to crystal chemistry and crystallography. Origin, occurrence and classification of common minerals; physical and chemical properties of minerals used in identification. Basic petrographic microscopy techniques and identification of common rock-forming minerals in thin-section.

**Prerequisites & Notes:** GEOL 211; CHEM 121; pre/co-requisite CHEM 122 with transportation fees

Credits: 4

### **GEOl 308 - Earthquakes**

This course is a qualitative survey of the causes, effects and dynamics of local and global earthquakes. Topics include wave propagation, earth structure, the global distribution of earthquakes, faulting mechanisms, earthquake magnitude, earthquake prediction and seismic hazard. Emphasis is placed on the investigation of earthquake behavior through case studies of historical earthquakes.

**Prerequisites & Notes:** GEOL 211; optional field trip(s) with transportation fees

Credits: 3

### **GEOl 309 - Volcanology**

Processes, products, and hazards of volcanic eruptions. Topics to include eruptive mechanisms, volcanic landforms and their relation to the composition and physical properties of magmas, emplacement mechanisms of pyroclastic

flows and characteristics of their deposits, calderas, volcanic gases, effects of volcanic eruptions on climate and the atmosphere, volcanic hazards and their mitigation, and geothermal energy and mineral resources.

**Prerequisites & Notes:** GEOL 211; co-requisite: GEOL 309A; optional field trip(s) with transportation fees

Credits: 3

#### **GEOL 309A - Volcanology Lab**

Optional lab to accompany GEOL 309. Observation and interpretation of volcanic rocks and interpretation of volcanic eruption styles.

**Prerequisites & Notes:** co-requisite: GEOL 309

Credits: 1

#### **GEOL 310 - Geomorphology**

Origin and evolution of topographic features by surface processes; analysis of glaciers, streams, wind, waves, ground water and other agents in development of landforms.

**Prerequisites & Notes:** GEOL 211, MATH 114 or higher; mandatory field trip(s) with transportation fees

Credits: 5

#### **GEOL 311 - Earth Materials**

Examines geologic materials (minerals, rocks, and soils) from the scale of atoms to tectonic plates. Lecture foci range from the esoteric (mineral symmetry) to the practical (economic minerals). Laboratory exercises emphasize the scientific skills of observation, identification, and classification in lab and in the field. Field trips are required.

**Prerequisites & Notes:** GEOL 211, CHEM 121; mandatory field trip(s) with transportation fees

Credits: 4

#### **GEOL 314 - Engineering Geology**

Introduction to the engineering properties of rock and soil surficial materials and their significance regarding slope stability and natural foundations for buildings, bridges, dams and other engineering works.

**Prerequisites & Notes:** GEOL 211, PHYS 121; mandatory field trip(s) with transportation fees

Credits: 3

#### **GEOL 315 - Minerals, Energy and Society**

Mineral resources are vital to society, and yet they are nonrenewable, expensive to find, unevenly distributed, and their extraction and consumption can be environmentally damaging. Can we make economically and environmentally sound decisions regarding land-use planning, development vs. conservation, mining vs. environmental protection, recycling vs. waste?

**Prerequisites & Notes:** GEOL 101 or GEOL 211

Credits: 4

#### **GEOL 316 - Research in Marine Paleontology**

A problem-solving approach, working on a sequence of problems with reports that build to a core project, report and presentation. Begins with the classification and ecology of marine organisms. Research projects involve data gathering and analysis of fossil samples. Emphasizes hypothesis testing, writing and sharing of data in collaborative research.

**Prerequisites & Notes:** GEOL 212; mandatory field trip(s) with transportation fees

Credits: 4

#### **GEOL 318 - Structural Geology**

An overview of deformation in the earth's crust and introduction to tools for analysis of geologic structures. Topics include geometry and development of faults, folds and rock fabrics; stress, strain, and rheology; interpretation of geologic maps and cross sections. Field and laboratory exercises are major components. One section each year is taught entirely in the field.

**Prerequisites & Notes:** GEOL 211, GEOL 212; PHYS 114 or PHYS 121; mandatory field trip(s) with transportation fees

Credits: 5

#### **GEOL 340 - Geological Oceanography**

In this course students will gain an understanding of the nature and origin of oceanic crust and lithosphere. Large scale chemical and geological processes associated with ocean basins, and seawater-rock interactions, and the role of oceanic circulation in climate and climate change will be studied. Additional topics will be included based on student interest, which will be explored via independent reading assignment.

**Prerequisites & Notes:** GEOL 211, CHEM 115 or CHEM 121 or equivalent.

Credits: 3

**GEOl 352 - Introduction to Geophysics**

Basic elements of geomagnetism, seismology, gravity and heat flow with reference to the internal structure of the earth.

**Prerequisites & Notes:** GEOL 318; PHYS 121

Credits: 4

**GEOl 372 - Watershed Hydrology**

Examination of the hydrologic processes and land characteristics controlling the movement and storage of surface and ground water within a watershed. Topics include the collection and analysis of watershed and hydrologic data, and watershed management issues.

**Prerequisites & Notes:** GEOL 211

Credits: 3

**GEOl 396A - Honors Tutorial**

Repeatable with no maximum.

Credits: 2 TO 5

**GEOl 396B - Honors Tutorial**

Repeatable with no maximum.

Credits: 2 TO 5

**GEOl 396C - Honors Tutorial**

Repeatable with no maximum.

Credits: 2 TO 5

**GEOl 401A - Teaching Practicum**

Supervised teaching experience in the general geology laboratory. Students will assist in one 2-hour lab section per week. Repeatable to a maximum of 2 credits. S/U grading.

**Prerequisites & Notes:** GEOL 211, with a B or better

Credits: 1

**GEOl 401B - Teaching Practicum**

Assisting faculty in teaching advanced undergraduate geology courses. Students will assist in two 2-hour lab sections per week in GEOL 211, or one 2-hour session per week in GEOL 212. Repeatable to a maximum of 4 credits. S/U grading.

**Prerequisites & Notes:** B or better in course for which student will be a Teaching Fellow.

Credits: 2

**GEOl 406 - Igneous and Metamorphic Petrology**

Origin, occurrence and classification of igneous and metamorphic rocks, hand specimen identification of rocks. In alternate years, one section that year is taught entirely in the field.

**Prerequisites & Notes:** GEOL 306; CHEM 121, CHEM 122

Credits: 4

**GEOl 407 - Advanced Petrography**

Interaction of light with minerals. Advanced petrographic techniques and identification of minerals with the polarizing microscope. Study of rocks and minerals with a polarizing microscope.

**Prerequisites & Notes:** GEOL 406

Credits: 3

**GEOl 409 - Field Methods and Theory**

Methods of geological field investigations; includes use of field instruments and outcrop studies.

**Prerequisites & Notes:** GEOL 211, GEOL 212, GEOL 318, GEOL 406, GEOL 415

Credits: 6

**GEOl 410 - Geologic Mapping**

Application of geological field methods to making geological maps and reports of specific areas; supervised investigation of one or more map areas.

**Prerequisites & Notes:** concurrent or immediate prior enrollment in GEOL 409

Credits: 6

**GEOl 411 - Field Geology of Western United States**

Geologic mapping and tectonic analysis of various field sites in the southern U.S. Cordillera, from the plate margin to the craton. Will include outcrop study, reading, independent field research, and discussion of tectonic evolution of the Cordillera.

**Prerequisites & Notes:** concurrent or prior enrollment in GEOL 410A and 410B

Credits: 3

### **GEOLOGY 413 - Fluvial Geomorphology**

Stream processes, equilibrium in fluvial environments, channel adjustments, mechanics of sediment erosion and transport. Weekly field trips.

**Prerequisites & Notes:** GEOL 310 or instructor permission; mandatory field trip(s) with transportation fees

Credits: 4

### **GEOLOGY 414 - Geology of Washington**

The significant geologic features of Washington State; field studies. Offered summer only.

**Prerequisites & Notes:** GEOL 101 or GEOL 211

Credits: 3 TO 5

### **GEOLOGY 415 - Stratigraphy and Sedimentation**

Analysis of the transportation, deposition and consolidation of sediments; classification of sedimentary rocks; determination of depositional facies; principles of stratigraphic nomenclature.

**Prerequisites & Notes:** GEOL 212, GEOL 306, GEOL 310 or instructor permission; mandatory field trip(s) with transportation fees

Credits: 4

### **GEOLOGY 423 - Advanced Igneous Petrology**

Advanced course on modern methods of igneous petrology. Focus on magma generation and evolution, utilizing major element, trace element, and isotope geochemistry. Interpretive methods include use of the petrographic microscope and geochemical modeling exercises. Individual research projects required.

**Prerequisites & Notes:** GEOL 406, GEOL 407

Credits: 4

### **GEOLOGY 424 - Advanced Sedimentary Petrology**

Description, classification and interpretation of sedimentary rocks, including provenance, depositional history and diagenesis. Advanced lab stresses work with the petrographic microscope. Individual research projects will be done and presented.

**Prerequisites & Notes:** GEOL 406, GEOL 407 or equivalent

Credits: 5

### **GEOLOGY 425 - Advanced Metamorphic Petrology**

Advanced course in metamorphic petrology. Emphasizes graphical and mathematical analysis of phase relations, and field and laboratory study of metamorphic structures, minerals and microstructures. Individual research projects performed and presented.

**Prerequisites & Notes:** GEOL 406, GEOL 407 or equivalent; mandatory field trip(s) with transportation fees

Credits: 5

### **GEOLOGY 428 - Depositional Environments**

Depositional framework of marine and continental sedimentary basins. Study of the means by which depositional environments of sedimentary rocks are determined.

**Prerequisites & Notes:** GEOL 415 or equivalent; mandatory field trip(s) with transportation fees

Credits: 3

### **GEOLOGY 430 - Image Interpretation**

Explores fundamental concepts of identifying and interpreting geologic features using remote imagery, including aerial photographs, topographic data (maps, DEMs), multispectral satellite images, and geophysical imagery. Emphasizes critical evaluation and development of multiple working hypotheses in creating geologic maps from images.

**Prerequisites & Notes:** GEOL 310; GEOL 318 recommended

Credits: 3

### **GEOLOGY 440 - Glacial Geology**

Explores fundamental concepts of glaciology and glacial geology. Topics include formation and dynamics of glaciers and glacier mass-balance, processes of glacial erosion, transport, and deposition, Quaternary climate change associated with global glaciations, and assessing effects of glaciation on the modern landscape. Includes field trips and research components.

**Prerequisites & Notes:** GEOL 310; mandatory field trip(s) with transportation fees; required field trip first weekend  
Credits: 4

**GEOL 442 - Introduction to Remote Sensing**

Concepts and applications of remote sensing data collection analysis of earth's surface features using radar, aerial photography and multispectral scanners.

**Prerequisites & Notes:** upper-division standing in sciences or instructor permission

Credits: 5

**GEOL 447 - Introduction to GIS**

The introduction of ArcGIS as a tool for manipulating and displaying spatial data. Several projects that apply ArcGIS to geologic problems are explored.

**Prerequisites & Notes:** Senior status in Geology.

Credits: 3

**GEOL 448 - Applied Geostatistics**

Introduction to the visualization of earth science data using a variety of univariate, bivariate, and multivariate statistical techniques, including: correlation, regression, ANOVA, principle component analysis and multiple regression.

**Prerequisites & Notes:** computer literacy, senior standing in Geology

Credits: 3

**GEOL 449 - Geomechanics**

This tutorial will review applications of continuum physics to geological problems. Fundamental topics may include: a review of elementary mechanics, mathematical descriptions of stress, strain, elasticity, buoyancy and the flow of viscous materials. Geoscience applications may include: faulting, flexure, landslides, propagation of seismic waves, flow of glaciers, debris flows, lava flows, isostatic rebound. The exact curriculum will be decided by participants. The tutorial format requires active participation and discussion by all students. Offered alternate years.

**Prerequisites & Notes:** PHYS 121; GEOL 314 or GEOL 318; GEOL 352 recommended

Credits: 3

**GEOL 450 - Advanced Topics in Structural Geology**

Analysis of geologic structures from microstructural to plate tectonic scales. Includes active and ancient structures, concepts of stress and strain, kinematics and mechanics of deformation, and modeling of deformation. Field trip and research project required. Taught alternate years.

**Prerequisites & Notes:** GEOL 318, GEOL 406; GEOL 409 and GEOL 410 recommended

Credits: 4

**GEOL 451 - Active Tectonics Seminar**

Study of active faults, associated crustal deformation and earthquakes. Examines the mechanics of faulting, earthquake seismology, and GPS geodesy. Regional emphasis on the Pacific Northwest.

**Prerequisites & Notes:** GEOL 318, GEOL 352

Credits: 4

**GEOL 452 - Applied Geophysics**

Geophysical exploration techniques applied to geological problems. Theory and field application of gravity, magnetics, refraction and earthquake seismology, electrical resistivity and others. Class projects include depth-to-bedrock, buried and subsurface features, groundwater estimates and earthquake potential and grounds response.

**Prerequisites & Notes:** GEOL 352 or equivalent; mandatory field trip(s) with transportation fees

Credits: 5

**GEOL 453 - Plate Tectonics**

Kinematics and dynamics of plate motions, with applications to geotectonics.

**Prerequisites & Notes:** GEOL 352

Credits: 4

**GEOL 454 - Magnetic Fabrics and Geologic Processes**

Theory and laboratory measurement of magnetic anisotropy in rocks, sediments, and minerals. Emphasis on the use of magnetic anisotropy techniques to understand various geological processes including deformation, sediment transport, and magma flow and emplacement. Laboratory project and writing project included.

**Prerequisites & Notes:** GEOL 352 or equivalent

Credits: 4

**GEOL 455 - Climate-Related Geologic Hazards**

The relation of climate and weather to geologic hazards: air masses, fronts, trends in temperature, precipitation, winds and tides. Topics include effects of severe weather on mass wasting, floods and erosion, global climate and sea-level variations for the past two million years.

**Prerequisites & Notes:** PHYS 121 or equivalent

Credits: 3

#### **GEOl 456 - Principles of Orogeny Seminar**

Study of geological and geophysical aspects of continental tectonics and mountain-building processes. Topics may include thermochronology, heat flow, metamorphic petrology, structural geology, tectonic geomorphology, plate tectonics, and geodesy. The tutorial format requires reading and discussion of tectonics literature, and active participation and discussion by all students. Field trip and research project required. Taught alternate years.

**Prerequisites & Notes:** GEOL 318, GEOL 352, GEOL 406, GEOL 409, GEOL 410

Credits: 3

#### **GEOl 457 - Practical Paleomagnetism**

Application of rock magnetism and paleomagnetism to field-oriented research problems. Seminar style meetings, field trip(s), and laboratory measurements will focus on solution of an original research problem. Results will be used for a required research paper. Project topics will vary; examples include paleomagnetism of displaced terranes, magnetostratigraphy, magnetic fabrics, environmental magnetism.

**Prerequisites & Notes:** GEOL 352; mandatory field trip(s) with transportation fees

Credits: 4

#### **GEOl 461 - Analytical Geochemistry**

Introduction to analysis of rocks, soil and water. Methods include atomic absorption spectrophotometry, ion chromatography, gas chromatography and quadrapole mass spectrometry as well as gravimetric, volumetric and colorimetric analysis.

**Prerequisites & Notes:** GEOL 306, CHEM 123

Credits: 2

#### **GEOl 462 – Hydrogeochemistry**

A discussion of the geological and geochemical processes that control the chemical composition of surface and groundwater.

**Prerequisites & Notes:** GEOL 211; CHEM 121, CHEM 122

Credits: 3

#### **GEOl 463 - Introduction to Seismology**

Investigates the physics of earthquakes, the effects of earthquakes on our world and the insights into the planet provided by seismology. This class is a quantitative introduction to the study of local and global seismology. Topics include stress and strain, wave propagation, power spectra, earthquake magnitude, seismic hazard, earthquake prediction and associated hazards such as tsunamis and volcano seismology. Whenever possible, student will use real seismic data in their analyses.

**Prerequisites & Notes:** GEOL 352

Credits: 4

#### **GEOl 464 - Mantle Processes**

Investigates geologic and geophysical processes in Earth's mantle, convection, heat flux, the life cycle of lithosphere and the dynamics of mantle plumes. Compares results from geophysical and petrological studies.

**Prerequisites & Notes:** GEOL 352

Credits: 4

#### **GEOl 470 - Landslides and Slope Stability**

This seminar will review current research on landslides and slope stability, including: landslide types and processes; landslide triggering mechanisms; soil and rock slope stability; soil and rock slope failure modes; landslide hazard analysis. Offered alternate years.

**Prerequisites & Notes:** GEOL 310; GEOL 314 or GEOL 318

Credits: 3

#### **GEOl 472 - Surface Water Hydrology**

Components of the hydrologic cycle, including precipitation, infiltration, evapotranspiration, and runoff, and their effect on a water balance in a watershed.

**Prerequisites & Notes:** GEOL 211, MATH 125

Credits: 4

#### **GEOl 473 - Ground Water Hydrology**

Introduction to the geologic and hydrologic factors controlling the occurrence and movement of subsurface water. Applications in well hydraulics and groundwater site investigations.

**Prerequisites & Notes:** GEOL 211, PHYS 122

Credits: 4

**GEOl 474 - Ground Water Contamination**

Introduction to the principles of some of the important physical, chemical, and biological processes that govern the transport, persistence, and/or degradation of pollutants in saturated and unsaturated groundwater systems.

**Prerequisites & Notes:** GEOL 473 or instructor permission

Credits: 3

**GEOl 476 - Surface Water Quality Modeling and Analysis**

Application of mass balance concepts to determining water quality concentrations in completely mixed streams. Reaction kinetics are introduced and applied to perturbations caused by impulse loads, step loads, exponential loading, and periodic inputs.

**Prerequisites & Notes:** senior standing in science; computer competency using mathematical analysis program

Credits: 3

**GEOl 490 - Senior Thesis**

Research project under direction of faculty. Repeatable to a maximum of 9 credits.

**Prerequisites & Notes:** senior standing

Credits: 1 TO 5

**GEOl 501 - Teaching Practicum**

Supervised teaching experiences in undergraduate geology laboratories at the 300 level and above courses.

Maximum of 2 credits can be applied toward student's graduate course work.

Credits: 2

**GEOl 513 - Fluvial Geomorphology**

Stream processes, equilibrium in fluvial environments, channel adjustments, mechanics of sediment erosion and transport. Weekly field trips.

**Prerequisites & Notes:** GEOL 310 or instructor permission; mandatory field trip(s) with transportation fees

Credits: 4

**GEOl 518 - Structural Geology and Tectonics of Washington**

Field methods of structural geology and introduction to the structural and tectonic evolution of Washington, focusing on the building of the Cascade Mountains. Taught during a three-week period prior to the beginning of fall quarter. Involves camping and field work throughout Washington state, including some strenuous hiking.

**Prerequisites & Notes:** GEOL 318 or equivalent, instructor permission

Credits: 3

**GEOl 523 - Advanced Igneous Petrology**

Advanced course on modern methods of igneous petrology. Focus on magma generation and evolution, utilizing major element, trace element, and isotope geochemistry. Interpretive methods include use of the petrographic microscope and geochemical modeling exercises. Individual research projects required.

**Prerequisites & Notes:** GEOL 406, GEOL 407 or equivalent

Credits: 4

**GEOl 524 - Sedimentary Petrology and Petrography**

Description, classification and interpretation of sedimentary rocks, including provenance, depositional history and diagenesis. Advanced lab stresses work with the petrographic microscope.

**Prerequisites & Notes:** GEOL 406, GEOL 407 or equivalent

Credits: 5

**GEOl 525 - Advanced Metamorphic Petrology**

Advanced course in metamorphic petrology. Emphasizes graphical and mathematical analysis of phase relations, and field and laboratory study of metamorphic structures, and microscope study of metamorphic structures, minerals and microstructures. Individual research projects performed and presented.

**Prerequisites & Notes:** GEOL 406, GEOL 407 or equivalent; mandatory field trip(s) with transportation fees

Credits: 5

**GEOl 528 - Depositional Environments**

Depositional framework of marine and continental sedimentary basins. Study of the means by which depositional environments of sedimentary rocks are determined.

**Prerequisites & Notes:** GEOL 415 or equivalent; mandatory field trip(s) with transportation fees

Credits: 3

**GEOl 530 - Image Interpretation**

Explores fundamental concepts of identifying and interpreting geological features using remote imagery, including aerial photographs, topographic data (maps, DEMs), multispectral satellite images, and geophysical imagery.

Emphasizes critical evaluation and development of multiple working hypotheses in creating geologic maps from images.

**Prerequisites & Notes:** GEOL 310; GEOL 318 recommended

Credits: 3

### **GEOLOGY 536 - Paleobiology**

Exploration of current topics in the study of fossils. Topics may include mass extinctions, community paleoecology, dinosaur behavior or the effects of extraterrestrial events on the earth's biosphere. Specific topics for each quarter will be decided by the class.

**Prerequisites & Notes:** GEOL 316 or instructor permission

Credits: 3

### **GEOLOGY 540 - Glacial Geology**

Explores fundamental concepts of glaciology and glacial geology. Topics include formation and dynamics of glaciers and glacier mass-balance, processes of glacial erosion, transport, and deposition, Quaternary climate change associated with global glaciations, and assessing effects of glaciation on the modern landscape. Includes field trips and research components.

**Prerequisites & Notes:** GEOL 310 or equivalent; mandatory field trip(s) with transportation fees; required field trip first weekend

Credits: 4

### **GEOLOGY 542 - Introduction to Remote Sensing**

Concepts and applications of remote sensing data collection analysis of the earth's surface features using radar, aerial photography and multispectral scanners.

Credits: 5

### **GEOLOGY 547 - Introduction to GIS**

The introduction of ArcGIS as a tool for analyzing spatial data. A variety of projections are introduced. Geodatabases are discussed. GPS systems are used in data collection.

Credits: 3

### **GEOLOGY 548 - Applied Geostatistics**

**Study of applied statistical analysis using environmental data. The S-Plus language is introduced.**

**Prerequisites & Notes:** computer literacy

Credits: 3

### **GEOLOGY 549 - Geomechanics**

This tutorial will review applications of continuum physics to geological problems. Fundamental topics may include: a review of elementary mechanics, mathematical descriptions of stress, strain, elasticity, buoyancy and the flow of viscous materials. Geoscience applications may include: faulting, flexure, landslides, propagation of seismic waves, flow of glaciers, debris flows, lava flows, isostatic rebound. The exact curriculum will be decided by participants. The tutorial format requires active participation and discussion by all students. Offered alternate years.

**Prerequisites & Notes:** PHYS 121; GEOL 318, GEOL 314; GEOL 352 recommended

Credits: 3

### **GEOLOGY 550 - Advanced Topics in Structural Geology**

Analysis of geologic structures from microstructural to plate tectonic scales. Includes active and ancient structures, concepts of stress and strain, kinematics and mechanics of deformation, and modeling of deformation. Field trip and research project required. Taught alternate years.

**Prerequisites & Notes:** GEOL 318, GEOL 406; GEOL 409 and GEOL 410 recommended

Credits: 4

### **GEOLOGY 551 - Active Tectonics Seminar**

Study of active faults, associated crustal deformation and earthquakes. Examines the mechanics of faulting, earthquake seismology and GPS geodesy. Regional emphasis on the Pacific Northwest.

**Prerequisites & Notes:** GEOL 318, GEOL 352

Credits: 4

### **GEOLOGY 552 - Applied Geophysics**

Geophysical exploration techniques applied to geological problems. Theory and field application of gravity, magnetics, refraction and earthquake seismology, electrical resistivity and others. Class projects include depth-to-bedrock, buried subsurface features, groundwater estimates and earthquake potential and grounds response.

**Prerequisites & Notes:** GEOL 352 or equivalent; mandatory field trip(s) with transportation fees

Credits: 5

**GEOl 553 - Plate Tectonics**

Kinematics and dynamics of plate motions, with applications to geotectonics.

**Prerequisites & Notes:** GEOL 352

Credits: 4

**GEOl 554 - Magnetic Fabrics and Geological Processes**

Theory and laboratory measurement of magnetic anisotropy in rocks, sediments, and minerals. Emphasis on the use of magnetic anisotropy techniques to understand various geological processes including deformation, sediment transport, and magma flow and emplacement. Laboratory project and writing project included.

**Prerequisites & Notes:** GEOL 352 or equivalent

Credits: 4

**GEOl 555 - Climate-Related Geologic Hazards**

The relation of climate and weather to geologic hazards: air masses, fronts, trends in temperature, precipitation, winds and tides. Topics include: effects of severe weather on mass wasting, floods, and erosion; global climate and sea level variations for the past two million years.

**Prerequisites & Notes:** PHYS 121 or equivalent

Credits: 3

**GEOl 556 - Principles of Orogeny Seminar**

Study of geological and geophysical aspects of continental tectonics and mountain-building processes. Topics may include thermochronology, heat flow, metamorphic petrology, structural geology, tectonic geomorphology, plate tectonics, and geodesy. The tutorial format requires reading and discussion by all students. Field trip and research project required. Taught alternate years.

**Prerequisites & Notes:** GEOL 318, GEOL 352, GEOL 406, GEOL 409, GEOL 410

Credits: 3

**GEOl 557 - Practical Paleomagnetism**

Application of rock magnetism and paleomagnetism to field-oriented research problems. Seminar style meetings, field trip(s), and laboratory measurements will focus on solution of an original research problem. Results will be used for a required research paper. Project topics will vary; examples include paleomagnetism of displaced terranes; magnetostratigraphy; magnetic fabrics, environmental magnetism.

**Prerequisites & Notes:** GEOL 352; mandatory field trip(s) with transportation fees

Credits: 4

**GEOl 558 - Paleomagnetism and Tectonics Lab Seminar**

Advanced instruction in the operation of paleomagnetic lab equipment, research techniques in rock and paleomagnetism, discussion and evaluation of current paleomagnetic literature. Seminar topics will focus on presentation of research results and current research in the field. Topics related to paleomagnetism and plate tectonics will vary each quarter. Repeatable for credit one time.

**Prerequisites & Notes:** GEOL 457 or GEOL 557

Credits: 1 TO 2

**GEOl 559 - Rock Magnetism and Geomagnetic Field Lab**

The course will involve advanced instruction in the operation of paleomagnetic lab equipment, research techniques in rock and paleomagnetism, discussion and evaluation of current paleomagnetic literature. Seminar topics will focus on presentation of research results and current research in the field. Topics related to the geomagnetic field and rock magnetism will vary each quarter. Repeatable for credit one time.

**Prerequisites & Notes:** GEOL 457 or GEOL 557 or instructor permission

Credits: 1 TO 2

**GEOl 560 - Geologic Phase Equilibria**

Analysis of geologic phase equilibria in terms of classical thermodynamics. Review of current research literature and seminar presentations.

Credits: 3

**GEOl 561 - Analytical Geochemistry**

Applications of analytical chemistry to soil, water and rock samples. Methods include atomic absorption spectrophotometry, ion chromatography, gas chromatography, mass spectrometry and X-ray diffraction. Field collection techniques, sample preparation and data processing also are discussed. Course consists of two hours of lecture and two hours of lab per week.

**Prerequisites & Notes:** instructor permission

Credits: 2

**GEOL 562 - Advanced Hydrogeochemistry**

Discussion and directed research on the physical processes and geochemical equilibria that control the major and trace element composition of water in its various forms on earth.

**Prerequisites & Notes:** GEOL 211; CHEM 121, CHEM 122

Credits: 3

**GEOL 563 - Introduction to Seismology**

Investigates the physics of earthquakes, the effects of earthquakes on our world and the insights into the planet provided by seismology. This class is a quantitative introduction to the study of local and global seismology. Topics include stress and strain, wave propagation, power spectra, earthquake magnitude, seismic hazard, earthquake prediction and associated hazards such as tsunamis and volcano seismology. Whenever possible, students will use real seismic data in their analyses.

**Prerequisites & Notes:** GEOL 352

Credits: 4

**GEOL 564 - Mantle Processes**

Investigates geologic and geophysical processes in Earth's mantle, including mantle convection, heat flux, the life cycle of lithosphere and the dynamics of mantle plumes. Compares results from geophysical and petrological studies. Students will be active in presenting material and leading class discussion.

**Prerequisites & Notes:** GEOL 353 or equivalent.

Credits: 4

**GEOL 570 - Landslides and Slope Stability**

This seminar will review current research on landslides and slope stability, including: landslide types and processes; landslide triggering mechanisms; soil and rock slope stability; soil and rock slope failure modes; landslide hazard analysis. Offered alternate years.

**Prerequisites & Notes:** GEOL 310; GEOL 318 or GEOL 314 or equivalent

Credits: 3

**GEOL 572 - Surface Water Hydrology**

Components of the hydrologic cycle and their interaction, including precipitation, infiltration, evapotranspiration, and runoff, and their effect on a water balance in a watershed.

**Prerequisites & Notes:** instructor permission

Credits: 4

**GEOL 573 - Ground Water Hydrology**

Introduction to the geologic and hydrologic factors controlling the occurrence and movement of subsurface water. Applications in well hydraulics and groundwater site investigations.

**Prerequisites & Notes:** instructor permission

Credits: 4

**GEOL 574 - Ground Water Contamination**

Introduction to the principles of some of the important physical, chemical, and biological processes that govern the transport, persistence, and/or degradation of pollutants in saturated and unsaturated groundwater systems.

**Prerequisites & Notes:** GEOL 573 or instructor permission

Credits: 3

**GEOL 576 - Surface Water Quality Modeling and Analysis**

Application of mass balance concepts to determining water quality concentrations in completely mixed streams. Reaction kinetics are introduced and applied to perturbations caused by impulse loads, step loads, exponential loading, and periodic inputs.

**Prerequisites & Notes:** computer competency using Mathcad

Credits: 3

**GEOL 595 - Seminar in Contemporary Geology Problems**

Seminar and weekend field trips introduce geology graduate students to research problems. Repeatable to a maximum of 6 credits. S/U grading.

Credits: 2

**GEOL 690 - Thesis**

Thesis research, repeatable up to 15 credits.

Credits: 2 TO 15

## **Interdisciplinary Science, Technology & Mathematics**

*Courses numbered X37; X97; 300, 400; 417, 445 are described in the University Academic Policies section of this catalog.*

### **ISTM 201 - Science Literacy**

Topics will vary somewhat with different instructors, but may include: Understanding the nature of science and what discriminates science from other ways of knowing. Discriminating among good science, junk science, and pseudoscience. Elementary statistics and how they can mislead. Logical fallacies. Scientific topics in the news (e.g., creationism vs. evolutionism).

Credits: 3

## **German**

*Courses numbered X37; X97; 300, 400; 417, 445 are described in the University Academic Policies section of this catalog.*

### **GERM 101 - Elementary German**

To be taken in sequence. Fundamentals of the language; pronunciation, grammar, aural comprehension, reading and speaking.

Credits: 5

### **GERM 102 - Elementary German**

Fundamentals of the language; pronunciation, grammar, aural comprehension, reading and speaking.

**Prerequisites & Notes:** GERM 101 or equivalent

Credits: 5

### **GERM 103 - Elementary German**

Fundamentals of the language; pronunciation, grammar, aural comprehension, reading and speaking.

**Prerequisites & Notes:** GERM 102 or equivalent

Credits: 5

### **GERM 104 - Review of Elementary German**

Designed for students with two years of high school German or equivalent to prepare them for the intermediate level through review and development of basic structure and vocabulary. Also for students needing a review of the first year.

**Prerequisites & Notes:** Two years of high school German

Credits: 5

### **GERM 201 - Intermediate German**

To be taken in sequence. Review of the fundamentals, reading and conversation.

**Prerequisites & Notes:** GERM 103 or GERM 104 or equivalent

Credits: 4

### **GERM 202 - Intermediate German**

Review of the fundamentals, reading and conversation.

**Prerequisites & Notes:** GERM 201 or equivalent

Credits: 4

### **GERM 203 - Intermediate German**

Review of the fundamentals, reading and conversation.

**Prerequisites & Notes:** GERM 202 or equivalent

Credits: 4

### **GERM 301 - Grammar Review and Composition**

To be taken in sequence. Written and oral composition and grammar, and vocabulary building.

**Prerequisites & Notes:** GERM 203 or equivalent

Credits: 4

### **GERM 302 - Grammar Review and Composition**

Written and oral composition and grammar, and vocabulary building.

**Prerequisites & Notes:** GERM 301 or equivalent

Credits: 4

### **GERM 306 - Third-Year Conversation**

Development of speaking skills in communicative situations. S/U grading.

**Prerequisites & Notes:** GERM 302 or equivalent

Credits: 3

**GERM 314 - Phonetics**

A course designed to improve the student's pronunciation and intonation, to become familiar with phonetic transcription, and to become aware of problems involved in teaching German sounds.

**Prerequisites & Notes:** GERM 203

Credits: 4

**GERM 331 - Civilization of Germany Through the Nineteenth Century**

Significant elements of German civilization presented through German texts.

**Prerequisites & Notes:** GERM 301

Credits: 4

**GERM 332 - German Civilization Today**

Significant elements of German civilization. Repeatable to a maximum of 8 credits.

**Prerequisites & Notes:** GERM 301

Credits: 4

**GERM 340 - Introduction to German Literature**

Selected works of major German authors, with emphasis on reading improvement and methods of textual interpretation.

**Prerequisites & Notes:** GERM 301

Credits: 4

**GERM 341 - Nineteenth-Century German Literature**

Emphasis on either Romanticism or Realism. Repeatable with different topics.

**Prerequisites & Notes:** GERM 340

Credits: 4

**GERM 343 - Eighteenth-Century German Literature**

Classical period of German literature as reflected in a major work of Lessing, Goethe and Schiller.

**Prerequisites & Notes:** GERM 340

Credits: 4

**GERM 401 - Advanced Grammar**

Analysis of syntactical, semantic and stylistic problems in German.

**Prerequisites & Notes:** GERM 302 or equivalent

Credits: 4

**GERM 402 - Advanced Grammar and Composition**

Analysis of syntactical, semantic and stylistic problems in German. Extensive practice in composition.

**Prerequisites & Notes:** GERM 302 or equivalent; recommended take GERM 401 first

Credits: 4

**GERM 406 - Fluency Through Dramatization**

Bridges the gap between grammar-based language learning and content-based culture and/or literature courses. Students profit highly from a holistic approach involving role playing and the actualization of works of modern German drama. Emphasis is placed on pronunciation and intonation to facilitate increased fluency in German.

**Prerequisites & Notes:** GERM 302

Credits: 4

**GERM 407 - German Culture Through Film**

This course explores the main features of German culture of the 20th Century through the medium of feature films rather than textbooks.

**Prerequisites & Notes:** GERM 302

Credits: 4

**GERM 425 - Teaching-Learning Process in Elementary German**

Practicum in preparation, implementation and evaluation of instructional materials. Repeatable with no maximum. S/U grading.

**Prerequisites & Notes:** 6 credits upper-division german; written department permission

Credits: 2

**GERM 432 - Contemporary German Culture**

Analysis of important trends and current events in the German-speaking countries presented through various texts and media.

**Prerequisites & Notes:** GERM 340 and department advisement.

Credits: 4

### **GERM 450 - Studies in German Literature**

Major authors and movements. Repeatable with different topics with no maximum.

**Prerequisites & Notes:** GERM 302, GERM 340

Credits: 4

## **Greek**

*Courses numbered X37; X97; 300, 400; 417, 445 are described in the University Academic Policies section of this catalog.*

### **GREK 101 - Elementary Greek**

Fundamentals of ancient Greek grammar designed primarily to provide an elementary reading knowledge; selected readings from various Greek writers.

Credits: 5

### **GREK 102 - Elementary Greek**

Fundamentals of ancient Greek grammar designed primarily to provide an elementary reading knowledge; selected readings from various Greek writers.

**Prerequisites & Notes:** GREK 101

Credits: 5

### **GREK 103 - Elementary Greek**

Fundamentals of ancient Greek grammar designed primarily to provide an elementary reading knowledge; selected readings from various Greek writers.

**Prerequisites & Notes:** GREK 102

Credits: 5

### **GREK 201 - Intermediate Greek**

To be taken in sequence. Review of fundamentals of ancient Greek grammar; reading from Plato's dialogues, the orators, the Iliad or Odyssey. Introduction to Greek civilization.

**Prerequisites & Notes:** GREK 103 or equivalent

Credits: 4

### **GREK 202 - Intermediate Greek**

Review of fundamentals of ancient Greek grammar; reading from Plato's dialogues, the orators, the Iliad or Odyssey. Introduction to Greek civilization.

**Prerequisites & Notes:** GREK 201

Credits: 4

### **GREK 350 - Advanced Readings**

Selected readings from Greek authors with an emphasis on honing grammatical skills and deepening one's understanding of Greek literary and cultural achievements. Repeatable with different topics.

**Prerequisites & Notes:** GREK 202

Credits: 4

## **History**

*Courses numbered X37; X97; 300, 400, 500; 417, 445, 517, 545 are described in the University Academic Policies section of this catalog.*

### **HIST 103 - Introduction to American Civilization: American History to 1865**

From the prehistoric period to the end of the Civil War.

Credits: 4

### **HIST 104 - Introduction to American Civilization: American History Since 1865**

From the end of the Civil War to the present.

Credits: 4

### **HIST 111 - Introduction to Western Civilization: Prehistory to 476**

Survey of the political, social and cultural history of occidental civilization from prehistory to the collapse of the Roman empire.

Credits: 4

**HIST 112 - Introduction to Western Civilization: 476-1713**

Human development in the Western world; emphasis upon ideas, institutions, forces and movements shaping contemporary life. Survey of the cultural, political, social and economic history of Europe from the early Middle Ages to the signing of the Treaty of Utrecht.

Credits: 4

**HIST 113 - Introduction to Western Civilization: 1713-Present**

Human development in the Western world; emphasis upon ideas, institutions, forces and movements shaping contemporary life. Survey of the political, social, economic and diplomatic history of Europe from the opening of the Enlightenment to the present.

Credits: 0 OR 4

**HIST 121 - World History to 500**

Survey of major topics in World History from the origins of civilization to 500 AD.

Credits: 5

**HIST 123 - World History, 1500 to the Present**

Survey of major topics in World History from 1500 to the present.

Credits: 5

**HIST 151 - Communities of the Ancient World**

Examines both the development of ideas of community in ancient world, and the ways in which the writing of histories of ancient communities affects the modern construction of identity. Involves analysis of primary documents from antiquity as well as discussions of the methods used in historical studies. We will focus on the related topics of the developments of civilization in Mesopotamia and Greece, and the transmission of ideas in the ancient world.

**Prerequisites & Notes:** Entering Freshman.

Credits: 4

**HIST 155 - The Idea of Utopia**

This course will introduce readers to major utopian writers in the secular and Christian traditions. We will then turn our attention to why, in the twentieth century, we have lost faith in utopia. Throughout, we will probe not only the history of the idea of utopia but how utopian writing can help us improve our own society.

**Prerequisites & Notes:** enrollment limited to first year students

Credits: 4

**HIST 158 - Race and Identity in Modern America**

Explores the ways in which race and identity have been formulated in American history and investigates the practice of history and its relationship to other disciplines. Involves examinations of primary documents as well as discussions of methods used in historical analysis. Topical coverage will span the last century and a half of American history.

**Prerequisites & Notes:** freshman standing

Credits: 4

**HIST 203 - Writing About Gender and Race in the US: 1492-1877**

Examines how early Americans understood race and gender and explores how historians have written about this understanding. Emphasis is on writing about history.

**Prerequisites & Notes:** HIST 103, ENG 101

Credits: 5

**HIST 262 - African American History to 1865**

The history of people of African descent in American and U.S. history from the beginnings of the trans-Atlantic Slave trade through the Civil War.

Credits: 5

**HIST 263 - African Americans Since 1865**

Introduces students to the experiences of African American women and men since the Civil War, with special emphasis on the Civil Rights and Black Power movements.

**Prerequisites & Notes:** HIST 104

Credits: 5

**HIST 265 - Lesbian, Gay, Bisexual, and Transgender Experiences in U.S. History**

Examines the experiences of lesbians, gay men, bisexuals, and transgendered people in U.S. history from the mid-nineteenth century to the present, with emphasis on identity and community formation and civil rights and liberation movements.

Credits: 5

**HIST 273 - Latin America: 1492-1824**

Political, economic and sociocultural trends from the Spanish conquest through the independence movements.

Credits: 4

**HIST 274 - Latin America: 1824 to the Present**

Political, economic and sociocultural trends from the post-independence period to the 1990s.

Credits: 4

**HIST 275 - The Indian in American History**

Events and persons critical to history of North American Indians; review of interpretations of Indian cultures and history.

**Prerequisites & Notes:** sophomore standing

Credits: 5

**HIST 277 - Canada: A Historical Survey**

Canadian history from aboriginal occupation to the present.

Credits: 4

**HIST 278 - Multiculturalism in Canada**

Historical development and current issues of multiculturalism in Canada through the lenses of immigration, acculturation, policies, critiques, and the lives of hosts and newcomers.

Credits: 4

**HIST 280 - Introduction to East Asian Civilizations**

The origins and evolution of the political, economic and social aspects of East Asian civilizations through the early-modern period. Also offered as EAST 201.

**Prerequisites & Notes:** also offered as EAST 201

Credits: 5

**HIST 281 - East Asian History in the Early-Modern and Modern Eras**

Examines political, cultural and social aspects of East Asian civilizations in the early-modern and modern periods. Also offered as EAST 202.

**Prerequisites & Notes:** also offered as EAST 202

Credits: 5

**HIST 285 - Introduction to African Civilizations**

An introduction to the history of Africa, with emphasis on the development of African societies and civilizations from antiquity to modern times.

Credits: 5

**HIST 286 - Modern Africa**

History of Africa during and after colonial rule. Emphasis is on African reactions to European rule, nationalist movements and the problems of independence.

Credits: 5

**HIST 287 - Introduction to Islamic Civilization**

A thematic approach to religious and cultural aspects of Middle Eastern society; the development of Islam as a body of religious thought and practice; and major cultural movements in the Middle East.

Credits: 5

**HIST 310 - History of Ancient Mesopotamia**

Introduction to the culture and history of Mesopotamia from the dawn of civilization to the end of the Roman era.

Emphasis on the civilizations of the Fertile Crescent, including the Sumerians, Babylonians, Assyrians, and Hittites.

**Prerequisites & Notes:** HIST 111 or HIST 121 or HIST 151 or LBRL 121 or instructor permission.

Credits: 5

**HIST 311 - History of Ancient Egypt**

Introduction to the culture and history of ancient Egypt. Focus on reading and discussing both modern textbooks and translations of ancient texts to gain an understanding of the people behind the pharaohs and the pyramids.

**Prerequisites & Notes:** HIST 111 or HIST 121 or HIST 151 or LBRL 121 or instructor permission.

Credits: 5

**HIST 312 - History of Ancient Greece**

Introduction to the culture and history of ancient Greece, including the Bronze Age Aegean. Explores ancient Greece from the beginnings of Minoan civilization on Crete through the rise of Alexander and the Hellenistic world.

**Prerequisites & Notes:** HIST 111 or HIST 121 or HIST 151 or LBRL 121 or instructor permission

Credits: 5

**HIST 313 - History of Ancient Rome**

The political and social development of Rome from village to republic to empire, including an exploration of the whole of the Roman world and its impact on the development of Mediterranean civilization.

**Prerequisites & Notes:** HIST 111 or HIST 121 or HIST 151 or LBRL 121 or instructor permission

Credits: 5

**HIST 314 - The Enlightenment Tradition**

An intellectual and cultural survey of modern Western History (circa 1600 to the present) using the philosophy of the eighteenth-century European Enlightenment as a reference point.

**Prerequisites & Notes:** HIST 113 or LBRL 123

Credits: 5

**HIST 315 - Europe in the Early Middle Ages: 300-1050**

Western Europe from late antiquity through the feudal era; particular attention to Roman-barbarian interchanges, Christianization and the rise, apogee and decline of the Carolingian empire.

**Prerequisites & Notes:** HIST 112 or LBRL 122 or instructor permission

Credits: 5

**HIST 316 - Europe in the High Middle Ages: 1050-1450**

Western Europe from c. 1050 to the end of the Middle Ages; focus on social, economic, religious and cultural developments.

**Prerequisites & Notes:** HIST 112 or LBRL 122 or instructor permission

Credits: 5

**HIST 320 - War in the Middle Ages**

War and related phenomena (crusades, Peace of God, Truce of God, laws of war, etc) in medieval Europe, with particular emphasis on the period from 1000-1450.

**Prerequisites & Notes:** HIST 112 or LBRL 122 or equivalent

Credits: 4

**HIST 325 - Marriage and the Family in European History**

A study of the development of marriage patterns and family structures in medieval and early modern Europe.

**Prerequisites & Notes:** HIST 112 or LBRL 122 or Anthropology or Sociology major

Credits: 4

**HIST 333 - Imperial Russia: 1689-1917**

Survey of major political, social and economic developments of Russia from Peter the Great to the fall of the Romanov dynasty.

**Prerequisites & Notes:** HIST 113 or LBRL 123

Credits: 4

**HIST 334 - History of Soviet Russia**

Russian history from the fall of the Romanovs to the fall of the Communist Party; emphasis on continuity and change.

**Prerequisites & Notes:** HIST 113 or LBRL 123

Credits: 4

**HIST 348 - European Intellectual History**

A study of the evolution of Western thought from the Middle Ages to the present with primary emphasis on the era since 1700.

**Prerequisites & Notes:** HIST 113 or LBRL 123

Credits: 5

**HIST 350 - American Colonial History**

The history of colonial settlements in North America from first contact to the beginnings of the imperial crisis that led to the War for American Independence.

**Prerequisites & Notes:** HIST 103 or junior status.

Credits: 4

**HIST 353 - Latinas/os in the US West**

Examines Spanish colonization of the region that became the western United States, the Mexican social, political, and cultural order, the impact of U.S. conquest on Spanish-speaking people, the emergence of new ethnic and racial

identities, and immigration from Mexico and Central America.

Credits: 5

**HIST 360 - History of Religion in Early America**

History of religious traditions, practices, ideas, and movements in America from colonial era to mid-nineteenth century.

**Prerequisites & Notes:** HIST 103 or HIST 112 or HIST 113 or LBRL 122 or LBRL 123 or LBRL 231.

Credits: 4

**HIST 361 – History of Religion in Modern America**

History of religious traditions, practices, ideas, and movements in America from mid-nineteenth century to the present day.

**Prerequisites & Notes:** HIST 104 or HIST 113 or LBRL 123 or LBRL 231

Credits: 4

**HIST 362 - Asian-American History**

Contributions Asian Americans have made to the development of the United States with emphasis on immigration, adaptation, settlement and their struggle for justice and equity. Also offered as AMST 362.

**Prerequisites & Notes:** HIST 103 or HIST 104 or AMST 203, AMST 205 or AMST 301; also offered as AMST 362

Credits: 5

**HIST 363 - The American Revolution**

This course will cover the causes and consequences of the American Revolution, as well as the experiences of Americans living through it.

**Prerequisites & Notes:** Sophomore status

Credits: 4

**HIST 364 - Film As History**

Readings and related films on selected historical topics; subject and course content varies with instructor. Repeatable with various topics.

**Prerequisites & Notes:** Established by each instructor. Consult Classfinder and/or Timetable of Classes before registering.

Credits: 0 OR 4

**HIST 366 - The Early American Republic**

This course will introduce students to major themes concerning the development of the American republic following the Revolution until the 1840s.

**Prerequisites & Notes:** Sophomore status

Credits: 4

**HIST 367 - US Women to 1865**

A survey of the changing social, economic and political roles of women in the United States from settlement through the Civil War.

**Prerequisites & Notes:** HIST 103 or HIST 104

Credits: 5

**HIST 368 - US Women from 1865**

A survey of the changing social, economic and political roles of women in the United States from the Civil War to the present.

**Prerequisites & Notes:** HIST 103 or HIST 104

Credits: 5

**HIST 369 - Topics in Us Women's History**

Explores various topics in US women's history. Topics will vary. See department for specific topic.

**Prerequisites & Notes:** HIST 103 or HIST 104

Credits: 4

**HIST 370 - Chinese History to 600 AD**

The evolution of early civilization and the first stage of high civilization in China to the Tang dynasty.

Credits: 4

**HIST 371 - Chinese History: 600-1880**

Political, socioeconomic and intellectual trends during the eras of highest development of the imperial system.

Credits: 4

**HIST 372 - Chinese History: 1800 to Present**

China's development from the relative peace and prosperity of the late 18th century through the devastating wars and imperialist incursions of the 19th century to the struggle in the 20th century to create a modern nation-state and regain a position of wealth and power in an often hostile world. Survey ends with the crushing of the pro-democracy movement at Tiananmen in 1989 and its consequences. Chinese materials in translation will help students explore how individuals experienced the major political, cultural, social and economic transformations of the past two centuries.

Credits: 4

**HIST 374 - Premodern Japanese History**

A general survey tracing the development of Japan's unique civilization from its earliest beginnings through the first half of the 19th century. Japan's diverse artistic, religious and intellectual traditions will be presented in sociohistorical context. Topics include the creation/maintenance of Japan's distinct national identity in the face of cultural borrowing, the role of religion in Japanese society, a critical analysis of the Bushido Way of the Warrior ethic, and the importance of the Imperial Institution for Japanese unity.

**Prerequisites & Notes:** Sophomore or junior or senior status; HIST 280 or HIST 281 or EAST 201 or EAST 202 highly recommended; or permission of instructor.

Credits: 4

**HIST 375 - Modern Japanese History**

Traces Japan's evolution into a 20th-century world power from the Meiji Restoration (1868 C.E.) to the late Showa period. Sociopolitical history is emphasized. Major topics include the nature of the Meiji Restoration itself; the forces affecting Japan's modernization; internal and external pressures upon the Japanese state (both pre- and post-war); the importance of Tennōsei Emperor System; the impact of the Occupation; and Japan's role in the New World Order.

**Prerequisites & Notes:** Sophomore or junior or senior status; HIST 280 or HIST 281 or EAST 201 or EAST 202 highly recommended; or permission of instructor.

Credits: 4

**HIST 376 - French Colonial Canada: 1534-1763**

A history of people and events making the social, cultural, political and economic structures of Canada under French colonial rule. Themes include colonialism, relationships with First Nations, religion, authority, social structures, gender, war and peace, and the nature of the Conquest.

**Prerequisites & Notes:** HIST 277 or permission of instructor.

Credits: 4

**HIST 377 - Japanese History Through Film**

Use of film to examine facets of the Japanese historical experience(s) in different periods. Lectures provide historical context for the films. The time frame extends from the Late Heian period [c. 12 century through the late 20th century].

**Prerequisites & Notes:** Junior or senior status

Credits: 5

**HIST 379 - Canadian American Relations**

Examination and impacts of significant developments in the political, diplomatic, economic, social and cultural relations between Canada and the United States.

**Prerequisites & Notes:** C/AM 200 or HIST 277.

Credits: 4

**HIST 385 - Pre-Colonial Africa**

Development of African societies and states up to the European partition.

**Prerequisites & Notes:** sophomore standing

Credits: 5

**HIST 386 - Southern Africa**

Development of African and European societies in South Africa and neighboring states, their relations and conflicts.

**Prerequisites & Notes:** sophomore standing

Credits: 5

**HIST 387 - History of the Jews**

An analysis of Jewish history and culture in medieval and modern Europe and in the classical and modern Middle East culminating in the development of the Jewish state in the Middle East.

**Prerequisites & Notes:** any from: HIST 111, HIST 112, HIST 113, HIST 287, LBRL 121, LBRL 122, LBRL 123, or any upper-division European or Middle-East history course; junior standing

Credits: 5

**HIST 388 - East Africa**

Imperialism, African nationalism and recent conflicts in Kenya, Tanzania, Uganda, Somalia and Mozambique.

**Prerequisites & Notes:** sophomore standing

Credits: 4

**HIST 390 - Topics in History**

Specialized topics in history. The subject of each individual course and its prerequisite will be announced in the Timetable of Classes. Repeatable to 10 credits.

**Prerequisites & Notes:** junior standing

Credits: 3 TO 5

**HIST 391 - History of the Pacific Northwest**

Examines key themes and developments in the history of the Pacific Northwest from the eighteenth century until the present, with specific emphasis on Washington State. Required for certification of secondary school social studies teachers and for Elementary Education Studies majors.

**Prerequisites & Notes:** sophomore standing

Credits: 5

**HIST 398 - Methods of Research and Analysis**

Familiarizes students with the application of a wide variety of historical methods and tools. Also focuses on different techniques in data analysis, source criticism and historiography.

**Prerequisites & Notes:** Three upper-division history courses

Credits: 4

**HIST 405 - The Traditional Middle East**

From the 6th Century to 1800.

**Prerequisites & Notes:** Junior status or instructor permission

Credits: 5

**HIST 406 - Middle East, 1800 to the Present**

From 1800 to the present.

**Prerequisites & Notes:** Junior status or instructor permission

Credits: 5

**HIST 407 - History of the Israel/Palestinian Conflict**

Emergence of Israel and Palestinian national identities and competition for control of territory and state formation.

**Prerequisites & Notes:** Junior status; HIST 113 or LBRL 123 or instructor permission

Credits: 4

**HIST 408 - World War II: The European War**

Examines the causes and conduct-political, military and economic-of World War II in Europe and North Africa, 1939-1945, the great mid-20th century conflict between the Axis and Allied powers.

**Prerequisites & Notes:** Junior status

Credits: 4

**HIST 409 - World War II: The Pacific War**

This course addresses the major causes, campaigns, consequences, and historical controversies related to World War II in the Pacific.

**Prerequisites & Notes:** Junior Status.

Credits: 4

**HIST 410 - The First Cities: Urbanization in the Ancient World**

Survey of the emergence and development of cities in antiquity, and of daily life in those cities, from the first urban experiences in Mesopotamia through the Greek city-states and up to the imperial city of Rome.

**Prerequisites & Notes:** HIST 111 or HIST 121 or HIST 310 or HIST 311 or HIST 312 or HIST 313 or LBRL 121; junior standing

Credits: 4

**HIST 415 - Undergraduate Seminar in Medieval History**

Focus is on selected topics in medieval European history. Repeatable to a maximum of 8 credits.

**Prerequisites & Notes:** upper-level medieval European history course; instructor permission

Credits: 4

**HIST 418 - Medieval England**

A study of the social, religious and political development of England from the Anglo-Saxon migrations through the end of the War of the Roses. Charts the transformation of England from a minor, peripheral territory at the beginning of the Middle Ages to a central part of the European order at the end of the period.

**Prerequisites & Notes:** HIST 315 or HIST 316 or any 300-level history course

Credits: 4

**HIST 420 - The Renaissance and the Reformation**

Transition from the Medieval to the Modern: Western Europe from the eve of the Hundred Years War to the Treaty of Westphalia (1337-1648).

**Prerequisites & Notes:** HIST 112 or LBRL 122

Credits: 5

**HIST 422 - History of Medieval Italy**

A study of the most sophisticated and culturally influential region of medieval Europe. Primary focus on the communes of northern and central Italy in the period of 1050-1347, with some treatment also of the Lombard, Carolingian and Ottonian periods, and of the radically different patterns of development in southern Italy.

**Prerequisites & Notes:** HIST 112 or HIST 315 or HIST 316 or LBRL 122

Credits: 4

**HIST 428 - Modern Europe: 1914-1945**

The First World War and the results of that conflict, attempts at world organization, the states of Europe between the wars, the Second World War.

**Prerequisites & Notes:** junior standing

Credits: 5

**HIST 432 - Germany: 1914 to the Present**

The impact of World War I; the Weimar Republic, the Third Reich and the period since 1945.

**Prerequisites & Notes:** junior standing

Credits: 5

**HIST 440 - Britain: 1688 to the Present**

Political, social, economic and intellectual history of Britain from the Glorious Revolution to the present; development of parliamentary, economic and social institutions.

**Prerequisites & Notes:** HIST 113 or LBRL 123 or equivalent

Credits: 5

**HIST 441 - France: 1453-1815**

Analysis of the transformation of France from a multilingual, multicultural kingdom to centralized nation-state; special attention to competing religious confessions, family organization and the state, Louis XIV's policies and the French Revolution and the Napoleonic achievement.

**Prerequisites & Notes:** HIST 112 or HIST 113 or LBRL 122 or equivalent

Credits: 5

**HIST 442 - France Since 1815**

Social, economic and political development of France since Napoleon with special emphasis on the impact of the Revolution on 19th-century society and politics, the effects of industrialization, the secularization of French culture, and post-war efforts to retain a distinct place in world politics.

**Prerequisites & Notes:** HIST 113, or LBRL 123 or equivalent

Credits: 5

**HIST 447 - History of the Sciences of Nature**

Examines the historical roots and development of the sciences of nature in Europe and the United States, 1600-2000. Will combine history of science with social and cultural history. Will be most attentive to those developments that shaped the emergence of environmental sciences.

**Prerequisites & Notes:** HIST 103 or HIST 104 or HIST 113; junior standing

Credits: 4

**HIST 449 - East Central Europe and the Balkans Since 1900**

The place of the East European nations, Poland, the Czech Republic, Slovakia, Hungary, the Balkan states, in European and world politics. Offered in alternate years.

**Prerequisites & Notes:** junior standing

Credits: 5

**HIST 452 - U.S. Intellectual History, 1776-1900**

This class will introduce students to major thinkers that shaped the development of the United States between the American Revolution and the turn of the 20th century. The course will ask students interpret the writings of American intellectuals in relation to each other and to their historical context.

**Prerequisites & Notes:** Junior or senior status

Credits: 5

**HIST 453 - U.S. Intellectual History, 1900-Present**

Introduction to major thinkers who shaped the development of the United States during the 20th century. Students will interpret the writings of American intellectuals in relation to each other and to their historical context.

**Prerequisites & Notes:** Junior or senior status

Credits: 5

**HIST 454 - The Civil War and Reconstruction**

Development of sectionalism; problems of war in North and South; efforts toward reunion; the failure of Reconstruction.

**Prerequisites & Notes:** junior standing

Credits: 4

**HIST 455 - Going to College in America**

This course is a reading seminar on the history of American higher education from the Revolution to today.

**Prerequisites & Notes:** History Major/Minor; or HIST 103 or HIST 104; or permission of instructor.

Credits: 5

**HIST 459 - The United States Since 1941**

Internal and international consequences of the rise of the United States as a world power since World War II.

**Prerequisites & Notes:** junior standing

Credits: 5

**HIST 460 - American Environmental History**

History of the role and place of nature in American culture from the colonial era to the present, with some comparisons to significant and kindred human-nature interactions elsewhere. Will emphasize the history of cultural constructions of nature, on American perceptions and conceptions of nature, on the transnational character of many environmental problems and ideas, and on the environmental consequences of this.

**Prerequisites & Notes:** HIST 103 or HIST 104; junior standing

Credits: 4

**HIST 461 - US Urban History**

Examines the development of cities and suburbs in the United States, primarily since the Civil War; special attention to the importance of race, ethnicity and gender in the shaping of urban cultures.

**Prerequisites & Notes:** HIST 104; junior standing

Credits: 5

**HIST 462 - Industrialization and Reform: US 1865-1920**

Course examines the emergence of the US as a major industrial power in the late nineteenth century, the major cultural, political and social changes brought by industrialization. Course concludes by exploring the reform movements generated by industrialization and American participation in World War I.

**Prerequisites & Notes:** HIST 104 plus four additional credits US history

Credits: 5

**HIST 465 - History of Sexuality in the United States**

Examines the changing definitions of sexuality from European settlement to 1988.

**Prerequisites & Notes:** HIST 103, HIST 104 or 8 credits US history

Credits: 4

**HIST 467 - American Cultural History: 1790-1880**

Topics in American cultural history, late 18th to the late 19th century, with some attention to recent developments in methodology and scholarship in cultural history.

Credits: 5

**HIST 477 - World War I & Canadian Society**

An examination and interrogation of the transformative power of Canada's first modern war upon her social, cultural, and national development, with special attention to gender, class, ethnicity, crisis in French-English relations, nationalist ideologies, cultures of war, and construction of collective memory.

**Prerequisites & Notes:** HIST 277 or permission of instructor and junior status.

Credits: 4

### **HIST 479 - Medieval and Early-Modern Chinese History**

A comprehensive exploration of key themes and topics in the social, cultural, economic, and political histories of medieval and early-modern China (roughly the thousand years spanning the sixth to sixteenth centuries).

**Prerequisites & Notes:** HIST 371 or HIST 280 or EAST 201.

Credits: 4

### **HIST 480 - Modern Chinese Social History**

A comprehensive exploration of key themes and topics in the social, cultural, economic, and political histories of late-imperial and modern China. Long-term processes such as China's interaction with the West, the demise of the imperial system and the creation of a Western-influenced structure of government, the globalization of the economy, the rise of a Western-oriented bourgeoisie, and an agrarian crisis form the backdrop to the Opium Wars, the Taiping Rebellion, the Boxer Uprising, the 1911 Revolution, the Chinese Renaissance, and the rise of the Nationalist and Communist parties.

**Prerequisites & Notes:** HIST 281 or HIST 372 or EAST 202.

Credits: 4

### **HIST 481 - The Chinese Revolution**

Explores key passages in China's long revolutionary struggle, beginning with Sun Yat-sen and the 1911 Revolution and ending with the pro-democracy movement and events at Tiananmen in 1989. The May 4th Movement, Chiang Kai-shek's National Revolution of 1925-27, Mao Zedong's peasant-based Communist revolution, and the Cultural Revolution are among the events to be explored from social and cultural, as well as political, perspectives. First-person accounts such as Edgar Snow's Red Star Over China, primary documents, classic and revisionist Western accounts, Chinese literature in translation, and films like "Yellow Earth" and "Farewell, My Concubine" will be among the materials that students will use to explore this vast and still-controversial topic.

**Prerequisites & Notes:** HIST 372 or HIST 281

Credits: 4

### **HIST 483 - Edo Social History**

This course investigates the Edo period in depth by looking at Tokugawa society. Daily life as well as legal codes, official dogma and ideologies are examined. Topics include Tokugawa religions and politics, popular culture, Western Studies, Tokugawa social structure, education, womens political involvement, Bushido, the family, art and literature, science, and the economic sphere.

**Prerequisites & Notes:** Junior status; HIST 374 or HIST 375 or instructor permission

Credits: 5

### **HIST 484 - Women in Japanese History**

Examines the diverse roles and fluctuating status of Japanese women from the beginnings of history to modern times. Possible topics: women and Japanese religions, womens political involvement, education and indoctrination, family roles, Japanese feminism, contributions to art and literature, and economic roles.

**Prerequisites & Notes:** Junior status; HIST 374 or HIST 375; or instructor permission.

Credits: 5

### **HIST 485 - Japanese Military History: Samurai Fact and Fiction**

Evolution and influence of Japan's military from the beginnings of history to modern times. Dispels popular misconceptions about Japanese warriors and Japan's martial traditions, and addresses military realities as well as formal ideologies. Topics include: the evolution of the military class, important battles, translated war tales (gunki monogatari), the evolution of military skills and technology, the military's political involvement over time, the myth of Bushido, martial traditions cultural contributions and influences, and the relationship between Japan's religious and martial spheres.

**Prerequisites & Notes:** Junior status; HIST 374 or HIST 375; or instructor permission.

Credits: 5

### **HIST 486 - Religion in Japanese History**

An examination of the symbiotic relationship between state and religion throughout Japanese history. Although basic doctrines will be considered, emphasis of the course will be sociopolitical rather than metaphysical. Examples of topics: the formation of the Shinto tradition, Millenarianism, Buddhist institutions and temporal power, women and evolving religious tenets, European missionaries and Sengoku politics, Yasukunijinja and modern politics, and the religio-political nature of the Imperial institution.

**Prerequisites & Notes:** Junior status; HIST 374 or HIST 375 or instructor permission

Credits: 5

**HIST 488 - Modern Egypt, Libya and the Nile Valley**

The emergence of modern states in Northeast Africa including Egypt, Libya, the Sudan, Ethiopia and Somalia in an age of imperialism and nationalism.

**Prerequisites & Notes:** junior standing

Credits: 5

**HIST 493 - Public History Seminar**

Introduction to concepts and issues inherent in public history as a preparation for understanding the uses of history beyond academe and/or the K-20 classroom.

**Prerequisites & Notes:** History Major or Minor; Anthropology Major or Minor; Public History Minor; or Permission of instructor.

Credits: 5

**HIST 494 - Public History Internship**

Internship at an approved location such as, but not limited to, as historical society, museum, archives, library, government agency, or history or related journal or press. In certain instances could include the development of public history projects for corporations or individuals as well as fieldwork in approved areas. Repeatable to a maximum of 10 credits.

**Prerequisites & Notes:** HIST 493 - Public History Seminar and/or permission of Faculty Liaison.

Credits: 3 TO 5

**HIST 498 - Editing History Writings for the Profession**

Introduction to participation in professional conferences and publishing through the preparation and editing of conference papers for presentation and potential publication. S/U grading.

**Prerequisites & Notes:** History Majors, History Minors, or Graduate Status in History.

Credits: 2

**HIST 499 - Historical Research**

Research and writing of a formal paper on a topic developed by the student. Students normally work under an instructor within the field of their choice. Limited to declared history majors with junior status. Also offered as EAST 302 (selected sections only). Departmental pre-registration is required and occurs each spring. Writing proficiency course.

**Prerequisites & Notes:** One upper-division course in field of topic

Credits: 4

**HIST 505 - Historical Theory and Methods**

A survey of current historical practice, including quantitative methods, deconstruction, economic history, comparative history, and intellectual and cultural history. Readings in current practice and papers are expected of students.

Credits: 4

**HIST 512 - The Ancient World**

Selected topics in ancient history and the historiography of the ancient world. Repeatable to a maximum of 8 credits.

**Prerequisites & Notes:** One upper-level course in ancient history or instructor permission

Credits: 4

**HIST 515 - Medieval History**

Selected studies from the Fall of Rome to the late Middle Ages. Repeatable.

**Prerequisites & Notes:** One upper-level course in ancient history or instructor permission

Credits: 4

**HIST 520 - Renaissance and Reformation**

Readings in the history of Europe from 1337-1848. Repeatable.

Credits: 4

**HIST 525 - History of Principles of Archives Administration & Records Management**

An overview of the characteristics and uses of records and archival materials, and of the historical development, essential principles, and major functions of the archives and records management professions.

Credits: 4

**HIST 526 - Selection and Appraisal**

Examination of theory and methodology of archival collecting policies, selection, acquisitions, and appraisal of archival records.

**Prerequisites & Notes:** HIST 525

Credits: 4

**HIST 528 - Reference, Access and Outreach**

Examination of theory and methodology of archival access policies, reference services, outreach, and public advocacy.

**Prerequisites & Notes:** HIST 525

Credits: 4

**HIST 530 - Arrangement and Description of Archives**

Detailed examination of archival arrangement and description systems, including both manual and automated applications, the USMARC cataloging format, and Encoded Archival Description and other access systems.

**Prerequisites & Notes:** HIST 525.

Credits: 4

**HIST 532 - Records and Information Management**

Detailed examination of principles, methodology and current issues in managing records in office information systems, including requirements for managing electronic records and for developing and applying automated techniques.

**Prerequisites & Notes:** HIST 525

Credits: 4

**HIST 534 - Preservation of Archival Materials**

Examination of issues in managing a preservation, conservation and disaster preparedness program for archives; and lectures, demonstrations and practical exercises in the conservation and repair of archival media.

**Prerequisites & Notes:** HIST 525

Credits: 4

**HIST 535 - Internship in Archives and Records Management**

Professional internship in a cooperating agency or organization. S/U grading.

**Prerequisites & Notes:** HIST 530 or HIST 532

Credits: 10

**HIST 536 - Internship in Archives and Records Management**

Professional internship in a cooperating agency or organization. S/U grading.

**Prerequisites & Notes:** HIST 530 or HIST 532.

Credits: 10

**HIST 538 - Advanced Seminar in Archives and Records Management**

Readings in selected aspects of archives administration and the management of current records and information systems.

**Prerequisites & Notes:** HIST 536 or permission of instructor.

Credits: 4

**HIST 539 - Practicum in Archives/Record Management**

Project-based application of principles of archives and/or records management, under direct supervision of a professional archivist or records manager. Specific topics may vary. A written project proposal must be approved by director of graduate program in archives and records management. Repeatable to a maximum of 6 credits. S/U grading.

**Prerequisites & Notes:** HIST 530 or HIST 532.

Credits: 2 TO 6

**HIST 540 - Modern European History**

Selected topics in European history and historiography since the sixteenth century. Repeatable with different topics.

Credits: 4

**HIST 550 - Colonial American History**

Selected topics in American colonial history through the mid-18th century. Repeatable to a maximum of 12 credits.

Credits: 4

**HIST 551 - Early American Republic: 1783-1840**

This course will introduce students to major readings and issues in the historiography of the Early American Republic.

Credits: 4

**HIST 553 - American Environmental History**

Readings seminar focusing on the literature on the history of the interaction of nature and society in America. Concentration on methods in environmental history. Also offered as ESTU 553.

**Prerequisites & Notes:** also offered as ESTU 553

Credits: 4

**HIST 554 - World Environmental History**

The organizing theme of this seminar will be that of "exchange" - biological and cultural - of organisms and ideas about what to do with them. By focusing on the problem of the history of exchanges of organisms and ideas about the environment around the globe, the seminar will at the same time illuminate other themes in world environmental history. Also offered as ESTU 554.

Credits: 4

**HIST 555 - US Women's History**

Selected readings in US women's history.

Credits: 4

**HIST 556 - Topics in Latin American History**

Selected readings in Latin American history. Repeatable.

Credits: 4

**HIST 557 - The American Revolution**

This course will introduce students to changing interpretations of the American Revolution. In the process, students will be exposed to broader changes in the historical profession. Repeatable to a maximum of 8 credits.

**Prerequisites & Notes:** Graduate status or permission of instructor.

Credits: 4

**HIST 558 - 20th-Century American History**

Topics in 20th-century American history.

**Prerequisites & Notes:** undergraduate preparation in American history or instructor permission

Credits: 4

**HIST 559 - Topics in American Religious History**

Selected topics in the history of religion in America from the colonial period through the 20th century. Repeatable to 12 credits.

**Prerequisites & Notes:** Graduate status or instructor permission

Credits: 4

**HIST 560 - Readings in North American Indian History**

Readings on the history and historiography of Native North America.

Credits: 4

**HIST 571 - Culture and Identity in Canadian History**

Examination of the constructions and meanings of various Canadian identities and their cultural origins and expressions, emphasizing their historical and historiographical significance.

**Prerequisites & Notes:** Graduate status.

Credits: 4

**HIST 582 - Topics in East Asian History**

Selected topics in the history and historiography of China and/or Japan in the traditional and/or modern periods.

Repeatable under advisement.

Credits: 4

**HIST 587 - Seminar in Middle Eastern History**

Topics in Middle Eastern history.

**Prerequisites & Notes:** undergraduate preparation in Middle Eastern history or instructor permission

Credits: 4

**HIST 590 - Directed Historical Research**

Directed research in historical topics by arrangement with the instructor. Counts as a writing seminar and may be repeated once with a different topic.

**Prerequisites & Notes:** Enrollment limited to non-thesis MA students

Credits: 4

**HIST 690 - Research and Writing Seminar: Thesis**

Original research, including use of primary source materials and bibliographic aids, interpretation and/or textual criticism, and writing an original research thesis. May require a knowledge of auxiliary sciences, a foreign language, or the use of statistics or computer programming, depending on the topic of the research. Repeatable to a maximum

of 12 credits.

Credits: 2 TO 12

## **Health Education**

*Courses numbered X37; X97; 300, 400; 417, 445 are described in the University Academic Policies section of this catalog.*

### **HLED 150 - Consumer and Environmental Health**

Analysis of media promotion of health products and services; health fraud; choosing health/medical care; investigation of environmental factors that affect human health; consumer and environmental protection agencies.

**Prerequisites & Notes:** open registration begins Phase II

Credits: 4

### **HLED 151 - Society and Drugs**

Physiological and behavioral effects of legal and illegal drugs; societal substance use and abuse; alternatives to drug use.

**Prerequisites & Notes:** open registration begins Phase II

Credits: 2

### **HLED 152 - Society and Sex**

Sociological, psychological, and biological aspects of human sexuality.

Credits: 2

### **HLED 201 - Perspectives of Human Lifestyle and Wellness**

Overview and analysis of the role and place lifestyle and wellness play in society (past, present and future). Issues in health, fitness, and lifestyle choices.

Credits: 3

### **HLED 210 - Introduction to Public Health**

A survey of public health principles, history, philosophy, services, ethics, tools, systems, interventions, and applications to current events.

Credits: 4

### **HLED 250 - Health of the College Student**

Analysis of major health risks; personal health status assessment; strategies for reducing risk behaviors and promoting healthy lifestyles among college students. S/U grading.

**Prerequisites & Notes:** HLED 150, HLED 151, HLED 152 recommended

Credits: 4

### **HLED 345 - Health Promotion/Disease Prevention**

Investigation of chronic/degenerative diseases and infectious/communicable illnesses; intentional and unintentional injuries; relationship of lifestyle choices and personal beliefs to well-being.

**Prerequisites & Notes:** BIOL 101 or BIOL 205

Credits: 4

### **HLED 350 – Nutrition**

Study of functions of nutrients in the body, factors that govern nutrient requirements, and the impact of diet on health and disease.

**Prerequisites & Notes:** BIOL 101 or BIOL 205 or CHEM 115 or CHEM 121; junior standing

Credits: 3

### **HLED 407 - Principles and Foundations of Health Education**

History, philosophy, ethics, health behavior theories and models, credentialing, occupations, professional organizations and literature, current issues, and future trends in health education practice.

**Prerequisites & Notes:** BIOL 348.

Credits: 5

### **HLED 410 - Health Communication and Social Marketing**

Examines the key concepts and practical skills of health communication/social marketing campaigns and their application to individual, group, and community public health initiatives.

**Prerequisites & Notes:** HLED 407, HLED 460

Credits: 4

**HLED 420 - Epidemiology and Biostatistics**

An introduction to biostatistics and epidemiology in community health.

**Prerequisites & Notes:** MATH 240 or KIN 307; community health major or permission of instructor.

Credits: 5

**HLED 432 - Organization and Administration of Community Health Programs**

Basic principles of organization and administration of health programs, leadership skills, and grant-writing.

**Prerequisites & Notes:** HLED 407, HLED 460, HLED 465

Credits: 4

**HLED 435 - Worksite Health Promotion**

Direct application of theoretical bases to worksite health promotion programs; assessment tools; cost-benefit ratio and employee-productivity; individual/organizational behavior change process.

**Prerequisites & Notes:** HLED 345; HLED 350 (or concurrent) or PE 414

Credits: 5

**HLED 447 - Community Health**

Concept of community health, health advocacy, and cultural competence; role of government, nonprofit and private agencies; investigation of national health goals; engagement with community agencies required.

**Prerequisites & Notes:** BIOL 348 or concurrent; community health major.

Credits: 4

**HLED 450 - Methods and Materials in Health Education**

Principles and application of methodology for educating about health; learning styles; development of computer-generated materials; selection, utilization, and evaluation of resources.

**Prerequisites & Notes:** HLED 447

Credits: 5

**HLED 455 - Health Education Grades K-8**

Instructional methods in health for grades K-8; selection, analysis and application of health education curricula and materials; education about prevention of child abuse and alcohol/drug abuse, and AIDS/HIV.

**Prerequisites & Notes:** Admission to Woodring College of Education; ELED 370 or ELED 372 or SPED 420 or PE 340.

Credits: 2

**HLED 460 - Program Planning and Implementation of Health Programs**

Application of processes of program development in designing health education/health promotion programs.

Writing proficiency course.

**Prerequisites & Notes:** HLED 407, HLED 450

Credits: 5

**HLED 465 - Program Evaluation and Research Design**

Basics of health education program evaluation including formative, summative, process, impact and outcome evaluation. Research design and applied methods in program evaluation.

**Prerequisites & Notes:** HLED 420

Credits: 5

**HLED 471 - Internship I**

Full-time supervised professional experience emphasizing functional proficiency under joint sponsorship of University and agency personnel. S/U grading.

**Prerequisites & Notes:** HLED 407, HLED 410, HLED 420, HLED 432, HLED 447, HLED 450, HLED 460, HLED 465 and proof of malpractice insurance.

Credits: 3

**HLED 472 - Internship II**

Full-time supervised professional experience emphasizing functional proficiency under joint sponsorship of University and agency personnel. S/U grading.

**Prerequisites & Notes:** HLED 407, HLED 410, HLED 420, HLED 432, HLED 447, HLED 450, HLED 460, HLED 465 and proof of malpractice insurance.

Credits: 12

**HLED 473 - Internship III**

Full-time supervised professional experience emphasizing functional proficiency under joint sponsorship of University and agency personnel. S/U grading.

**Prerequisites & Notes:** HLED 407, HLED 410, HLED 420, HLED 432, HLED 447, HLED 450, HLED 460, HLED 465

and proof of malpractice insurance.

Credits: 15

## Honors

*Courses numbered X37; X97; 300, 400; 417, 445 are described in the University Academic Policies section of this catalog.*

### **HNRS 103 - Major Cultural Traditions I**

**Analysis, interpretation, and discussion of a wide range of texts from ancient times to the 5th century, with emphasis on the Western traditions.**

Credits: 4

### **HNRS 104 - Major Cultural Traditions II**

**Analysis, interpretation, and discussion of a wide range of texts from the 6th to the close of the 19th century, with emphasis on the Western traditions.**

Credits: 4

### **HNRS 105 - Major Cultural Traditions III**

Analysis, interpretation, and discussion of a wide range of sources from the contemporary world with major emphasis on a culture outside North America.

### **HNRS 106 - Major Cultural Traditions IV**

Analysis, interpretation, and discussion of a wide range of sources from the contemporary world with a major emphasis on a North American culture.

### **HNRS 201 - Colloquium in Philosophy**

An introduction to philosophical methods and to the branches of philosophical inquiry. The class will concentrate on a specific subject or topic in each colloquium, and the area of emphasis will therefore vary from year to year.

Credits: 4

### **HNRS 202 - Colloquium in Economics**

An introduction to the principles of micro- and macroeconomics, including the role of the market in allocating scarce resources, the decision making of economic agents, market and regulatory failures, macroeconomic performance, competing theories of the macro economy, the creation of money, and international trade and finance. Students will have the opportunity for extensive discussion and to explore one or more areas of the discipline.

**Prerequisites & Notes:** MATH 112 or higher or equivalent.

Credits: 4

### **HNRS 203 - Colloquium in Anthropology**

The study of societies that contrast with Western Civilization, leading to an acquaintance with the concept of culture, human variation, and change, and their importance to an understanding of human behavior. Emphasis on understanding each culture from its own point of view rather than our own. Class will concentrate on discussion and will provide students with an opportunity to explore one or more areas of the discipline.

Credits: 4

### **HNRS 204 - Colloquium in Psychology**

An introduction to the basic concepts and methods of the discipline of psychology utilizing the results of research investigations. Students will have an opportunity to perform independent work.

Credits: 4

### **HNRS 205 - Colloquium in History**

The study of history as a discipline, including an introduction to primary sources, source criticism, basic techniques of historical research, and historical writing. Students will study a specific historical issue or event in some depth.

**Prerequisites & Notes:** Admission to Honors Program.

### **HNRS 206 - Colloquium in Political Science**

An introduction of the concept of politics and the types of governments and political issues in the contemporary world, with an emphasis on the comparative study of political ideas and systems. The class will focus on discussion and students will have an opportunity to study one or more areas in depth.

Credits: 4

### **HNRS 211 - Colloquium in Physics**

An introduction to the basic concepts and practice of physics, including the laws of motion, conservation of energy and momentum, gravitation, electricity and magnetism, sound and light waves, radioactivity, and fission and fusion. The class includes a lab, and students will have an opportunity to study an area of interest in depth.

**Prerequisites & Notes:** MATH 107 or equivalent or higher.

Credits: 4

**HNRS 212 - Colloquium in Geology**

Study of the earth including its origins, petrology, volcanology, orogeny, plate tectonics, and the evolution of continents as a result of surface and subsurface processes. The class includes a laboratory, and students will have the opportunity to study a particular area of geology in depth.

**Prerequisites & Notes:** MATH 107 or equivalent or higher.

Credits: 4

**HNRS 213 - Colloquium in Biology**

An introduction to the study of biology, including molecular and evolutionary processes, the energetics of living systems with emphasis on photosynthesis and respiration in relation to the first and second laws of thermodynamics, and the study of the physical structure of DNA and its involvement in the information flow in the cell. The class includes a laboratory, and students will have an opportunity to explore a specific, selected area of inquiry.

**Prerequisites & Notes:** MATH 106 or equivalent or higher.

Credits: 4

**HNRS 252 - Colloquium in Sociology**

An introduction to the principles of sociology, including the study of social change, social institutions, and social organizations. The class will also provide an opportunity for concentrated study in one or more areas of the discipline.

**HNRS 350 – Seminar**

Repeatable with various topics.

Credits: 3

**HNRS 351 – Seminar**

Repeatable with various topics.

Credits: 3

**HNRS 352 – Seminar**

Repeatable with various topics.

Credits: 3

**HNRS 353 – Seminar**

Repeatable with various topics.

Credits: 3

**HNRS 354 – Seminar**

Repeatable with various topics.

Credits: 3

**HNRS 355 – Seminar**

Repeatable with various topics.

Credits: 3

**HNRS 356 – Seminar**

Repeatable with various topics.

Credits: 3

**HNRS 357 – Seminar**

Repeatable with various topics.

Credits: 3

**HNRS 358 – Seminar**

Repeatable with various topics.

Credits: 3

**HNRS 359 – Seminar**

Repeatable with various topics.

Credits: 3

**HNRS 490 - Senior Project**

**Repeatable up to 6 credits.** S/U grading. 2 Credits

## **Human Resource Management**

*Courses numbered X37; X97; 300, 400; 417, 445 are described in the University Academic Policies section of this catalog.*

### **HRM 322 - Human Resource Management**

Recruitment, selection, utilization and development of human resources, with emphasis on employee-management relations and relevant behavioral research.

**Prerequisites & Notes:** Major restricted, MGMT 271, MGMT 311.

Credits: 4

### **HRM 423 - Staffing**

Recruiting and selection as related to organizational objectives. Legal requirements, selection models, validation and topical issues of importance.

**Prerequisites & Notes:** Major restricted, HRM 322.

Credits: 4

### **HRM 424 - Training and Development**

Training as related to organizational objectives. Emphasis on training models, learning theory, evaluation methodologies, instructional techniques and topics of special interest.

**Prerequisites & Notes:** Major restricted, HRM 322.

Credits: 4

### **HRM 425 - Negotiations and Labor Relations**

Uses cases, lectures and simulations to develop negotiation skills in a variety of management situations, including union-management relations. Issues include pre-employment discussions, collective bargaining, arbitration, mediation, agency, renegotiating contracts, and multiparty discussions.

**Prerequisites & Notes:** Major restricted, HRM 322.

Credits: 4

### **HRM 426 - Current Issues in Human Resource Management**

Current problems in human resource policy and practice.

**Prerequisites & Notes:** Major restricted, HRM 322.

Credits: 4

### **HRM 427 - Compensation Administration**

Examination of theories, models and procedures required to develop compensation and reward systems in organizations. Economic, psychological and social elements of compensation. Determination of compensation structures and differentials, forms of compensation and reward, compensation levels.

**Prerequisites & Notes:** Major restricted, HRM 322.

Credits: 4

### **HRM 490 - Internship in Human Resource Management**

Practical application of skills and theories learned in the classroom through work or special project experience in private or public organizations. Repeatable to 12 credits. Also offered as MGMT 490.

**Prerequisites & Notes:** business administration students only.

Credits: 1 TO 4

## **Human Services**

*Courses numbered X37; X97; 300, 400; 417, 445 are described in the University Academic Policies section of this catalog.*

### **HSP 301 - Human Services Professionals and Personal Systems**

Explores personal systems in relation to other systems with an emphasis on motives, values, personal communication, and self-determination.

**Prerequisites & Notes:** Admission to major, or permission of Human Services Program. Course meets as scheduled, plus arranged.

Credits: 4

### **HSP 302 - Introduction to Human Services**

A conceptual foundation of human services, with an emphasis on history, current theoretical models, and ethical considerations for professionals.

**Prerequisites & Notes:** course meets as scheduled plus arranged

Credits: 3

**HSP 303 - Human Services Professionals and Interpersonal Systems**

Investigates interpersonal systems in relation to other systems, with an emphasis on communication models and professional strategies.

**Prerequisites & Notes:** HSP 301 or instructor permission; course meets as scheduled plus arranged

Credits: 4

**HSP 304 - Portfolio Development in Human Services**

Must be taken in the first 5 credits of the major. Reading, writing, and discussion elaborating on the portfolio processes for learning, assessment and professional development in the human services field. An emphasis is placed on benchmark assessment in relationship to CSHSE National Standards and a survey of writing styles of the human services profession. Portfolios will be finalized in HSP 495 - Capstone Portfolio. S/U grading.

**Prerequisites & Notes:** Course meets as scheduled, plus arranged.

Credits: 1

**HSP 305 - Human Services Professionals and Small Group Systems**

A study of small groups in relation to other systems, with emphasis on theories of group dynamics, process, facilitation, and leadership.

**Prerequisites & Notes:** HSP 303 or instructor permission; course meets as scheduled plus arranged

Credits: 4

**HSP 311 - Health Care and Human Services**

Examines societal, cultural, and economic factors that affect characteristics of the healthcare system, analyzes policies, and assesses different organizational models that impact the skills and knowledge necessary for human services professionals to advocate for client access to the health care system and to influence health care policy.

**Prerequisites & Notes:** Course meets as scheduled, plus arranged.

Credits: 4

**HSP 315 - Human Development and Human Services**

An interdisciplinary examination of human development across the lifespan, with an emphasis on issues that are relevant to providing effective human services delivery. Topics examine theories related to physical, cognitive, social, and emotional development, normative and non-normative developmental processes, and the relationship between public policy, human services, and human development.

**Prerequisites & Notes:** Course meets as scheduled, plus arranged.

Credits: 4

**HSP 323 - Conflict Resolution in Human Services**

A multidisciplinary survey of the nature of conflict and models of conflict resolution including mediation, negotiation, arbitration, conciliation, and collaborative problem solving as they apply to the human services profession.

**Prerequisites & Notes:** Course meets as scheduled, plus arranged.

Credits: 4

**HSP 325 - Interviewing for Human Services**

Addresses the theory and practice of interviewing in a variety of settings including agencies, education, health care, and business. Examines ethics in the practice of interviewing. Emphasizes skill development.

Credits: 4

**HSP 331 - Children, Families, and Communities**

Explores theories, research, and practices of child and family-centered development with an emphasis on child and family-centered support practices, home-school-community collaborations, interprofessional practices, and integrated services.

**Prerequisites & Notes:** course meets as scheduled plus arranged

Credits: 4

**HSP 340 - Practicum and Seminar I**

An introduction to practicum learning, with an emphasis on professional and ethical expectations, liability and malpractice, confidentiality and boundaries, health and safety, and observation and reflection. Supervised field experience is included. S/U grading.

**Prerequisites & Notes:** HSP 301. Course meets as scheduled, plus arranged.

Credits: 4

**HSP 341 - Practicum and Seminar II**

Practicum learning and accompanying seminar, with an emphasis on establishing client/professional relationships; understanding and following agency policies, procedures, and protocol; and professional growth through observation and reflection. Supervised field experience is included. S/U grading.

**Prerequisites & Notes:** HSP 340. Course meets as scheduled, plus arranged.

Credits: 4

#### **HSP 345 - Case Management and Interventions**

Models and theories of case management, intake assessment, service planning and coordination, monitoring, documentation and use of technology, and termination of services. Continuum of interventions, (i.e., prevention, treatment, maintenance, aftercare) are addressed within the context of a spectrum of service settings and ethical and culturally appropriate responses.

Credits: 4

#### **HSP 356 - Narrative in Human Services**

Interdisciplinary study of the uses of narrative in social science research, psychological theory, cultural and individual identity, and the professional practice of human services.

**Prerequisites & Notes:** Course meets as scheduled, plus arranged.

Credits: 4

#### **HSP 371 - Issues and Concepts in Human Services**

Discuss and analyze selected issues and concepts in human services. Repeatable to a maximum of 8 credits.

**Prerequisites & Notes:** Course meets as scheduled, plus arranged.

Credits: 4

#### **HSP 373 - Law and Human Services**

Study in the interaction of legal systems with human services delivery systems, and the roles of the courts in impacting social change in society. Examine the institutional sources of law that affect individual and group rights and duties, criminal justice models and systems, and major issues in criminal and civil law.

**Prerequisites & Notes:** Course meets as scheduled, plus arranged.

Credits: 4

#### **HSP 385 - Applied Research Methods**

An introduction to quantitative and qualitative research methods relevant to the human services profession. Includes an overview of research designs, analysis techniques, and methods of interpretation, dissemination and application.

**Prerequisites & Notes:** Course meets as scheduled, plus arranged.

Credits: 4

#### **HSP 402 - Human Services Professionals Organizational Systems**

An examination of human service organizations in relation to other systems, with an emphasis on organizational theory, influencing systems and outcomes, and the role of human services professionals in organizations.

**Prerequisites & Notes:** HSP 305 or instructor permission; course meets as scheduled plus arranged

Credits: 4

#### **HSP 404 - Human Services Professionals and Community Systems**

Study of community systems in relation to human services systems. Emphasis on analyzing theories of community change and examining the roles of human services professionals in communities.

**Prerequisites & Notes:** HSP 402 or instructor permission; course meets as scheduled plus arranged

Credits: 4

#### **HSP 406 - Human Services Professionals and Global Systems**

Explores societal and global systems in relation to human services systems, with an emphasis on advocacy, change, and social justice.

**Prerequisites & Notes:** HSP 404 or instructor permission; course meets as scheduled plus arranged

Credits: 4

#### **HSP 410 - Mental Health: Individuals and Systems**

A survey of diagnostic criteria and an overview of theory and research describing the interactions of biological, environmental, psychosocial, cognitive and socio-cultural factors that relate to the development and maintenance of mental health. An emphasis is placed on understanding the major models used to integrate prevention, maintenance, and intervention, reduce recidivism and promote healthy functioning. Integrated services and resource referral practices are examined within the context of mental health services and general human services delivery.

**Prerequisites & Notes:** Course meets as scheduled, plus arranged.

Credits: 4

#### **HSP 430 - Readings and Projects in Human Services**

Supervised reading and projects on selected contemporary topics that impact human services. Repeatable to a maximum of 8 credits.

**Prerequisites & Notes:** Course meets as scheduled, plus arranged.

Credits: 1 TO 4

**HSP 430A - Family Centered Services**

Seminars in contemporary social problems which impact the roles of human services workers.

Credits: 2

**HSP 430B - Family Services: Issues and Concepts**

Seminars in contemporary social problems which impact the roles of human services workers.

Credits: 2

**HSP 430C - Problems: Birth to 3 Assessment**

Seminars in contemporary social problems which impact the roles of human services workers.

Credits: 2

**HSP 430K - Family Services Conc-Assessment**

Seminars in contemporary social problems which impact the roles of human services workers.

Credits: 2

**HSP 430N - Infant-Toddler Interventions**

Seminars in contemporary social problems which impact the roles of human services workers.

Credits: 2

**HSP 430Z - Typical/Atypical Development**

Seminars in contemporary social problems which impact the roles of human services workers.

Credits: 2

**HSP 435 - Human Services and Management**

Fundamentals of management in public and nonprofit agencies and organizations, including budget development and diversification of revenue sources.

**Prerequisites & Notes:** Course meets as scheduled, plus arranged.

Credits: 4

**HSP 440 - Internship and Seminar**

Demonstration and documentation of knowledge and skills to meet Council for Standards in Human Service Education national standards. Includes seminar and 120 hours of supervised field experience. S/U grading.

Repeatable to a maximum of 12 credits.

**Prerequisites & Notes:** HSP 341; HSP 325, HSP 345 recommended.

Credits: 4

**HSP 443 - Disability: Individuals and Systems**

An exploration of disability issues relating to work in human services, including historical, legal, ethical, medical, psychosocial, employment, and independent living issues; review of specific disabilities.

**Prerequisites & Notes:** Course meets as scheduled, plus arranged.

Credits: 4

**HSP 450 - Survey of Addictions and Dependencies**

Examines the etiology of chemical dependency and other compulsive behaviors and the impact of these behaviors on societal systems such as family, legal, education, work, social, and health services. Discusses roles of human services professionals in prevention and intervention.

**Prerequisites & Notes:** course meets as scheduled plus arranged

Credits: 4

**HSP 455 - Diversity & Social Justice Dynamics**

Examination of the current complexity and historical context of diversity in relationship to human services systems. Topics include responses to institutional oppression and privilege as manifested in societal systems.

**Prerequisites & Notes:** Course meets as scheduled, plus arranged.

Credits: 4

**HSP 484 - Program Funding and Grant Writing**

Investigating optimum sources for funding the delivery of human services programs with an emphasis on planning, writing, marketing, and evaluating funding proposals. Determining funding strategies, selecting funding methods, researching grant funds, interpreting funding guidelines, and preparing grant proposals.

**Prerequisites & Notes:** HSP 435 or permission of instructor. Course meets as scheduled, plus arranged.

Credits: 4

**HSP 485 - Program Planning and Evaluation**

Fundamentals of program planning in human services delivery including needs assessment and program evaluation.

**Prerequisites & Notes:** HSP 385. Course meets as scheduled, plus arrange

Credits: 4

**HSP 486 - Human Resources in Human Services**

Overview of the human resources knowledge and skills required of human services professionals

**Prerequisites & Notes:** course meets as scheduled plus arranged

Credits: 4

**HSP 487 - Leadership**

Modern theories of administration, management and leadership. Interdisciplinary exploration of theories, models, principles, research, and skills as they relate to personal and organizational leadership.

**Prerequisites & Notes:** course meets as scheduled plus arranged

Credits: 4

**HSP 495 - Capstone Portfolio**

Must be taken in the last 5 credits of the major. Assess integrated learning through discussion and writing related CSHSE National Standards. Review and revise capstone essay and writing samples; review, select and revise portfolio artifacts. Finalize student capstone portfolio to complete benchmark assessment in the Human Services major.

**Prerequisites & Notes:** Course meets as scheduled, plus arranged.

Credits: 4

**Instructional Technology**

*Courses numbered X37; X97; 300, 400, 500; 417, 445, 517, 545 are described in the University Academic Policies section of this catalog.*

**IT 344 - Basic Instructional Technology Skills**

Allows the student to prepare a portfolio that demonstrates the instructional technology skills which are required for admission to IT 442, 443 or 444. S/U grading.

Credits: 1

**IT 442 - Classroom Use of Instructional Technology (Elementary)**

Examines the use of instructional technology, including using the computer as teacher, student, partner (tool) and aide. Successful completion satisfies the Woodring College of Education instructional technology education competency requirement.

**Prerequisites & Notes:** IT 344 or portfolio of basic instructional technology skills. Override permission in MH 262, 360-650-3336.

Credits: 3

**IT 443 - Classroom Use of Instructional Technology (Special Education)**

Examines the use of instructional technology, including using the computer as teacher, student, partner (tool) and aide. Successful completion satisfies the Woodring College of Education instructional technology education competency requirement.

**Prerequisites & Notes:** IT 344 or portfolio of basic instructional technology skills. Override permission in MH 322, 360-650-3330.

Credits: 3

**IT 444 - Classroom Use of Instructional Technology (Secondary)**

Examines the use of instructional technology, including using the computer as teacher, student, partner (tool) and aide. Successful completion satisfies the Woodring College of Education instructional technology education competency requirement.

**Prerequisites & Notes:** IT 344 or portfolio of basic instructional technology skills. Override permission in MH 204, 360-650-3090

Credits: 3

**IT 458 - Instructional Design**

Introduction to the process of instructional design. Topics include task analysis, competency specification, instructional strategies, media selection, user interface, rapid prototyping, formative evaluation and project management.

**Prerequisites & Notes:** IT 444A or IT 444B or IT 444C or permission of instructor.

Credits: 4

**IT 459 - Distance Education: Theory and Practice**

Examines the concepts, technologies and issues related to the design, development, delivery, policy-making and evaluation of distance education courses and programs. Course includes online learning environment development.

**Prerequisites & Notes:** IT 458 and IT 444A or IT 444B or IT 444C, IT 458 or permission of instructor.

Credits: 4

**IT 461 - Multimedia Tools and Applications**

An overview of the tools required for the creation of interactive multimedia. The tools are organized into three categories: authoring systems, hypermedia authoring environments, and media production (such as graphics production, video and sound).

**Prerequisites & Notes:** IT 442, IT 443 or IT 444 or permission of instructor.

Credits: 3

**IT 463 - Techniques and Tools in Graphic Design**

Principle, techniques and tools used in the creation and manipulation of digital graphic elements and products. Topics include elements of design and photography, application of artistic concepts, issues related to graphic representation, and modes of delivery with an emphasis on Web-based development.

**Prerequisites & Notes:** IT 444, IT 458, IT 459 or permission of instructor.

Credits: 4

**IT 465 - Development of Web-Based Learning Environments**

Design and develop web-based instruction and materials; study various forms of web-based instruction with emphasis on online learning technologies. Integrates appropriate methods, curricular resources, assessments, and Internet delivery systems.

**Prerequisites & Notes:** IT 444, IT 458, IT 459 or permission of instructor.

Credits: 4

**IT 466 - Authoring for Multimedia Development**

Techniques and procedures for authoring when developing multimedia. Scripting required in implementation of concepts. **Prerequisites & Notes:** IT 461 or instructor permission

Credits: 3

**IT 467 - Creating Modules for Electronic Delivery**

Design and develop technology-enhanced interactive learning objects for teaching and training. Focus on using multimedia and instructional design for online learning. Students explore concepts and findings identified in the multimedia and distance educational literature.

**Prerequisites & Notes:** IT 444, IT 458, IT 459 or permission of instructor.

Credits: 4

**IT 468 - Interactive Multimedia Systems**

An introductory study of interactive multimedia systems. Includes videodiscs, computer interfacing, CD ROM and multimedia authoring software.

**Prerequisites & Notes:** IT 442, IT 443 or IT 444 or instructor permission.

Credits: 3

**IT 470 - The Internet in Education**

Studies the use of the Internet and the World Wide Web in educational settings, including strategies for effective student and teacher use. Topics include e-mail, Web browsing, videoconferencing, implementation, ethics and issues. Examines alternatives in Web development.

**Prerequisites & Notes:** IT 442, IT 443 or IT 444 or instructor permission.

Credits: 3

**IT 503 - Designing Instruction and Selecting Technologies for Learning**

Systematic analysis, design, development and evaluation of instructional practices. Class discussions and projects apply instructional design principles in P-12 classrooms and emphasize the appropriate integration of technologies at relevant stages of the learning process.

**Prerequisites & Notes:** IT 442, IT 443 or IT 444 or equivalent; graduate status and EDUC 501 or instructor permission.

Credits: 4

**IT 518 - Current Issues in Education**

Examination and discussion of several current and controversial issues in education. Repeatable with no maximum.

Credits: 1 TO 5

**IT 544 - Instructional Technology and Education**

A study in the use of technological tools for instruction; for teaching, training, and student learning; for presentation and development; and for administration and management. Incorporates distance delivery procedures and effective planning for the use of Instructional Technology. Satisfies the Woodring College of Education instructional technology and education competency requirement. Emphasis on K-12 education.

**Prerequisites & Notes:** Graduate status or permission of instructor.

Credits: 4

**IT 546 - Instructional Technology and Education - CCE**

A study in the use of technological tools for instruction; for teaching, training, and student learning; for presentation and development; and for administration and management. Incorporates distance delivery procedures and effective planning for the use of instructional technology. Satisfies the Woodring College of Education instructional technology and education competency requirement. Emphasis on the Continuing and College Master's program.

**Prerequisites & Notes:** Admission to the CCE program, or permission of instructor.

Credits: 4

**IT 550 - Technology Leadership: Policies, Planning and Administration**

Problems and principles in establishing and maintaining the use of instructional technologies in educational institutions, including establishing school and district policies for technology, developing budgets, managing resources, maintaining facilities and technology infrastructure.

**Prerequisites & Notes:** IT 442, IT 443 or IT 444, or equivalent; graduate status; and IT 503, IT 571 and IT 572 or permission of instructor.

Credits: 4

**IT 551 - Seminar in Instructional Technology**

Analysis of issues affecting present and future implementations of instructional technology.

**Prerequisites & Notes:** 20 credits in the program; permission of instructor.

Credits: 4

**IT 552 - Instructional Design: Strategies**

Survey of strategies for delivering instruction, including large-scale strategies such as cooperative learning, lectures and technology; and microstrategies such as feedback, advance organizers, teaching procedures and questioning strategies.

**Prerequisites & Notes:** IT 560 or permission of instructor.

Credits: 3

**IT 558 - Distance Education: Theory and Practice**

Examines the concepts, technologies and issues related to the design, development, delivery, policy-making and evaluation of distance education courses and programs. Course includes development of online learning environments.

**Prerequisites & Notes:** IT 544A and IT 560 or permission of instructor.

Credits: 4

**IT 560 - Instructional Design**

Introduction to the process of instructional design. Topics include task analysis, competency specification, instructional strategies, media selection, user interface, prototyping, formative evaluation and project management.

Credits: 4

**IT 561 - Designing Computer-Based Instruction**

Addresses the design, development and evaluation of computer-based instructional software. Covers the steps in creating an effective CBI lesson, designing effective displays, use of graphics and illustrations, use of color, analyzing questions, learner control, and storyboarding.

**Prerequisites & Notes:** IT 560 and IT 566 or IT 567 or permission of instructor.

Credits: 3

**IT 563 - Techniques and Tools in Multimedia Development**

Create digital media (e.g., graphics, video, audio); identify properties, strengths and weaknesses of digital media in different learning contexts; analyze its use in a variety of settings including distance delivery.

**Prerequisites & Notes:** IT 546, IT 558, IT 560 or permission of instructor.

Credits: 4

**IT 565 - Development of Web-Based Learning Environments**

Design and develop web-based instruction and materials; study of various forms of web-based instruction with emphasis on online learning technologies. Integrates appropriate methods, curricular resources, assessments, and Internet delivery systems.

**Prerequisites & Notes:** IT 544A, IT 558, IT 560 or permission of instructor.

Credits: 4

**IT 566 - Authoring for Multimedia Development**

Techniques and procedures for authoring when developing multimedia. Scripting required in implementation of concepts.

**Prerequisites & Notes:** IT 461 or permission of instructor.

Credits: 3

**IT 567 - Creating Modules for Electronic Delivery**

Design and develop technology-enhanced interactive learning objects for teaching and training. Focus on using multimedia and instructional design for online learning. Students explore concepts and findings identified in the multimedia and distance education literature.

**Prerequisites & Notes:** IT 544A, IT 558, IT 560 or permission of instructor.

Credits: 4

**IT 568 - Advanced Design of Multimedia Instruction**

Advanced issues in the design and development of interactive multimedia instructional lessons. Covers design issues related to the use of multimedia for instruction and is organized around individual student projects. Repeatable to a maximum of 6 credits.

**Prerequisites & Notes:** IT 566 or IT 567 or permission of instructor.

Credits: 3 TO 6

**IT 571 - Implementing Technology-Enhanced Learning Activities**

Implement an instructional plan that integrates appropriate methods, curricular resources, assessments, and technology in a classroom setting; gather data to evaluate the plan's effectiveness. Develop a learning object; do usability testing and analysis. Begin development of an electronic portfolio.

**Prerequisites & Notes:** IT 442, IT 443 or IT 444, or equivalent; graduate status; and IT 503 or permission of instructor.

Credits: 3

**IT 572 - Advanced Technology Tools and Classroom Applications**

Develop advanced skills in information and communication technologies, assistive technologies, and productive tools. Employ one of these technologies in creating a prototype to be used for research. Develop materials and methods for teaching of software applications.

**Prerequisites & Notes:** IT 442, IT 443 or IT 444, or equivalent; graduate status; and IT 503 or permission of instructor.

Credits: 3

**IT 573 - Emerging Issues: The Social, Ethical, Legal and Human Implications of Technology**

Consideration of a wide range of human and social issues relating to the use of technology, including equitable access, social and cognitive effects of various technologies, appropriateness of technologies for students with diverse learning needs, gender and cultural bias, copyright, and health concerns.

**Prerequisites & Notes:** IT 442, IT 443 or IT 444, or equivalent; graduate status; and IT 503 or permission of instructor.

Credits: 3

**IT 574 - Educational Technology Research, Evaluation and Assessment**

Research the effectiveness of technology products and processes, selecting appropriate technology tools for assessment, and evaluating learner and program outcomes.

**Prerequisites & Notes:** IT 442, IT 443 or IT 444, or equivalent; graduate status; and IT 503 or permission of instructor.

Credits: 3

**IT 575 - Designing, Implementing and Evaluating Professional Development**

Identify research-based models for professional development, implement them effectively in particular settings, and evaluate participant outcomes. Emphasis on diffusion of innovations and facilitating change.

**Prerequisites & Notes:** IT 442, IT 443 or IT 444, or equivalent; graduate status; and IT 503 or permission of instructor.

Credits: 3

**IT 640 - Current Topics in Education**

Studies of current topics in learning resources/library science or instructional technology. Repeatable with no maximum.

**Prerequisites & Notes:** master's degree; permission of instructor.

Credits: 1 TO 5

#### **IT 690 - Thesis**

Research study under the direction of a faculty committee. Repeatable to a maximum of 9 credits. S/U grading.

**Prerequisites & Notes:** advancement to candidacy; graduate committee approval

Credits: 1 TO 9

#### **IT 691 - Research Seminar**

Repeatable to a maximum of 6 credits. S/U grading.

**Prerequisites & Notes:** graduate committee or program advisor approval

Credits: 1 TO 6

### **International Business**

*Courses numbered X37; X97; 300, 400; 417, 445 are described in the University Academic Policies section of this catalog.*

#### **IBUS 370 - Introduction to International Business**

Introduction to the environment and challenges of doing business abroad. Topics include country-market differences, trade and investment patterns, the international financial environment, issues in business-government relations and strategies for international business.

**Prerequisites & Notes:** ECON 206.

Credits: 4

#### **IBUS 470 - International Business Operations**

Strategic and operational issues that firms face when they do business abroad. Themes include the competitiveness challenge, country-market analysis and entry strategies, negotiations and diplomacy, cooperative ventures, design and control of international operations, and various functional area issues.

**Prerequisites & Notes:** Major restricted, IBUS 370 or another international course in the College of Business and Economics.

Credits: 4

#### **IBUS 473 - International Trade Operations**

Operations of firms using exporting as a means to serve foreign markets. Focus on export operations (documentation, transport, support services, financing), practical aspects of contract negotiations, alternative methods of export business arrangements.

**Prerequisites & Notes:** Major restricted, IBUS 370 or MKTG 486.

Credits: 4

#### **IBUS 474 - Topics in International Business**

Varying topics in international business. This could include courses on business in specific areas of the world, specific international business topics (e.g. negotiation), or currently important topics in the international business field. May Be Repeated for Credit on a Different Topic (up to 8 credits).

**Prerequisites & Notes:** Major restricted, IBUS 370 or equivalent of permission of instructor.

Credits: 4

#### **IBUS 490 - Internship in International Business**

Practical application of international business skills and theories learned in the classroom through work or special projects experience in private or public organizations. Repeatable to 12 credits. Also offered as MGMT 490.

**Prerequisites & Notes:** Major restricted, Business administration students only.

Credits: 1 TO 4

### **International Studies**

*Courses numbered X37; X97; 300, 400, 500; 417, 445, 517, 545 are described in the University Academic Policies section of this catalog.*

#### **INTL 105 - Study Abroad**

Credit through international exchanges, academic programs offered through universities or consortia, cosponsored programs. Repeatable. S/U grading.

**Prerequisites & Notes:** Approval from International Programs & Exchanges

Credits: 1-30

#### **INTL 106 - Direct Exchange - Plan I**

Credit through international exchanges. Direct Exchange Plan 1 – Direct Exchange Two Semesters or Three Quarters. Repeatable. S/U grading.

**Prerequisites & Notes:** Approval from International Programs & Exchanges

Credits: 1-30

**INTL 107 - Direct Exchange - Plan II**

Credit through international exchanges. Direct Exchange Plan 2 – Direct Exchange Semester. Repeatable. S/U grading.

**Prerequisites & Notes:** Approval from International Programs & Exchanges

Credits: 1-30

**INTL 108 - Direct Exchange - Plan III**

Credit through international exchanges. Direct Exchange Plan 3 – Direct Exchange Asia University. Repeatable. S/U grading.

**Prerequisites & Notes:** Approval from International Programs & Exchanges

Credits: 1-30

**INTL 115 - International Internship and Field Study**

International internships, independent research projects, work experience approved by departments or colleges. Repeatable. S/U grading.

**Prerequisites & Notes:** Approval from International Programs & Exchanges

Credits: 1-30

**INTL 201 - Introduction to Global Studies**

Introduction to contemporary global issues, drawing on the integrated knowledge and methodologies of multiple disciplines.

Credits: 5

**INTL 205 - Study Abroad**

Credit through international exchanges, academic programs offered through universities or consortia, cosponsored programs. Repeatable. S/U grading.

**Prerequisites & Notes:** Approval from International Programs and Exchanges

Credits: 1-30

**INTL 206 - Direct Exchange - Plan I**

Credit through international exchanges. Direct Exchange Plan 1 – Direct Exchange Two Semesters or Three Quarters. Repeatable. S/U grading.

**Prerequisites & Notes:** Approval from International Programs & Exchanges

Credits: 1-30

**INTL 207 - Direct Exchange - Plan II**

Credit through international exchanges. Direct Exchange Plan 2 – Direct Exchange Semester. Repeatable. S/U grading.

**Prerequisites & Notes:** Approval from International Programs & Exchanges

Credits: 1-30

**INTL 208 - Direct Exchange - Plan III**

Credit through international exchanges. Direct Exchange Plan 3 – Direct Exchange Asia University. Repeatable. S/U grading.

**Prerequisites & Notes:** Approval from International Programs & Exchanges

Credits: 1-30

**INTL 215 - International Internship and Field Study**

International internships, independent research projects, work experience approved by departments or colleges. Repeatable. S/U grading.

**Prerequisites & Notes:** Approval from International Programs & Exchanges

Credits: 1-30

**INTL 301 - Study Abroad Predeparture Orientation**

Pre-departure orientation, ethics and intercultural communication issues for study, service work or internships abroad. S/U grading.

Credits: 1

**INTL 305 - Study Abroad**

Credit through international exchanges, academic programs offered through universities or consortia, cosponsored programs. repeatable. S/U grading.

**Prerequisites & Notes:** Approval from International Programs & Exchanges.

Credits: 1-30

**INTL 306 - Direct Exchange - Plan I**

Credit through international exchanges. Direct Exchange Plan 1 – Direct Exchange Two Semesters or Three Quarters. Repeatable. S/U grading.

**Prerequisites & Notes:** Approval from International Programs & Exchanges

Credits: 1-30

**INTL 307 - Direct Exchange - Plan II**

Credit through international exchanges. Direct Exchange Plan 2 – Direct Exchange Semester. Repeatable. S/U grading.

**Prerequisites & Notes:** Approval from International Programs & Exchanges

Credits: 1-30

**INTL 308 - Direct Exchange - Plan III**

Credit through international exchanges. Direct Exchange Plan 3 – Direct Exchange Asia University. Repeatable. S/U grading.

**Prerequisites & Notes:** Approval from International Programs & Exchanges

Credits: 1-30

**INTL 315 - International Internship and Field Study**

International internships, independent research projects, work experience approved by departments or colleges.

Repeatable. S/U grading.

**Prerequisites & Notes:** Approval from International Programs & Exchanges

Credits: 1-30

**INTL 325 - Global Literature**

Explores themes in global relations through critical reading, thinking and writing about literature from various parts of the world.

**Prerequisites & Notes:** ENG 101 or equivalent.

Credits: 4

**INTL 330 - International Student Exchange Program - Plan I**

Credit for an international exchange through the International Student Exchange Program (ISEP), a consortia of universities. ISEP Plan 1 – Fall Quarter Only. Repeatable. S/U grading.

**Prerequisites & Notes:** Approval from International Programs & Exchanges

Credits: 1-30

**INTL 331 - International Student Exchange Program - Plan II**

Credit for an international exchange through the International Student Exchange Program (ISEP), a consortia of universities. ISEP Plan 2 – Two Semesters or Three Quarters. Repeatable. S/U grading.

**Prerequisites & Notes:** Approval from International Programs & Exchanges

Credits: 1-30

**INTL 332 - International Student Exchange Program - Plan III**

Credit for an international exchange through the International Student Exchange Program (ISEP), a consortia of universities. ISEP Plan 3 – Winter/Spring Quarter Only. Repeatable. S/U grading.

**Prerequisites & Notes:** Approval from International Programs & Exchanges

Credits: 1-30

**INTL 405 - Study Abroad**

Credit through international exchanges, academic programs offered through universities or consortia, cosponsored programs. Repeatable. S/U grading.

**Prerequisites & Notes:** Approval from International Programs & Exchanges

Credits: 1-30

**INTL 405A - National Student Exchange**

Credit through national and international exchanges, academic programs offered through universities or consortia, cosponsored programs. S/U grading.

Credits: 2 to 24

**INTL 406 - Direct Exchange - Plan I**

Credit through international exchanges. Direct Exchange Plan 1 – Direct Exchange Two Semesters or Three Quarters. Repeatable. S/U grading.

**Prerequisites & Notes:** Approval from International Programs & Exchanges

Credits: 1-30

**INTL 407 - Direct Exchange - Plan II**

Credit through international exchanges. Direct Exchange Plan 2 – Direct Exchange Semester. Repeatable. S/U grading.

**Prerequisites & Notes:** Approval from International Programs & Exchanges

Credits: 1-30

**INTL 408 - Direct Exchange - Plan III**

Credit through international exchanges. Direct Exchange Plan 3 – Direct Exchange Asia University. Repeatable. S/U grading.

**Prerequisites & Notes:** Approval from International Programs & Exchanges

Credits: 1-30

**INTL 415 - International Internship and Field Study**

International internships, independent research projects, work experience approved by departments or colleges. Repeatable. S/U grading.

**Prerequisites & Notes:** Approval from International Programs & Exchanges

Credits: 1-30

**INTL 430 - International Student Exchange Program - Plan I**

Credit for an international exchange through the International Student Exchange Program (ISEP), a consortia of universities. ISEP Plan 1 – Fall Quarter Only. Repeatable. S/U grading.

**Prerequisites & Notes:** Approval from International Programs & Exchanges

Credits: 1-30

**INTL 431 - International Student Exchange Program - Plan II**

Credit for an international exchange through the International Student Exchange Program (ISEP), a consortia of universities. ISEP Plan 2 – Two Semesters or Three Quarters. Repeatable. S/U grading.

**Prerequisites & Notes:** Approval from International Programs & Exchanges

Credits: 1-30

**INTL 432 - International Student Exchange Program - Plan III**

Credit for an international exchange through the International Student Exchange Program (ISEP), a consortia of universities. ISEP Plan 3 – Winter/Spring Quarter Only. Repeatable. S/U grading.

**Prerequisites & Notes:** Approval from International Programs & Exchanges

Credits: 1-30

**INTL 499 - Thesis in International Studies**

Capstone independent study course integrating global perspective and interdisciplinary bodies of knowledge into a directed research paper, under faculty advisement.

**Prerequisites & Notes:** INTL 201

Credits: 3

**INTL 515 - Internship**

Capstone independent study course integrating global perspective and interdisciplinary bodies of knowledge into a directed research paper, under faculty advisement.

Credits: 2 to 15

**Italian**

Courses numbered X37; X97; 300, 400; 417, 445 are described in the University Academic Policies section of this catalog.

**ITAL 101 - First-Year Italian**

Fundamentals of the language: pronunciation, grammar, aural comprehension, reading and speaking.

Credits: 5

## **Japanese**

Courses numbered X37; X97; 300, 400; 417, 445 are described in the University Academic Policies section of this catalog.

### **JAPN 101 - First-Year Japanese**

Fundamentals of the language: writing and reading hiragana, katakana and kanji; grammar, listening and speaking. Audio-assisted oral practice is an integral part of the course.

Credits: 5

### **JAPN 102 - First-Year Japanese**

Fundamentals of the language: writing and reading hiragana, katakana and kanji; grammar, listening and speaking. Audio-assisted oral practice is an integral part of the course.

**Prerequisites & Notes:** JAPN 101

Credits: 5

### **JAPN 103 - First-Year Japanese**

Fundamentals of the language: writing and reading hiragana, katakana and kanji; grammar, listening and speaking. Audio-assisted oral practice is an integral part of the course.

**Prerequisites & Notes:** JAPN 102

Credits: 5

### **JAPN 104 - Review of Elementary Japanese**

Designed for students with two years high school Japanese or equivalent to prepare them for the intermediate level through review and development of basic structure and vocabulary. Also for students needing a review of the first year.

**Prerequisites & Notes:** Two years high school Japanese; proficiency in hiragana, katakana, and 150 basic kanji

Credits: 5

### **JAPN 115 - Study-Abroad: Elementary Level**

Elementary-level Japanese language study, equivalent to on-campus coursework completed in Japanese 101, 102, 103 and 104, but earned in a study-abroad setting. Students may not enroll for these credits, which are only awarded after a study-abroad experience has been evaluated by a faculty advisor in the language.

Credits: 2 TO 15

### **JAPN 201 - Second-Year Japanese**

Further fundamental grammar; review of first-year grammar; emphasis on writing, reading, listening and speaking skills. Audio-assisted oral practice is an integral part of the course.

**Prerequisites & Notes:** JAPN 103

Credits: 4

### **JAPN 202 - Second-Year Japanese**

Further fundamental grammar; review of first-year grammar; emphasis on writing, reading, listening and speaking skills. Audio-assisted oral practice is an integral part of the course.

**Prerequisites & Notes:** JAPN 201

Credits: 4

### **JAPN 203 - Second-Year Japanese**

Further fundamental grammar; review of first-year grammar; emphasis on writing, reading, listening and speaking skills. Audio-assisted oral practice is an integral part of the course.

**Prerequisites & Notes:** JAPN 202

Credits: 4

### **JAPN 215 - Study-Abroad: Intermediate Level**

Intermediate-level Japanese language study, equivalent to on-campus coursework completed in Japanese 201, 202, and 203, but earned in a study-abroad setting. Students may not enroll for these credits, which are only awarded after a study-abroad experience has been evaluated by a faculty advisor in the language.

**Prerequisites & Notes:** JAPN 103 or equivalent.

Credits: 2 TO 15

### **JAPN 280 - Kanji**

Acquisition of 50 kanji per week by way of associative method. Not applicable to the minor. Repeatable to 10 credits. S/U grading.

Credits: 2

**JAPN 301 - Third-Year Japanese**

Emphasis on well-rounded development of reading, writing, listening and speaking abilities; introduction of colloquial Japanese. Audio-assisted oral practice is an integral part of the course.

**Prerequisites & Notes:** JAPN 203

Credits: 4

**JAPN 302 - Third-Year Japanese**

Emphasis on well-rounded development of reading, writing, listening and speaking abilities; introduction of colloquial Japanese. Audio-assisted oral practice is an integral part of the course.

**Prerequisites & Notes:** JAPN 301

Credits: 4

**JAPN 303 - Third-Year Japanese**

Emphasis on well-rounded development of reading, writing, listening and speaking abilities; introduction of colloquial Japanese. Audio-assisted oral practice is an integral part of the course.

**Prerequisites & Notes:** JAPN 302

Credits: 4

**JAPN 305 - Japanese Conversation**

Development of speaking skills in communicative situations.

**Prerequisites & Notes:** JAPN 201

Credits: 3

**JAPN 314 - Japanese Phonetics**

Improvement of pronunciation, familiarization with phonetic transcription, and awareness of pronunciation problems.

**Prerequisites & Notes:** JAPN 301 or instructor permission

Credits: 4

**JAPN 315 - Study-Abroad: Intermediate/Advanced**

These credits are awarded only after a study-abroad experience, upon evaluation by a faculty advisor in the language. These credits correspond to intermediate level coursework completed in culture, literature, and language courses in the language during the study-abroad experience.

**Prerequisites & Notes:** JAPN 203 or equivalent.

Credits: 2 TO 24

**JAPN 330 - Japanese Culture Through Film**

Discussion of Japanese culture seen through Japanese films. Topics of discussion involve Japanese psychology, mentality, customs, society and history. This course is conducted in Japanese and is repeatable up to 8 credits.

**Prerequisites & Notes:** JAPN 203.

Credits: 4

**JAPN 350 - Japanese Culture, History and Society**

This is a survey course that covers a broad scope of Japanese history, culture and society. It will be taught in Japanese but will include some readings and instruction in English when deemed appropriate. It is a requirement for students pursuing a major in Japanese, but other interested students may enroll with the permission of the instructor if space permits. Specific course contents vary according to instructors.

**Prerequisites & Notes:** JAPN 301

Credits: 4

**JAPN 401 - Advanced Japanese**

Emphasis on well-rounded development of reading, writing, listening and speaking abilities; targets the advanced materials. Required for majors.

**Prerequisites & Notes:** JAPN 303; required for majors.

Credits: 4

**JAPN 402 - Topics in Japanese Literature**

This is a seminar, conducted entirely in Japanese, and is required of students majoring in Japanese. Advanced reading materials in Japanese literature are introduced according to the class discussion schedule. The topic of the seminar varies according to the instructor. Repeatable to a maximum of 8 credits. under advisement.

**Prerequisites & Notes:** JAPN 401

Credits: 4

**JAPN 403 - Topics in Japanese Thought**

This is a seminar, conducted entirely in Japanese, and is required of students majoring in Japanese. Students are introduced to advanced materials in Japanese thought according to the class discussion schedule. The topic of the seminar varies according to the instructor. This is a writing intensive course.

**Prerequisites & Notes:** JAPN 401 or equivalent

Credits: 4

**JAPN 415 - Study-Abroad: Advanced**

These credits are awarded only after a study-abroad experience, upon evaluation by a faculty advisor in the language. These credits correspond to advanced level coursework completed in culture, literature, and language courses in the language during the study-abroad experience.

**Prerequisites & Notes:** JAPN 303 or equivalent.

Credits: 2 TO 24

**JAPN 425 - Teaching-Learning Process in Elementary Japanese**

Practicum in course preparation, classroom materials, evaluation and counseling. Repeatable up to 4 credits. S/U grading.

**Prerequisites & Notes:** Written permission of department; JAPN 303 with B or better.

Credits: 2

**Journalism**

*Courses numbered X37; X97; 300, 400; 417, 445 are described in the University Academic Policies section of this catalog.*

**JOUR 106 - Writing Structure**

Analysis of and skill development in sentence structure, syntax, English grammar, mechanics, usage and punctuation as applied to journalistic writing.

Credits: 2

**JOUR 190 - Introduction to Mass Media**

Introduction to basic issues and problems facing journalists and the public as recipients of mass media messages in national and international society; nature, theory and effects of communication; media systems, structure and support; world news flow; media controls; First Amendment rights; ethical considerations.

Credits: 5

**JOUR 207 - Newswriting**

Writing for news media; clarity in use of language, style and punctuation; sentence and paragraph structure and organization of stories; credibility of information and news judgment; basic methods of researching and writing. Weekly news discussions based on a major national newspaper as one of the texts.

**Prerequisites & Notes:** basic word processing skills required

Credits: 4

**JOUR 214 - Newspaper Staff**

Participation on the staff of the university newspaper. Write articles and take photographs for the university's newspaper and online edition. Gather and edit audio and video, create multimedia packages for the newspaper's Web site. Also includes lecture.

**Prerequisites & Notes:** Sophomore status; JOUR 207.

Credits: 3

**JOUR 305 - Photojournalism**

Introduction to news photography and its application in print and online; composing effective new pictures; essentials of processing for print publication and multi-media projects; picture editing and layout; professional ethics and the law.

**Prerequisites & Notes:** JOUR 207; basic knowledge of photography and instructor permission

Credits: 4

**JOUR 307 - Reporting**

Interviewing, news coverage of community news sources with emphasis on public affairs reporting. Introduction to computerized database reporting and investigative techniques. Writing for news media.

**Prerequisites & Notes:** JOUR 207

Credits: 5

**JOUR 309 - Editing**

News copy desk operations; editing; headline writing; dummying; page make-up and news graphics; and computerized editing.

**Prerequisites & Notes:** JOUR 207; JOUR 307 or JOUR 380.

Credits: 5

**JOUR 314 - Newspaper Staff**

Participation on the staff of the university newspaper. Write articles and take photographs for the university's newspaper. Gather and edit audio and video, create multimedia packages for the newspaper's Web site. Also includes lecture.

**Prerequisites & Notes:** Junior status, JOUR 207; JOUR 307 or JOUR 380.

Credits: 3

**JOUR 321 - Periodical Staff**

Workshop in print periodical design, online, multimedia design, layout and production, training in the creative combination of type, headlines, photographs and other illustrative material, text and caption writing; creative layout techniques; writing for publication; participation on and publication of the University periodical. Repeatable to a maximum of 6 credits.

**Prerequisites & Notes:** JOUR 207; one newspaper staff course

Credits: 3

**JOUR 330 - Principles of Public Relations**

Methods, tools and media used in planning and developing strategic public relations programs for all organizations. Practicing research methods, writing news releases, understanding effective communications strategies and integrated marketing communications, analyzing case studies, exploring relations with the press and developing creative public relations campaigns.

**Prerequisites & Notes:** JOUR 207 or ENG 101

Credits: 4

**JOUR 340 - History of U.S. Journalism**

An examination of how U.S. journalism has influenced U.S. history from the works that inspired the revolution to the coverage of 9/11. A poster presentation offers students the opportunity to research the role of the news media in shaping a specific event or issue in U.S. history.

**Prerequisites & Notes:** junior standing

Credits: 4

**JOUR 346 - Introduction to Visual Journalism**

Critical and analytical exploration of the visual aspects of storytelling in print and online media; research on the cultural history and news media application of photography, infographics, typography, audio and video clips. Consideration of special properties, demands, and aspects of visuals as they are used to enhance and augment written news narratives. Application of these principles through projects that produce still and video photography, audio, informational graphics and typography to accompany written narrative.

**Prerequisites & Notes:** JOUR 207, JOUR 305, JOUR 309

Credits: 5

**JOUR 350 - Mass Media Law**

Rights and legal restrictions on freedom of the press; constitutional guarantees as interpreted through the courts; libel, privacy, access to information, censorship, contempt, agency regulations. Issues applying to various forms of mass media, including print, broadcast and online publishing.

**Prerequisites & Notes:** Junior status

Credits: 5

**JOUR 351 - Mass Media Ethics**

Introduction to ethical theories; examination of professional codes and standards; changing roles of the media that affect moral reasoning for the journalist; responsibilities of the media in a world of instant communication and reaction; historical perspectives through case studies; use of reporting editing and advocacy methods and formation of news in print, broadcast and online media. Research paper examines ethics topic.

**Prerequisites & Notes:** JOUR 207

Credits: 4

**JOUR 360 - Study of Literary Journalism**

Reading and critiquing texts that use literary techniques to enhance journalism. Studying the history of literary journalism and its impact on the field.

**Prerequisites & Notes:** Junior status

Credits: 3

**JOUR 370 - Online Journalism**

Practice and study of journalism online. Examines how technological innovations are changing the ways print and broadcast journalists do their jobs, as well as the social, economic, ethical and legal implications of these changes. Students will learn to report, edit and design in an online environment.

**Prerequisites & Notes:** JOUR 307, JOUR 309 and JOUR 346.

Credits: 3

**JOUR 375 - Diversity, Mass Media and Social Change**

Uses an intersectional framework of race/ethnicity, gender, class and other demographic groups to examine how mass media cover social change and affect their audiences.

**Prerequisites & Notes:** Junior status.

Credits: 4

**JOUR 380 - Advanced Public Relations Writing and Techniques**

Intensive focus on the processes involved in writing for an organization's diverse publics, including news releases, op-eds, broadcast material, speeches, organizational memos and proposals, employer publications, backgrounders, features and web sites. Students gain hands-on experience by applying these skills and processes through service-learning by writing for community organizations.

**Prerequisites & Notes:** JOUR 207 and JOUR 330.

Credits: 5

**JOUR 390 - The News Process**

Critical examination of current news issues and decision-making processes through visiting news media professionals, readings and discussion. Repeatable to a maximum of 8 credits. with various topics.

**Prerequisites & Notes:** Junior status.

Credits: 4

**JOUR 404 - Feature Writing**

In-depth article, column, and persuasive writing; development of ideas, gathering of materials and writing; special attention to individual interests; exploration of freelance writing markets.

**Prerequisites & Notes:** Major status and JOUR 307 or JOUR 380.

Credits: 4

**JOUR 414 - Newspaper Staff**

Participation on the staff of the university newspaper. Writing articles and taking photographs for the university's newspaper and online edition. Gathering and editing audio and video, creating multimedia packages for the newspaper's Web site. Also includes lecture. Repeatable to a maximum of 12 credits.

**Prerequisites & Notes:** JOUR 207; JOUR 307 or JOUR 380; JOUR 314.

Credits: 3

**JOUR 415 - Newspaper Editorship**

Publication editing and development; assigning and editing news stories, photographs and multimedia projects; creating content for the publication's Web site; creating and implementing budget and advising on budget decisions; acting as mentor to assigned staff members; holding office hours and meeting outside scheduled class time; preparing reports and presentations for class and instructor; assisting with and taking part in workshops; office management and security; learning personnel communication skills; using advanced publication software and technology; making self-evaluation and production reports for adviser. Repeatable to a maximum of 16 credits. This course may not be taken concurrently with a staff course.

**Prerequisites & Notes:** JOUR 207; JOUR 307 or JOUR 380; one newspaper staff course, and permission of instructor.

Credits: 4

**JOUR 421 - Periodical Staff**

Workshop in print periodical design, online, multimedia design, layout and production, training in the creative combination of type, headlines, photographs and other illustrative material, text and caption writing; creative layout techniques; writing for publication; participation on and publication of the university periodical. Repeatable to 9 credits.

**Prerequisites & Notes:** Senior status; JOUR 207; JOUR 307 or JOUR 380; and one newspaper staff course.

Credits: 3

**JOUR 422 - Periodical Editorship**

Print publication and online publication editing and development; creating and implementing budget and advising on budget decisions; acting as mentor to assigned staff members; holding office hours and meetings outside scheduled class time; preparing reports and presentations for class and instructor; assisting with and taking part in workshops; office management and security; learning personnel communication skills; using advanced publication software and technology; making self-evaluation and production reports for adviser. This course may not be taken

concurrently with a periodical staff course. Repeatable to a maximum of 8 credits.

**Prerequisites & Notes:** JOUR 207; JOUR 307 or JOUR 380; one periodical staff course, and permission of instructor.

Credits: 4

#### **JOUR 430 - Field Internship**

Supervised field work on newspapers, magazines, radio and TV stations, public relations and advertising agencies, or other appropriate professional situations. S/U grading.

**Prerequisites & Notes:** For the news/editorial sequence: JOUR 207, JOUR 307, JOUR 309, JOUR 350, JOUR 351, two newspaper staff courses and major status. For the public relations sequence: JOUR 207, JOUR 309, JOUR 330, JOUR 350, JOUR 351, JOUR 380, one newspaper staff course and major status. For the visual journalism sequence: JOUR 207, JOUR 305, JOUR 307, JOUR 309, JOUR 346, JOUR 350, JOUR 351, one newspaper staff course and major status. For the environmental journalism sequence: JOUR 207, JOUR 307, JOUR 309, JOUR 350, one newspaper staff course and major status.

Credits: 6

#### **JOUR 440 - Public Relations Research and Campaigns**

Study and practice in research methods, theory, implementation and evaluation of effective programs of communication. Students work in teams to establish a firm theoretical and research-based approach to planning an effective public relations campaign for a community organization.

**Prerequisites & Notes:** JOUR 330, JOUR 380 and major status.

Credits: 5

#### **JOUR 446 - Advanced Visual Journalism**

In depth exploration of concepts and practices explored in Journalism 346. Students work in teams to apply theories, conduct research, analyze data and apply design and software skills to produce visual and verbal elements for advanced projects.

**Prerequisites & Notes:** Major status and JOUR 346 and JOUR 370.

Credits: 5

#### **JOUR 450 - Advanced Reporting**

Survey and application of advanced reporting techniques, including computer-assisted reporting, and the use of the Internet, to produce news stories of depth, complexity and appeal.

**Prerequisites & Notes:** JOUR 307, JOUR 350 and JOUR 351; major status.

Credits: 5

#### **JOUR 460 - Special Reporting Project**

Students write about and photograph people who have ethnic, national, environmental or cultural backgrounds different from the dominant society; sensitivity to other cultural traditions; advanced reporting and writing skills.

**Prerequisites & Notes:** JOUR 307 or JOUR 380; JOUR 350 or JOUR 351; two staff courses and major status.

Credits: 4

#### **JOUR 480 - Senior Seminar**

Examines research methods in and theories of mass communication in the context of the practice of journalism and public relations in a democratic society. A research paper provides students with practice applying specific methods and theories to explore contemporary issues in journalism and public relations.

**Prerequisites & Notes:** JOUR 350 and JOUR 351; and major status.

Credits: 5

### **Kinesiology**

*Courses numbered X37; X97; 300, 400, 500; 417, 445, 517, 545 are described in the University Academic Policies section of this catalog.*

#### **KIN 301 - Survey of Kinesiology, Physical Education and Health**

Library research methods, career orientation, professional readiness, historical perspectives, and current issues in kinesiology, physical education and health.

Credits: 3

#### **KIN 304 - Prevention and Care of Athletic Injuries**

Overview of current information on the care and prevention, and immediate care, of common sports injuries.

**Prerequisites & Notes:** KIN 301, BIOL 348.

Credits: 3

**KIN 306 - Measurement and Evaluation in Kinesiology**

Application of the theory of measurement, evaluation and appropriate statistical processes to kinesiology programs; practical experiences involving test selection, administration and evaluation and interpretation of results in health and fitness settings.

**Prerequisites & Notes:** KIN 301 or concurrent.

Credits: 3

**KIN 307 - Statistics in Exercise & Sport Science**

Statistical techniques utilized in the exercise and sport science fields.

**Prerequisites & Notes:** KIN 301, KIN 306; or instructor permission.

Credits: 4

**KIN 308 - Human Growth and Motor Development**

The study of postnatal growth, maturation, and physical activity, their interrelationship with cognitive and psychosocial development, with application to health promotion and physical activity programs for children and youth.

Credits: 3

**KIN 309 - Physical Dimensions of Aging**

A study of the physical and motoric changes that occur during the adult years, their interrelationship with physical activity, with application to health promotion and disease prevention. Includes theoretical perspectives on aging, the aging process in specific body systems, and how these processes may affect cognitive and emotional development.

**Prerequisites & Notes:** KIN 301 or concurrent.

Credits: 3

**KIN 311 - Biomechanics**

Application of basic mechanical principles to movement. Motion fundamentals, kinetics, kinematics, aerodynamics, hydrodynamics, equilibrium and external forces, rebound and spin, two-dimensional analysis, and the body as a machine; lab work is included.

**Prerequisites & Notes:** KIN 301 or concurrent; completion of Math GURs.

Credits: 5

**KIN 312 - Functional Anatomy**

Important muscles of the body; origin, insertion, and action; principles of human movement; performance analysis of basic locomotor movement, daily living activities and sports skills; lab work included.

**Prerequisites & Notes:** KIN 301 or concurrent; BIOL 348.

Credits: 5

**KIN 315 - Fitness Instruction and Leadership**

Instructional strategies, general progressions, pedagogical principles, teaching methods, class management, peer teaching, self-evaluation strategies, and supervision strategies for teaching in various health and fitness settings.

**Prerequisites & Notes:** KIN 301, KIN 308.

Credits: 2

**KIN 316 - Group Fitness Instructor Training**

Instruction leading to qualification for the American Council on Exercise (ACE) Group Fitness Certification Exam which covers foundational knowledge, instructional techniques, and professional responsibilities.

**Prerequisites & Notes:** BIOL 348; KIN major status; KIN 315 recommended.

Credits: 2

**KIN 320 - Psychology of Sport**

Psychological principles and states which are present in sporting activities, both at recreational and highly competitive levels. **Prerequisites & Notes:** KIN 301 or concurrent; permission of instructor.

Credits: 3

**KIN 321 - Sociology of Sport**

Sociological implications of sport in contemporary American society.

**Prerequisites & Notes:** KIN 301 or concurrent; or permission of instructor.

Credits: 3

**KIN 323 - Olympism and the Modern Olympic Games**

A historical and philosophical overview of the Olympic Movement and modern Olympic Games. Particular emphasis will be placed on the philosophy of the Olympic Movement-Olympism.

**Prerequisites & Notes:** KIN 301 or instructor permission.

Credits: 3

**KIN 409 - Functional Assessment of Older Adults**

This course will examine the physical functional assessment methods commonly used with older adults, including those that are novel or in development. The assessments will focus on mobility, balance, strength, and power. The course aims to explore the research foundations and effectiveness of such assessments, and to discuss their appropriate utilization and interpretation. The class will be conducted using a lecture-discussion basis with several hands-on small group activities in the laboratory and lower weight room.

**Prerequisites & Notes:** KIN 309; or permission of instructor.

Credits: 3

**KIN 410 - Motor Control and Learning**

Principles of motor control and skill acquisition, as it relates to human movement.

**Prerequisites & Notes:** KIN 301 and BIOL 348.

Credits: 3

**KIN 413 - Physiology of Exercise**

Nature of muscular, metabolic, cardiovascular and respiratory adjustments to acute and chronic exercise. The effect of training on fitness and health. Includes experimental laboratory sessions.

**Prerequisites & Notes:** KIN, PE or Community Health major status; BIOL 348; KIN 306 recommended; or permission of instructor.

Credits: 5

**KIN 414 - Physical Activity and Nutrition**

Current topics on exercise and nutrition; weight control, dietary supplementation and performance, fluid regulation, atherosclerosis and diabetes. Applications include metabolic balance, consumer issues such as marketing strategies, label analysis, food choices, attributes of food products such as natural, organic, fat-free, among others.

**Prerequisites & Notes:** KIN, PE or Community Health major status or permission of instructor; KIN 413, or concurrent.

Credits: 3

**KIN 415 - Physical Fitness Assessment and Exercise Prescription**

Examine techniques of evaluation for physical fitness with an emphasis on aerobic capacity, flexibility, and body composition; case studies; develop appropriate exercise program and re-evaluation. Includes experimental laboratory sessions and practical laboratory skills analysis.

**Prerequisites & Notes:** KIN 413.

Credits: 5

**KIN 416 - Strength and Conditioning Program Design**

Theoretical and practical knowledge necessary to design safe and effective training programs for optimization of health, fitness and performance.

**Prerequisites & Notes:** KIN 312 and KIN 413; KIN 410 or concurrent.

Credits: 3

**KIN 420 - Seminar in Sport Psychology**

An interdisciplinary seminar (psychology/physical education) exploring core topics of sport psychology including: evaluation of athletes, research design and strategies, personality assessment, mental and physical preparation for competition, clinical applications.

**Prerequisites & Notes:** KIN 320, KIN 321, KIN 410; and 10 credits in psychology or permission of instructor.

Credits: 3

**KIN 422 - Professional Issues in Health and Exercise Settings**

The focus of this course is on professional issues relating to human resources, philosophy, finance and legal concerns with a focus on technical and professional writing.

**Prerequisites & Notes:** KIN 301; Senior Status.

Credits: 3

**KIN 471 - Internship I**

Full-time supervised professional experience emphasizing functional proficiency under joint sponsorship of University and agency personnel. S/U grading.

**Prerequisites & Notes:** First Aid/CPR certification, proof of malpractice insurance, and permission of instructor.

Credits: 3

**KIN 472 - Internship II**

Full-time supervised professional experience emphasizing functional proficiency under joint sponsorship of University and agency personnel. S/U grading.

**Prerequisites & Notes:** First Aid/CPR certification, proof of malpractice insurance, and permission of instructor.  
Credits: 12

**KIN 491 - Field Experience**

Practical volunteer experience in agencies such as hospitals, physical therapy clinics, retirement or convalescent center, worksite wellness programs, fitness facilitation, on-campus fitness programs and community sports organizations. Repeatable to a maximum of 6 credits. S/U grading.

**Prerequisites & Notes:** First Aid/CPR certification, proof of malpractice insurance, and permission of instructor.  
Credits: 3

**KIN 493 - Exercise And Sport Science Research**

Investigation of a problem conducted independently or as part of a group under faculty supervision. S/U grading.

**Prerequisites & Notes:** 15 credits completed in Exercise and Sport Science; permission of instructor.  
Credits: 3

**KIN 494 - Instructional Assistant**

Assist faculty in the classroom and lab instruction. Assist faculty with activities such as lab and lecture preparation and implementation, leading classroom discussions, assisting students with class materials. Duties vary by course and instructor but the time commitment will be 8 to 10 hours per week. Repeatable to a maximum of 6 credits. S/U grading.

**Prerequisites & Notes:** Permission of instructor; a minimum grade of B in the course for which the student will be a teaching assistant.

Credits: 3

**KIN 502 - Research Topics in Human Movement and Performance**

Supervised research or study in topics related to sociology/ psychology of sport, biomechanics, exercise physiology, motor learning/control, human growth and motor development, and epidemiology of physical activity. Repeatable to a maximum of 10 credits.

**Prerequisites & Notes:** Permission of instructor.

Credits: 1 TO 5

**KIN 506 - Research Design in Human Movement and Performance**

Purpose and design of various research methods used in the analysis of human movement and performance problems; survey of common statistical applications; development of research proposals.

**Prerequisites & Notes:** Graduate status; MATH 240 or KIN 307 or equivalent.

Credits: 4

**KIN 507 - Motor Control**

Examination of the structure and function of the human neuromuscular system, as it pertains to the production of movement.

**Prerequisites & Notes:** KIN 410 or equivalent.

Credits: 3

**KIN 510 - Laboratory Techniques in Exercise Science**

Common laboratory techniques utilized in exercise science are presented with emphasis on body composition analysis, circulo-respiratory testing, phlebotomy/blood analysis, muscular strength and endurance, computer usage, force platform analysis, electromyography and motion capture techniques.

**Prerequisites & Notes:** KIN 311 and KIN 413 or equivalent, or permission of instructor.

Credits: 4

**KIN 511 - Physical Activity and Hypokinetic Diseases**

Survey of effects of physical activity on disease processes related to hypokinesis: cardiovascular disease, obesity, diabetes, osteoporosis, arthritis, inflammation, sarcopenia. Overview of physical activity needs of special populations.

**Prerequisites & Notes:** KIN 413 or permission of instructor.

Credits: 3

**KIN 512 - Data Processing Methods**

Principles of data processing in Kinesiology using software applications common in the field.

**Prerequisites & Notes:** KIN 311, KIN 413, KIN 510 maybe taken concurrently; or permission of instructor.

Credits: 3

**KIN 513 - Exercise Prescription and Programming**

Design safe and effective physical activities for selected populations in rehabilitative, preventative, and competitive programs. Medico-legal aspects and administration of exercise prescription and programming. Case studies.

**Prerequisites & Notes:**

KIN 413 or permission of instructor.

Credits: 4

**KIN 516 - Advanced Conditioning Principles and Practice**

This course is designed to equip students with the theoretical and practical knowledge related to the most advanced and state-of-the-art methods used to maximize fitness and athletic performance.

**Prerequisites & Notes:** KIN 416 or permission of instructor.

Credits: 3

**KIN 520 - Readings in Human Movement and Performance**

Directed readings, analysis, discussion of current literature on human movement culminating in a written paper and discussion of chosen topic.

**Prerequisites & Notes:** Permission of instructor.

Credits: 3

**KIN 533 - Cardiovascular Physiology**

Advanced principles and concepts regarding cardiovascular dynamics. Examines various parameters of the cardiovascular system, the relationship of resting data to exercise data, and electrocardiography.

**Prerequisites & Notes:** KIN 413 or permission of instructor.

Credits: 3

**KIN 540 - Applied Exercise Physiology**

Selected topics in advanced exercise physiology: homeostasis, energy systems, metabolism, cardiorespiratory adjustments, hormonal control, neuromuscular physiology, nephrology, immunology, environmental responses and adaptations, by lecture and recitation.

**Prerequisites & Notes:** KIN 413 or permission of instructor.

Credits: 4

**KIN 541 - Foundations and Ethics of Sport Psychology**

Theoretical foundations and behavioral applications of sport psychology including: history, ethics and current status of sport psychology, individual differences in sport behavior, motivation in sport, exercise psychology, social influence and sport, and the dynamics of sport groups.

**Prerequisites & Notes:** KIN 320 or permission of instructor.

Credits: 3

**KIN 542 - Seminar in Sport Sociology**

The study of sport as a microcosm of society with particular emphasis on the following topical areas: economics and sport, social mobility and sport, socialization, ethnic issues and sport, gender issues and sport, education and sport, sport and politics, and current social issues and sport.

**Prerequisites & Notes:** KIN 321 or permission of instructor.

Credits: 3

**KIN 543 - Biomechanical Analysis of Human Movement**

Kinematic and kinetic analysis of human movement with focus on practical application of mechanical laws governing human motion; laboratory and computer applications.

**Prerequisites & Notes:** KIN 311, KIN 312 or permission of instructor.

Credits: 4

**KIN 544 - Biomechanics of the Musculoskeletal System**

Selected topics relating to biomechanics of the musculoskeletal system, muscular and skeletal system characteristics, biomechanics of the hip, knee, shoulder, foot, ankle and vertebral column.

**Prerequisites & Notes:** KIN 311, KIN 312 or permission of instructor.

Credits: 4

**KIN 551 - Applied Sport and Exercise Psychology**

Provides comprehensive overview of applied educational strategies and techniques in sport and exercise psychology, including performance enhancement/intervention strategies and techniques, exercise psychology, psychosocial foundations of youth sport programs and psychology of coaching.

**Prerequisites & Notes:** KIN 541.

Credits: 4

**KIN 592 - Internship**

Supervised internship in schools, hospitals, clinics or corporation/industries as appropriate to complement the student's area of interest. Repeatable to a maximum of 6 credits.

**Prerequisites & Notes:** First Aid/CPR certification, proof of malpractice insurance, and permission of instructor.

Credits: 1 TO 6

#### **KIN 690 - Thesis**

Repeatable to a maximum of 9 credits.

**Prerequisites & Notes:** problem approval and permission of instructor.

Credits: 1 TO 9

#### **KIN 699 - Continuous Enrollment**

S/U grading.

Credits: 2

### **Modern and Classical Languages**

*Courses numbered X37; X97; 300, 400; 417, 445 are described in the University Academic Policies section of this catalog.*

#### **LANG 410 - Second Language Acquisition: Theory**

Current theories on the process by which a second language is acquired, in comparison and contrast with first language acquisition. Emphasis on the learner, and the many variables that will affect his/her success in the process of learning language.

**Prerequisites & Notes:** Six credits in one modern foreign language beyond second year; LING 201 or TESL 404 recommended

Credits: 3

#### **LANG 420 - Second Language Acquisition: Practice**

To be taken prior to field experience. Current trends in the teaching of language as seen in the historical context. Emphasis on hands-on experimentation and practice with techniques appropriate to a variety of levels. Use, analysis and critique of technological aids that may enhance the acquisition process.

**Prerequisites & Notes:** Six credits in one modern foreign language beyond second year; LANG 410

Credits: 5

### **Latin**

*Courses numbered X37; X97; 300, 400; 417, 445 are described in the University Academic Policies section of this catalog.*

#### **LAT 101 - Elementary Latin**

Fundamentals of grammar to provide a reading knowledge; selected readings from various Roman writers.

Credits: 5

#### **LAT 102 - Elementary Latin**

Fundamentals of grammar to provide a reading knowledge; selected readings from various Roman writers.

**Prerequisites & Notes:** LAT 101

Credits: 5

#### **LAT 103 - Elementary Latin**

Fundamentals of grammar to provide a reading knowledge; selected readings from various Roman writers.

**Prerequisites & Notes:** LAT 102

Credits: 5

#### **LAT 201 - Intermediate Latin**

Review of fundamentals; selected readings from various Roman writers; introduction to Latin civilization.

**Prerequisites & Notes:** LAT 103 or two years of high school Latin

Credits: 4

#### **LAT 202 - Intermediate Latin**

Review of fundamentals; selected readings from various Roman writers; introduction to Latin civilization.

**Prerequisites & Notes:** LAT 201

Credits: 4

#### **LAT 203 - Intermediate Latin**

To be taken in sequence as the third in an intermediate language sequence. Review of fundamentals; selected readings from Roman writers with an emphasis on honing grammatical skills and understanding Roman literary and cultural achievements.

**Prerequisites & Notes:** Latin 202 or equivalent.

Credits: 4

**LAT 340 - Classical Roman Literature**

Readings in major Roman authors of the late Republican and early Imperial periods; introduction to classical literary analysis.

**Prerequisites & Notes:** Two years university-level Latin or equivalent.

Credits: 4

**LAT 341 - Medieval Latin Literature**

Readings in the Christian Latin authors of the European Middle Ages. Introduction to Latin paleography, Medieval literary genres and prosody.

**Prerequisites & Notes:** Two years university-level Latin or equivalent.

Credits: 4

**LAT 342 - Humanist and Neo-Latin Literature**

Selections from authors of the European Renaissance, Reformation and modern periods; special attention given to the continuity of Classical literary traditions.

**Prerequisites & Notes:** Two years university-level Latin or equivalent.

Credits: 4

**LAT 350 - Advanced Readings**

**Prerequisites & Notes:** LAT 202

Credits: 4

**Liberal Studies**

*Courses numbered X37; X97; 300, 400; 417, 445 are described in the University Academic Policies section of this catalog.*

**LBRL 110 - Confession and Self-Promotion: Autobiography from Augustine to the Blogosphere**

An examination of the historical origins of autobiographical writing in the European tradition, this class considers how individuals have imagined both themselves and their relationships to society. Through visual media (such as portraiture) and various written genres (from letters to trial records to essays), this class uses an interdisciplinary approach to introduce some important themes in European cultural history.

**Prerequisites & Notes:** Freshman status

Credits: 5

**LBRL 121 - The Western Tradition I: The Ancient World**

Concepts of man in Near Eastern and Mediterranean cultures: Mesopotamia, Egypt, Greece, Palestine, Rome. Interdisciplinary introduction to significant cultural themes from art, music, history, philosophy, literature in the Western tradition. (LBRL 121, 122 and 123 may be counted toward the GUR humanities requirement; they need not be taken in sequence.)

Credits: 5

**LBRL 122 - The Western Tradition II: Medieval and Early Modern Europe**

Emphasis on emergent "modernity" and associated problems of "world-view," authority vs. reason, the individual in the universe. Interdisciplinary introduction to significant cultural themes from art, music, history, philosophy, literature in the Western tradition. (LBRL 121, 122 and 123 may be counted toward the GUR humanities requirement; they need not be taken in sequence.)

Credits: 5

**LBRL 123 - The Western Tradition III: Modern World**

Nineteenth- and twentieth-century ideologies; their philosophies of man; alienation and integration of the individual in society. Interdisciplinary introduction to significant cultural themes from art, music, history, philosophy, literature in the Western Tradition. (LBRL 121, 122 and 123 may be counted toward the GUR humanities requirement; they need not be taken in sequence.)

Credits: 5

**LBRL 231 - Introduction to the Study of Religion**

Introduction to academic study of religion; use of case studies from world religions to explore various scholarly perspectives; theories of religion.

Credits: 5

**LBRL 232 - Myth and Folklore**

An introduction to the study of myth and folklore and its cultural impact.

Credits: 4

**LBRL 243 - Art and Ideas**

A study of Western humanities through the visual arts, sculpture, painting and architecture. Exploration of the values expressed through choices of style and subject matter in selected cultural periods.

Credits: 4

**LBRL 271 - Humanities of India**

The Indian experience and the development of its cultural unity; the challenge of Islam and the British colonial experience; the conditions of modernization and the emerging synthesis of values.

Credits: 4

**LBRL 272 - Religion and Society in China and Japan**

Study of formal religious thought and of popular religion in traditional Chinese and Japanese cultures, the impact of Christian denominations and the character of contemporary religious life.

Credits: 4

**LBRL 273 - Art and Society in China and Japan**

Studies of the aesthetic traditions of East Asia, courtly and popular, secular and religious; the impact of foreign ideas and the role of art in recent propaganda, architecture and industrial design as well as in traditional modes of expression.

Credits: 4

**LBRL 275 - Humanities of Japan**

Interdisciplinary introduction to Japanese civilization, both traditional and modern, with particular emphasis on religions; historical, artistic, and literary patterns; and societal and cultural ideals.

Credits: 4

**LBRL 276 - Humanities of Africa**

Introduction to the cultural heritage of sub-Saharan Africa and to the contemporary civilization that draws upon it; emphasis on the process by which Africans currently build and use coherent accounts of their heritage.

Credits: 5

**LBRL 277 - Humanities of China**

Interdisciplinary introduction to Chinese civilization, traditional and modern. Emphasis on religions; intellectual, artistic and literary patterns; and societal and cultural ideals.

Credits: 4

**LBRL 278 - Humanities of Islamic Civilization**

Interdisciplinary introduction to Islamic Civilizations with an emphasis on shared religious, cultural, and societal ideals and their adaptation in various historical and geographic contexts.

Credits: 5

**LBRL 281 - Representations of Otherness**

Examination of images and narratives of the Other in major works of modern literature, art and film from the 19th century to the present. Themes include the roles of the unconscious, languages, gender and politics in the construction and destruction of self and others.

Credits: 4

**LBRL 283 - Religion and Globalization**

Focus on religious responses to globalization through case studies of modern religious movements. Case studies will be chosen to explore cultural interaction and religious change in a world shaped by technological revolutions and increased communication, information, and migration.

Credits: 5

**LBRL 301 - Historical Methods in the Humanities**

Methods of cultural and intellectual history. Locating texts in their historical and cultural contexts by analyzing their authors, audiences and arguments.

**Prerequisites & Notes:** Junior status or permission of instructor; one from: LBRL 121, LBRL 122, LBRL 123, HIST 111, HIST 112, HIST 113.

Credits: 5

**LBRL 302 - Methods of Interdisciplinary Study**

Exploration of techniques of interdisciplinary investigation through analysis of a major literary text in its cultural and historical context; exercises in the use of the library as a research tool; preparation of a seminar paper. Ordinarily offered spring quarter only.

**Prerequisites & Notes:** LBRL 121, LBRL 122; average grade of B in LBRL courses and permission of instructor.

Credits: 5

### **LBRL 303 - Methods in the Study of Religion**

An examination of the academic study of religion as a problem in the interaction of theory, method, and the history of culture. Consideration of various approaches to understanding and explaining religion from the Enlightenment to the present.

**Prerequisites & Notes:** One course from LBRL 231, LBRL 271, LBRL 272, LBRL 278, or permission of instructor.

Credits: 5

### **LBRL 321 - Between Renaissance and Inquisition: Censorship and Religious Conflict in Spain's Golden Age**

Early modern Spain has simultaneously been identified as an artistic Golden Age (which saw a flourishing production of plays, verse, and prose) and as an era in which censorship and religious intolerance closed Spain off to other European intellectual currents. This class will help seek to explore this central paradox of Spanish religious, cultural and intellectual history, through an interdisciplinary examination of various literary genres, trial records, painting and architecture.

**Prerequisites & Notes:** One Liberal course or HIST 112 or instructor permission.

Credits: 5

### **LBRL 323 - The Romantic Paradox: Love, Life and Death**

Study of romanticism as a complex, international cultural movement originating in the late 18th century with continuing vitality and influence into the present. Exploration of characteristic Romantic tensions: the desire for unity, harmony, infinity and beauty vs. the experience of fragmentation, limitation and loss. Analysis of texts and films representing various facets of the Romantic mind.

**Prerequisites & Notes:** Junior status or permission of instructor.

Credits: 4

### **LBRL 325 - Surveillance, Voyeurism and the Culture of Suspicion**

This course will trace the concept of surveillance and its connection to voyeurism as the primordial desire to see from the 18th Century to the present. Through careful reading of primary and secondary sources of literature, sociology, philosophy, history, journalism, and film studies and analysis of visual material, this course will examine the paradox within the concept of surveillance which can be understood as a means to implement security and insure peace as well as constitute a threat to private and civic rights and freedoms. Formally, the course will alternate between the analysis of visual material and printed material. Class time is divided into lecture, organized class discussion and student presentations.

Credits: 4

### **LBRL 332 - Universal Religions: Founders and Disciples**

Beliefs and practices of major world religions; traditional images of religious founders; development of religious traditions; historical and phenomenological perspective.

**Prerequisites & Notes:** Junior status or permission of instructor.

Credits: 4

### **LBRL 333 - Religion in America**

Religious traditions, values and institutions in American culture; focus on pluralism; attention to contemporary issues and events; interdisciplinary perspective.

**Prerequisites & Notes:** Junior status or permission of instructor.

Credits: 5

### **LBRL 334 - Hebrew Bible and the Religion of Ancient Israel**

A survey of representative sections of the Hebrew Bible (the Old Testament for Christians) and related literature. Biblical texts are analyzed as expressions of the ways in which groups or individuals understood themselves, their world, and God. The historical and cultural contexts in which the texts were originally written are emphasized with attention to the ways that elements of the Biblical tradition developed under changing historical circumstances.

**Prerequisites & Notes:** Junior status

Credits: 4

### **LBRL 336 - New Testament and Early Christianity**

A survey of the New Testament and related early Christian literature. The texts are analyzed as expressions of the ways in which groups or individuals understood themselves, their world, and God. The historical and cultural contexts in which the texts were written are emphasized with attention to the variety of early Christian traditions and their development under changing historical circumstances.

**Prerequisites & Notes:** Junior status

Credits: 4

**LBRL 338 - Mysticism**

An interdisciplinary exploration of the nature and variety of mysticism. Theoretical debates concerning the psychological roots and cultural conditioning of mysticism. Includes an examination of important mystics in the Christian, Islamic and East Asian traditions along with their significance for their respective societies.

**Prerequisites & Notes:** Junior status or permission of instructor.

Credits: 5

**LBRL 340 - Sufism: The Islamic Mystical Tradition**

This course explores the Islamic mystical tradition, or Sufism. For long centuries Sufism has contributed to the development of Islamic religious thought, to the global diffusion of the faith, and to the shaping of religious experiences and practices of Muslims in the Middle East, Africa and Asia. It has also enriched the creative and aesthetic aspects of Islamic civilization, most notably music and poetry. We will examine Sufi devotional practices and rituals, teachings of some spiritual masters, and the historical development and growth of Sufism and Sufi orders.

**Prerequisites & Notes:** Junior status; ENG 101 and 30 credits; and one course from: LBRL 231, LBRL 271, LBRL 278, LBRL 332, LBRL 378, or HIST 287, HIST 406; or instructor permission.

Credits: 4

**LBRL 360 - China and the Emerging World Economy: From Antiquity to the Early Modern**

The focus of this course will be early stages of the unfolding of "globalization" in Eurasia, from antiquity into the early modern period, with particular attention given to China's important role in these developments, and how it was affected in turn.

**Prerequisites & Notes:** Junior status or permission of instructor.

Credits: 5

**LBRL 362 - Islam and Muslims in the Indian Ocean World**

Explores cross cultural contacts in the Indian Ocean world from East Africa, Arabia and the Persian Gulf to South and Southeast Asia, and the history and role of Islam and Muslims from the 14th century to the present. Focuses on texts by or about Muslim travelers—Sufis, pilgrims, scholars, and merchants—and their creation networks, identities, and "Muslim spaces", to show that some aspects of globalization have a long history in the Indian Ocean.

**Prerequisites & Notes:** Junior status or permission of instructor.

Credits: 4

**LBRL 372 - Postcolonial Novels: Art, Rhetoric and Social Context**

Critical readings of postcolonial novels. Close attention to how they have been shaped as artistic wholes, and how they try to shape emotions and beliefs of readers. Reading beyond the novels about contexts which they assume and incompletely express: change and the absence of change in postcolonial societies.

**Prerequisites & Notes:** Junior status or permission of instructor.

Credits: 4

**LBRL 375 - Buddhism**

Beginning with a broad overview of the teachings of Buddhism and its core beliefs and practices, this course will then turn to detailed study of the doctrines and institutions of particular Buddhist traditions.

**Prerequisites & Notes:** One of LBRL 231, LBRL 271, LBRL 272, LBRL 275, LBRL 277; HIST 370.

Credits: 5

**LBRL 378 - Religion and Society in India**

Examination of major Indian religious traditions - Hindu and Islamic - as ritual systems, belief and value systems, and systems of social identification; emphasis on the relation of religion to social and gender identities, communal politics, and social change, chiefly in the modern period.

**Prerequisites & Notes:** Junior status or permission of instructor.

Credits: 4

**LBRL 421 - Senior Seminar: Approaches to Cultural History**

Methodologies of cultural history, by nature interdisciplinary. Students read and analyze great figures in the field, such as Burckhardt, Lovejoy, Huizinga, and Gombrich, to discover methodologies used. Topics may include the nature of evidence and arguments in cultural history, and the history of ideas, rhetoric and aesthetics in writing cultural history, roles of authorial voice, and relations of writing cultural history to intellectual, social and cultural contexts. See instructor for syllabus and specific readings and topics. Repeatable with different topics to a maximum of 10 credits.

**Prerequisites & Notes:** LBRL 302 and permission of instructor.

Credits: 5

**LBRL 422 - Senior Seminar: Literary Traditions in Western Culture**

How Western culture has understood, developed and transformed its major literary monuments. Students read works of major figures, and examine how in later eras these figures and their works were read and used, and discover

purposes and contexts of such use. Examples may include Greek Sophists versus Plato on Homer, Dante's use of Homer and Virgil, Biblical material in Milton. See instructor for syllabus and specific readings and topics. Repeatable with different topics to a maximum of 10 credits.

**Prerequisites & Notes:** LBRL 302 and permission of instructor.

Credits: 5

#### **LBRL 423 - Senior Seminar: Self, Culture, and Society**

Analysis of individual identity and social forms in a non-Western culture. Use of primary sources (in translation). Consideration of methodologies needed to analyze sources from non-Western cultures. Cross-cultural comparison of conceptions of the individual and his/her place in society and the universe. See instructor for syllabus and specific readings and topics. Repeatable with different topics to a maximum of 10 credits.

**Prerequisites & Notes:** LBRL 302 and permission of instructor.

Credits: 5

#### **LBRL 424 - Senior Seminar: Social Change in Cross-Cultural Contexts**

Changes associated with European expansion in Asia and Africa and direct and indirect European colonial rule; course may include topics on Western education, religious reform movements, nationalist and postcolonial political movements, and new intellectual, literary and cultural movements. Emphasis on finding and using primary sources, application of methodologies from a variety of disciplines to understand complex patterns of social change. See instructor for syllabus and specific readings and topics. Repeatable with different topics to a maximum of 10 credits.

**Prerequisites & Notes:** LBRL 302 and permission of instructor.

Credits: 5

#### **LBRL 430 - The Humanities and the Contemporary Workplace**

Connects liberal-arts curriculum to workplace issues. Introduces students to professional work environments through placement in local non-profit agencies. Carries service-learning credit.

**Prerequisites & Notes:** Permission of Instructor.

Credits: 3

#### **LBRL 478 - Renewal and Reform in the Islamic World Since the Eighteenth Century**

An exploration of the ideological foundations and historical contexts of reform movements in the Middle East, Asia and Africa from the 18th century up to the various contemporary Salafi movements commonly recognized as "fundamentalist." Islamic responses to imperialism, colonialism, and "modernization" through the analysis of texts written by major Muslim modernist and revivalist thinkers such as al-Afghani, Sayyid Ahmad Khan, Abduh, Mawdudi, Qutb, Khomeini and others.

**Prerequisites & Notes:** One from: LBRL 231, LBRL 271, LBRL 278, LBRL 332, LBRL 378, HIST 287, HIST 487B

Credits: 5

#### **LBRL 498 - Readings for Research in Humanities**

Readings in Humanities under advisement in preparation for writing senior paper. Students develop a reading schedule and meet weekly with their faculty advisor; prepare and submit a formal proposal for the senior paper, on a topic developed by the student in consultation with their faculty advisor.

**Prerequisites & Notes:** Senior status. LBRL 302; and one course from: LBRL 421, LBRL 422, LBRL 423 or LBRL 424 or concurrent; permission of instructor.

Credits: 2

#### **LBRL 499 - Research in Humanities**

Research and writing of a formal paper on a topic developed by the student in consultation with a faculty advisor. LBRL 498, Readings for Research in Humanities (2), required in the quarter prior to LBRL 499.

**Prerequisites & Notes:** Senior status. One course from LBRL 421, LBRL 422, LBRL 423, LBRL 424; LBRL 498, permission of instructor.

Credits: 3

## **Library**

*Courses numbered X37; X97; 300, 400; 417, 445 are described in the University Academic Policies section of this catalog.*

#### **LIBR 201 - Introduction to Research Strategies**

Intended for sophomores and transfer students or above. Introduces students to the nature of research with emphasis on strategies for carrying out inquiry, locating electronic and print sources, assessing sources for authority and selecting and incorporating material from sources into writing.

**Prerequisites & Notes:** Sophomore status, transfer student, or above

Credits: 2

**LIBR 302 - Research Paper Tutorial**

This course is intended to be linked with upper-level writing intensive courses. The purpose of this course is to familiarize students with the methods of identifying the relevant body of knowledge in a discipline and the library research methods that will enable them to utilize this knowledge in successfully writing assigned research papers. Includes developing a research strategy and collecting resources for an annotated bibliography to accompany an assigned research paper in a linked 300-level course.

**Prerequisites & Notes:** concurrent enrollment in 300-level writing intensive course

Credits: 1 to 4

**LIBR 302A - Research Paper Tutorial**

This course is intended to be linked with upper-level writing intensive courses. The purpose of this course is to familiarize students with the methods of identifying the relevant body of knowledge in a discipline and the library research methods that will enable them to utilize this knowledge in successfully writing assigned research papers. Includes developing a research strategy and collecting resources for an annotated bibliography to accompany an assigned research paper in a linked 300-level course.

**Prerequisites & Notes:** co-requisite: EAST 302, HIST 499

Credits: 1 to 4

**LIBR 320 - Topics in Information Studies**

Varying topics and information studies including emerging technologies and trends in scholarly research. Repeatable to a maximum of 6 credits.

**Prerequisites & Notes:** LIBR 201

Credits: 1 to 3

**LIBR 402 - Research Tutorial**

Examines library resources, research processes, and scholarly discourse for upper-division students in a particular discipline. An upper-division library course intended to support advanced research methodologies for students in a particular major. Not repeatable. Letter graded. Equivalent to LIBR 403. Cannot take both LIBR 402 and 403 for credit.

**Prerequisites & Notes:** junior or senior status or permission of instructor.

Credits: 1 to 4

**LIBR 403 - Research Tutorial**

Examines library resources, research processes, and scholarly discourse for upper-division students in a particular discipline. An upper-division library course intended to support advanced research methodologies for students in a particular major. Not repeatable. S/U grading. Equivalent to LIBR 402. Cannot take both LIBR 402 and 403 for credit.

**Prerequisites & Notes:** Junior or senior status or permission of instructor.

Credits: 1 to 4

**LIBR 499 - Special Problems**

Research designed to demonstrate the student's competence in working with the tools of the discipline. Also offered as AMST 499.

**Prerequisites & Notes:** AMST 301

Credits: 4

**Linguistics**

*Courses numbered X37; X97; 300, 400; 417, 445 are described in the University Academic Policies section of this catalog.*

**LING 099 - Linguistics Colloquium**

Presentation of a paper presented at a student linguistics colloquium is a requirement for graduation as a linguistics major. The presentation may be a modification of a paper presented in an upper division course subject to the approval of the instructor. Students must sign up for LING 099 during the quarter of their presentation. This course carries no credit. S/U grading.

**Prerequisites & Notes:** Junior status and completion of four core curriculum courses in linguistics

Credits: 0

**LING 201 - Introduction to Linguistics Science**

Survey of major subfields of linguistics including phonetics, phonology, morphology, syntax, semantics, language acquisition and sociolinguistics.

Credits: 5

**LING 204 - Sociolinguistics**

Examines the relationship between society and language, concentrating on the following areas: address forms, variation theory, language use, sociolinguistics and education, multilingualism, language policy and language

attitudes.  
Credits: 4

#### **LING 314 - Phonetics**

An introduction to phonetics as a science, its history and contributions. Emphasis is on the function of the mechanism and on the production, perception and transcription of speech sounds used in various languages.

**Prerequisites & Notes:** LING 201  
Credits: 4

#### **LING 315 - Phonology**

Theory, methods and problems of phonological description and analysis.

**Prerequisites & Notes:** LING 201 and LING 314.  
Credits: 4

#### **LING 321 - Syntax I**

Theory, methods and problems of syntactic description and analysis.

**Prerequisites & Notes:** LING 201.  
Credits: 4

#### **LING 322 - Syntax II**

Advanced topics in theory, methods and problems of syntactic description and analysis.

**Prerequisites & Notes:** LING 201 and LING 321.  
Credits: 4

#### **LING 331 - Semantics**

Advanced topics in theory, methods and problems of semantic description and analysis.

**Prerequisites & Notes:** LING 201.  
Credits: 4

#### **LING 402 - Topics in Linguistics**

Readings and/or directed research as determined by instructor. Variable topic. Repeatable.

**Prerequisites & Notes:** LING 201  
Credits: 3 TO 5

#### **LING 425 - Linguistics Tutoring**

Student selected for tutoring must dedicate four hours per week to provide help to other students, primarily those enrolled in LING 201 or LING 204. Permission may also be given to assist with other linguistics courses completed with outstanding achievement. Students may be requested to lead group sessions or work with students individually. Expertise in phonetics/phonology or morphology/syntax is desirable. S/U grading.

**Prerequisites & Notes:** LING 201, LING 204 and two upper division core courses  
Credits: 2

### **Mathematics/Computer Science**

*Courses numbered X37; X97; 300, 400; 417, 445 are described in the University Academic Policies section of this catalog.*

#### **M/CS 335 - Linear Optimization**

The optimization of linear functions subject to linear constraints. Linear programming, duality theory, sensitivity analysis, applications.

**Prerequisites & Notes:** MATH 204; and one of CSCI 140 or CSCI 141 or MATH 207.  
Credits: 4

#### **M/CS 375 - Numerical Computation**

Computer arithmetic, solution of nonlinear equations and optimization in a single variable; matrix factorization; matrix iterative techniques.

**Prerequisites & Notes:** MATH 204; CSCI 140, CSCI 141 or MATH 207.  
Credits: 4

#### **M/CS 435 - Nonlinear Optimization**

Nonlinear optimization with emphasis on basic theory (including Lagrange multipliers and the Kuhn-Tucker conditions), algorithms for numerical solution of problems, and applications. Introductory dynamic programming, with emphasis on applications and algorithms.

**Prerequisites & Notes:** MATH 204, MATH 224; CSCI 140, CSCI 141 or MATH 207.  
Credits: 4

**M/CS 475 - Numerical Analysis**

Polynomial interpolation including splines, orthogonal systems of functions and least squares approximation; numerical differentiation and integration; solution of systems of nonlinear equations and unconstrained optimization.

**Prerequisites & Notes:** MATH 224, M/CS 375

Credits: 4

**Mathematics**

*Courses numbered X37; X97; 300, 400, 500; 417, 445, 517, 545 are described in the University Academic Policies section of this catalog.*

**MATH 99 - Introductory Algebra**

Gain skill working with algebraic language and concepts using graphs, tables and algebraic expressions and equations in order to prepare for math 112. Develop problem solving abilities and understanding. Polynomials, exponents, roots, radicals, and linear equations and inequalities and their graphs. S/U grading.

**Prerequisites & Notes:** NOTE: This course will fulfill 5 credits towards financial aid and veterans benefits requirements only. Students who are enrolled in fewer than 10 credits will be assessed a per credit charge for the course. No credit will be allowed toward the graduation requirements of 180 credits.

Credits: 5

**MATH 101 - Functions and Algebraic Methods for K-8 Teachers**

Designed for prospective K-8 teachers. Emphasizes pattern recognition and generalization, building mathematical models and problem solving. Supporting topics include polynomials, linear and quadratic equations, inequalities, graphs, rational expressions and functions. Graphing calculators required. Cannot be counted toward majors or minors in mathematics or computer science.

**Prerequisites & Notes:** suitable Intermediate Math Placement Test score or college intermediate algebra course with a C- or better; instructor permission

Credits: 5

**MATH 106 - Quantitative Reasoning**

Develops abilities to understand quantitative information and make reasoned decisions using it. Focus is on reasoning and symbolic and quantitative models as they are commonly encountered in personal life, careers and public issues.

Credits: 4

**MATH 107 - Mathematical Reasoning and its Applications**

Reading quantitative information, reasoning, personal finance, data display and summary, assessing risk; quantitative decisions in life, careers, and public issues. Students interested in taking higher level mathematics courses should instead take a course from MATH 112, 114, 118, 124, 156, 157 or 240. Note: This course is not an acceptable prereq for MATH 112.

**Prerequisites & Notes:** suitable Intermediate Math Placement Test score or C- or better in MATH 102/112 or MATH 106, or college intermediate algebra course

Credits: 4

**MATH 112 - Functions and Algebraic Methods**

Pattern recognition and generalization, building mathematical models and problem solving are emphasized. Supporting topics include polynomials, linear and quadratic equations, inequalities, graphs, rational expressions, radicals and functions. Graphing calculator required. Cannot be counted toward majors or minors in mathematics or computer science.

**Prerequisites & Notes:** suitable Intermediate Math Placement Test score, MATH 99 or completion of a college intermediate algebra course with a C- or better. Note: Neither MATH 106 or MATH 107 are acceptable pre-requisites for this course.

Credits: 5

**MATH 114 - Precalculus I**

Data analysis, functions as mathematical models, functions and their graphs. Graphing calculators are required. Cannot be counted toward majors or minors in mathematics or computer science. Students needing math for GUR purposes only should consider MATH 107 instead of MATH 114.

**Prerequisites & Notes:** suitable Intermediate Math Placement Test score or MATH 102/112 with a C- or better

Credits: 5

**MATH 115 - Precalculus II**

Data analysis, modeling, trigonometry, inverse functions. Graphing calculator required. Cannot be counted toward majors or minors in mathematics or computer science.

**Prerequisites & Notes:** MATH 114 with C- or better at WWU

Credits: 5

**MATH 118 - Accelerated Precalculus**

Not open to students who have taken a lower numbered mathematics course at Western. Functions as mathematical models, functions and their graphs, inverse functions, trigonometry. Graphing calculator required. Cannot be counted toward majors or minors in mathematics or computer science.

**Prerequisites & Notes:** suitable Intermediate or Advanced Math Placement Test score

Credits: 5

**MATH 119A - Topics in Mathematics**

A supplement to one or more math courses offered at the 100 level. Repeatable, subject to permission of department.

**Prerequisites & Notes:** Permission of instructor.

Credits: 1 TO 15

**MATH 119B - Topics in Mathematics**

A supplement to one or more math courses offered at the 100 level. Repeatable, subject to permission of department. S/U grading.

**Prerequisites & Notes:** Permission of instructor.

Credits: 1 TO 15

**MATH 124 - Calculus and Analytic Geometry I**

Average and instantaneous rates of change, interpretation, computation, and application of derivatives to optimization, rates, graphing, and antiderivative problems. Graphing calculator required.

**Prerequisites & Notes:** suitable Advanced Math Placement Test score or C- or better in MATH 115 or MATH 118 at WWU

Credits: 5

**MATH 125 - Calculus and Analytic Geometry II**

The definite integral, techniques of integration, applications including area and volume, growth and decay, introduction to differential equations.

**Prerequisites & Notes:** MATH 124 or MATH 134.

Credits: 5

**MATH 134 - Calculus I Honors**

Intended for particularly strong students. Average and instantaneous rates of change, interpretation, computation, and application of derivatives to optimization, rates, graphing, and antiderivative problems. Frequent writing assignments. Graphing calculator required.

**Prerequisites & Notes:** Suitable score on the Advanced Mathematics Placement test or an A in MATH 115 or MATH 118, and permission of instructor.

Credits: 5

**MATH 135 - Calculus II Honors**

Intended for particularly strong students. Riemann sums and the definite integral, interpretation and application to area, volume, growth and decay, techniques of integration. Introduction to differential equations. Frequent writing assignments.

**Prerequisites & Notes:** MATH 124 or MATH 134, and permission of instructor.

Credits: 5

**MATH 138 - Accelerated Calculus**

Designed for entering freshmen who are thoroughly familiar with the computational aspects of single variable calculus. Students study selected topics from MATH 124 and 125 from a more conceptual point of view. Students who complete this course receive five credits of advanced placement (unless previously received). Not open to students who have taken MATH 124 or 125. Offered fall quarter only. AP mathematics credit and MATH 138 are equivalent to MATH 124 and 125.

**Prerequisites & Notes:** One year Advanced Placement level high school calculus

Credits: 5

**MATH 156 - Algebra With Applications to Business and Economics**

Equations and inequalities, graphs and functions, exponential and logarithmic functions, applications to finance. This course is designed for business students continuing on to MATH 157.

**Prerequisites & Notes:** suitable Intermediate Math Placement Test score or MATH 102/112 with a C- or better

Credits: 4

**MATH 157 - Calculus With Applications to Business and Economics**

Limits, rates of change, differentiation, graphing and optimization, integration, business applications, partial differentiation. MATH 124 may be substituted for MATH 157 but not vice versa. Cannot be taken for credit by a

student who has already completed another college-level calculus course.

**Prerequisites & Notes:** suitable Advanced Math Placement Test score or C- or better in MATH 156, MATH 114 or MATH 118

Credits: 4

### **MATH 203 - Linear Algebra and Differential Equations I**

First course in the 203-303 sequence. A unified treatment of the material on elementary linear algebra and elementary differential equations covered in MATH 204 and 331. Together with MATH 303, is equivalent to MATH 204 and MATH 331.

**Prerequisites & Notes:** MATH 125 or MATH 135 or equivalent

Credits: 4

### **MATH 204 - Elementary Linear Algebra**

Systems of linear equations; matrices; the vector space  $\mathbb{R}^n$ ; linear independence, bases, subspaces and dimension in  $\mathbb{R}^n$ ; introduction to determinants and the eigenvalue problem; applications.

**Prerequisites & Notes:** MATH 125 or MATH 135; MATH 224 recommended

Credits: 4

### **MATH 205 - Linear Algebra Workshop**

Elementary linear algebra projects on a computer. S/U grading.

**Prerequisites & Notes:** Math 204 or concurrent.

Credits: 1

### **MATH 207 - Mathematical Computing**

Use of mathematical software such as Matlab and Mathematica. Elementary programming, numerical and symbolic computation, visualization and technical reporting in mathematical context.

**Prerequisites & Notes:** MATH 125, MATH 204

Credits: 3

### **MATH 209 - Discrete Mathematics**

The logic of proofs, combinatorics, graph theory, and topics from recurrences and generating functions, set theory.

**Prerequisites & Notes:** MATH 124 or MATH 134, or MATH 138

Credits: 4

### **MATH 220 - Visualization in Multivariable Calculus**

Weekly lab projects emphasizing the creation and interpretation of computer-generated graphs and contour diagrams for functions of several variables. Problems are drawn from material being studied in MATH 224. S/U grading.

**Prerequisites & Notes:** Math 224 or concurrent.

Credits: 1

### **MATH 224 - Multivariable Calculus and Geometry I**

Coordinate systems, curves and vectors in the plane and in space, partial derivatives, applications including optimization and motion, multiple integrals.

**Prerequisites & Notes:** MATH 125 or MATH 135, or MATH 138

Credits: 5

### **MATH 225 - Multivariable Calculus and Geometry II**

Multiple integrals, line and surface integrals, gradient fields, Green's and Stokes' theorems.

**Prerequisites & Notes:** MATH 224

Credits: 4

### **MATH 226 - Limits and Infinite Series**

Formal treatment of limits of functions and sequences of continuity, including a thorough training in constructing rigorous proofs of the epsilon-delta type. Convergence tests for infinite series. Radius of convergence, differentiation, and integration of Taylor series.

**Prerequisites & Notes:** MATH 125, MATH 135 or MATH 138

Credits: 4

### **MATH 240 - Introduction to Statistics**

Descriptive statistics, basic ideas of probability, normal distribution, sampling distributions, confidence intervals, hypothesis testing, contingency tables, and one-way analysis of variance. Use of a statistical software package. Cannot be counted toward any major in the Department of Mathematics.

**Prerequisites & Notes:** suitable Intermediate Math Placement Test score or MATH 102/112

Credits: 4

**MATH 245 - Statistics for Engineering Technology**

Descriptive statistics, basic probability, discrete distributions, normal distribution, statistical methods used in engineering.

**Prerequisites & Notes:** MATH 115 or MATH 118.

Credits: 3

**MATH 302 - Introduction to Proofs Via Number Theory**

The properties of integers, prime numbers, Euclidean algorithm, congruences. The student is expected to develop competence in proving basic results in number theory.

**Prerequisites & Notes:** MATH 125 or MATH 135 or MATH 138

Credits: 4

**MATH 303 - Linear Algebra and Differential Equations II**

Second course in the MATH 203-303 sequence. A unified treatment of the material on elementary linear algebra and elementary differential equations covered in MATH 204 and 331. Together with MATH 203, is equivalent to MATH 204 and MATH 331.

**Prerequisites & Notes:** MATH 203

Credits: 4

**MATH 304 - Linear Algebra**

Orthogonality and orthogonal bases; linear transformations and the least squares problem; further study of eigenvalues and eigenvectors and their applications; abstract vector spaces and linear transformations.

**Prerequisites & Notes:** MATH 204, MATH 224

Credits: 4

**MATH 312 - Proofs in Elementary Analysis**

Open and closed sets in the line and plane, sequences, least upper bound axiom, continuous functions and their properties. The student is expected to develop competence in proving basic theorems involving these concepts.

**Prerequisites & Notes:** MATH 226; MATH 209 or MATH 302. Restricted to majors and minors during registration Phase I.

Credits: 4

**MATH 321 - Mathematics for Technology**

A survey of topics from differential equations and the Laplace Transform. Designed especially for students majoring in engineering technology. Students may count only one of MATH 321 or MATH 331 toward any major or minor in the Department of Mathematics.

**Prerequisites & Notes:** MATH 125 or MATH 135

Credits: 4

**MATH 331 - Ordinary Differential Equations**

First order equations, first order systems (primarily linear), applications and modeling, qualitative reasoning. First course in the 331-432 sequence.

**Prerequisites & Notes:** MATH 204; MATH 224 recommended or concurrent.

Credits: 4

**MATH 341 - Probability and Statistical Inference**

Probability, including combinatorial methods, discrete distributions and continuous distributions using integrals. Descriptive statistics and the use of computer statistical package. Statistical inference, including confidence intervals and hypothesis testing.

**Prerequisites & Notes:** MATH 125 or MATH 135 or MATH 138

Credits: 4

**MATH 342 - Statistical Methods**

Statistical techniques including chi-square tests, simple and multiple linear regression, and one-way analysis of variance. Extensive use of a computer statistical package.

**Prerequisites & Notes:** MATH 341

Credits: 4

**MATH 360 - Euclidean and Non-Euclidean Geometry**

Metric development of Euclidean geometry and consideration of non-Euclidean geometries.

**Prerequisites & Notes:** MATH 125 or MATH 135 or MATH 138; MATH 204 and MATH 209 or MATH 302

Credits: 4

**MATH 381 - Teaching K-8 Mathematics I**

Investigations of mathematics topics that focus on logical reasoning, number concepts, and number operations. Emphasis on problem solving, the use of manipulatives and computing technologies, remediation and resource materials, and optimal pedagogical techniques that help students learn quality mathematics. Not acceptable for any departmental major except BA/Ed, Elementary, and does not satisfy GUR requirement except for those who complete the BA/Ed, Elementary.

**Prerequisites & Notes:** suitable Intermediate Math Placement Test score; C or better in MATH 112 or college intermediate algebra course; and one of ELED 370, ELED 372, SPED 420, or ECE 391. Prerequisites must have been met within the last 5 years.

Credits: 4

**MATH 382 - Teaching K-8 Mathematics II**

Investigations of mathematics topics that focus on proportional thinking, measurement, and informal geometry. Emphasis on problem solving, the use of manipulatives and computing technologies, remediation and resource materials, and optimal pedagogical techniques that help students learn quality mathematics. Not acceptable for any department major except BA/Ed, Elementary, and does not satisfy GUR mathematics requirement except for those who complete the BA/Ed, Elementary.

**Prerequisites & Notes:** MATH 381 with a C or better

Credits: 4

**MATH 383 - Teaching K-8 Mathematics III**

Investigations of mathematics topics that focus on probability and statistics. Emphasis on problem solving, the use of manipulatives and computing technologies, remediation, assessment and resource materials, and optimal pedagogical techniques that help students learn quality mathematics. Not acceptable for any departmental major except BA/Ed, Elementary.

**Prerequisites & Notes:** MATH 382 with C or better at WWU

Credits: 4

**MATH 401 - Introduction to Abstract Algebra**

Groups, rings, fields, field extensions, Galois Theory.

**Prerequisites & Notes:** MATH 204 and MATH 209 or MATH 302

Credits: 4

**MATH 402 - Introduction to Abstract Algebra**

Groups, rings, fields, field extensions, Galois Theory.

**Prerequisites & Notes:** MATH 401

Credits: 4

**MATH 409 - Putnam Exam Preparation**

Preparation for participation in the annual Putnam Exam. This exam involves mathematical concepts beyond those typically found in standard courses. Questions cut across the bounds of disciplines and are hard. This course covers the basics of the relevant mathematical content, particularly in discrete mathematics, and emphasizes advanced problem-solving techniques. S/U grading.

**Prerequisites & Notes:** Permission of instructor.

Credits: 2

**MATH 410 - Mathematical Modeling**

The construction and solution of mathematical models, using optimization, stability analysis, eigenvalue methods, probability and simulation.

**Prerequisites & Notes:** MATH 204, MATH 224, MATH 331

Credits: 4

**MATH 412 - Mathematical Modeling Competition**

Preparation for participation in the national mathematics modeling competition. Repeatable with no maximum.

**Prerequisites & Notes:** instructor permission

Credits: 1

**MATH 415 - Mathematical Biology**

An introduction to mathematical models in biology. Population models, Michaelis-Menten kinetics, models for neuron functioning, pattern formation. Mathematical topics: difference equations, dynamical systems, conservation equations, stochastic models.

**Prerequisites & Notes:** MATH 224; either MATH 204 and MATH 331, or MATH 203 and MATH 303

Credits: 4

**MATH 419 - Historical Perspectives of Mathematics**

History and development of mathematical thought from ancient to modern times. Philosophical, sociological and biographical perspectives.

**Prerequisites & Notes:** 12 credits upper-division math

Credits: 3

**MATH 420 - Topics in the History and Philosophy of Mathematics**

Concentrated study of a topic or a closely connected group of topics associated with the history and philosophy of mathematics. Students are required to write a substantial expository paper.

**Prerequisites & Notes:** MATH 312

Credits: 3

**MATH 421 - Methods of Mathematical Analysis I**

Introduction to metric spaces, properties of functions on metric spaces, compactness and continuity. The student is expected to develop competence in proving basic theorems involving these concepts.

**Prerequisites & Notes:** MATH 312

Credits: 4

**MATH 422 - Methods of Mathematical Analysis II**

Analysis on the real line, including uniform convergence of series, using metric space notions. The student is expected to develop competence in proving theorems involving these concepts.

**Prerequisites & Notes:** MATH 421

Credits: 4

**MATH 424 - Topics in Analysis**

Topics such as pointwise convergence of Fourier series, Gibbs phenomenon, Poisson summability, Dirichlet problem for the disc, Weierstrass approximation theorem. Repeatable to a maximum of 8 credits with various topics.

**Prerequisites & Notes:** MATH 422

Credits: 4

**MATH 430 - Fourier Series and Applications to Partial Differential Equations**

An introduction to Fourier series and the Fourier transform; applications to boundary value problems including the wave and heat equations.

**Prerequisites & Notes:** MATH 204, MATH 226, MATH 331

Credits: 4

**MATH 431 - Analysis of Partial Differential Equations**

Solutions for general first order and linear second order partial differential equations. Topics from characteristics; propagation of singularities; hyperbolic, and elliptic equations; Cauchy problem; Dirichlet problem; Green's function; Poisson formula; maximum principle.

**Prerequisites & Notes:** MATH 204, MATH 225, MATH 226, MATH 312, MATH 331, or equivalent(s).

Credits: 4

**MATH 432 - Systems of Differential Equations**

Forced second order equations, systems of nonlinear differential equations, applications.

**Prerequisites & Notes:** MATH 204, MATH 331; or MATH 203, MATH 303.

Credits: 4

**MATH 438 - Introduction to Complex Variables**

Differentiation and integration of complex-valued functions; Cauchy integral theorem; calculations of residues.

**Prerequisites & Notes:** MATH 225, MATH 312.

Credits: 4

**MATH 441 - Probability**

Discrete and continuous random variables, moment generating functions, multivariate distributions, survey of widely used distributions such as normal, chi-square, gamma, t and F distributions. Emphasis on the theoretical aspects of probability.

**Prerequisites & Notes:** MATH 204, MATH 224, MATH 312

Credits: 4

**MATH 442 - Mathematical Statistics**

Limiting distributions, the Central Limit Theorem, statistical inferences such as confidence intervals, hypothesis testing and chi-square tests, maximum likelihood methods, sufficiency.

**Prerequisites & Notes:** MATH 441 or equivalent

Credits: 4

**MATH 443 - Linear Statistical Models**

Matrix algebra for linear models, multivariate normal distribution, quadratic forms, Gauss-Markov Theorem, estimation in full-rank and less-than-full-rank models, hypothesis testing in full-rank models.

**Prerequisites & Notes:** MATH 441/541, and either MATH 342 or MATH 442/542, or equivalent(s).

Credits: 4

**MATH 483 - Methods of Teaching Secondary Mathematics**

Topics include pre-algebra, algebra, geometry, problem solving and resource materials.

**Prerequisites & Notes:** minimum of two upper-division math courses, SEC 431, or permission of instructor.

Credits: 4

**MATH 490 - Senior Project**

Intensive study of an advanced topic in mathematics.

**Prerequisites & Notes:** Permission of the Department Chair.

Credits: 4

**MATH 491 - Internship Seminar - Teaching K-8 Mathematics**

Focus on issues and practices related to teaching K-8 mathematics, coordinated with the year-long K-8 classroom internship. Includes the use of ideas, theory, and lesson plans from the Mathematics 381-383 sequence in actual classroom settings, plus opportunity to assess and work with K-8 students on an individual, small group, and whole class basis. Not acceptable for any departmental major except BA/Ed, Elementary. S/U grading.

**Prerequisites & Notes:** Completion WWU Elementary Education degree requirement

Credits: 2

**MATH 495 - Academic or Industrial Learning and Research Experience in Math**

Participation in a learning program, research project or internship in business, industry, a government agency or academic institution. Oral and written report required. Repeatable to a maximum of 8 credits. S/U grading.

**Prerequisites & Notes:** 20 credits in MATH above the 100-level; department permission

Credits: 1 TO 4

**MATH 502 - Abstract Algebra**

Rings, fields, field extensions, Galois Theory.

**Prerequisites & Notes:** MATH 401 or equivalent

Credits: 4

**MATH 503 - Topics in Abstract Algebra**

Topics based on the theory of groups and its applications. Repeatable with various topics.

**Prerequisites & Notes:** MATH 502 or equivalent

Credits: 3

**MATH 504 - Abstract Linear Algebra**

Abstract vector spaces, linear transformations, spectral theory.

**Prerequisites & Notes:** MATH 304 or equivalent

Credits: 4

**MATH 510 - Mathematical Modeling**

The construction and solution of mathematical models, using optimization, stability analysis, eigenvalue methods, probability and simulation.

**Prerequisites & Notes:** MATH 204, MATH 224, MATH 331

Credits: 4

**MATH 511 - Advanced Modeling**

Exact and numerical techniques for the development and analysis of models of dynamic processes, including the construction and validation of models.

**Prerequisites & Notes:** MATH 331; instructor permission

Credits: 4

**MATH 515 - Mathematical Biology**

An introduction to mathematical models in biology. Population models, Michaelis-Menten kinetics, models for neuron functioning, pattern formation. Mathematical topics: difference equations, dynamical systems, conservation equations, stochastic models.

**Prerequisites & Notes:** MATH 224; MATH 204 and MATH 331 or MATH 203 and MATH 303

Credits: 4

**MATH 521 - Methods of Mathematical Analysis I**

Introduction to metric spaces, properties of functions on metric spaces, compactness and continuity.

Credits: 4

**MATH 522 - Methods of Mathematical Analysis II**

Analysis on the real line, including uniform convergence of series, using metric space notions.

**Prerequisites & Notes:** MATH 521

Credits: 4

**MATH 523 - Advanced Calculus of Several Variables**

Parameterization, integration and changes of variables in Euclidean spaces.

**Prerequisites & Notes:** MATH 304 or equivalent; MATH 521

Credits: 4

**MATH 524 - Topics in Analysis**

Topics such as pointwise convergence of Fourier series, Gibbs phenomenon, Poisson summability, Dirichlet problem for the disc, Weierstrass approximation theorem. Repeatable to a maximum of 8 credits with various topics.

**Prerequisites & Notes:** MATH 522

Credits: 4

**MATH 525 - Topology**

Topological spaces, connectedness, compactness, product and quotient spaces, homotopy.

**Prerequisites & Notes:** MATH 521

Credits: 3

**MATH 527 - Real Analysis**

Theory of Lebesgue measure and integration.

**Prerequisites & Notes:** MATH 522

Credits: 4

**MATH 528 - Functional Analysis**

Spaces of functions, linear functionals and their representation, applications.

**Prerequisites & Notes:** MATH 522

Credits: 4

**MATH 530 - Fourier Series and Applications to Partial Differential Equations**

An introduction to Fourier series and the Fourier transform; applications to boundary value problems including the wave and heat equations.

**Prerequisites & Notes:** MATH 204, MATH 226, MATH 331 or equivalent

Credits: 4

**MATH 531 - Analysis of Partial Differential Equations**

Solutions for general first order and linear second order partial differential equations emphasizing geometric properties and integral representations. Topics include characteristics; propagation of singularities; hyperbolic, elliptic, and parabolic equations; Cauchy problem; Dirichlet problem; Green's function; Poisson formula; maximum principle.

**Prerequisites & Notes:** MATH 204, MATH 225, MATH 226, MATH 312, MATH 331, or equivalent.

Credits: 4

**MATH 533 - Advanced Ordinary Differential Equations**

Existence and uniqueness of solutions, stability theory for nonlinear equations, bifurcation.

**Prerequisites & Notes:** MATH 432 or equivalent; MATH 521

Credits: 3

**MATH 535 - Nonlinear Optimization**

Nonlinear programming with emphasis on basic theory (including Lagrange multipliers and the Kuhn-Tucker conditions), algorithms for numerical solution of problems, and applications. Introductory dynamic programming, with emphasis on applications and algorithms.

**Prerequisites & Notes:** MATH 204, MATH 224; CSCI 140 or CSCI 141 or MATH 207.

Credits: 4

**MATH 538 - Complex Variables**

Differentiation and integration of complex-valued functions, Cauchy integral theorem, residues.

**Prerequisites & Notes:** MATH 312 or equiv

Credits: 4

**MATH 539 - Topics in Complex Analysis**

Topics such as normal families, mapping properties of analytic functions, conformal mappings, fluid flow, Dirichlet and Neumann problems, Julia sets. Repeatable with various topics.

**Prerequisites & Notes:** MATH 521, MATH 538

Credits: 3

**MATH 541 - Probability**

Discrete and continuous random variables, moment generating functions, multivariate distributions, survey of widely used distributions such as normal, chi-square, gamma, t and F distributions. Emphasis on the theoretical aspects of probability.

**Prerequisites & Notes:** MATH 204, MATH 224, MATH 312

Credits: 4

**MATH 542 - Mathematical Statistics**

Limiting distributions, the Central Limit Theorem, statistical inferences such as confidence intervals, hypothesis testing and chi-square tests, maximum likelihood methods, sufficiency.

**Prerequisites & Notes:** MATH 441 or equivalent

Credits: 4

**MATH 543 - Linear Statistical Models**

Matrix algebra for linear models, multivariate normal distribution, quadratic forms, Gauss-Markov Theorem, estimation in full-rank and less-than-full-rank models, hypothesis testing in full-rank models.

**Prerequisites & Notes:** MATH 441/541, and either MATH 342 or MATH 442/542 or equivalent(s).

Credits: 4

**MATH 560 - Topics in Geometry**

A study of one or more topics in geometry such as convex sets, polytopes, tilings, integral geometry or combinatorial geometry. Repeatable with various topics.

Credits: 3

**MATH 562 - Differential Geometry**

Geometry of curves, surfaces and manifolds.

**Prerequisites & Notes:** MATH 522

Credits: 4

**MATH 564 - Graph Theory**

Basic properties of graphs, trees, Eulerian and Hamiltonian circuits, genera of graphs, algorithms, applications.

Credits: 3

**MATH 566 - Topics in Combinatorics**

Counting techniques, generating functions, coding, coloring and relations with probability theory. Repeatable with various topics.

Credits: 3

**MATH 570 - Topics in Optimization**

Topics taken from nonlinear programming, calculus of variations or the theory of optimal control. Repeatable with various topics.

**Prerequisites & Notes:** MATH 304, MATH 521

Credits: 4

**MATH 573 - Numerical Linear Algebra**

Norms; fundamental matrix types, transformations and factorizations; linear equations, linear least squares; rounding error, condition and stability; the algebraic eigenvalue problem (QR method).

**Prerequisites & Notes:** MATH 304; ability to program

Credits: 4

**MATH 575 - Numerical Analysis**

Polynomial interpolation including splines, orthogonal systems of functions and least squares approximation; numerical differentiation and integration; solution of systems of nonlinear equations and unconstrained optimization.

**Prerequisites & Notes:** MATH 224, M/CS 375

Credits: 4

**MATH 577 - Topics in Numerical Analysis**

Topics from numerical optimization, approximation, linear algebra, quadrature, and the solution of algebraic and differential equations. Repeatable with various topics.

**Prerequisites & Notes:** MATH 573 or M/CS 375

Credits: 4

**MATH 595 - Teaching Algebra and Precalculus**

Curriculum and instructional support for teaching the algebra and precalculus sequence. S/U grading.

Credits: 2

**MATH 599 - Mathematics Seminar**

Repeatable to a maximum of 4 credits.

Credits: 1 TO 3

**MATH 680 - Internship in Industrial Mathematics**

An internship in industry, government, or other organizations during which participants will work with people in the host organization on problems of a quantitative nature. Number of credits depends on time spent at the host organization. S/U grading.

**Prerequisites & Notes:** MATH 510, MATH 547, MATH 575 or equivalent(s)

Credits: 2 TO 8

**MATH 690 - Thesis**

Repeatable to a maximum of 4 credits. S/U grading.

Credits: 1 TO 4

**MATH 691 - Required Project**

Repeatable to a maximum of 2 credits. S/U grading.

**Prerequisites & Notes:** advancement to candidacy

Credits: 1 OR 2

## **Master of Business Administration**

*Courses numbered X37; X97; 300, 400, 500; 417, 445, 517, 545 are described in the University Academic Policies section of this catalog.*

**MBA 502 - Microeconomics**

An analytic approach to the theory of the consumer, the firm and markets. Emphasis is placed on the development of managerial tools for understanding supply and demand concepts and the determination of prices in various market settings for both outputs and inputs. The problems of market efficiency, externalities and public goods are also considered from an analytical and policy perspective.

**Prerequisites & Notes:** Admission to the MBA program.

Credits: 4

**MBA 503 - Macroeconomics**

The study of the national economy and the interpretation of national economic performance. Material includes the causes and policy remedies for business cycles, unemployment, inflation and the twin deficits (government and foreign trade). Topics such as Keynesian and classical theories, monetary and fiscal policy, and international trade are studied in an analytic perspective with emphasis on the behavior of business cycles and the issues facing the national economy in an international setting.

**Prerequisites & Notes:** Admission to the MBA program.

Credits: 4

**MBA 504 - Statistical Methods**

Provides an understanding of some of the tools that enable a manager to analyze information, including data analysis, probability distributions, statistical inference and hypothesis testing, and multivariate regression analysis.

**Prerequisites & Notes:** Admission to the MBA program.

Credits: 4

**MBA 505 - Business Finance**

Objectives, tools and techniques of finance from the viewpoint of the financial manager of a manufacturing firm. Focus is on corporate financial decisions encompassing investment, financing, dividends and working capital management, including an introduction to financial instruments and markets.

**Prerequisites & Notes:** admit to MBA program; MBA 510

Credits: 4

**MBA 506 - Corporate Information Systems Management**

Case study of the current and potential applications of information technology to enhance the competitive posture of the corporation. Uses of information technology throughout the organization; management and control of the information technology function.

**Prerequisites & Notes:** Admission to the MBA program.

Credits: 4

**MBA 507 - Managing Organizations and People**

The purpose of this course is to help students understand the complexities of organizations. It provides exposure to theories of organization, important organizational issues and processes, and a variety of strategies and tactics useful to successfully manage organizations and people.

**Prerequisites & Notes:** Admission to the MBA program

Credits: 4

**MBA 508 - Operations Management**

Surveys the fundamentals of operations management and further develops the student's competence through case analyses. Dual emphasis on concepts and applications prepares students for all aspects of managing an operation. Detailed coverage of operations design, planning and control.

**Prerequisites & Notes:** Admission to the MBA program.

Credits: 4

**MBA 509 - Marketing Management**

Staffing, direction and coordination of organizational marketing activities. Development of new products and integration with current activities to meet evolving market needs. Includes sales and advertising in both national and international markets.

**Prerequisites & Notes:** Admission to the MBA program.

Credits: 4

**MBA 510 - Financial Accounting and Reporting Concepts**

Introduction to financial statements and the concepts, principles and theories of asset valuation and income determination underlying their preparation. Analysis and interpretation of financial statements in the perspective of the management decision-making process.

**Prerequisites & Notes:** Admission to the MBA program

Credits: 4

**MBA 511 - Managerial Accounting**

Conceptual approach to managerial accounting's role in an organization. Emphasis on the use of accounting information for management decision making. Topics include accounting for planning and control purposes, behavioral implications associated with accounting information, budgeting and various quantitative techniques available.

**Prerequisites & Notes:** Admission to the MBA program.

Credits: 4

**MBA 514 - Managerial Foundations**

Introduction to professional management and foundation coverage of managerial skills, microeconomics, global competition, financial reporting, and business statistics

**Prerequisites & Notes:** Admission to the MBA program.

Credits: 16

**MBA 515 - Internal and External Forces Impacting the Manager**

Examination of the range of internal and external forces that impact managerial decisions. Topics include global competition, the national and international economy, corporate information systems, foundation concepts in marketing, operations management, finance, people and organizations.

**Prerequisites & Notes:** MBA 514

Credits: 16

**MBA 516 - Managerial Decisions**

Links managerial decisions with specific functional areas of study such as marketing, operations, accounting, finance, and organizational behavior. The focus of these modules is cross-functional decision making in the context of global competition.

**Prerequisites & Notes:** MBA 515 or admission to accelerated full-time MBA program

Credits: 16

**MBA 523 - Negotiations and Labor Relations**

Analysis, explanation, and evaluation of negotiation in organizations. Application of negotiations to labor relations in unionized and non-unionized workplaces. Issues include pre-employment discussions, collective bargaining, arbitration, mediation, agency, renegotiating contracts, and multiparty discussions.

**Prerequisites & Notes:** MBA 516

Credits: 4

**MBA 524 - Management and Leadership Skills**

Interpersonal skill building in critical management areas including stress management, delegation, communication, power and influence, meetings and conflict management.

**Prerequisites & Notes:** Admission to the MBA program.

Credits: 4

**MBA 525 - Seminar in Management**

Intensive examination of selected topics in management. Repeatable to a maximum of 8 credits.

**Prerequisites & Notes:** MBA 516

Credits: 4

**MBA 527 - Ethics in Business Decisions**

An investigation of ethical theories and their application to issues faced by managers. An analysis of the morality of capitalism as a social system, and the ethical issues involved in international business operations.

**Prerequisites & Notes:** MBA 516

Credits: 4

**MBA 528 - Diversity in Organizations**

An examination of how diversity in organizations places increasingly complex demands and creates new opportunities for organizations in managing human capital.

**Prerequisites & Notes:** MBA 516

Credits: 4

**MBA 529 - Influence, Power and Politics in Organizations**

The analysis, explanation and evaluation of power and politics in organizations. Introduces frameworks for assessing the sources of power in organizations, the conditions that lead to its attainment, and its effective use from both a practical and an ethical perspective.

**Prerequisites & Notes:** MBA 516

Credits: 4

**MBA 532 - Marketing Strategy**

Integration of marketing principles with overall objectives of the organization. Concepts and analytical techniques facilitating marketing analysis and the development of strategic plans. Strategy formulation in product planning and development, distribution and promotion, marketing research, and consumer behavior.

**Prerequisites & Notes:** MBA 509 or MBA 516

Credits: 4

**MBA 534 - Seminar in Marketing**

Focuses on selected traditional and contemporary topics in marketing theory, planning, strategy, management and practice. Repeatable to a maximum of 8 credits.

**Prerequisites & Notes:** MBA 516

Credits: 4

**MBA 535 - Buyer and Consumer Behavior**

An overview of the theories and research that underlie the analysis of buyer and consumer behavior central to the formulation of marketing tactics and strategic plans.

**Prerequisites & Notes:** MBA 516

Credits: 4

**MBA 539 - Seminar in International Business**

Intensive examination of selected topics in international business. Repeatable to a maximum of 8 credits.

**Prerequisites & Notes:** MBA 516

Credits: 4

**MBA 541 - Managerial Finance**

Theory and policy implications of financial decision making. Emphasis on valuation, long-term financing and investment/merger decisions.

**Prerequisites & Notes:** MBA 505, MBA 511; or MBA 516

Credits: 4

**MBA 542 - Equity Markets and Portfolio Analysis**

An examination of investment risk and return, the operation of equity securities markets, equity valuation models, modern portfolio theory and portfolio management. Also includes capital market efficiency, stock options and mutual funds.

**Prerequisites & Notes:** MBA 516

Credits: 4

**MBA 543 - Financial Markets, Derivative Instruments and Risk Management**

A mix of seminars and case discussions are used to study the application of recent innovations in financial management. Includes financial futures and options as well as interest rate caps, floors, collars and swaps. Foreign currency risk exposure and management are studied in the context of international financial management. Other topics include pension fund design and management, asset securitization and financial distress.

**Prerequisites & Notes:** MBA 516

Credits: 4

**MBA 544 - Seminar in Finance**

Intensive examination of selected topics in finance. Repeatable to a maximum of 8 credits.

**Prerequisites & Notes:** MBA 516

Credits: 4

**MBA 551 - Managerial Economics**

Economic analysis provides the framework to consider the problems of resource allocations that confront managers in business, government and nonprofit environments. Topics include consumer choice and demand for products, production and cost functions, alternative market structures and the profit criteria for long-run planning and investment decisions.

**Prerequisites & Notes:** MBA 502, MBA 503, MBA 504; or MBA 516

Credits: 4

**MBA 555 - Seminar in Economics**

Intensive examination of selected topics in economics. Repeatable to a maximum of 8 credits.

**Prerequisites & Notes:** MBA 516

Credits: 4

**MBA 561 - Professional Auditing**

In-depth exposure to a variety of aspects of the theory and practice of professional auditing. Topics may include auditing philosophy, history and research; economic function of audits; professional standards and malpractice; new auditing techniques and services. Cases, readings, individual research and discussion.

**Prerequisites & Notes:** MBA 516, ACCT 461 or equivalent

Credits: 4

**MBA 562 - Taxation**

A continuation of taxation topics, with emphasis on compensation and retirement planning, estate, gift and trust taxation, and international taxation. Advanced research, planning, and tax policy are also a fundamental part of the course.

**Prerequisites & Notes:** MBA 516

Credits: 4

**MBA 565 - Seminar in Accounting**

Intensive examination of selected topics in accounting. Repeatable to a maximum of 8 credits.

**Prerequisites & Notes:** MBA 516

Credits: 4

**MBA 566 - Managerial Accounting and Control**

Seminar/case study course. Focus on managerial accounting topics such as responsibility centers and transfer pricing; budgeting; and analysis of performance. Examines managerial accounting in international, service and not-for-profit entities.

**Prerequisites & Notes:** MBA 516

Credits: 4

**MBA 567 - Financial Statement Presentation and Analysis**

Study of reporting issues from a management perspective. Introduction to the tools and techniques of financial statement analysis. Use of financial statements by external and internal decision makers. Emphasis on the

development of communication and computer skills.

**Prerequisites & Notes:** MBA 516

Credits: 4

#### **MBA 572 - Information Systems for Management Decision Making**

How information systems technologies can be used to support the decision-making activities of managers. Several types of management support systems are explored, including Decision Support Systems (DSS), Group Support Systems (GSS), and Executive Information Systems (EIS). Includes the use of application development software to build DSS prototypes following appropriate design techniques.

**Prerequisites & Notes:** MBA 516

Credits: 4

#### **MBA 574 - Enterprise Resource Planning**

The course introduces students to the integrated business planning and execution systems currently in use by most large and medium-sized organizations. Although the course is taught primarily from the vantage point of the supply chain management function, the cross-functional nature of the topic requires discussion of the marketing, accounting, and human resources components of ERP as well. Students will also gain experience with SAP R/3 and a small-market ERP package.

**Prerequisites & Notes:** MBA 516

Credits: 4

#### **MBA 575 - Seminar in Decision Sciences**

Intensive examination of selected topics in decision sciences. Repeatable to a maximum of 8 credits.

**Prerequisites & Notes:** MBA 516

Credits: 4

#### **MBA 585 - Seminar in Environmental Management**

This course stresses the appropriateness of assessing the impact(s) of corporate action on the natural environment. Primary consideration will be given to the organizational implications of shifting from the traditional input-process-output ("cradle-to-grave") organization model to an input-process-output-input ("cradle-to-cradle") mindset. Strategic business opportunities associated with an evolving consumer environmental consciousness will be explored.

**Prerequisites & Notes:** Admitted Graduate Student within College of Business and Economics.

Credits: 4

#### **MBA 591 - Business Policy**

Study of administration and policy making from a top-management viewpoint. Integrates the marketing, financial, production and functional fields of management within a strategic management framework. Case study and simulation techniques used. (MBA program comprehensive exam, in the form of an integrated case, is a part of the course.) Normally taken in the last quarter of the program.

**Prerequisites & Notes:** MBA 516 or MBA 595

Credits: 4

#### **MBA 594 - Introduction to Professional Management**

Explores the responsibilities and tasks of management, the characteristics of successful managers, various contexts of management, elements of strategic decision making at various levels of the organization, and an introduction to global business issues.

**Prerequisites & Notes:** Admission to the MBA program.

Credits: 4

#### **MBA 595 - Competing in a Global Environment**

Explores the effect of various aspects of globalization on markets, managers, and business strategy, with emphasis on both corporate and functional-level issues.

**Prerequisites & Notes:** Admission to the MBA program.

Credits: 4

## **Management**

*Courses numbered X37; X97; 300, 400; 417, 445 are described in the University Academic Policies section of this catalog.*

#### **MGMT 201 - Introduction to Business**

A survey of the field. Introduction to the major functional areas comprising business or organizations. Recommended for students not intending to major in the College of Business and Economics.

Credits: 4

**MGMT 202 - Perspectives on Business**

An introduction to perspectives on the nature of business in society, the development of the firm and how organizations function.

**Prerequisites & Notes:** Enrollment in CBE Distinguished Scholars Program

Credits: 2

**MGMT 271 - Law and the Business Environment**

Historical development of legal institutions, the judicial process, and impact of the law upon individual and business decision making.

**Prerequisites & Notes:** only one of MGMT 271, PLSC 311, or FAIR 211 may be taken for GUR credit

Credits: 4

**MGMT 311 - Introduction to Management and Organizational Behavior**

Introduction to organization theory, behavior and interpersonal communication; concepts of power, authority and influence; the role of philosophy and values in organizations.

Credits: 4

**MGMT 313 - Teamwork Basics**

An introduction to teamwork concepts and skills. Covers structural and process attributes of teams with the objective of enhancing team leader or member effectiveness.

**Prerequisites & Notes:** Major restricted, MGMT 311

Credits: 4

**MGMT 319 - Business Communications**

Business writing principles applied to various types of communications and reports. Cases used; work must be submitted in acceptable business format.

**Prerequisites & Notes:** ENG 101 or equivalent

Credits: 4

**MGMT 337 - Management Study Abroad**

Management elective credit for upper-division courses taken at a WWU-approved study abroad program. Students must present sufficient documentation to show the material was successfully completed with a letter grade and the content is appropriate for upper-division elective credit in management. Repeatable up to 12 credits. S/U grading.

**Prerequisites & Notes:** Majors only.

Credits: 4

**MGMT 365 - Industrial Purchasing**

Business writing principles applied to various types of communications and reports. Cases used; work must be submitted in acceptable business format.

**Prerequisites & Notes:** MGMT 360

Credits: 4

**MGMT 380 - Business History of the United States**

Business history of the United States. Review and analysis of the organizational methods, performance, climate and entrepreneurship of American business from 1780 to the present.

**Prerequisites & Notes:** ECON 206

Credits: 4

**MGMT 401 - Conflict Management and Negotiations**

Examination of the theory and practice of interpersonal conflict management and negotiations in organizations. Uses cases and simulations to develop negotiation skills. Topics include conflict resolution, distributive and integrative negotiation techniques and outcomes, mediations, and collaboration.

**Prerequisites & Notes:** Major restricted, MGMT 313

Credits: 4

**MGMT 413 - Organizational Change Practicum**

Field-based course that covers both the theories and tools needed to implement change in organizations. Topics include individual resistance to change, ethics in change management and consulting, issues in organizational change, organizational development, and change management.

**Prerequisites & Notes:** Major restricted, MGMT 313.

Credits: 4

**MGMT 414 - Leadership Practicum**

A problem-based leadership course with emphasis on leading teams, leading organizational change, and self-leadership.

**Prerequisites & Notes:** Major restricted, OPS 461; MGMT 401 or MGMT 413

Credits: 4

### **MGMT 481 - Managing Cultural Diversity**

Management of persons from diverse countries and cultures. Culture-specific issues and issues of diversity in the workplace. Problems, cases and research assignments associated with managing in a multicultural and international work environment.

**Prerequisites & Notes:** Major restricted, MGMT 311

Credits: 4

### **MGMT 482 - Business and its Environment**

A study of the business decision-making process as these decisions interact with the social, technological, political/legal and economic environments. The causes and effects of the regulation of business are developed and explored.

**Prerequisites & Notes:** Major restricted, Mgmt 271

Credits: 4

### **MGMT 483 - Ethics in Business Decisions**

An investigation of ethical theories and their application to issues faced by managers. An analysis of the morality of capitalism as a social system, and the ethical issues involved in international business operations.

**Prerequisites & Notes:** Major restricted, MGMT 482

Credits: 4

### **MGMT 490 - Internship in Business Administration**

Practical application of skills and theories learned in the classroom through work or special project experience in private or public organizations. Repeatable to 12 credits.

**Prerequisites & Notes:** Major restricted

Credits: 1 TO 4

### **MGMT 491 - Small Business Entrepreneurship**

Planning, marketing, financial, legal, control and human elements associated with the start up, acquisition and operation of a small business from the entrepreneurial point of view.

**Prerequisites & Notes:** Major restricted, MGMT 311, FIN 341, MKTG 380, OPS 360, and MIS 320 or ACCT 321.

Credits: 4

### **MGMT 492 - Entrepreneurial Problems**

Field consulting work and study under faculty supervision with small business entrepreneurs in the local business community, directed towards solving varied real-life small business problems.

**Prerequisites & Notes:** Major restricted, MGMT 491

Credits: 4

### **MGMT 495 - Strategic Management**

Case study of policy making and administration from a general management point of view. Emphasis on problem analysis, the decision-making process, administration and control, and development of policies and objectives.

**Prerequisites & Notes:** Major restricted, MGMT 311, FIN 341, MKTG 380, OPS 360, and MIS 320 or ACCT 321.

Credits: 4

## **Management Information Systems**

*Courses numbered X37; X97; 300, 400; 417, 445 are described in the University Academic Policies section of this catalog.*

### **MIS 220 - Introduction to Business Computer Systems**

Introduction to use of commercial software packages for business applications, including spreadsheet analysis, word processing, data management, and communications. S/U grading.

**Prerequisites & Notes:** ACCT 240, C- or better; or ECON major

Credits: 2

### **MIS 304 - Introduction to Web Site Development**

Covers basic Web site design, navigation, and construction. Topics include HTML, JavaScript, page layout, site navigation, cascading style sheets, server-side includes, designing search engines, and site testing.

**Prerequisites & Notes:** MIS 320, C- or better

Credits: 4

### **MIS 313 - Computer Hardware and Operating Systems**

Understand the hardware components commonly found in networked PC work stations and servers and the operating systems that control them. Diagnose common hardware problems. Install or replace PC components.

Install and configure PC operating systems. Diagnose and troubleshoot common OS problems. Manage system resources, including memory, directories and files. Configure network and Internet connectivity.

**Prerequisites & Notes:** Major restricted, MIS 320 or ACCT 321, C- or better

Credits: 4

#### **MIS 314 - Fundamentals of Web Site Development and Management**

Introduction to server-side programming. Topics include PHP, mySQL, reading and writing to databases, database normalization, structured query language (SQL), data management, security, maintenance management and web usability. Each student constructs an interactive, database-driven web site.

**Prerequisites & Notes:** CSCI 202 or equivalent.

Credits: 4

#### **MIS 320 - Principles of Management Information Systems**

Describes the role of MIS in management, including current professional practices and methodologies. Includes presentation of systems theory, decision theory, organizational models, types of MIS, planning and MIS development.

**Prerequisites & Notes:** MIS 220 or equivalent

Credits: 4

#### **MIS 321 - Systems Analysis and Design**

Use management information systems techniques to solve managerial and organizational problems of limited complexity. Includes solving formal analytic problems and implementing solutions using MIS development techniques. Includes supervised structured laboratory exercises.

**Prerequisites & Notes:** Major restricted, MIS 320 or ACCT 321, C- or better

Credits: 4

#### **MIS 322 - Business Applications Development**

Business application development using an object-oriented language. Design of user interfaces and integration with other development platforms such as spreadsheets and databases.

**Prerequisites & Notes:** Major restricted, MIS 320 or ACCT 321; pre/coreq: MIS 321; C- or better

Credits: 4

#### **MIS 323 - Telecommunications**

Analysis and design of telecommunications systems, including those on the Internet. Topics include network design and management, telecommunications concepts and management, and network and telecommunications tools.

**Prerequisites & Notes:** Major restricted, MIS 320 or ACCT 321, C- or better

Credits: 4

#### **MIS 324 - Intermediate Web Site Development and Management**

Web development using ASP.NET, C#, Visual Web Developer and SQL Server Express. Topics include: data management, web services, object-oriented programming, security, reusability, scalability and reliability. Students refine their skills by constructing a database driven web site.

**Prerequisites & Notes:** MIS 314 or MIS 322; instructor permission

Credits: 4

#### **MIS 421 - Business Database Development**

Overview of database use in modern business organizations. Alternative data models and normalization of data. Database design methodologies. Development of a database application using commercial software in microcomputer environment.

**Prerequisites & Notes:** Major restricted, MIS 321

Credits: 4

#### **MIS 422 - Management Support Systems**

Use of modern information system technologies to support the decision-making activities of managers. Introduces several major types of MSS, including Decision Support Systems, Group Support Systems, and Executive Information Systems. Student teams use modern application development software to build a prototype MSS following appropriate design techniques.

**Prerequisites & Notes:** Major restricted, MIS 322, C- or better

Credits: 4

#### **MIS 423 - Network Administration**

Theory and principles, design, implementation, and management of local area network systems, including predominant networking products and technologies.

**Prerequisites & Notes:** Major restricted, MIS 321, MIS 323, C- or better

Credits: 4

**MIS 424 - E-Commerce Systems Management**

This course covers both the theories and tools needed to build and manage e-commerce sites. Specific topics include e-commerce business models, marketing, security, hosting options, secure-transactions, web server installation and configuration, web services and interfacing with legacy systems.

**Prerequisites & Notes:** MIS 324, C- or better

Credits: 4

**MIS 431 - Advanced Business Database Systems**

Design, development, implementation and administration of server-based database management systems. Database queries from client, administrative, and Web-based systems. Instruction in both theory and practice.

**Prerequisites & Notes:** Major restricted, MIS 322, MIS 421, C- or better

Credits: 4

**MIS 432 - Expert Systems in Business**

Use of artificial intelligence concepts in the development of systems for expert decision making, with application to business problems. Review and use of selected commercial expert systems software packages.

**Prerequisites & Notes:** Major restricted, MIS 321 or ACCT 321, C- or better

Credits: 4

**MIS 491 - Practicum in Management Information Systems**

Information systems related to employment, research or special project experience. Emphasis on applying information systems principles and techniques in an academically guided setting. Minimum requirements include a written proposal, journal, and a comprehensive final report. Repeatable to a maximum of 12 credits, only four of which may be applied to the MIS concentration.

**Prerequisites & Notes:** Major restricted, MIS 321, C- or better

Credits: 4

**MIS 492 - Systems Implementation Project**

Solve an information system problem using project management and IS methodologies. Apply project management techniques in a group project environment. Develop systems documentation, implement system, and present completed project report.

**Prerequisites & Notes:** Major restricted, MIS 322 or MIS 421 or MIS 422 or MIS 432, C- or better

Credits: 4

**MIS 495 - Corporate Information Systems Management**

Case study of the current and potential applications of information technology to enhance the competitive posture of the corporation. Uses of information technology throughout the organization; management and control of the information technology function.

**Prerequisites & Notes:** Major restricted, MIS 321; pre/coreq: one 400-level MIS elective; C- or better

Credits: 4

**Marketing**

*Courses numbered X37; X97; 300, 400; 417, 445 are described in the University Academic Policies section of this catalog.*

**NOTE:** Not all courses are offered every year. Many elective courses are offered only once each year. See the online Timetable of Classes for current offerings. Consult department for answers to specific questions.

**MKTG 380 - Principles of Marketing**

Identification and analysis of relevant opportunities and constraints in consumer and industrial target markets. Management of the marketing mix including product planning, distribution institutions and activities, promotion and pricing.

**Prerequisites & Notes:** ACCT 240, ECON 206; Junior standing.

Credits: 4

**MKTG 381 - Fundamentals of Marketing Research**

The primary tool for exploring new opportunities in the marketplace. Emphasis will be on how to: 1) specify information needs and design a research study to meet those needs; 2) collect, analyze and use marketing research data to make effective marketing decisions; 3) communicate the research findings and their implications to various publics.

**Prerequisites & Notes:** Major restricted, MKTG 380, permission of instructor.

Credits: 4

**MKTG 382 - Buying Behavior and Analysis**

Perception, motivation, learning, attitude structure and change, social influences and cultural forces relevant to buyer behavior and decision processes. Implications for marketing planning, analysis and management.

**Prerequisites & Notes:** Major restricted, MKTG 380

Credits: 4

### **MKTG 471 - Sports Marketing**

Application of marketing principles and concepts in the sports industry. Includes sponsorships, branding, promotions, public relations, licensing, and sports consumer research and behavior.

**Prerequisites & Notes:** Major restricted, MKTG 381, MKTG 382.

Credits: 4

### **MKTG 472 - Internet Marketing**

This course is an examination of the use of the Internet as a unique channel for marketing to consumers and businesses. Topics include the role of the Internet in: the identification of appropriate target segments, the development of product opportunities, the application of unique pricing and distribution structures, and the integration between companies' online and offline marketing efforts. Also discussed are the ethical and legal constraints of Internet marketing.

**Prerequisites & Notes:** MKTG 381 and MKTG 382.

Credits: 4

### **MKTG 473 - Innovation and Branding**

This course explores strategies for effective commercialization of innovation and key concepts in branding. Course will focus on three frameworks for innovation management, and students will discuss and apply these frameworks through several business cases.

**Prerequisites & Notes:** MKTG 381 and MKTG 382.

Credits: 4

### **MKTG 474 - Marketing Strategies for Sustainability**

This course will provide students with the skills for developing and marketing a sustainable product. It will cover key concepts and tools related to marketing mix decisions, such as product design-for-environment, pricing based on full cost accounting, greening of the supply chain, and life cycle impact assessment. Strategies for reducing the environmental impacts of products and services will be emphasized.

**Prerequisites & Notes:** MKTG 381 and MKTG 382.

Credits: 4

### **MKTG 480 - Marketing Internship**

Marketing-related employment, research or special project experience. Emphasis is on applying marketing principles in an academically guided setting. Minimum requirements include a written proposal and a comprehensive final report. Cannot be used as one of the two 400-level marketing elective prerequisites for MKTG 489; however, MKTG 480 may be used as one of the four 400-level MKTG electives in the marketing concentration.

**Prerequisites & Notes:** Major restricted, MKTG 381, MKTG 382. Permission of instructor.

Credits: 4

### **MKTG 481 - Advanced Marketing Research and Analysis**

Focuses on advanced questionnaire design, enhancing the validity of survey research, value of information and multivariate analysis of market research data. The course is based around a market research project completed for a real business client.

**Prerequisites & Notes:** Major restricted, MKTG 381, MKTG 382, DSCI 305

Credits: 4

### **MKTG 482 - Personal Selling and Sales Management**

Planning and implementation of personal selling activities. Management of the sales force -- objectives, recruiting, selection, training, motivation, compensation, evaluation and control. Emphasis on sustainable business-to-business selling.

**Prerequisites & Notes:** Major restricted, MKTG 382

Credits: 4

### **MKTG 483 - Integrated Marketing Communications**

Covers the different types of marketing communications and how to integrate them into a coherent IMC plan: advertising (media and creative strategies), sales promotion, public relations, direct marketing, event sponsorship, brand placement, internet advertising, search engine optimization, web site design, and viral communication tactics (e.g., social networks, user-generated content). Emphasis is on "new media" and Web 2.0 strategies. Students develop a comprehensive IMC plan for an existing or invented product or service.

**Prerequisites & Notes:** Major restricted, MKTG 381, MKTG 382

Credits: 4

**MKTG 484 - Retailing**

Administration and strategic planning in large and small retail firms. Management of retail functions: stock planning, inventory control, markup and pricing, retail accounting, merchandising, retail promotion, human resources management, store location, design and layout, legal and ethical issues, information systems.

**Prerequisites & Notes:** Major restricted, MKTG 381, MKTG 382.

Credits: 4

**MKTG 486 - International Marketing Management**

Formulation and implementation of international marketing strategies. Analysis of the contemporary global marketing environment, marketing mix issues and decisions in international markets, global competitive analysis and strategy, organizing for international marketing, current problems and practices in multinational firms.

**Prerequisites & Notes:** Major restricted, MKTG 380

Credits: 4

**MKTG 487 - Nonprofit Marketing**

Marketing strategies for all types of nonprofit organizations. Includes marketing mix, as well as fund raising, volunteer management, nonprofit branding, and the use of public media.

**Prerequisites & Notes:** Major restricted, MKTG 381

Credits: 4

**MKTG 488 - Topics in Marketing**

Varying topics in marketing such as distribution systems, marketing on the internet, geographic information systems in business and direct marketing. Repeatable with various topics to a maximum of 8 credits.

**Prerequisites & Notes:** Major restricted, Vary by topic; instructor permission required.

Credits: 4

**MKTG 489 - Marketing Management and Strategy**

Application of marketing management and strategic concepts in a case problem and market simulation format.

Emphasis on marketing planning, implementation of the marketing mix and utilization of market research information.

**Prerequisites & Notes:** Major restricted, MKTG 381, MKTG 382, and two 400-level MKTG courses (excluding MKTG 480, 490).

Credits: 4

**MKTG 490 - Customized Internship in Marketing**

Practical application of skills and theories learned in the classroom through work or special project experience in public or private organizations. Repeatable to a maximum of 12 cr, only 4 cr of which may be applied to the marketing concentration. Cannot be applied to the concentration.

**Prerequisites & Notes:** Majors only. MKTG 381 and MKTG 382; permission of instructor.

Credits: 1 TO 4

**Master of Professional Accounting**

*Courses numbered X37; X97; 300, 400, 500; 417, 445, 517, 545 are described in the University Academic Policies section of this catalog.*

**MPAC 521 - Seminar in Accounting Information Systems**

A seminar designed to study elements of accounting information systems, including technological aspects. The content includes a combination of theory and practical application. Conceptual modeling, implementation of accounting transaction processing systems, enterprise value chains, business processes, documentation, and control requirements are emphasized.

**Prerequisites & Notes:** ACCT 321 or equivalent.

Credits: 4

**MPAC 531 - Accounting Communications**

This course will focus on developing skills for communication as a professional accountant in an organizational setting and is intended to enhance the experience of students enrolled in MPAcc 590, Internship in Professional Accounting. This is an online course that includes student-led discussions, team tasks, reflective journaling, and a variety of other individual assignments aimed at enhancing communication skills in a professional accounting setting. Short readings will cover organizational communications research applicable to accounting firms.

Credits: 4

**MPAC 535 - Seminar in Management Accounting**

Using cases, students will gain the analytical skills needed to both implement well designed management systems, and to evaluate the strengths and weaknesses of existing systems. Topics will include budgeting, resource allocation,

performance measurement, evaluation and reward, change management, and transfer pricing.

**Prerequisites & Notes:** ACCT 331 or equivalent

Credits: 4

#### **MPAC 541 - Seminar in Advanced Financial Accounting**

This course develops accounting skills for business combinations, consolidated financial statements, partnerships, corporate reorganizations, segment reporting, and foreign currency financial statements. Critical thinking, teamwork, and communications skills will be emphasized along with current technology used in accounting practice.

**Prerequisites & Notes:** ACCT 343 or equivalent.

Credits: 4

#### **MPAC 545 - Seminar in Accounting Theory**

A study of accounting theory underlying current practice. This course is designed to develop awareness of and ability to utilize knowledge including significant historical components, key stakeholders and their issues, political and regulatory processes, and critical perspectives on accounting and its role in society.

**Prerequisites & Notes:** ACCT 343 or equivalent.

Credits: 4

#### **MPAC 551 - Seminar in International Accounting**

This course explores how various accounting topics and issues are addressed within an international context, including a comparative analysis of accounting measurement, disclosure and financial reporting requirements in different countries within the framework of global harmonization efforts. In addition, the impact of accounting issues on multinational business operations is discussed and students will study a 'non-home' country in depth.

**Prerequisites & Notes:** ACCT 343 or equivalent.

Credits: 4

#### **MPAC 561 - Seminar in Professional Auditing**

Provides in-depth exposure to a variety of aspects of the theory and practice of professional auditing. Topics may include auditing philosophy, history and research; economic function of audits; professional standards and malpractice; new auditing techniques and services. Activities include cases, readings, individual research and discussion.

**Prerequisites & Notes:** ACCT 461 or equivalent.

Credits: 4

#### **MPAC 565 - Special Topics in Accounting**

This is an advanced course in accounting that examines a broad range of issues that are of current concern to both the accounting profession and users of accounting information. The course content will vary to provide opportunities to study current issues in accounting.

Credits: 4

#### **MPAC 571 - Seminar in Law for Accountants**

Using cases, texts, lecture and discussion, students examine legal issues important to accountants, including: administrative law-making; agency, business organizations; negotiable instruments, bank deposits, intellectual property; aspects of real and personal property security, bankruptcy; lobbying and campaign finance regulations; and accountants' professional liability.

**Prerequisites & Notes:** ACCT 470 or equivalent.

Credits: 4

#### **MPAC 575 - Seminar in Taxation**

Tax from a managerial perspective, with emphasis on the identification and examination of tax problems and potential tax opportunities. Students will examine the choice of different business entities for tax purposes, compensation and succession planning, and tax planning for investments.

**Prerequisites & Notes:** ACC 375 or equivalent.

Credits: 4

#### **MPAC 581 - Ethics and Accountability**

This is a capstone course in the MPAcc program introducing ethical systems used for decision making and public reporting taken from a professional accounting perspective and integrating notions of entity social responsibility with a global business perspective.

Credits: 4

#### **MPAC 585 - Sustainability Accounting and Reporting**

Through reading several books and examining some Triple Bottom Line (TBL)-related websites in detail, course participants will study the overall themes and examples of TBL offered by various authors and organizations. Our directed conversations will focus on an analysis and synthesis of these themes, the credibility the proposals and

attempts, and the general applicability of the TBL concept.

**Prerequisites & Notes:** ACCT 343 or equivalent.

Credits: 4

#### **MPAC 590 - Internship in Professional Accounting**

Practical application of academic curriculum beyond that contained in graduate coursework. A one quarter internship under supervision with an approved certified public accounting firm, business entity, not-for-profit organization, or government agency. S/U grading.

**Prerequisites & Notes:** Approval of the Internship Coordinator: Co-req: MPAC 531

Credits: 12

### **Materials Science**

*Courses numbered X37; X97; 300, 400; 417, 445 are described in the University Academic Policies section of this catalog.*

#### **MSCI 101 - The Materials Revolution**

An introductory course designed to facilitate a basic understanding of the materials science fundamentals behind the development of today's most important and innovative materials. Topics include: nanomaterials, smart materials, advanced composite materials, and semiconductors. Other important basics such as building materials from atoms, structures, synthesis, materials failures, and sustainability will also be covered.

**Prerequisites & Notes:** Freshman status or permission - FYE

Credits: 4

#### **MSCI 201 - Introduction to Engineering Materials**

The relationship between the properties, structure and processes of engineering materials is discussed. Emphasis on the fundamentals of selecting materials based on engineering design criteria. Also offered as ETEC 220.

**Prerequisites & Notes:** CHEM 121 or CHEM 125; MATH 115 or MATH 118; PHYS 121 or concurrent.

Credits: 4

#### **MSCI 320 - Introduction to Materials Science I**

The first course in a three course interdisciplinary sequence designed to cover the fundamental concepts of materials science. Basic atomic structures, basic organic and polymer chemistry, synthesis of organic materials, polymers, composites, and basic characterization methods are covered in this first overview course. ETEC majors may substitute ETEC 333 + 334 + CHEM 251 for MSCI 320.

**Prerequisites & Notes:** CHEM 123 or CHEM 225.

Credits: 4

#### **MSCI 330 - Introduction to Materials Science II**

The second course in a three course interdisciplinary sequence designed to cover the fundamental concepts of materials science. Electrical, magnetic and optical properties and structures of materials are emphasized in this second overview course. ETEC majors may substitute ETEC 333 + 334 + CHEM 251 for MSCI 320.

**Prerequisites & Notes:** MATH 125 or MATH 135 or MATH 138; PHYS 121, PHYS 122, PHYS 123; MSCI 320

Credits: 4

#### **MSCI 410 - Characterization of Materials**

The third course in a three course interdisciplinary sequence designed to cover the fundamental concepts of materials science. Theory and operating principals of external and internal characterization of materials such as: electron microscopy, x-ray chemical microanalysis, optical microscopy, thermal, magnetic and structural analysis, polymer processing and analysis, thin film preparation and characterization, and x-ray diffraction. Laboratory experience and projects are emphasized.

**Prerequisites & Notes:** MSCI 330 or CHEM 461 or GEOL 306

Credits: 4

#### **MSCI 491 - Independent Research or Internship in Materials Science I**

Undergraduate research in materials science or an undergraduate internship in materials science in industry under supervision.

**Prerequisites & Notes:** MSCI 330.

Credits: 3

#### **MSCI 492 - Independent Research or Internship in Materials Science II**

Undergraduate research in materials science or an undergraduate internship in materials science in industry under supervision.

**Prerequisites & Notes:** MSCI 330.

Credits: 3

## **Music**

*Courses numbered X37; X97; 300, 400, 500; 417, 445, 517, 545 are described in the University Academic Policies section of this catalog.*

### **MUS 099 - Concert Attendance**

All music pre-majors and majors are required to attend a minimum of eight approved concerts and/or recitals each quarter in residence. S/U grading.

Credits: 0

### **MUS 100 - Marrowstone Music Festival**

A combined theory, composition, and music literature class keyed to the works students will perform during the Marrowstone Music Festival. Students will gain insight into these works and have the opportunity to develop their own compositional skills. S/U grading.

**Prerequisites & Notes:** concurrent participation/enrollment in Marrowstone Music Festival

Credits: 1

### **MUS 101 - Fundamentals of Music**

Open to all students. The study of musical construction for those unfamiliar with the fundamentals of notation (pitch and rhythm), major and minor scales, intervals, triads and keys, with particular attention to their practical application.

Credits: 3

### **MUS 102 - Introduction to Music Theory and Ear Training**

Courses designed to strengthen the prospective music major's knowledge of fundamental theoretical principles and to introduce the basic aural/reading skills needed to begin the musicianship sequence.

**Prerequisites & Notes:** MUS 101 or instructor permission

Credits: 3

### **MUS 103 - Introduction to Music Theory and Ear Training**

Courses designed to strengthen the prospective music major's knowledge of fundamental theoretical principles and to introduce the basic aural/reading skills needed to begin the musicianship sequence.

**Prerequisites & Notes:** MUS 102

Credits: 3

### **MUS 104 - The Art of Listening to Music**

Open to all students. Non-technical basis for enjoyable listening to music; performance practices relating to symphony orchestras, instrumental ensembles, opera, choral groups and solo performance.

Credits: 3

### **MUS 105 - Music in the Western World**

Open to all students. An introduction to the principal genres, forms and composers of Western music within the framework of a study of the historical stylistic periods.

Credits: 3

### **MUS 116 - Guitar Technologies: Guitar for Beginners**

This course serves as an introduction to the guitar. Techniques include both basics of plectrum and finger-style technique. Also covered are chords, strumming and finger-style applications for arpeggio playing, leading to basic accompaniment. S/U grading.

Credits: 2

### **MUS 121 - Aural and Keyboard Skills I**

The development of aural competence in and visual familiarity with the sounds and symbols of the diatonic major and minor system. Exercises and drill in prepared and sight reading, dictation, error detection, accuracy of rhythm and intonation. S/U grading.

**Prerequisites & Notes:** music major

Credits: 1

### **MUS 122 - Theoretical and Analytical Skills I**

Study of and practical experience in using the basic materials of musical construction including notation, melody, harmony, rhythm and form.

**Prerequisites & Notes:** MUS 101 or equivalent; music major

Credits: 3

**MUS 123 - Aural and Keyboard Skills I**

The development of aural competence in and visual familiarity with the sounds and symbols of the diatonic major and minor system. Exercises and drill in prepared and sight reading, dictation, error detection, accuracy of rhythm and intonation. S/U grading.

**Prerequisites & Notes:** MUS 121; music major

Credits: 1

**MUS 124 - Theoretical and Analytical Skills I**

Study of and practical experience in using the basic materials of musical construction including notation, melody, harmony, rhythm and form.

**Prerequisites & Notes:** MUS 122; music major

Credits: 3

**MUS 125 - Aural and Keyboard Skills I**

The development of aural competence in and visual familiarity with the sounds and symbols of the diatonic major and minor system. Exercises and drill in prepared and sight reading, dictation, error detection, accuracy of rhythm and intonation. S/U grading.

**Prerequisites & Notes:** MUS 123; music major

Credits: 1

**MUS 126 - Theoretical and Analytical Skills I**

Study of and practical experience in using the basic materials of musical construction including notation, melody, harmony, rhythm and form.

**Prerequisites & Notes:** MUS 124; music major

Credits: 3

**MUS 160 - Preparatory Class Piano**

Designed for students with no keyboard experience. Basic reading skills and technique.

Credits: 1

**MUS 163 - Class Voice**

Study of basic vocal production skills and repertoire preparation.

Credits: 2

**MUS 164 - Class Voice and Pedagogy**

Tone production, song repertoire interpretation and pedagogy for non-voice majors.

**Prerequisites & Notes:** music major

Credits: 2

**MUS 166A - Introduction to Voice Studies A**

This course will prepare the student for success in solo and choral voice performance at the university level. The student will be exposed to linguistic and musical resources for the preparation and performance of vocal music in various languages. Efficient practice and research techniques are also integral to the course.

**Prerequisites & Notes:** Admission to music program as a voice pre-major.

Credits: 3

**MUS 166B - Introduction to Voice Studies B**

A continuation of MUS 166A with added emphasis on skills necessary for success as a vocal soloist. The student will be exposed to more in-depth linguistic and musical resources such as: recital preparation, performance anxiety, and a general survey of the solo vocal repertoire.

**Prerequisites & Notes:** Admission to the music program as a voice pre-major, MUS 166A.

Credits: 2

**MUS 168 - Exploring the World of Teaching Music**

Overview of strategies for effective teaching, rehearsal techniques and strategies, motivational tools, appropriate body language, assertive classroom management. S/U grading.

**Prerequisites & Notes:** concurrent participation/enrollment in Marrowstone Music Festival

Credits: 1

**MUS 173 - Marrowstone Orchestra**

Study, rehearsal and performance of orchestra literature appropriate to students participating in the Marrowstone Music Festival. S/U grading.

**Prerequisites & Notes:** concurrent participation/enrollment in Marrowstone Music Festival

Credits: 1

**MUS 181 - Marrowstone Chamber Music**

Study, rehearsal and performance of chamber music appropriate to students participating in the Marrowstone Music Festival. S/U grading.

**Prerequisites & Notes:** concurrent participation/enrollment in Marrowstone Music Festival

Credits: 1

**MUS 202 - Jazz: Genesis and Evolution**

Open to all students. Personalities, styles and social/cultural influences on jazz from its beginning to the present day.  
Credits: 3

**MUS 205 - Survey of Non-Western Musical Cultures**

Open to all students. A general introduction to the musical styles of major non-Western cultures, including those of Africa, India, Asia, Indonesia and Eastern Europe. Focus on the role played by music in each society.  
Credits: 3

**MUS 211 - Applied Instruction: Organ**

Repeatable for credit.

**Prerequisites & Notes:** music major; minimum applied performance audition

Credits: 1 TO 4

**MUS 212 - Applied Instruction: Piano**

Repeatable for credit.

**Prerequisites & Notes:** music major; minimum applied performance audition

Credits: 1 TO 4

**MUS 213 - Applied Instruction: Strings**

Repeatable for credit.

**Prerequisites & Notes:** music major; minimum applied performance audition

Credits: 1 TO 4

**MUS 213A - Applied Instruction: Violin**

Repeatable for credit.

**Prerequisites & Notes:** music major; minimum applied performance audition

Credits: 1 TO 4

**MUS 213B - Applied Instruction: Viola**

Repeatable for credit.

**Prerequisites & Notes:** music major; minimum applied performance audition

Credits: 1 TO 4

**MUS 213C - Applied Instruction: Cello**

Repeatable for credit.

**Prerequisites & Notes:** music major; minimum applied performance audition

Credits: 1 TO 4

**MUS 213D - Applied Instruction: Double Bass**

Repeatable for credit.

**Prerequisites & Notes:** music major; minimum applied performance audition

Credits: 1 TO 4

**MUS 214 - Applied Instruction: Winds and Percussion**

Repeatable for credit.

**Prerequisites & Notes:** music major; minimum applied performance audition

Credits: 1 TO 4

**MUS 214A - Applied Instruction: Flute**

Repeatable for credit.

**Prerequisites & Notes:** music major; minimum applied performance audition

Credits: 1 TO 4

**MUS 214B - Applied Instruction: Oboe**

Repeatable for credit.

**Prerequisites & Notes:** music major; minimum applied performance audition

Credits: 1 TO 4

**MUS 214C - Applied Instruction: Clarinet**

Repeatable for credit.

**Prerequisites & Notes:** music major; minimum applied performance audition

Credits: 1 TO 4

**MUS 214D - Applied Instruction: Bassoon**

Repeatable for credit.

**Prerequisites & Notes:** music major; minimum applied performance audition

Credits: 1 TO 4

**MUS 214E - Applied Instruction: Saxophone**

Repeatable for credit.

**Prerequisites & Notes:** music major; minimum applied performance audition

Credits: 1 TO 4

**MUS 214F - Applied Instruction: French Horn**

Repeatable for credit.

**Prerequisites & Notes:** music major; minimum applied performance audition

Credits: 1 TO 4

**MUS 214G - Applied Instruction: Trumpet**

Repeatable for credit.

**Prerequisites & Notes:** music major; minimum applied performance audition

Credits: 1 TO 4

**MUS 214H - Applied Instruction: Trombone**

Repeatable for credit.

**Prerequisites & Notes:** music major; minimum applied performance audition

Credits: 1 TO 4

**MUS 214I - Applied Instruction: Euphonium**

Repeatable for credit.

**Prerequisites & Notes:** music major; minimum applied performance audition

Credits: 1 TO 4

**MUS 214J - Applied Instruction: Tuba**

Repeatable for credit.

**Prerequisites & Notes:** music major; minimum applied performance audition

Credits: 1 TO 4

**MUS 214K - Applied Instruction: Percussion**

Repeatable for credit.

**Prerequisites & Notes:** music major; minimum applied performance audition

Credits: 1 TO 4

**MUS 215 - Applied Instruction: Voice**

Repeatable for credit.

**Prerequisites & Notes:** music major; minimum applied performance audition

Credits: 1 TO 4

**MUS 216 - Applied Instruction: Classical Guitar**

Repeatable for credit.

**Prerequisites & Notes:** music major; minimum applied performance audition

Credits: 1 TO 4

**MUS 221 - Aural and Keyboard Skills II**

The development of aural competence in and visual familiarity with the sounds and symbols of the chromatic major and minor system; introduction to extended tertian harmony. Exercises and drill in prepared and sight reading, dictation, error detection, accuracy of rhythm and intonation. S/U grading.

**Prerequisites & Notes:** MUS 125; music major

Credits: 1

**MUS 222 - Theoretical and Analytical Skills II**

Advanced study of and practical experience in using the materials of musical construction including extended, chromatic, and non-tertian harmonic structures and complex musical forms.

**Prerequisites & Notes:** MUS 126; music major

Credits: 3

### **MUS 223 - Aural and Keyboard Skills II**

The development of aural competence in and visual familiarity with the sounds and symbols of the chromatic major and minor system; introduction to extended tertian harmony. Exercises and drill in prepared and sight reading, dictation, error detection, accuracy of rhythm and intonation. S/U grading.

**Prerequisites & Notes:** MUS 221; music major

Credits: 1

### **MUS 224 - Theoretical and Analytical Skills II**

Advanced study of and practical experience in using the materials of musical construction including extended, chromatic, and non-tertian harmonic structures and complex musical forms.

**Prerequisites & Notes:** MUS 222; music major

Credits: 3

### **MUS 225 - Aural and Keyboard Skills II**

The development of aural competence in and visual familiarity with the sounds and symbols of the chromatic major and minor system; introduction to extended tertian harmony. Exercises and drill in prepared and sight reading, dictation, error detection, accuracy of rhythm and intonation. S/U grading.

**Prerequisites & Notes:** MUS 223; music major; minimum applied performance audition

Credits: 1

### **MUS 226 - Theoretical and Analytical Skills II**

Advanced study of and practical experience in using the materials of musical construction including extended, chromatic, and non-tertian harmonic structures and complex musical forms.

**Prerequisites & Notes:** MUS 224

Credits: 3

### **MUS 230 - Introduction to Electroacoustic Music**

Instruction in editing and mixing audio with computer software; analog synthesis with vintage synthesizers; history of electroacoustic music.

**Prerequisites & Notes:** MUS 105

Credits: 2

### **MUS 231 - Elementary Composition**

Elementary craft of melody, counterpoint, harmony, instrumentation, texture, rhythm, and notation; participation in weekly composition seminars. Repeatable for credit under advisement.

Credits: 1 TO 2

### **MUS 232 - Computer Music Seminar**

Instruction in musical programming with CSound or SuperCollider. Topics include sound synthesis, signal processing, and algorithmic composition.

**Prerequisites & Notes:** MUS 105; music major

Credits: 2

### **MUS 260 - Remedial Class Piano**

Concentration on specific areas of the Keyboard Competency Exam based on individual needs. Repeatable for credit.

**Prerequisites & Notes:** music major; successful completion of at least 4 items of the Keyboard Competency Exam

Credits: 1

### **MUS 261 - Intermediate Class Piano**

Intermediate piano repertoire, sight-reading skills, technique and accompanying. Repeatable to a maximum of 6 credits.

**Prerequisites & Notes:** MUS 225; music major

Credits: 1

### **MUS 264A - Instrumental Lab for Secondary Instruments: Flute/Single Reeds**

Pedagogy of and performance on secondary instruments, conducting, developing teaching strategies with goals and objectives.

**Prerequisites & Notes:** music major

Credits: 1 TO 2

**MUS 264B - Instrumental Lab for Secondary Instruments: Double Reeds**

Pedagogy of and performance on secondary instruments, conducting, developing teaching strategies with goals and objectives.

**Prerequisites & Notes:** music major

Credits: 1 TO 2

**MUS 264C - Instrumental Lab for Secondary Instruments: Clarinet**

Pedagogy of and performance on secondary instruments, conducting, developing teaching strategies with goals and objectives.

**Prerequisites & Notes:** music major

Credits: 1 TO 2

**MUS 264D - Instrumental Lab for Secondary Instruments: Bassoon**

Pedagogy of and performance on secondary instruments, conducting, developing teaching strategies with goals and objectives.

**Prerequisites & Notes:** music major

Credits: 1 TO 2

**MUS 264E - Instrumental Lab for Secondary Instruments: Saxophone**

Pedagogy of and performance on secondary instruments, conducting, developing teaching strategies with goals and objectives.

**Prerequisites & Notes:** music major

Credits: 1 TO 2

**MUS 264F - Instrumental Lab for Secondary Instruments: Horn**

Pedagogy of and performance on secondary instruments, conducting, developing teaching strategies with goals and objectives.

**Prerequisites & Notes:** music major

Credits: 1 TO 2

**MUS 264G - Instrumental Lab for Secondary Instruments: High Brass**

Pedagogy of and performance on secondary instruments, conducting, developing teaching strategies with goals and objectives. **Prerequisites & Notes:** music major

Credits: 1 TO 2

**MUS 264H - Instrumental Lab for Secondary Instruments: Low Brass**

Pedagogy of and performance on secondary instruments, conducting, developing teaching strategies with goals and objectives.

**Prerequisites & Notes:** music major

Credits: 1 TO 2

**MUS 264I - Instrumental Lab for Secondary Instruments: Euphonium**

Pedagogy of and performance on secondary instruments, conducting, developing teaching strategies with goals and objectives.

**Prerequisites & Notes:** music major

Credits: 1 TO 2

**MUS 264J - Instrumental Lab for Secondary Instruments: Tuba**

Pedagogy of and performance on secondary instruments, conducting, developing teaching strategies with goals and objectives.

**Prerequisites & Notes:** music major

Credits: 1 TO 2

**MUS 264K - Instrumental Lab for Secondary Instruments: Percussion**

Pedagogy of and performance on secondary instruments, conducting, developing teaching strategies with goals and objectives.

**Prerequisites & Notes:** music major

Credits: 1 TO 2

**MUS 265A - String Techniques and Pedagogy Lab: Violin/Viola**

Principles and techniques of playing and teaching string instruments.

**Prerequisites & Notes:** music major

Credits: 1 TO 2

**MUS 265B - String Techniques and Pedagogy Lab: Cello/Bass**

Principles and techniques of playing and teaching string instruments.

**Prerequisites & Notes:** music major

Credits: 1 TO 2

**MUS 268 - Survey of Music Education**

History and philosophy of music education, basic teaching methods, curriculum design and implementation.

Examination of relevant journals. Observation of public school music programs.

**Prerequisites & Notes:** music major

Credits: 2

**MUS 269 - Music Teaching Practicum I**

Observation, assisting and/or micro-teaching experience in K-12 music classroom environments. Repeatable for credit.

**Prerequisites & Notes:** instructor permission

Credits: 2

**MUS 271 - University Choir**

Preparation and performance of major choral works and part-songs. Open to all students having the ability to sing mixed part-songs. Repeatable for credit.

**Prerequisites & Notes:** instructor permission

Credits: 2

**MUS 272 - Symphonic Band**

Preparation and performance of major band works. Open to all students with band experience. Repeatable for credit.

**Prerequisites & Notes:** instructor permission

Credits: 2

**MUS 274 - Jazz Ensembles**

Performance and interpretation of contemporary jazz in a large ensemble situation. Repeatable for credit.

**Prerequisites & Notes:** by audition

Credits: 2

**MUS 275 - Chamber Jazz Ensembles**

Supervised small ensemble performance in jazz idioms stressing repertoire, improvisation, and performance of written arrangements and compositions. One public performance per quarter required. Repeatable for credit.

**Prerequisites & Notes:** by audition; MUS 224, MUS 334 strongly recommended

Credits: 2

**MUS 276 - Piano Accompanying**

Includes private accompanying instruction and weekly performance seminars. Accompanying assignments include duos, chamber ensembles and large performance ensembles. Sight-reading skills, interpretation and accompanying techniques are emphasized. Repeatable for credit.

Credits: 2

**MUS 278 - Opera Workshop**

Preparation of opera scenes or a major music production to include a public performance each quarter. Repeatable for credit.

**Prerequisites & Notes:** by audition

Credits: 1 TO 2

**MUS 280 - Collegium Musicum**

Music literature studies from an analytical and performance viewpoint from early to classic music, culminating in a public performance each quarter. Repeatable for credit.

**Prerequisites & Notes:** by audition

Credits: 1 TO 2

**MUS 281A - Applied Chamber Music: Flute**

Repeatable.

**Prerequisites & Notes:** by audition

Credits: 1 TO 2

**MUS 281B - Applied Chamber Music: Double Reed**

Repeatable.

**Prerequisites & Notes:** by audition

Credits: 1 TO 2

**MUS 281C - Applied Chamber Music: Single Reed**

Repeatable.

**Prerequisites & Notes:** by audition

Credits: 1 TO 2

**MUS 281F - Applied Chamber Music: High Brass**

Repeatable.

**Prerequisites & Notes:** by audition

Credits: 1 TO 2

**MUS 281H - Applied Chamber Music: Low Brass**

Repeatable.

**Prerequisites & Notes:** by audition

Credits: 1 TO 2

**MUS 281K - Applied Chamber Music: Percussion**

Repeatable.

**Prerequisites & Notes:** by audition

Credits: 1 TO 2

**MUS 281L - Applied Chamber Music: Strings**

Repeatable.

**Prerequisites & Notes:** by audition

Credits: 1 TO 2

**MUS 281M - Applied Chamber Music: Piano**

Repeatable.

**Prerequisites & Notes:** by audition

Credits: 1 TO 2

**MUS 281N - Applied Chamber Music: Guitar**

Repeatable.

**Prerequisites & Notes:** by audition

Credits: 1 TO 2

**MUS 283 - Chamber Vocal Ensembles**

Repeatable for credit.

**Prerequisites & Notes:** by audition

Credits: 2

**MUS 284 - Vocal Jazz Ensemble**

Preparation and performance of vocal works by major jazz composers. Open to all University students having the ability to sing in mixed chorus. Repeatable for credit.

**Prerequisites & Notes:** by audition

Credits: 2

**MUS 285 - Fundamentals of Musical Theatre**

Practical application for singing, acting and movement to performance-related work from American musical theatre through solo, duet and group performance. Repeatable to a maximum of 6 credits.

Credits: 3

**MUS 305 - Musics of the Pacific Rim**

An investigation of specific musical styles and practices of selected Pacific Rim cultures, including Pacific Islands, West Coast Native Americans, South America, Indonesia, China and Japan. Includes class participation in actual musical situations from these areas.

**Prerequisites & Notes:** MUS 205

Credits: 3

**MUS 311 - Applied Instruction: Organ**

Repeatable for credit.

**Prerequisites & Notes:** music major; upper-division exam

Credits: 1 TO 4

**MUS 312 - Applied Instruction: Piano**

Repeatable for credit.

**Prerequisites & Notes:** music major; upper-division exam

Credits: 1 TO 4

**MUS 313 - Applied Instruction: Strings**

Repeatable for credit.

**Prerequisites & Notes:** music major; upper-division exam

Credits: 1 TO 4

**MUS 313A - Applied Instruction: Violin**

Repeatable for credit.

**Prerequisites & Notes:** music major; upper-division exam

Credits: 1 TO 4

**MUS 313B - Applied Instruction: Viola**

Repeatable for credit.

**Prerequisites & Notes:** music major; upper-division exam

Credits: 1 TO 4

**MUS 313C - Applied Instruction: Cello**

Repeatable for credit.

**Prerequisites & Notes:** music major; upper-division exam

Credits: 1 TO 4

**MUS 313D - Applied Instruction: Double Bass**

Repeatable for credit.

**Prerequisites & Notes:** music major; upper-division exam

Credits: 1 TO 4

**MUS 314 - Winds and Percussion**

Repeatable for credit.

**Prerequisites & Notes:** music major; upper-division exam

Credits: 1 TO 4

**MUS 314A - Applied Instruction: Flute**

Repeatable for credit.

**Prerequisites & Notes:** music major; upper-division exam

Credits: 1 TO 4

**MUS 314B - Applied Instruction: Oboe**

Repeatable for credit.

**Prerequisites & Notes:** music major; upper-division exam

Credits: 1 TO 4

**MUS 314C - Applied Instruction: Clarinet**

Repeatable for credit.

**Prerequisites & Notes:** music major; upper-division exam

Credits: 1 TO 4

**MUS 314D - Applied Instruction: Bassoon**

Repeatable for credit.

**Prerequisites & Notes:** music major; upper-division exam

Credits: 1 TO 4

**MUS 314E - Applied Instruction: Saxophone**

Repeatable for credit.

**Prerequisites & Notes:** music major; upper-division exam

Credits: 1 TO 4

**MUS 314F - Applied Instruction: French Horn**

Repeatable for credit.

**Prerequisites & Notes:** music major; upper-division exam

Credits: 1 TO 4

**MUS 314G - Applied Instruction: Trumpet**

Repeatable for credit.

**Prerequisites & Notes:** music major; upper-division exam

Credits: 1 TO 4

**MUS 314H - Applied Instruction: Trombone**

Repeatable for credit.

**Prerequisites & Notes:** music major; upper-division exam

Credits: 1 TO 4

**MUS 314I - Applied Instruction: Euphonium**

Repeatable for credit.

**Prerequisites & Notes:** music major; upper-division exam

Credits: 1 TO 4

**MUS 314J - Applied Instruction: Tuba**

Repeatable for credit.

**Prerequisites & Notes:** music major; upper-division exam

Credits: 1 TO 4

**MUS 314K - Applied Instruction: Percussion**

Repeatable for credit.

**Prerequisites & Notes:** music major; upper-division exam

Credits: 1 TO 4

**MUS 315 - Applied Instruction: Voice**

Repeatable for credit.

**Prerequisites & Notes:** music major; upper-division exam

Credits: 1 TO 4

**MUS 316 - Applied Instruction: Classical Guitar**

Repeatable for credit.

**Prerequisites & Notes:** music major; upper-division exam

Credits: 1 TO 4

**MUS 321 - Aural and Keyboard Skills III**

The development of aural competence in and visual familiarity with the sounds and symbols of atonal, freely tonal and highly chromatic tonal systems; completion of extended tertian harmony. Exercises and drill in prepared and sight reading, dictation, error detection, accuracy of rhythm and intonation. S/U grading.

**Prerequisites & Notes:** MUS 225; music major

Credits: 1

**MUS 322 - Form and Analysis: Music to 1900**

Formal and stylistic analysis of works from the major historical periods up to 1900.

**Prerequisites & Notes:** MUS 224, MUS 225.

Credits: 3

**MUS 323 - Aural and Keyboard Skills III**

The development of aural competence in and visual familiarity with the sounds and symbols of atonal, freely tonal and highly chromatic tonal systems; completion of extended tertian harmony. Exercises and drill in prepared and sight reading, dictation, error detection, accuracy of rhythm and intonation. S/U grading.

**Prerequisites & Notes:** MUS 321

Credits: 1

**MUS 324A - Modal Counterpoint**

Counterpoint in species and free style. Composition and analysis of pieces in two and three parts.

**Prerequisites & Notes:** MUS 224, MUS 225.

Credits: 3

**MUS 324B - Tonal Counterpoint**

Counterpoint in species and free style. Composition and analysis of pieces in two and three parts.

**Prerequisites & Notes:** MUS 224, MUS 225.

Credits: 3

**MUS 325 - Aural and Keyboard Skills III**

The development of aural competence in and visual familiarity with the sounds and symbols of atonal, freely tonal and highly chromatic tonal systems; completion of extended tertian harmony. Exercises and drill in prepared and sight reading, dictation, error detection, accuracy of rhythm and intonation. S/U grading.

**Prerequisites & Notes:** MUS 323

Credits: 1

**MUS 326 - Orchestration/Arranging**

Orchestration and arranging with special reference to the needs of the instrumental conductor and composer.

Repeatable for credit.

**Prerequisites & Notes:** MUS 224, MUS 225.

Credits: 3

**MUS 328A - Midi Notation and Sequencing for Music Education**

MIDI sequencing and notation instruction. Analysis, synthesis, editing, printing, file management, Internet use as an instructional and research tool. Introduction of software applications for music instruction.

**Prerequisites & Notes:** MUS 224, MUS 225, IT 344 or portfolio of basic instructional technology skills, music education major status.

Credits: 3

**MUS 328B - Midi Notation and Sequencing for Composition**

Computer-based notation and recording of music through MIDI keyboard systems.

**Prerequisites & Notes:** MUS 224, MUS 225.

Credits: 3

**MUS 331 - Composition**

Intermediate-level projects in melody, counterpoint, harmony, instrumentation, texture, rhythm, and notation; participation in weekly composition seminars. Repeatable for credit under advisement.

**Prerequisites & Notes:** MUS 226; successful completion of upper-division competency exam in composition

Credits: 3

**MUS 334 - Jazz Improvisation I**

Study of basic chord changes, scales and patterns with improvisation based on these principles. Analysis of transcribed solos and study of jazz repertoire.

**Prerequisites & Notes:** open to all accepted jazz majors or MUS 224

Credits: 3

**MUS 335 - Jazz Improvisation II**

Study of altered chords, scales and patterns with improvisation based on the principles. Analysis of transcribed solos, study of jazz repertoire and ear training.

**Prerequisites & Notes:** MUS 334

Credits: 3

**MUS 336 - Jazz Improvisation III**

Study of bitonal chords, atonality and patterns with improvisation based on these principles. Analysis of transcribed solos, study of jazz repertoire and ear training.

**Prerequisites & Notes:** MUS 335

Credits: 3

**MUS 341 - History of Music to 1600**

Main styles, forms, terminology and composers up to 1600. Individual research projects.

**Prerequisites & Notes:** MUS 224, MUS 225; music major status.

Credits: 3

**MUS 342 - History of Music 1600-1830**

Main styles, forms, terminology and composers from 1600 to 1830. Individual research projects.

**Prerequisites & Notes:** MUS 341; music major

Credits: 3

**MUS 343 - History of Music 1830-Present**

Main styles, forms, terminology and composers from 1830-present. Individual research projects.

**Prerequisites & Notes:** MUS 342; music major

Credits: 3

**MUS 351 - Basic Conducting**

Basic conducting techniques, score reading and interpretive analysis.

**Prerequisites & Notes:** MUS 224, MUS 225; music major status.

Credits: 2

**MUS 352 - Instrumental Conducting**

Instrumental techniques, score reading, interpretive analysis and rehearsal techniques.

**Prerequisites & Notes:** MUS 224, MUS 225; music major status.

Credits: 3

**MUS 353 - Choral Conducting**

Choral techniques, score reading, interpretive analysis and rehearsal techniques.

**Prerequisites & Notes:** MUS 224, MUS 225; music major status.

Credits: 3

**MUS 354 - Advanced Conducting**

Hands-on practical experience in developing advanced conducting skills. Ensemble conducting experience.

**Prerequisites & Notes:** MUS 352, MUS 353; music major

Credits: 3

**MUS 354A - Choral Conducting**

Hands-on practical experience in developing advanced conducting skills. Ensemble conducting experience.

**Prerequisites & Notes:** MUS 352, MUS 353; music major

Credits: 3

**MUS 354B - Instrumental Conducting**

Hands-on practical experience in developing advanced conducting skills. Ensemble conducting experience.

**Prerequisites & Notes:** MUS 352, MUS 353; music major

Credits: 3

**MUS 361 - Music for Elementary Teachers**

For elementary teachers, not music majors. The skills of singing, reading, writing, playing and hearing music; techniques and materials used in the elementary grades.

Credits: 3

**MUS 362 - Elementary Music Education**

Teaching techniques, materials and organization of the elementary music program. Introduction to Orff, Kodaly and MMCP methodology. Observations.

**Prerequisites & Notes:** MUS 124; music major status.

Credits: 3

**MUS 364 - Elementary String Education**

Instruction in elementary-level string instrumental repertoire, teaching strategies, rehearsal techniques, curriculum design and implementation. Peer-teaching and micro-teaching assignments in conjunction with Instrumental Pedagogy Lab classes and public school programs.

**Prerequisites & Notes:** MUS 265A, MUS 265B; music major

Credits: 2

**MUS 366A - Vocal Diction: Italian**

Familiarization and application of the phonetic structures of the major languages of singing and the use of the International Phonetic Alphabet as a basic tool for pronunciation.

**Prerequisites & Notes:** music major; must be taken concurrent with applied voice instruction

Credits: 1

**MUS 366B - Vocal Diction: German**

Familiarization and application of the phonetic structures of the major languages of singing and the use of the International Phonetic Alphabet as a basic tool for pronunciation.

**Prerequisites & Notes:** music major; must be taken concurrent with applied voice instruction

Credits: 1

**MUS 366C - Vocal Diction: French**

Familiarization and application of the phonetic structures of the major languages of singing and the use of the International Phonetic Alphabet as a basic tool for pronunciation.

**Prerequisites & Notes:** music major; must be taken concurrent with applied voice instruction

Credits: 1

**MUS 367 - Fretboard Harmony**

Diatonic harmony applied to the fretboard. Hands-on application of scales and chords as well as basic arranging chord-melody for the guitarist.

**Prerequisites & Notes:** MUS 124, three quarters of MUS 216.

Credits: 1

**MUS 411 - Applied Instruction: Organ**

Repeatable for credit.

**Prerequisites & Notes:** music major; upper-division exam

Credits: 1 TO 4

**MUS 412 - Applied Instruction: Piano**

Repeatable for credit.

**Prerequisites & Notes:** music major; upper-division exam

Credits: 1 TO 4

**MUS 413 - Applied Instruction: Strings**

Repeatable for credit.

**Prerequisites & Notes:** music major; upper-division exam

Credits: 1 TO 4

**MUS 413A - Applied Instruction: Violin**

Repeatable for credit.

**Prerequisites & Notes:** music major; upper-division exam

Credits: 1 TO 4

**MUS 413B - Applied Instruction: Viola**

Repeatable for credit.

**Prerequisites & Notes:** music major; upper-division exam

Credits: 1 TO 4

**MUS 413C - Applied Instruction: Cello**

Repeatable for credit.

**Prerequisites & Notes:** music major; upper-division exam

Credits: 1 TO 4

**MUS 413D - Applied Instruction: Double Bass**

Repeatable for credit.

**Prerequisites & Notes:** music major; upper-division exam

Credits: 1 TO 4

**MUS 414 - Applied Instruction: Winds and Percussion**

Repeatable for credit.

**Prerequisites & Notes:** music major; upper-division exam

Credits: 1 TO 4

**MUS 414A - Applied Instruction: Flute**

Repeatable for credit.

**Prerequisites & Notes:** music major; upper-division exam

Credits: 1 TO 4

**MUS 414B - Applied Instruction: Oboe**

Repeatable for credit.

**Prerequisites & Notes:** music major; upper-division exam

Credits: 1 TO 4

**MUS 414C - Applied Instruction: Clarinet**

Repeatable for credit.

**Prerequisites & Notes:** music major; upper-division exam

Credits: 1 TO 4

**MUS 414D - Applied Instruction: Bassoon**

Repeatable for credit.

**Prerequisites & Notes:** music major; upper-division exam

Credits: 1 TO 4

**MUS 414E - Applied Instruction: Saxophone**

Repeatable for credit.

**Prerequisites & Notes:** music major; upper-division exam

Credits: 1 TO 4

**MUS 414F - Applied Instruction: French Horn**

Repeatable for credit.

**Prerequisites & Notes:** music major; upper-division exam

Credits: 1 TO 4

**MUS 414G - Applied Instruction: Trumpet**

Repeatable for credit.

**Prerequisites & Notes:** music major; upper-division exam

Credits: 1 TO 4

**MUS 414H - Applied Instruction: Trombone**

Repeatable for credit.

**Prerequisites & Notes:** music major; upper-division exam

Credits: 1 TO 4

**MUS 414I - Applied Instruction: Euphonium**

Repeatable for credit.

**Prerequisites & Notes:** music major; upper-division exam

Credits: 1 TO 4

**MUS 414J - Applied Instruction: Tuba**

Repeatable for credit.

**Prerequisites & Notes:** music major; upper-division exam

Credits: 1 TO 4

**MUS 414K - Applied Instruction: Percussion**

Repeatable for credit.

**Prerequisites & Notes:** music major; upper-division exam

Credits: 1 TO 4

**MUS 415 - Applied Instruction: Voice**

Repeatable for credit.

**Prerequisites & Notes:** music major; upper-division exam

Credits: 1 TO 4

**MUS 416 - Applied Instruction: Classical Guitar**

Repeatable for credit.

**Prerequisites & Notes:** music major; upper-division exam

Credits: 1 TO 4

**MUS 422 - Analytical Techniques: 20th-Century Music**

Formal and stylistic analysis of representative 20th-century works.

**Prerequisites & Notes:** MUS 224, MUS 225.

Credits: 3

**MUS 431 - Composition**

Advanced projects in melody, counterpoint, harmony, instrumentation, texture, rhythm, and notation; participation in weekly composition seminars. Repeatable for credit under advisement.

**Prerequisites & Notes:** minimum of 6 credits in MUS 331

Credits: 3

**MUS 432 - Electroacoustic Music**

Instruction in the use of synthesizers, samplers, and computer software for use in electroacoustic music. Group instruction and studio time. Repeatable to a maximum of 6 credits.

**Prerequisites & Notes:** Two from: MUS 230, MUS 232, MUS 328

Credits: 2

**MUS 434 - Jazz Arranging I**

Writing and arranging for small jazz ensembles. Analysis of small jazz ensemble styles.

**Prerequisites & Notes:** MUS 224 or MUS 334.

Credits: 3

**MUS 435 - Jazz Arranging II**

Writing and arranging for a variety of instrumental combinations. Analysis of jazz ensemble styles.

**Prerequisites & Notes:** MUS 434

Credits: 3

**MUS 436 - Jazz Arranging III**

Writing and arranging for large jazz ensemble. Analysis of large jazz ensemble styles.

**Prerequisites & Notes:** MUS 435

Credits: 3

**MUS 441 - Notation**

Reading and interpreting early, contemporary or other extant systems.

**Prerequisites & Notes:** MUS 224, MUS 341, MUS 343; permission of instructor.

Credits: 3

**MUS 442 - Seminar in Music History**

The student, in consultation with the instructor, selects one or more given musical developments for individual research. Ongoing results of this research are shared with other members of the seminar. Focus of varies from quarter to quarter. Repeatable for credit.

**Prerequisites & Notes:** MUS 342, 343; music major

Credits: 4

**MUS 443A - History of Musical Genres: Choral Music**

Development and literature of important musical genres from their origin to the present.

**Prerequisites & Notes:** MUS 343; music major

Credits: 3

**MUS 443B - History of Musical Genres: Solo Song**

Development and literature of important musical genres from their origin to the present.

**Prerequisites & Notes:** MUS 343; music major

Credits: 3

**MUS 443C - History of Musical Genres: Opera**

Development and literature of important musical genres from their origin to the present.

**Prerequisites & Notes:** MUS 343; music major

Credits: 3

**MUS 443D - History of Musical Genres: Keyboard Music**

Development and literature of important musical genres from their origin to the present.

**Prerequisites & Notes:** MUS 343; music major

Credits: 3

**MUS 443E - History of Musical Genres: Chamber Music**

Development and literature of important musical genres from their origin to the present.

**Prerequisites & Notes:** MUS 343; music major

Credits: 3

**MUS 443F - History of Musical Genres: Symphonic Music**

Development and literature of important musical genres from their origin to the present.

**Prerequisites & Notes:** MUS 343; music major

Credits: 3

**MUS 443G - History of Musical Genres: Concerto**

Development and literature of important musical genres from their origin to the present.

**Prerequisites & Notes:** MUS 343; music major

Credits: 3

**MUS 443H - History of Musical Genres: Symphonic Music in the 20th Century**

Development and literature of important musical genres from their origin to the present.

**Prerequisites & Notes:** MUS 343; music major

Credits: 3

**MUS 443I - History of Musical Genres: Opera I**

Development and literature of important musical genres from their origin to the present.

**Prerequisites & Notes:** MUS 343; music major.

Credits: 3

**MUS 443J - History of Musical Genres: Opera II**

Development and literature of important musical genres from their origin to the present.

**Prerequisites & Notes:** MUS 343; music major.

Credits: 3

**MUS 444 - Shakespeare and Music**

History and literature of musicians' responses to works of Shakespeare - music for stage and film, orchestral music, opera and song settings.

**Prerequisites & Notes:** MUS 343

Credits: 3

**MUS 451 - Conducting Practicum**

Advanced conducting techniques to include direction of student ensembles under faculty supervision.

**Prerequisites & Notes:** MUS 351; MUS 352 or MUS 353

Credits: 1 TO 3

**MUS 455 - Band Music Workshop**

Offered summers only. Repeatable for credit.

Credits: 2

**MUS 456 - String Music Workshop**

Offered summers only. Repeatable for credit.

Credits: 2

**MUS 461 - Elementary Music Education Methods II**

Advanced teaching techniques, activities, materials and literature for elementary music teaching. In-depth application strategies for Orff, Kodaly and MMCP methods. Observation and laboratory experience.

**Prerequisites & Notes:** MUS 361 or MUS 362

Credits: 3

**MUS 462 - Band Music Education**

Instruction in elementary, middle and high school band, jazz band, and marching band. Curriculum design, teacher effectiveness, repertoire, rehearsal techniques and classroom management. Peer-teaching and micro teaching assignments in public schools.

**Prerequisites & Notes:** MUS 264A, MUS 264B, MUS 264G or MUS 264H; MUS 354; B- or better.

Credits: 3

**MUS 463 - Secondary Choral Music Education**

Instruction in middle and high school choral repertoire, teaching strategies, rehearsal techniques, classroom management, curriculum design. Peer-teaching and micro-teaching assignments in public schools.

**Prerequisites & Notes:** MUS 354; music education major; admission to Woodring College of Education

Credits: 3

**MUS 464 - Orchestral Music Education**

Instruction in elementary, middle and high school orchestral curriculum design, teaching strategies, repertoire, rehearsal techniques and classroom management. Peer-teaching and micro-teaching assignments in public schools.

**Prerequisites & Notes:** MUS 354, MUS 265A or MUS 265B; music education major status, and admission to Woodring College of Education.

Credits: 3

**MUS 466 - Applied Music Pedagogy**

A study of the basic concepts involved in instrument or voice pedagogy through a survey of the most important modern teaching methods. Repeatable for credit.

**Prerequisites & Notes:** upper-division applied instruction; music major

Credits: 1 TO 3

**MUS 466A - Applied Music Pedagogy: Piano**

A study of the basic concepts involved in instrument or voice pedagogy through a survey of the most important modern teaching methods. Repeatable for credit.

**Prerequisites & Notes:** upper-division applied instruction; music major

Credits: 2

**MUS 466B - Applied Music Pedagogy: Voice**

A study of the basic concepts involved in instrument or voice pedagogy through a survey of the most important modern teaching methods. Repeatable for credit.

**Prerequisites & Notes:** upper-division applied instruction; music major

Credits: 2

**MUS 467 - Applied Music Literature**

A stylistic and historical survey of literature for instruments or voice. Repeatable for credit.

**Prerequisites & Notes:** music major

Credits: 1 TO 3

**MUS 467A - Applied Music Literature**

A stylistic and historical survey of literature for instruments or voice. Repeatable for credit.

**Prerequisites & Notes:** music major

Credits: 3

**MUS 468A - Guitar History and Repertory**

A survey of guitar literature and history from Renaissance to present.

**Prerequisites & Notes:** MUS 367; co-requisite: MUS 216.

Credits: 2

**MUS 468B - Guitar History and Repertory**

A survey of guitar literature and history from Renaissance to present.

**Prerequisites & Notes:** MUS 367; co-requisite: MUS 216.

Credits: 2

**MUS 469 - Music Teaching Practicum II**

Observation, assisting and intense field experience in music classroom environments. Repeatable for credit.

**Prerequisites & Notes:** admission to Woodring College of Education

Credits: 2

**MUS 471 - Concert Choir**

Selected group experience, vocal ability, reading skill, musicianship and interest in serious choral music considered for membership. Repeatable for credit.

**Prerequisites & Notes:** by audition

Credits: 2

**MUS 472 - Wind Symphony**

Repeatable for credit.

**Prerequisites & Notes:** by audition

Credits: 2

**MUS 473 - University Symphony Orchestra**

Repeatable for credit.

**Prerequisites & Notes:** by audition

Credits: 2

**MUS 474 - Jazz Ensembles**

Advanced performance and interpretation of contemporary jazz in an ensemble situation; recent developments in the idiom; performance of student compositions and arrangements. Repeatable for credit.

**Prerequisites & Notes:** by audition

Credits: 2

**MUS 475 - Chamber Jazz Ensemble**

Supervised small ensemble playing in jazz idioms stressing repertoire, improvisation and performance of written arrangements and compositions. One public performance per quarter required. Repeatable for credit.

**Prerequisites & Notes:** by audition; MUS 334 or MUS 434 strongly recommended

Credits: 2

**MUS 476 - Advanced Piano Accompanying**

Advanced instruction in accompanying skills. Repeatable for credit.

**Prerequisites & Notes:** Completion of major performance ensemble requirement

Credits: 2

**MUS 478 - Advanced Opera Production**

Preparation of opera scenes or a major musical production to include a public performance each quarter. Repeatable for credit.

**Prerequisites & Notes:** by audition

Credits: 1 TO 2

**MUS 480 - Advanced Collegium Musicum**

Music literature studies from an analytical and performance viewpoint from early to classic music, culminating in a public performance each quarter. Repeatable for credit.

Credits: 1 TO 2

**MUS 481 - Advanced Applied Chamber Music**

Open to piano, string, wind, brass and percussion performers. Repeatable for credit.

**Prerequisites & Notes:** by audition

Credits: 2

**MUS 483 - Advanced Chamber Vocal Ensembles**

Repeatable for credit.

**Prerequisites & Notes:** by audition

Credits: 2

**MUS 484 - Advanced Vocal Jazz Ensemble**

Preparation and performance of vocal works by major jazz composers. Open to all University students having the ability to sing in mixed chorus. Repeatable for credit.

**Prerequisites & Notes:** by audition; MUS 101, MUS 102, MUS 103 recommended

Credits: 2

**MUS 485 - New Music Ensemble**

Performance of 20th-century music literature. Repeatable for credit.

**Prerequisites & Notes:** by audition

Credits: 1 TO 2

**MUS 486 - Chamber Orchestra**

Rehearsal and performance of chamber orchestra literature. Repeatable for credit.

Credits: 1

**MUS 490 - Senior Thesis**

S/U grading.

**Prerequisites & Notes:** admission to music history and literature program

Credits: 3

**MUS 499 - Senior Recital**

A full-length, public recital approved by the student's Recital Committee. S/U grading.

Credits: 3

**MUS 501 - Instrumental Conducting and Rehearsal Techniques**

Advanced work in conducting band and orchestra music; baton technique, interpretation, score preparation and rehearsal techniques. Repeatable for credit.

Credits: 3

**MUS 502 - Choral Conducting and Literature**

Successful techniques in developing and conducting choral groups, score analysis of outstanding choral works; laboratory experience in conducting. Repeatable for credit.

Credits: 3

**MUS 503 - Introduction to Graduate Study of Music**

Sources and availability of music, recordings and literature about music throughout its entire history. Techniques of research bibliography and formal writing about music. Students are expected to prepare and defend a formal written project.

Credits: 4

**MUS 511 - Individual Instruction: Advanced Organ**

In addition to regularly scheduled private lessons, students are expected to participate in organ class performances and to hold a church organist position throughout their residence for the degree. Repeatable for credit.

**Prerequisites & Notes:** by audition

Credits: 3 TO 4

**MUS 512 - Individual Instruction: Advanced Piano**

In addition to regularly scheduled private lessons, a public performance is expected each quarter. Repeatable for credit.

**Prerequisites & Notes:** by audition

Credits: 3 TO 4

**MUS 513 - Individual Instruction: Advanced Strings**

In addition to regularly scheduled private lessons, a public performance of a significant work is expected. The performance will be approved and evaluated by a faculty committee. Repeatable for credit.

**Prerequisites & Notes:** by audition

Credits: 3 TO 4

**MUS 514 - Individual Instruction: Advanced Orchestral Winds and Percussion**

In addition to regularly scheduled private lessons, a public performance of a significant work is expected. The performance will be approved and evaluated by a faculty committee. Repeatable for credit.

**Prerequisites & Notes:** by audition

Credits: 3 TO 4

**MUS 515 - Individual Instruction: Advanced Voice**

In addition to regularly scheduled private lessons, a public performance is expected each quarter. Repeatable for credit.

**Prerequisites & Notes:** by audition

Credits: 3 TO 4

**MUS 518 - Individual Instruction: Applied Jazz**

Individual instruction in jazz performance styles and techniques. Repeatable to a maximum of 12 credits.

**Prerequisites & Notes:** admission to MMus degree program

Credits: 3 TO 4

**MUS 519 - Individual Instruction - Advanced Applied Conducting**

Individual instruction in conducting techniques and repertoire.

**Prerequisites & Notes:** admission to MMus degree program; MUS 501 or MUS 502

Credits: 1 TO 3

**MUS 525 - Brass and Percussion Techniques and Materials**

Pedagogical and fundamental performance problems for all brass and percussion instruments; appropriate literature for beginning through advanced levels; performance problems encountered within the school band and orchestra settings.

Credits: 3

**MUS 531 - Arranging**

Practical techniques in arranging and composing for large and small ensembles. Summer only.

Credits: 3

**MUS 532 - Analytical Techniques: 20th-Century Musical Practices**

Analysis of works by various composers who have generated the major trends of 20th-century music.

Credits: 3

**MUS 533 - Analytical Techniques: 19th-Century Musical Styles and Practices**

Analysis of works by various composers who generated the major trends of 19th-century music.

Credits: 3

**MUS 534 - Composition**

Composition, rehearsal and public performance of original works. Repeatable for credit.

**Prerequisites & Notes:** MUS 431

Credits: 4

**MUS 540 - Advanced Collegium Musicum**

Editing, coaching and performance of early music (before 1800) for chamber ensembles (vocal and instrumental). Students are expected to prepare stylistically suited performing editions, coach these works and participate in their public performance. (Only 6 credits applicable toward MMus degree.) Repeatable for credit.

Credits: 2

**MUS 541 - History/Analysis: Music to 1600**

An in-depth study of a particular segment of music from the period with historical perspective, analysis of representative works, and bibliography and research techniques appropriate to the subject. Repeatable once for credit.

Credits: 4

**MUS 542 - History/Analysis: Music from 1600-1830**

An in-depth study of a particular segment of music from the period with historical perspective, analysis of representative works, and bibliography and research techniques appropriate to the subject. Repeatable once for credit.

Credits: 4

**MUS 543 - History/Analysis: Music from 1830-Present**

An in-depth study of a particular segment of music from the period with historical perspective, analysis of representative works, and bibliography and research techniques appropriate to the subject. Repeatable once for credit.

Credits: 4

**MUS 550 - Seminar in the History of Music**

Detailed study of a particular period or phase of the history of music designed to give students a first-hand acquaintance with one special area of musical literature and with musicological method.

Credits: 3

**MUS 555 - Advanced Band Music Workshop**

Course not applicable to MMus degree. Offered summers only. Repeatable for credit.

Credits: 2

**MUS 556 - Advanced String Orchestra Music Workshop**

Course not applicable to MMus degree. Offered summers only. Repeatable for credit.

Credits: 2

**MUS 571 - Concert Choir**

Rehearsal and public performance of representative choral works. Repeatable to a maximum of 12 credits.

**Prerequisites & Notes:** admission to MMus degree program

Credits: 2

**MUS 572 - Wind Symphony**

Rehearsal and public performance of works for wind ensemble. Repeatable to a maximum of 12 credits.

**Prerequisites & Notes:** admission to MMus degree program

Credits: 2

**MUS 573 - University Symphony Orchestra**

Rehearsal and public performance of works for symphony orchestra. Repeatable to a maximum of 12 credits.

**Prerequisites & Notes:** admission to MMus degree program

Credits: 2

**MUS 574 - Jazz Ensembles**

Advanced performance and interpretation of contemporary jazz in an ensemble situation; recent developments in the idiom; performance of student compositions and arrangements. Repeatable to a maximum of 12 credits.

**Prerequisites & Notes:** admission to MMus degree program

Credits: 2

**MUS 575 - Chamber Jazz Ensembles**

Supervised small ensemble playing in jazz idioms stressing repertoire, improvisation and performance of written arrangements and compositions. One public performance per quarter required. Repeatable to a maximum of 12 credits.

**Prerequisites & Notes:** admission to MMus degree program

Credits: 2

**MUS 576 - Accompanying**

Graduate-level instruction in accompanying skills. Pianists will accompany singers and instrumentalists under the supervision and regular coaching of the instructor. Repeatable for credit.

Credits: 2 TO 3

**MUS 578 - Opera Production**

Preparation of opera scenes or a major musical production to include a public performance each quarter. Repeatable to a maximum of 12 credits.

**Prerequisites & Notes:** admission to MMus degree program

Credits: 1 TO 2

**MUS 581 - Applied Chamber Music**

Rehearsal and public performance of representative works of chamber music. Open to piano, string, wind, brass and percussion performers. Repeatable to a maximum of 12 credits.

**Prerequisites & Notes:** admission to MMus degree program

Credits: 2

**MUS 583 - Chamber Vocal Ensembles**

Rehearsal and public performance of chamber vocal works. Repeatable to a maximum of 12 credits.

**Prerequisites & Notes:** admission to MMus degree program

Credits: 2

**MUS 585 - New Music Ensemble**

Rehearsal and performance of 20th-century music literature. Repeatable to a maximum of 12 credits.

**Prerequisites & Notes:** admission to MMus degree program

Credits: 2

**MUS 586 - Chamber Orchestra**

Rehearsal and performance of chamber orchestra literature. Repeatable to a maximum of 6 credits.

**Prerequisites & Notes:** admission to MMus degree program

Credits: 1

**MUS 690 - Thesis**

Students in the composition concentration of the MMus degree program may meet the thesis requirement by submitting a major original composition; students in the performance concentration may meet the thesis requirement by presenting a full-length public recital; students in the music education concentration selecting the conducting practicum for their thesis requirement will carry out a practical and/or creative conducting project, field study or investigation, or rehearsal/conducting series culminating in a public performance. Repeatable to a maximum of 6 credits.

Credits: 1 TO 6

**Operations Management**

*Courses numbered X37; X97; 300, 400; 417, 445 are described in the University Academic Policies section of this catalog.*

**OPS 360 - Operations Management**

Examines the concepts for designing, planning and improving manufacturing and service organizations. Topics include enterprise resource planning, facility layout, forecasting, queuing models, inventory management, lean manufacturing, total quality control, and project management.

**Prerequisites & Notes:** DSCI 205, ACCT 245, C- or better; spreadsheet competency

Credits: 4

**OPS 367 - Management of Service Operations**

Concepts and techniques for designing, planning and controlling service operations. Topics include service site location, service facilities design, managing capacity and demand in service operations, work force scheduling, the queuing phenomenon, and the impact of new technology on service operations.

**Prerequisites & Notes:** Major restricted, OPS 360, C- or better

Credits: 4

**OPS 460 - Designing and Improving Operations**

Examines the design and analysis of lean manufacturing systems. Topics include principles of lean enterprises, visual management, standard work, value stream mapping, creating continuous flow, cellular manufacturing, and process and capacity analysis.

**Prerequisites & Notes:** OPS 360 or ETEC 325 or ETEC 327; Major restricted.

Credits: 4

**OPS 461 - Project Management**

Examines the organization, planning, and controlling of projects and provides practical knowledge on managing project scope, schedule and resources. Topics include project life cycle, work breakdown structure and Gantt charts, network diagrams, scheduling techniques, and resource allocation decisions. Concepts are applied through team projects and tutorials using project management software.

**Prerequisites & Notes:** OPS 360 or ETEC 325 or ETEC 327; Major restricted.

Credits: 4

**OPS 463 - Enterprise Resource Planning Systems**

Examines the principles and techniques for planning and managing resource usage across the business enterprise. Topics include business process integration, inventory management, master scheduling, and material and capacity planning. Concepts are applied through the use of current enterprise resource planning software.

**Prerequisites & Notes:** OPS 360 or ETEC 325 or ETEC 327; Major restricted.

Credits: 4

**OPS 464 - Manufacturing Management Practicum**

Manufacturing management-related employment, research or special project experience. Emphasis on applying manufacturing management principles in an academically guided setting. Minimum requirements include a written proposal, a daily journal, and a comprehensive final written report. Repeatable to a maximum of 12 cr; 8 cr of these may be applied to the manufacturing management major.

**Prerequisites & Notes:** OPS 360 or ETEC 325 or ETEC 327 and permission of instructor; Major restricted.

Credits: 4

**OPS 465 - Quality Management**

Examines the principles and techniques for managing and improving quality in an organization. Topics include incoming material control, statistical process control, and process improvement.

**Prerequisites & Notes:** OPS 360 or ETEC 325 or ETEC 327. Major restricted.

Credits: 4

**OPS 466 - Supply Chain Management**

Examines the principles, techniques, and practices for the design and management of integrated supply chain operations. Investigates supply chain strategy, distribution, facility location decisions, purchasing, and information systems for managing supply chain activities.

**Prerequisites & Notes:** OPS 360 or ETEC 325 or ETEC 327; Major restricted.

Credits: 4

**OPS 467 - Global Operations Strategy**

Analysis of issues, problems, and techniques experienced in managing global operations. Topics include global supply chain management, plant location decisions, production planning, technology transfer, and foreign manufacturing systems.

**Prerequisites & Notes:** Major restricted, OPS 360, C- or better

Credits: 4

**OPS 468 - Manufacturing and Supply Train Strategy**

Reviews manufacturing and supply chain management principles and techniques and examines issues in global manufacturing operations. Topics include supply chain strategy, facility network design, logistics, forecasting, aggregate planning, lean manufacturing principles, and global operations.

**Prerequisites & Notes:** OPS 360 or ETEC 325 or ETEC 327; Major restricted.

Credits: 4

**OPS 469 - Seminar in Manufacturing and Supply Chain Management**

Operations management theory and concepts applied to current manufacturing and supply chain problems.

**Prerequisites & Notes:** Major restricted, OPS 460, 463, 464 and permission of instructor.

Credits: 4

## **Physical Education**

Courses numbered X37; X97; 300, 400; 417, 445 are described in the University Academic Policies section of this catalog.

### **Development Skills/Fitness Leadership**

Activities courses, with the exception of varsity sports and those so noted, may not be repeated for credit. Courses offered depend on instructor availability. All 100-level classes are S/U graded. Participants may not accumulate more than three absences to receive a satisfactory grade. Should a student register late and miss the first and/or second class, all missed classes will be counted as absences.

Some courses require an additional VARIABLE fee (see specific course sections). Attendance and participation in the University assigned final exam time period, as listed in the timetable, is MANDATORY. A written and/or skills test will be given during the final exam class period.

Beginning courses, or equivalent, are pre-requisite to intermediate courses, which are in turn pre-requisite to advanced course in any given activity.

#### **PE 101 - Beginning Conditioning**

S/U grading.

Credits: 1

#### **PE 102 - Beginning Group Fitness**

S/U grading.

**Prerequisites & Notes:** ID card REQUIRED for all PE courses held at the Recreation Center.

Credits: 1

#### **PE 103 - Beginning Jogging**

S/U grading.

Credits: 1

#### **PE 104 - Beginning Yoga**

S/U grading.

Credits: 1

#### **PE 105 - Challenge Facilitation I**

Course provides an overview of the theory and application of adventure based programming. Students will be introduced to safety practices, goal setting, framing and debriefing both group and individual challenge activities. Students will practice leading others in challenge learning activities. S/U grading.

Credits: 2

#### **PE 108 - Beginning Weight Training**

S/U grading.

Credits: 1

#### **PE 112 - Beginning Swimming**

S/U grading.

**Prerequisites & Notes:** provide own goggles and cap (if desired)

Credits: 1

#### **PE 113 - Intermediate Swimming**

S/U grading.

**Prerequisites & Notes:** provide own goggles and cap (if desired)

Credits: 1

#### **PE 120 - Beginning Social Dance**

S/U grading.

Credits: 1

#### **PE 122 - Beginning Folk and Country Dance**

S/U grading.

Credits: 1

#### **PE 123 - Beginning Scottish Country Dancing**

S/U grading.

Credits: 1

**PE 124 - Intermediate Scottish Country Dance**

S/U grading.

**Prerequisites & Notes:** PE 123

Credits: 1

**PE 132 - Beginning Badminton**

S/U grading.

**Prerequisites & Notes:** provide own shuttlecock

Credits: 1

**PE 134 - Beginning Pickleball**

S/U grading.

**Prerequisites & Notes:** provide own ball

Credits: 1

**PE 136 - Beginning Tennis**

S/U grading.

**Prerequisites & Notes:** provide own racket and tennis balls

Credits: 1

**PE 139 - Beginning Racquetball**

S/U grading.

**Prerequisites & Notes:** provide own eyeguards and ball

Credits: 1

**PE 144 - Beginning Soccer**

S/U grading.

Credits: 1

**PE 145 - Beginning Volleyball**

S/U grading.

Credits: 1

**PE 148 - Beginning Lacrosse**

S/U grading.

Credits: 1

**PE 149 - Beginning Ultimate Disc**

S/U grading.

Credits: 1

**PE 157 - Beginning Skiing**

S/U grading.

Credits: 1

**PE 158 - Intermediate Skiing**

S/U grading.

Credits: 1

**PE 159 - Advanced Skiing**

S/U grading.

Credits: 1

**PE 165 - Beginning Handball**

Four wall handball. S/U grading.

**Prerequisites & Notes:** provide own gloves, eye guards and ball

Credits: 1

**PE 166 - Intermediate Handball**

Four wall handball. S/U grading.

**Prerequisites & Notes:** Provide own gloves, eye guards and ball

Credits: 1

**PE 167 - Beginning Mountain Bicycling**

S/U grading.

**Prerequisites & Notes:** provide own equipment; first class meets in Gym A

Credits: 1

**PE 168 - Beginning Martial Arts**

S/U grading.

**Prerequisites & Notes:** provide own arm and shin pads - equipment NOT required

Credits: 1

**PE 169 - Beginning Self-Defense**

Course teaches basic self-defense for men and women. S/U grading.

Credits: 1

**PE 170 - Sailing**

S/U grading.

**Prerequisites & Notes:** Swim test first day; bring suit and towel; first class in Carver Gym; provide own transportation to Lakewood; check CV 102 window

Credits: 1

**PE 171 - Sailboat Racing I**

S/U grading.

**Prerequisites & Notes:** basic skippering skills required; first class meets at Lakewood; bring suit/towel; provide own transportation to Lakewood

Credits: 1

**PE 172 - Sailboat Racing II**

Advanced sailing skills, racing a boat with spinnaker and trapeze. S/U grading.

**Prerequisites & Notes:** PE 171 or 1 year racing experience skippering; bring suit and towel; provide own transportation to Lakewood

Credits: 1

**PE 173 - Sailing Instructor Training**

Successful completion of the course and additional fees required for Level 1 U.S. Sailing Association Instructor Certification. S/U grading.

Credits: 3

**PE 175 - Windsurfing**

**Prerequisites & Notes:** swim test first day; bring suit and towel; first class in Carver Gym - check CV 102 window. Provide own transportation to Lakewood. S/U grading.

Credits: 1

**PE 176 - Windsurfing Instructor Training**

Successful completion of the course and additional fees required for U.S. Sailing Association Windsurfing Instructor Certification. S/U grading.

**Prerequisites & Notes:** basic windsurfing skills; bring suit and towel; provide own transportation to Lakewood.

Credits: 3

**PE 177 - Kayak Touring**

S/U grading.

**Prerequisites & Notes:** First six weeks of fall quarter only; swim test first day; bring suit and towel; first class in Carver Gym; provide own transportation to Lakewood

Credits: 1

**PE 179 - Intermediate Sailing**

S/U grading.

**Prerequisites & Notes:** basic skippering skills; provide own transportation to Lakewood

Credits: 1

**PE 181 - Intercollegiate Basketball**

This course is designed for the Varsity Athletes. Each student is required to attend regularly scheduled practices, individual meetings, team meetings, conditioning, games/events, and team activities. Repeatable up to 10 credits. S/U grading.

**Prerequisites & Notes:** Instructor permission.

Credits: 2

**PE 183 - Intercollegiate Track and Field**

This course is designed for the Varsity Athletes. Each student is required to attend regularly scheduled practices, individual meetings, team meetings, conditioning, games/events, and team activities. Repeatable up to 10 credits. S/U grading.

**Prerequisites & Notes:** Instructor permission.

Credits: 2

**PE 185 - Intercollegiate Golf**

This course is designed for the Varsity Athletes. Each student is required to attend regularly scheduled practices, individual meetings, team meetings, conditioning, games/events, and team activities. Repeatable up to 10 credits. S/U grading.

**Prerequisites & Notes:** Instructor permission.

Credits: 2

**PE 189 - Intercollegiate Cross Country**

This course is designed for the Varsity Athletes. Each student is required to attend regularly scheduled practices, individual meetings, team meetings, conditioning, games/events, and team activities. Repeatable up to 10 credits. S/U grading.

**Prerequisites & Notes:** Instructor permission.

Credits: 2

**PE 190 - Intercollegiate Rowing**

This course is designed for the Varsity Athletes. Each student is required to attend regularly scheduled practices, individual meetings, team meetings, conditioning, games/events, and team activities. Repeatable up to 10 credits. S/U grading.

**Prerequisites & Notes:** Instructor permission.

Credits: 2

**PE 192 - Intercollegiate Volleyball**

This course is designed for the Varsity Athletes. Each student is required to attend regularly scheduled practices, individual meetings, team meetings, conditioning, games/events, and team activities. Repeatable up to 10 credits. S/U grading.

**Prerequisites & Notes:** Instructor permission.

Credits: 2

**PE 193 - Intercollegiate Soccer**

This course is designed for the Varsity Athletes. Each student is required to attend regularly scheduled practices, individual meetings, team meetings, conditioning, games/events, and team activities. Repeatable up to 10 credits. S/U grading.

**Prerequisites & Notes:** Instructor permission.

Credits: 2

**PE 194 - Intercollegiate Softball**

This course is designed for the Varsity Athletes. Each student is required to attend regularly scheduled practices, individual meetings, team meetings, conditioning, games/events, and team activities. Repeatable up to 10 credits. S/U grading.

**Prerequisites & Notes:** Instructor permission.

Credits: 2

**PE 340 - Block I: Elementary Physical Education Methods**

Incorporates pedagogical principles and instructional techniques in physical education based on the characteristics and needs of elementary students with emphasis on rhythms and dance, fundamental movement, and gymnastics.

**Prerequisites & Notes:** KIN 301, or concurrent.

Credits: 5

**PE 341 - Block II: Elementary Physical Education Methods**

Incorporates pedagogical principles and instructional techniques in physical education based on the characteristics and needs of elementary students with emphasis on fitness development, fundamental skills, sport-related activities and contemporary recreational activities.

**Prerequisites & Notes:** PE 340, P-12 PE and Health major

Credits: 5

**PE 341P - Elementary Physical Education Practicum**

Observing/assisting/teaching in an elementary school setting. Includes weekly seminar which covers: academic learning time, student success rates, feedback, professional growth.

**Prerequisites & Notes:** PE 341, or concurrent.

Credits: 3

**PE 345 - Physical Education for Elementary School**

Physical activities in fundamental skill development, fitness, creative movement, rhythms and gymnastics for elementary age. Includes methods of teaching and developmental characteristics of children.

**Prerequisites & Notes:** admission to Woodring College of Education; PSY 230 or EDU 301

Credits: 3

**PE 440 - Block III: Middle School Physical Education Methods**

Course incorporates pedagogical principles, instructional methodology, planning and implementation of instructional programs for middle school level students. Curricular emphasis will focus upon skill acquisition and lead up to activities in the following areas: team building, loco-motor/fitness, striking w/hands & feet, rhythmic movements and recreational activities.

**Prerequisites & Notes:** PE 341P.

Credits: 5

**PE 440P - Middle School Physical Education Practicum**

Observing/assisting/teaching in a middle school setting. Includes weekly seminar which covers: characteristics of middle school students, research on effective teaching, developing routines, class management, skill progressions and sequencing, pre-assessment, unit planning, assessment.

**Prerequisites & Notes:** PE 341P; PE 440 or concurrent.

Credits: 3

**PE 441 - Block IV: High School Physical Education Methods**

Course incorporates pedagogical principles, instructional methodology, planning and implementation of instructional programs for high school level students. Curricular emphasis will focus upon tactical games and lifetime fitness in the following areas: team building, multi-skill activities, group exercise, striking w/implements, rhythmic movements, content integration and recreational activities.

**Prerequisites & Notes:** PE 440P

Credits: 5

**PE 441P - High School Health and Physical Education Practicum**

Observing/assisting/teaching health and physical education in a high school setting. Includes weekly seminar which covers characteristics of high school students, curriculum development for health and physical education, assessment and transitioning from student to student teacher.

**Prerequisites & Notes:** PE 440P

Credits: 4

**PE 442P - Practicum in Physical Education**

Individualized practicum in teaching physical education activities. S/U grading.

**Prerequisites & Notes:** PE341P.

Credits: 2

**PE 443 - Adapted Physical Education Methods & Practicum**

Course incorporates pedagogical principles, instructional methodology, and planning and implementation of instructional interventions for individuals with disabilities in the educational setting. Includes field based experiences working with adapted physical education/recreational settings.

**Prerequisites & Notes:** PE 341.

Credits: 3

**Philosophy**

*Courses numbered X37; X97; 300, 400; 417, 445 are described in the University Academic Policies section of this catalog.*

**PHIL 102 - Introduction to Logic**

The development of a formal system of propositional and predicate logic for the evaluation of reasoning.

Credits: 3

**PHIL 107 - Logical Thinking**

An aid in speaking and writing so as to reflect clear, critical and responsive thinking, covering definition, classification, fallacies and techniques of good argument. Not applicable to the philosophy major or minor.

Credits: 3

**PHIL 112 - Introduction to Philosophy: Moral Issues**

Introduction to philosophical thinking about moral problems. Seeks to understand central moral concepts such as good, right, duty, etc., in the context of contemporary issues.

Credits: 3

**PHIL 113 - Introduction to Philosophy: Philosophy of Religion**

Special attention is given to questions about the nature and existence of God. Also examined are such topics as the problem of evil, concepts of faith, religious experience, miracles, etc.

Credits: 3

**PHIL 114 - Introduction to Philosophy: Knowledge and Reality**

Emphasis is given to the nature and possibility of knowledge, to related concepts such as truth, belief and evidence, and to selected metaphysical problems.

Credits: 3

**PHIL 202 - Intermediate Logic**

The development of a formal system of logic with multiple quantifiers, identity and definite descriptions; and an examination of either nonclassical systems of logic or the fundamental results defining the scope and limits of formal systems of logic.

**Prerequisites & Notes:** PHIL 102

Credits: 4

**PHIL 310 - Theory of Knowledge**

The attempt to understand the possibility, nature, origins and limits of knowledge; problems and concepts.

**Prerequisites & Notes:** PHIL 102, PHIL 114

Credits: 3

**PHIL 320 - Ethical Theory I**

An examination of traditional and contemporary views concerning the overall nature of morality (views such as cognitivism and realism), and also of specific moral theories (such as utilitarianism and contractualism). Other topics include moral rights, moral responsibility and the moral virtues.

**Prerequisites & Notes:** PHIL 112 or instructor permission

Credits: 3

**PHIL 330 - Metaphysics I**

A systematic study of the fundamental categories of reality, such as existence, substance, property, identity, space, time, change, event, causality, necessity, essence, free will and mind. The philosophical issues in which these categories play a part also will be discussed.

**Prerequisites & Notes:** PHIL 102; PHIL 113 or PHIL 114

Credits: 3

**PHIL 335 - Philosophy of Religion**

Philosophy of religion and philosophical theology at an advanced level. Topics may include arguments for and against the existence of God, the attributes of God, religious pluralism, religion and science, religion and ethics, miracles, and the epistemology of religious belief.

**Prerequisites & Notes:** PHIL 102, PHIL 113

Credits: 3

**PHIL 340 - Philosophy of Science**

A examination of the basic methods and concepts of the sciences through the study of such topics as explanation, confirmation, causality, probability, laws of nature, theories, revolution, reduction and realism.

**Prerequisites & Notes:** PHIL 102, PHIL 114; or instructor permission

Credits: 3

**PHIL 350 - Political Philosophy**

The nature of the state, and of the institutions and practices of which it is comprised; the basis and scope of political obligation, the proper role of political activity; considerations of concepts of sovereignty, legitimacy, limits of state power, representation, and the like.

**Prerequisites & Notes:** One philosophy course; PHIL 350 and PLSC 360 may not both be taken for GUR credit

Credits: 3

**PHIL 355 - Aesthetics and the Philosophy of Art**

Examination of the concept of art and related concepts, and also of aesthetic evaluation and interpretation as they apply to nature and to human artifacts.

**Prerequisites & Notes:** One philosophy course

Credits: 3

**PHIL 360 - Society, Law and Morality**

Concepts and principles involved in analysis and appraisal of social institutions with attention to freedom, rights, justice, and the relation between laws and morality.

**Prerequisites & Notes:** One philosophy course

Credits: 3

**PHIL 364 - History of Philosophy: Ancient Philosophy**

Great philosophical thinkers from the pre-Socratic philosophers to the Hellenistic period; special attention to Plato and Aristotle.

**Prerequisites & Notes:** One philosophy course

Credits: 3

**PHIL 366 - History of Philosophy: the Rationalists**

Great philosophical thinkers in the rationalist tradition, their problems and their methods: Descartes, Spinoza, Leibniz, et al.

**Prerequisites & Notes:** PHIL 114

Credits: 3

**PHIL 367 - History of Philosophy: the Empiricists**

Great philosophical thinkers in the empiricist tradition, their problems and their methods: Locke, Berkeley, Hume, et al.

**Prerequisites & Notes:** PHIL 114

Credits: 3

**PHIL 368 - History of Philosophy: Kant and Post-Kantian Philosophy**

Kant and post-Kantian philosophers, their problems and their methods: Kant, Fichte, Hegel, Schopenhauer, Nietzsche. Normally offered in odd-numbered academic years.

**Prerequisites & Notes:** PHIL 114

Credits: 3

**PHIL 403 - Philosophy of Language**

An examination of the nature of language through the study of such topics as truth, reference, meaning, use, convention, language's differences from other forms of communication and representation, and language's relations to thought and reality. The relevance of theories on these topics to selected philosophical issues also will be discussed. Normally offered in odd-numbered academic years.

**Prerequisites & Notes:** PHIL 202

Credits: 3

**PHIL 410 - Theory of Knowledge II**

An intensive examination of selected topics and methods in epistemology. Normally offered in even-numbered academic years.

**Prerequisites & Notes:** PHIL 310

Credits: 3

**PHIL 420 - Ethical Theory II**

An intensive examination of selected topics and methods in ethical theory. Normally offered in odd-numbered academic years.

**Prerequisites & Notes:** PHIL 320

Credits: 3

**PHIL 425 - Philosophy of Mind**

A study of the mind through the examination of such topics as the mind-body problem, intentionality, consciousness, 'qualia,' introspection and knowledge of other minds. Philosophical theories on these topics - such as dualism, behaviorism, type physicalism, functionalism and eliminativism. Normally offered in odd-numbered academic years.

**Prerequisites & Notes:** PHIL 102 plus one upper-division philosophy course

Credits: 3

**PHIL 430 - Metaphysics II**

An intensive examination of selected topics and methods in metaphysics. Normally offered in even-numbered academic years. NOTE: Whether an academic year is odd- or even-numbered is determined by whether fall quarter is

an odd- or even-numbered calendar year.

**Prerequisites & Notes:** PHIL 330

Credits: 3

## Physics

*Courses numbered X37; X97; 300, 400; 417, 445 are described in the University Academic Policies section of this catalog.*

### PHYS 101 - Physics Analysis

In-depth analysis of physical phenomena such as the motion of objects and conditions for equilibrium; development and application of conceptual models that account for observations and have predictive power. Instruction seeks to actively engage students in scientific reasoning. Lab.

**Prerequisites & Notes:** MATH 107 or higher. Must register for a lecture and lab section.

Credits: 0 OR 4

### PHYS 102 - Physics and Society

Exploration of the relationships between basic physics concepts and broader social issues such as the generation of energy or global climate change; using scientific evidence to judge claims and construct arguments.

**Prerequisites & Notes:** Math 107 or higher.

Credits: 3

### PHYS 104 - Physics Applications

A study of physics as a human endeavor to understand everyday phenomena and the development of technology: exploration of basic concepts from physics relevant to phenomena such as weather, music, or sports; investigation of the effects of technology and the causes of disasters; new advances in applied physics. Lab.

**Prerequisites & Notes:** MATH 107 or higher. Must register for a lecture and lab section.

Credits: 4

### PHYS 114 - Principles of Physics I

Kinematics and dynamics of particles; force, momentum, energy; rotational dynamics and equilibrium; gravity and oscillations. Recommended for students in science and pre-professional programs not requiring physics with calculus.

**Prerequisites & Notes:** MATH 115

Credits: 5

### PHYS 115 - Principles of Physics II

Fluids; kinetic theory; heat and thermodynamics; principles of electricity and magnetism. Lab.

**Prerequisites & Notes:** PHYS 114. Must register for a lecture and lab section.

Credits: 5

### PHYS 116 - Principles of Physics III

Waves and sound; geometrical and physical optics; relativity and modern physics. Lab.

**Prerequisites & Notes:** Pre-req: PHYS 115. Must register for a lecture and lab section.

Credits: 5

### PHYS 121 - Physics With Calculus I

Kinematics and dynamics of particles; work and energy; gravitation; collisions and conservation of momentum.

Includes lab.

**Prerequisites & Notes:** Pre-corequisite: MATH 124 or MATH 134 or MATH 138. Must register for a lecture and lab section.

Credits: 5

### PHYS 122 - Physics With Calculus II

Rotational kinematics and dynamics; oscillations; fluid statics and dynamics; thermodynamics. Includes lab.

**Prerequisites & Notes:** PHYS 121; MATH 124 or MATH 134 or MATH 138. Must register for a lecture and lab section.

Credits: 5

### PHYS 123 - Electricity and Magnetism

Electrostatics; magnetic fields of steady currents; time-varying electric and magnetic fields; DC and AC circuits; electromagnetic waves. Includes lab.

**Prerequisites & Notes:** PHYS 121; MATH 124 or MATH 134 or MATH 138; Must register for a lecture and lab section.

Credits: 5

**PHYS 190 - Exploring Physics and Astronomy**

Seminar for students interested in majoring in Physics. Current topics and trends in physics, with emphasis on research opportunities for undergraduates. S/U grading.

**Prerequisites & Notes:** Co-requisite PHYS 121 or PHYS 122

Credits: 1

**PHYS 223 - Waves and Optics**

Waves in elastic media, superposition, interference and standing waves; sound waves and electromagnetic waves; reflection, refraction and geometric optics; interference and diffraction of light.

**Prerequisites & Notes:** PHYS 121, MATH 124 or MATH 134 or MATH 138; concurrent enrollment in PHYS 233 (lab) required for physics majors.

Credits: 3

**PHYS 224 - Modern Physics I**

Special relativity, quantization of charge, matter waves, bound and unbound states in quantum physics.

**Prerequisites & Notes:** PHYS 223

Credits: 4

**PHYS 225 - Modern Physics II**

Schrodinger equation in three dimensions, spin and atomic physics, statistical physics, molecules and solids.

**Prerequisites & Notes:** PHYS 224

Credits: 3

**PHYS 233 - Waves and Optics Laboratory**

**Prerequisites & Notes:** PHYS 223 concurrent

Credits: 1

**PHYS 235 - Modern Physics Lab**

Selected experiments in atomic physics and nuclear physics. Lecture and lab.

**Prerequisites & Notes:** PHYS 322, PHYS 326. Co-requisite PHYS 225.

Credits: 3

**PHYS 322 - Fundamentals of Electronics**

AC/DC circuit theory, transistor and op-amp circuit design, digital basics and introduction to LabVIEW programming. Includes lab.

**Prerequisites & Notes:** PHYS 123

Credits: 4

**PHYS 326 - Tools and Data Analysis in Physics**

Introduction to error analysis, data handling, and numerical solution methods in physics using computer programs such as KaleidaGraph, Mathematica, and LabView. Lecture and computer lab. S/U grading.

**Prerequisites & Notes:** MATH 224; CSCI 140; concurrent enrollment in PHYS 223 and MATH 203 required.

Credits: 3

**PHYS 335 - Statistical and Thermal Physics**

Foundations of macroscopic thermodynamics, statistical description of physical systems, laws of thermodynamics, statistical ensemble theory and applications.

**Prerequisites & Notes:** PHYS 225, MATH 224.

Credits: 4

**PHYS 339 - Optics**

Topics in modern physical and geometrical optics including general solutions to the 3-D wave equation, analytical ray tracing, polarized light, interferometric techniques, and introduction to lasers.

**Prerequisites & Notes:** PHYS 223. Corequisite: PHYS 349 (lab) for physics majors.

Credits: 3

**PHYS 363 - Classical Mechanics**

Newtonian mechanics; general motion of a particle in three dimensions; Lagrangian mechanics; canonical coordinates; particle systems and rigid bodies; gravitation and Newtonian cosmology; nonlinear mechanics and chaos.

**Prerequisites & Notes:** PHYS 122, MATH 203, MATH 303.

Credits: 4

**PHYS 368 - Electromagnetism I**

Vector calculus; Green's and Stokes' theorems; static electric and magnetic field laws; boundary-value problems; Lorentz force; polarization and magnetization in materials.

**Prerequisites & Notes:** PHYS 225, MATH 203, MATH 224.

Credits: 4

**PHYS 369 - Electromagnetism II**

Electrodynamics; Maxwell's equations; plane electromagnetic waves in free space; dielectrics and conductors; reflection and refraction at a plane boundary; electromagnetic radiation; relativistic dynamics.

**Prerequisites & Notes:** PHYS 368, MATH 303.

Credits: 3

**PHYS 391 - Solids Junior Lab**

Selected experiments in condensed matter physics and materials science. Graded work includes lab notebook, oral and written presentations, and exams.

**Prerequisites & Notes:** PHYS 235, PHYS 322, PHYS 326. Co-requisite PHYS 475

Credits: 3

**PHYS 392 - Optics Junior Lab**

Selected experiments in physical optics. Graded work includes lab notebook, oral and written presentations, and exams.

**Prerequisites & Notes:** PHYS 235, PHYS 322, PHYS 326. Co-requisite PHYS 339.

Credits: 3

**PHYS 419 - Topics in Physics**

Presentation of scientific research in written form; abstracts, project reports, and documentation; elements of successful posters; proposals and professional critique. Writing proficiency course.

**Prerequisites & Notes:** One year of college-level physics; consult instructor prior to enrollment.

Credits: 3

**PHYS 444 - Special Topics in Physics**

Introduction to a special topic, current research, or application in physics. Repeatable up to two times for credit.

**Prerequisites & Notes:** PHYS 363 and PHYS 368

Credits: 3

**PHYS 455 - Quantum Mechanics I**

Review of the Schrodinger equation with applications to simple potentials, introduction to Dirac notation, generalized function spaces, and general uncertainty relations. The Schrodinger equation in three dimensions, including the hydrogen atom, angular momentum, and spin. Introduction to identical particles.

**Prerequisites & Notes:** PHYS 225, PHYS 363; MATH 303.

Credits: 3

**PHYS 456 - Quantum Mechanics II**

Introduction to perturbation theory (including time independent, degenerate, and time dependent), the variational principle and WKB approximations. Introduction to scattering theory. Special topics such as Bell's theorem, relativistic quantum mechanics.

**Prerequisites & Notes:** PHYS 455

Credits: 3

**PHYS 475 - Physics of Solids and Materials I**

Structure and properties of materials including crystallography, symmetry, bonding-related properties, electronic structure, phase diagrams, surfaces, semiconductors, metals.

**Prerequisites & Notes:** PHYS 225 or instructor permission.

Credits: 3

**PHYS 476 - Physics of Solids and Materials II**

Application and investigation of materials including amorphous, liquid crystal, magnetic, porous and novel materials, lasers, photo detectors, optical fibers, microscopy, spectroscopy.

**Prerequisites & Notes:** PHYS 475

Credits: 3

**PHYS 485 - Mathematical Physics**

Fourier transforms; Laplace transforms; orthogonal functions and boundary value problems; series expansions; rotations and tensors; complex integration.

**Prerequisites & Notes:** MATH 204, MATH 224.

Credits: 3

**PHYS 486 - Computational Physics**

Introduction to methods of solving physics problems with computers. Topics include molecular dynamics, electronic states, calculation of classical electromagnetic fields and orbits, and Monte Carlo methods applied to statistical mechanics and quantum systems.

**Prerequisites & Notes:** PHYS 363, MATH 303.

Credits: 3

**PHYS 491 - Senior Project in Experimental Physics**

Individual experimental physics projects under supervision. The experimental physics project may be an extension of a summer research project carried out at another institution. Oral presentation and written paper with drafts required. Repeatable for credit. S/U grading.

**Prerequisites & Notes:** PHYS 391; senior status; permission of instructor.

Credits: 1 TO 3

**PHYS 492 - Senior Project in Theoretical Physics**

Individual theoretical physics projects under supervision. The theoretical physics project may be an extension of a summer research project carried out at another institution. Oral presentation and written paper with drafts required. Repeatable for credit. S/U grading. Writing proficiency course.

**Prerequisites & Notes:** PHYS 363, PHYS 368; senior status in Physics; permission of instructor required.

Credits: 1 TO 3

## Political Science

*Courses numbered X37; X97; 300, 400, 500; 417, 445, 517, 545 are described in the University Academic Policies section of this catalog.*

**PLSC 101 - Government and Politics in the Modern World**

Introduction to concepts of politics; types of governments and political problems in the world today.

Credits: 5

**PLSC 250 - The American Political System**

Consideration of the system and process of American politics and government with primary focus on the national level.

Credits: 5

**PLSC 261 - Introduction to Political Theory**

Major concepts of Western political theory - thematic or historical approach.

Credits: 5

**PLSC 271 - Introduction to International Relations**

The politics of war, peace, and international economic relations.

Credits: 5

**PLSC 291 - Introduction to Comparative Politics**

Basic structures, functions and sociocultural environments of foreign political systems; methods of comparative study.

Credits: 5

**PLSC 301 - The British Parliamentary System**

The British parliamentary political system: analysis of British state and political structures and functions; analysis of British political parties; examination of the British service state.

**Prerequisites & Notes:** PLSC 101 or PLSC 250 or PLSC 291

Credits: 5

**PLSC 302 - Western Europe**

Governments and politics of selected western European states.

**Prerequisites & Notes:** PLSC 101 or PLSC 291

Credits: 5

**PLSC 307 - East Asia**

Survey course covering China, Japan and Korea since the mid-19th century. Not offered every year.

**Prerequisites & Notes:** PLSC 101 or PLSC 291

Credits: 5

**PLSC 308 - African Political Systems**

Post-colonial political development in Africa focusing on ideologies and strategies for achieving legitimate government and improved living standards. Several country studies are included to illustrate outcomes associated with different strategies for development.

**Prerequisites & Notes:** PLSC 101 or PLSC 291

Credits: 5

**PLSC 310 - The International Relations of East Asia**

The issues of national and human security in the East Asian Region.

**Prerequisites & Notes:** PLSC 271 or PLSC 291 or PLSC 307

Credits: 5

**PLSC 311 - Introduction to Law and Judicial Process**

Origin and development of basic concepts and practices of law with emphasis upon legal reasoning and values in contemporary societies.

**Prerequisites & Notes:** PLSC 250; only one of PLSC 311, MGMT 271 or FAIR 211 may be taken for GUR credit

Credits: 5

**PLSC 313 - Law and Society**

An introduction to how law interacts with and is applied to different social and cultural contexts. Specific topics covered may change quarter to quarter. This course presumes a familiarity with basic legal concepts and a rudimentary knowledge of the legal system.

**Prerequisites & Notes:** PLSC 250; and PLSC 311 or FAIR 211b or MGMT 271

Credits: 5

**PLSC 314 - U.S. Supreme Court**

Introduction to the U.S. Supreme Court as an institution within the American political system. Topics covered include: Court procedures and decision-making, constitutional history, judicial powers and doctrines, and the Court's role in American politics and society. No prior knowledge of the Supreme Court is presumed.

**Prerequisites & Notes:** PLSC 250; PLSC 311 recommended.

Credits: 5

**PLSC 345 - Women and Politics**

The history and ideas of the women's movement; investigation of the changing role of women in American politics including legal status, economic position and political behavior.

**Prerequisites & Notes:** PLSC 101 or PLSC 250

Credits: 5

**PLSC 345S - Women and Politics**

The history and ideas of the women's movement; investigation of the changing role of women in American politics including legal status, economic position and political behavior.

Credits: 3

**PLSC 346 - Politics of Inequality**

Survey of the causes and consequences of inequality, particularly economic inequality, and the political, social and economic institutions and processes supporting group subordination, racism, sexism and poverty.

**Prerequisites & Notes:** PLSC 250

Credits: 5

**PLSC 347 - Race, Politics and Public Policy**

The historical and political bases of contemporary racial conflict in the United States.

**Prerequisites & Notes:** PLSC 250 or equivalent

Credits: 5

**PLSC 353 - State and Local Politics**

Politics of states, urban regions and suburbs. Inter-jurisdictional conflict over growth or development. Federal relations, direct democracy and state policy making.

**Prerequisites & Notes:** PLSC 250

Credits: 5

**PLSC 361 - Classical Political Thought**

Exploration of emerging themes in classical political thought, such as Greek, Roman, Judeo-Christian, and Islamic traditions.

**Prerequisites & Notes:** HIST 111 or LBRL 121 or PLSC 261 or equivalent.

Credits: 4

**PLSC 362 - Political Theory: Renaissance and Modern**

Exploration of themes in Renaissance and Modern political thought, with particular focus on the nature of freedom, right, individuality, communal obligation, and the rise of the nation-state.

**Prerequisites & Notes:** HIST 112 or LBRL 121 or PLSC 261 or equivalent.

Credits: 4

**PLSC 366 - Research in Politics**

Fundamentals of research design, including basic methods for the collection and statistical analysis of political and administrative data.

Credits: 5

**PLSC 370 - Global Issues in International Politics**

Problems of global dimensions (population, food, resources, environment, nuclear proliferation, terrorism) and international efforts to solve them.

**Prerequisites & Notes:** PLSC 271

Credits: 5

**PLSC 372 - International Political Economy**

The politics of international trade, investment, lending and economic development.

**Prerequisites & Notes:** PLSC 271 or PLSC 291 and any ECON course.

Credits: 5

**PLSC 376 - American Foreign Policy**

Background and organization of American foreign policy; the conduct of diplomatic relations with other states; current issues and problems in foreign affairs.

**Prerequisites & Notes:** PLSC 271 or PLSC 291.

Credits: 5

**PLSC 390 - The Politics of Development**

Political processes in developing countries, colonialism, nationalism, alternative models of political and economic development; problems of instability, military rule, population, famine, debt and other issues confronting developing nations.

**Prerequisites & Notes:** PLSC 271 or PLSC 291

Credits: 5

**PLSC 399 - The Politics of Democratization**

The domestic and international challenges of democratization.

**Prerequisites & Notes:** PLSC 271 or PLSC 291.

Credits: 5

**PLSC 402 - Regional European Society and Politics**

Government and society in selected countries from the Scandinavian, Alpine, Benelux and Iberian European regions.

**Prerequisites & Notes:** PLSC 101 or PLSC 291

Credits: 4

**PLSC 403 - The European Union and the Process of European Integration**

Explores the process of European integration after World War II and the European Union. Topics covered include integration theories, the historical development of the EU, its institutional structure, as well as various policy areas.

**Prerequisites & Notes:** None

Credits: 4

**PLSC 406 - Canadian Government and Politics**

Canadian political institutions and process, relations with U.S., current topics including regional tensions, the environment, and First Nations.

**Prerequisites & Notes:** PLSC 250, PLSC 291 or instructor permission

Credits: 4

**PLSC 414 - Constitutional Law I: National Powers**

Supreme Court decisions interpreting major parts of the Constitution: judicial power; separation of powers; and federalism.

**Prerequisites & Notes:** PLSC 250 and PLSC 314; and one of PLSC 311, FAIR 211B or MGMT 271

Credits: 5

**PLSC 415 - Constitutional Law II: Individual Rights**

Supreme Court decisions interpreting major parts of the Constitution: Bill of Rights and Fourteenth Amendment.

**Prerequisites & Notes:** PLSC 250, PLSC 314; and PLSC 311 or FAIR 211B or MGMT 271

Credits: 5

**PLSC 420 - Environmental Politics**

Examination of contending perspectives on environmental problems. Focus on how these perspectives are rooted in political philosophy, their roles in the development of environmental movements, and the implications for public policy.

**Prerequisites & Notes:** PLSC 101 or PLSC 250

Credits: 5

**PLSC 421 - Lesbian, Gay, Bisexual, Transgendered Politics**

Examines how lesbian, gay, bisexual and transgender (LGBT) citizens have organized to achieve social change.

Focuses on how LGBT movements have engaged in electoral, judicial, legislative, protest and other forms of politics.

**Prerequisites & Notes:** PLSC 250 or AMST 242 or instructor permission

Credits: 5

**PLSC 423 - The American Presidency**

The growth of presidential power; the institutionalized presidency and styles of presidential leadership. The president as party leader, policy initiator, chief executive, commander-in-chief and head of foreign relations.

**Prerequisites & Notes:** PLSC 250

Credits: 3

**PLSC 427 - Policy-Making and Policy Analysis**

Organizational and societal policy-making, and the nature and consequences of policy for various groups and sectors of the polity; the possibility and problems of objective analysis conducted from within the boundaries of the subject political system.

**Prerequisites & Notes:** PLSC 250

Credits: 4

**PLSC 430 - Modern Chinese Politics**

An introduction to politics and society in modern China: state structures, political culture, state-society relations, policy-making and foreign relations

**Prerequisites & Notes:** PLSC 291 or equivalent

Credits: 4

**PLSC 436 - Managing Environmental Commons**

Explores how political, economic and social institutions affect the management and sustainability of shared environments, both local and global.

**Prerequisites & Notes:** One upper-division course in PLSC or instructor permission

Credits: 5

**PLSC 443 - Legislative Internship**

Internship in the Washington state Legislature during winter quarter; assignment is primarily as research assistant to a legislator. Enrollment limited to the number of internships allocated by the Legislature. Open only to juniors and seniors, competitively selected. No more than 10 credits of internship may be counted toward the major without the permission of the chair. Repeatable to a maximum of 15 credits.

Credits: 5 TO 15

**PLSC 444 - Administrative Internships**

Internships in administrative agencies and other public service settings. Priority given to seniors. Requests for internships should be filed with the departmental intern coordinator one quarter in advance of registration for this course. No more than 10 credits in internship may be counted toward the major without the permission of the chair. Credit may be divided over two quarters where the internship placement requires a commitment of more than 10 weeks. Repeatable to a maximum of 15 credits.

**Prerequisites & Notes:** Two courses in appropriate field in discipline

Credits: 3 TO 15

**PLSC 447 - Teaching Internship**

Assists faculty member in conduct of political science course. No more than 10 cr in internship may be counted toward the major without the permission of the chair. Repeatable to a maximum of 6 credits.

**Prerequisites & Notes:** Two from: PLSC 250, PLSC 261, PLSC 271, PLSC 291 plus 10 upper-division credits in political science

Credits: 2 TO 5

**PLSC 448 - Research Internship**

Student will work closely with one faculty member, providing assistance with research. Course is structured on an apprenticeship model. Repeatable up to 10 credits.

**Prerequisites & Notes:** Instructor permission

Credits: 2 TO 5

**PLSC 449 - Politics and Social Change**

Theories linking social change and politics. The role of ideas and ideology, mass movements, political institutions, social disruption and violence in causing and directing change.

**Prerequisites & Notes:** PLSC 101 or PLSC 250

Credits: 4

**PLSC 450 - Parties, Campaigns and Elections**

Political parties, voters and voting behavior, candidate and campaign strategy, the resources of politics; workers, money, and mass media.

**Prerequisites & Notes:** PLSC 250

Credits: 4

**PLSC 453 - Comparative Electoral Systems**

Examines how institutional rules affect party systems, electoral outcomes, prospects for small parties, and fairness in translating votes into seats. Survey of politics of electoral system reform in modern democracies. Not offered every year.

**Prerequisites & Notes:** PLSC 101, PLSC 291 or PLSC 450

Credits: 4

**PLSC 462 - The Rise of Modern Political Economy**

An examination of the conceptual, ethical, and ideological underpinnings of political economy and the implications for contemporary public policy.

**Prerequisites & Notes:** PLSC 261 or HIST 113 or ECON 206 and ECON 207 or equivalent

Credits: 5

**PLSC 463 - American Political Thought**

Major concepts in American political thought from the Colonial period to the present.

**Prerequisites & Notes:** PLSC 261 or HIST 103 or HIST 104 or equivalent

Credits: 4

**PLSC 464 - Contemporary Political Theory**

Contemporary developments, with emphasis on Continental political theory. May also include other contemporary contributions, such as feminist theory and neo-pragmatism.

**Prerequisites & Notes:** PLSC 261 or any 400-level political theory course

Credits: 4

**PLSC 467 - Philosophical and Ethical Issues in Law**

Philosophical and ethical inquiry into legal issues and problems. Topics covered may include the philosophical and ethical foundations of law; law in relation to justice, morality, and equality; and philosophical and ethical inquiry into specific areas or current topics of law (e.g. tort, criminal, property, and/or constitutional law; capital punishment, affirmative action, same-sex marriage, and abortion).

**Prerequisites & Notes:** PLSC 250, PLSC 311, plus one additional upper-division course in law or political theory

Credits: 5

**PLSC 469 - Feminist Political Theory**

Early feminists to contemporary theoretical critiques and contributions. Topics such as feminist conceptions of philosophy of science, eco-feminism and post-modernism. Not offered every year.

**Prerequisites & Notes:** PLSC 261 or any 400-level political theory course

Credits: 4

**PLSC 480 - Politics, Government and Religion**

How political activity and government structures relate to religious perceptions and organizations. Not offered every year.

**Prerequisites & Notes:** instructor permission

Credits: 4

**PLSC 489 - Managing an International Ecosystem**

A research seminar that examines how economic, environmental, social and political agendas affect the shared international ecosystem - Georgia Basin/Puget Sound. Course focuses on the interests of various stakeholders and the efforts taken to manage the cross-border environmental issues. The course involves cross-border travel and field work and thus participants require a passport. In some years, the course will involve collaborations with students and faculty from Canadian Universities. Also offered as C/AM 489 and ESTU 489.

**Prerequisites & Notes:** Junior or Senior status.

Credits: 5

**PLSC 491 - Issues in Political Economy**

Discussion and analysis of selected issues of significant political and economic content. Also offered as ECON 491. Not offered every year.

**Prerequisites & Notes:** Senior standing in the political science/economics combined major or political science major and economics minor.

Credits: 4

**PLSC 493 - Issues in Political Theory**

Discussion and analysis of specialized and timely issues in political theory. Possible topics include, but are not limited to: comparative political theory; Islamic political thought; toleration; cosmopolitanism; humanitarian intervention; race, gender, and sexuality; aesthetics and rhetoric. Repeatable up to 8 credits.

**Prerequisites & Notes:** PLSC 261 or any 400-level political theory course.

Credits: 4

**PLSC 496 - Honors Tutorial**

Repeatable to a maximum of 10 credits.

Credits: 2 TO 5

**PLSC 496A - Honors Tutorial**

Repeatable to a maximum of 10 credits.

Credits: 2 TO 5

**PLSC 496B - Honors Tutorial**

Repeatable to a maximum of 10 credits.

Credits: 2 TO 5

**PLSC 496C - Honors Tutorial**

Repeatable to a maximum of 10 credits.

Credits: 2 TO 5

**PLSC 501 - Political Science as a Discipline**

Study of political science as an academic field; description and critique of subfields trends and challenges.

Credits: 5

**PLSC 502 - Research Techniques in Political Science**

**Prerequisites & Notes:** PLSC 366 or equivalent

Credits: 5

**PLSC 503 - Public Policy and Administration**

Consideration of current and emerging problems facing public organizations.

Credits: 5

**PLSC 505 - Seminar in Comparative Government and Politics**

Principles of government and politics in existing and developing states.

Credits: 5

**PLSC 506 - Advanced Topics: Comparative Government and Politics**

Advanced comparative consideration of the political systems of selected nation-states. Repeatable to a maximum of 10 credits.

**Prerequisites & Notes:** instructor and graduate advisor permission

Credits: 5

**PLSC 510 - Seminar in Public Law**

Credits: 5

**PLSC 521 - Seminar in Public Policy Analysis**

Advanced problems in public policy and analysis.

Credits: 3

**PLSC 524 - Environmental Politics and Policy**

Survey of the field of environmental politics and policy. Examination of how political scientists have addressed environmental issues by focusing on questions raised, methods used and conclusions reached. Approach is comparative in examining research on different countries. Also offered as ESTU 524.

Credits: 5

**PLSC 540 - Seminar in the Political Process**

The influence of organizations and individuals in the formation of public policy. Includes study of the role of beliefs in the political process.

Credits: 5

**PLSC 542 - Public Service Internship**

Work as research and management assistant with a local, state or federal government body (executive, legislative or judiciary), political party, interest group or private nonprofit organization. Work-load: 3 hours/week per credit.

Repeatable to a maximum of 10 credits.

**Prerequisites & Notes:** PLSC 501, PLSC 503

Credits: 1 TO 10

**PLSC 550 - Seminar in State and Local Government**

Problems at subnational levels, both American and other, internally and in relation to national levels.

Credits: 3

**PLSC 560 - Seminar in Political Theory**

Function and history of political theory; the crisis in traditional theory; emerging trends. Repeatable to a maximum of 10 credits.

Credits: 5

**PLSC 570 - Special Problems in Political Science**

The consideration of special problems and the conduct of independent study under the guidance and supervision of a faculty member. Repeatable to a maximum of 15 credits.

Credits: 1 TO 5

**PLSC 690 - Thesis/Thesis Research**

Repeatable to a maximum of 9 credits.

Credits: 1 TO 9

**Portuguese**

Courses numbered X37; X97; 300, 400; 417, 445 are described in the University Academic Policies section of this catalog.

**PORT 105 - Intensive Portuguese for Speakers of Spanish**

An accelerated course designed for students with one year of college-level Spanish or equivalent to introduce them to the fundamentals of the language: pronunciation, grammar, aural comprehension, reading and speaking.

Credits: 5

**PORT 305 - 3rd-Year Conversation**

Development of speaking skills in communicative situations. S/U grading.

**Prerequisites & Notes:** Previous experience in Portuguese or permission of instructor.

Credits: 5

## **Psychology**

Courses numbered X37; X97; 300, 400, 500; 417, 445, 517, 545 are described in the University Academic Policies section of this catalog.

### **PSY 101 - Introduction to Psychology**

Examination of basic psychological processes utilizing results of research investigations: participation in at least two experiments or equivalent activities is expected.

Credits: 5

### **PSY 117 - The Psychology of Identity**

This course examines the development of identity throughout the lifespan with consideration of gender, social class, ethnicity, culture, autobiographical memory, social roles, and self-presentation.

Credits: 5

### **PSY 118 - The Psychology of Happiness and Well-Being**

In this course, students will address the question of what comprises happiness and a sense of well-being in life. In particular, students will be exposed to the scientific literature on happiness and well-being within the framework of philosophical perspectives on life. Students will compare and contrast the findings on happiness and well-being in the scientific literature with advice provided in the various popular sources of information (e.g. self-help books, self-help websites, magazines, popular self-help television programs).

Credits: 5

### **PSY 119 - Psychology of Gender**

Basic concepts, foundations for sex roles; similarities and differences between the sexes; historical customs, personality theories, cultural, subcultural and cross-cultural perspectives

Credits: 4

### **PSY 210 - Cognition**

Provides an overview of the theories, methods and practical applications of cognitive psychology. The higher mental processes, particularly the ways in which knowledge is acquired, stored and used, will be emphasized. The course also examines how theories and findings from cognitive psychology can help us to understand mental activities in everyday life.

**Prerequisites & Notes:** PSY 101

Credits: 5

### **PSY 220 - Introduction to Behavioral Neuroscience**

An overview of the biological bases of behavior. Basic concepts in neuroanatomy, neurophysiology, and neurochemistry will be used to understand the neural bases of normal and abnormal behavior.

**Prerequisites & Notes:** PSY 101

Credits: 5

### **PSY 230 - Lifespan Developmental Psychology**

This class covers biological, cognitive, and psychosocial changes that occur across different periods of life, as well as contexts of development (e.g., culture, school, families, peers). Topics include basic developmental tasks from infancy to old age and theories of development.

**Prerequisites & Notes:** PSY 101.

Credits: 5

### **PSY 240 - Social Psychology**

Socialization (moral development, racial, ethnic and class differences), attitudes and attitude change, conformity, interpersonal attraction. Theories and methods of social psychology stressing applicability of social psychological research and knowledge to contemporary social problems.

**Prerequisites & Notes:** PSY 101

Credits: 5

### **PSY 250 - Introduction to Personality and Abnormal Psychology**

An overview of the research on individuals within social contexts. Topics include models of personality development, stress and coping, social influence on behavior, the relationship between psychological and physical health and development adjustment issues. Also addresses common psychological problems.

**Prerequisites & Notes:** PSY 101

Credits: 5

**PSY 274 - Psychology of Child Rearing**

Discipline at different developmental stages; parental influences on social and cognitive development; influences on parenting; a systems approach to understanding families; the changing American family.

**Prerequisites & Notes:** PSY 101.

Credits: 3

**PSY 301 - Overview of Research Methods**

Introduction to research psychology. A variety of research methodologies will be explored. Students will also learn basic description of research data and how to write psychology papers.

**Prerequisites & Notes:** 15 credits in psychology with a minimum of 5 credits at WWU

Credits: 5

**PSY 302 - Research Methods and Statistical Analysis: Correlational Approaches**

Introduction to correlational research methods in psychology and associated statistics. Review of correlational research methods, design of correlational studies, and development of research instruments such as questionnaires and behavioral observation forms. Methods of data analysis include graphs, bivariate and multivariate descriptive correlational statistics, sampling distributions of statistical inference regarding correlations, and introduction to the t and F tests. Nonparametric statistics such as chi square also will be discussed.

**Prerequisites & Notes:** PSY 301 with a C- or better

Credits: 5

**PSY 303 - Research Methods and Statistical Analysis: Experimental Approaches**

Continuation of statistical inferencing introduced in PSY 302 as it applies to the special cases of the general linear model. Two sample t-tests and ANOVA models will be introduced at the conceptual and computational level.

Appropriate follow-up tests also will be covered. Computer data analysis will be utilized for problem sets and the individual project.

**Prerequisites & Notes:** PSY 302 with a C- or better

Credits: 5

**PSY 305 - Psychological Tests and Measurement**

Philosophy, history and development of psychological measurement. Reliability, validity, standardization and norms; tests of intelligence, special abilities, personality, interests and values. Students review nonrestricted instruments of various types in small groups.

**Prerequisites & Notes:** PSY 101, PSY 301 or instructor permission

Credits: 5

**PSY 310 - Sensation and Perception**

The basic principles involved in seeing, hearing, touch, taste and smell will be presented. Ecological constraints on perceptual processes will be discussed in the context of illusions and other perceptual demonstrations as well as underlying physiological mechanisms.

**Prerequisites & Notes:** PSY 210, PSY 220, PSY 301

Credits: 5

**PSY 311 - Human Memory**

Reviews memory theories, empirical findings, and applications. Topics include encoding, storage, and retrieval from short- and long-term memory; implicit and explicit memory; autobiographical memory; eyewitness memory.

**Prerequisites & Notes:** PSY 210, PSY 301

Credits: 5

**PSY 318 - Psychology of Language**

An overview of the psychological study of language. Topics include language comprehension, language acquisition, speech errors, bilingualism, dyslexia, language and the brain, and animal communication systems.

**Prerequisites & Notes:** PSY 210 and PSY 301

Credits: 5

**PSY 319 - Cognitive Neuroscience**

Discussion of the brain systems underlying human cognition, with a focus on how inferences about brain systems are drawn from neuropathological, neuroimaging, and behavioral studies.

**Prerequisites & Notes:** PSY 210, PSY 220 and PSY 301.

Credits: 5

**PSY 320 - Topics in Behavioral Neuroscience**

Detailed examination of key areas of physiological psychology, emphasizing the anatomical, physiological and neurochemical bases of behavior.

**Prerequisites & Notes:** PSY 220; PSY 301 or comparable research course; instructor permission

Credits: 5

### **PSY 321 - Learning**

A survey of conditioning and learning.

**Prerequisites & Notes:** PSY 101, PSY 301.

Credits: 5

### **PSY 322 - Motivation**

Theoretical and empirical study of human and subhuman motivational process. Topics covered range from basic physiological drives to achievement motivation and conformity. Emphasis on both biological and social sources of motivation.

**Prerequisites & Notes:** PSY 220, PSY 301

Credits: 5

### **PSY 323 - Psychopharmacology**

Introduction to behavioral pharmacology and the effects of therapeutic and recreational drugs on the function of the nervous system and behavior.

**Prerequisites & Notes:** PSY 220; PSY 301 or comparable research course; instructor permission

Credits: 5

### **PSY 324 - Comparative Psychology**

A phylogenetic comparison of animal behavior, focusing on learning, motivation and sensory processes in selected species of animals.

**Prerequisites & Notes:** PSY 210, PSY 240, PSY 301

Credits: 5

### **PSY 327 - Cognitive Neuroscience Lab**

Introduction to laboratory methods and techniques used in cognitive neuroscience. Concentration will be on large scale brain imaging of cognition using EEG. Students will collect and analyze data from participants undergoing a broad range of cognitive paradigms.

**Prerequisites & Notes:** PSY 220 and at least one of PSY 310, PSY 311, or PSY 319.

Credits: 4

### **PSY 328 - Techniques in Behavioral Neuroscience**

Introduction to laboratory methods and techniques used in behavioral neuroscience. Two hours lecture and four hours lab each week; students will be introduced to basic techniques in histology, neurophysiology, neurochemistry, molecular biology, or behavioral analyses. May require live animal research. Repeatable to a maximum of 8 credits.

**Prerequisites & Notes:** PSY 220 and PSY 301 (or a comparable research design course and permission of instructor); and PSY 320 or concurrent.

Credits: 4

### **PSY 330 - Children Development**

In-depth coverage of social and cognitive development in children and adolescents. Emphasis on the implications and practical applications of research findings in these areas.

**Prerequisites & Notes:** PSY 230 and PSY 301

Credits: 5

### **PSY 331 - Adult Development and Aging**

Examines developmental processes that occur in later life, with a focus on theory, research and practical issues. Topics include a) theoretical and methodological issues, b) biological changes and health issues, c) changes in memory and intelligence, d) personality across adulthood and e) death and dying.

**Prerequisites & Notes:** PSY 230, PSY 301

Credits: 5

### **PSY 332 - Adolescent Development**

Examines adolescent cognitive, social, physiological and intrapsychic development from a variety of theoretical perspectives. Emphasis on current research findings in this area. Students cannot get credit for both PSY 332 and 373.

**Prerequisites & Notes:** PSY 230, PSY 301

Credits: 5

### **PSY 333 - Infant Development**

Examines social, emotional, cognitive, and physical development of infants and toddlers from diverse theoretical perspectives and methodological approaches. Emphasis on current research findings, application of research findings,

and considering infant development in socio-cultural context.

**Prerequisites & Notes:** PSY 230 and PSY 301.

Credits: 5

#### **PSY 340 - Environmental Psychology**

Theoretical, methodological and empirical problems and issues relating to behavior in constructed and natural environments.

**Prerequisites & Notes:** PSY 301 plus one from PSY 210-250

Credits: 5

#### **PSY 341 - Psychology and Culture**

Cultural and ecological factors and their effect on perception, thinking, language, intelligence, sexuality and other psychological variables. An examination of the "universality" of traditional Euro-American psychological theories.

**Prerequisites & Notes:** PSY 240, PSY 301

Credits: 5

#### **PSY 342 - Social Cognition**

Survey of theory and research investigating the cognitive processes that underlie social judgment and behavior.

**Prerequisites & Notes:** PSY 210, PSY 240, PSY 301

Credits: 5

#### **PSY 343 - Social Processes**

Examination of selected topics related to formation and functioning of groups, as well as intergroup relations.

**Prerequisites & Notes:** PSY 240, PSY 301

Credits: 5

#### **PSY 344 - Psychology and the Law**

An examination of current issues in psychology and the law with an emphasis on the application of social psychological theories and research to the understanding of human behavior in a legal context.

**Prerequisites & Notes:** PSY 240, PSY 301

Credits: 5

#### **PSY 345 - Evolutionary Psychology**

The application of evolutionary theory to understanding the characteristics of human functioning including emotion, thinking, and action.

**Prerequisites & Notes:** One course from PSY 210 to 240; C- or better in PSY 301.

Credits: 5

#### **PSY 346 - Stereotyping, Prejudice, & Discrimination**

This course will examine issues of and related to stereotyping, prejudice, and discrimination from a social psychological perspective with an emphasis on racism and sexism.

**Prerequisites & Notes:** PSY 240, PSY 301

Credits: 5

#### **PSY 351 - Abnormal Psychology**

Human behavior patterns culturally labeled as abnormalities, or as mental illness; their etiology, incidence, treatment and social attitudes toward such patterns. Historical review of the concepts used to explain such behavior and the research relating to the treatment of mental disorders.

**Prerequisites & Notes:** PSY 250, PSY 301

Credits: 5

#### **PSY 359 - Introduction to School and Community Counseling**

Overview of professional counseling in schools, colleges and communities. Includes counselor roles, ethics, counseling theories and techniques, training and licensing, counseling minorities, outreach, use of paraprofessionals and research.

**Prerequisites & Notes:** PSY 250, PSY 301; major

Credits: 4

#### **PSY 370 - Psychology and the Arts**

Concepts from a wide variety of areas in psychology are used to analyze issues in art. Specific works of art - which may include literature, music and visual arts - are considered through class discussion and written essay.

**Prerequisites & Notes:** PSY 101

Credits: 3

**PSY 375 - Health Psychology**

The course examines health psychology with a focus on theory, research, and practical issues. Topics include (a) health behavior and prevention, (b) stress and coping, (c) the treatment setting, and (d) management of chronic and terminal illness.

**Prerequisites & Notes:** PSY 101 and PSY 301.

Credits: 5

**PSY 376 - Psychology of Romantic Relationships**

An overview of the psychology of romantic relationships. Topics bridge social and abnormal psychology and include attraction, relationship formation, maintenance, and dissolution, and theoretical approaches to the clinical treatment of couples' issues. **Prerequisites & Notes:** PSY 240, PSY 250 and PSY 301.

Credits: 5

**PSY 377 - Positive Psychology**

This course is a survey of the science of positive psychology which explores the study of human strengths and virtues. The focus of the course is on the unique characteristics of the human experience that contribute to the physical/psychological health and well-being. **Prerequisites & Notes:** PSY 301 or instructor permission.

Credits: 5

**PSY 410 - Seminar in Cognitive Neuroscience**

In-depth coverage of major issues and methods in the study of cognitive neuroscience. Library and laboratory or field research.

**Prerequisites & Notes:** PSY 210, PSY 220, PSY 230, PSY 240, PSY 250, PSY 303; and one of PSY 310, PSY 311, PSY 319 or PSY 320, all with a C- or better.

Credits: 5

**PSY 411 - Seminar in Cognition**

In-depth coverage of selected topics in memory, cognition, and higher order cognitive processing. Library and laboratory or field research.

**Prerequisites & Notes:** PSY 210, PSY 220, PSY 230, PSY 240, PSY 250, PSY 303; and one of PSY 310, PSY 311, PSY 319 or PSY 320, all with a C- or better.

Credits: 5

**PSY 420 - Seminar in Behavioral Neuroscience**

A detailed examination of brain-behavior relations and the neural bases of behavior, based upon review and discussion of current literature in a variety of areas. Library and/or laboratory work.

**Prerequisites & Notes:** PSY 210, PSY 220, PSY 230, PSY 240, PSY 250; PSY 320 or PSY 323; PSY 303 or comparable research course and permission of instructor, all with a C- or better.

Credits: 5

**PSY 421 - Seminar in Learning**

In-depth study of major theoretical and methodological approaches to the study of learning. Laboratory and field research exercises.

**Prerequisites & Notes:** PSY 210, PSY 220, PSY 230, PSY 240, PSY 250, PSY 303, and PSY 321, all with a C- or better.

Credits: 5

**PSY 422 - Seminar in Motivation**

In-depth coverage of determinants of behavior in humans and other animals. Topics of interest to individual students are studied in depth and research analyzing motivational issues is conducted.

**Prerequisites & Notes:** PSY 210, PSY 220, PSY 230, PSY 240, PSY 250, PSY 303, PSY 322.

Credits: 5

**PSY 424 - Seminar in Comparative Psychology**

In-depth study of animal behavior where different species in different ecological niches is a major variable. Emphasis on the genetic determinants of behavior differences. Students will examine primary research and will conduct research. Activities will also include class discussion, presentations, and a major integration paper.

**Prerequisites & Notes:** PSY 210, PSY 220, PSY 230, PSY 240, PSY 250, PSY 303, PSY 324.

Credits: 5

**PSY 428 - Advanced Techniques in Behavioral Neuroscience**

Laboratory based study of integrated neural systems underlying behavior, based on advanced techniques in histology, neurophysiology, neurochemistry, molecular biology, or behavioral analyses. Two hours lecture and four hours lab each week; may require live animal research. Repeatable to a maximum of 8 credits.

**Prerequisites & Notes:** Corresponding section of PSY 328 and PSY 303 or comparable research course and

permission of instructor; PSY 420 or concurrent.

Credits: 4

**PSY 430 - Seminar in Developmental Psychology**

In-depth study of central themes of human development. Contemporary research questions addressed in professional literature and field investigations.

**Prerequisites & Notes:** PSY 210, PSY 220, PSY 230, PSY 240, PSY 250, PSY 303; PSY 330 or PSY 331 or PSY 332, all with C- or better.

Credits: 5

**PSY 431 - Seminar in Adult Development and Aging**

In-depth study of central themes of adult development and aging. Contemporary research questions addressed in professional literature and field investigations.

**Prerequisites & Notes:** PSY 210, PSY 220, PSY 230, PSY 240, PSY 250, PSY 303, PSY 331, all with C- or better

Credits: 5

**PSY 440 - Seminar in Environmental Psychology**

In-depth study of major issues and methods in the study of psychosocial adaptations to and of the physical environment. Library and laboratory or field research.

**Prerequisites & Notes:** PSY 210, PSY 220, PSY 230, PSY 240, PSY 250, PSY 303, PSY 340, all with C- or better.

Credits: 5

**PSY 441 - Seminar in Cross-Cultural Psychology**

In-depth study of contemporary issues, perspectives, and methods used in the study of how cultural and ethnic factors affect psychological processes. A basic examination of current topics that are receiving significant attention. Library and/or laboratory and field research.

**Prerequisites & Notes:** PSY 210, PSY 220, PSY 230, PSY 240, PSY 250, PSY 303, PSY 341, all with C- or better.

Credits: 5

**PSY 442 - Seminar in Social Psychology**

In-depth study of social psychological theory and research to explain patterns of thought and behavior.

**Prerequisites & Notes:** PSY 210, PSY 220, PSY 230, PSY 240, PSY 250, PSY 303; one of PSY 342, PSY 343, PSY 344, or PSY 345, all with C- or better.

Credits: 5

**PSY 451 - Seminar in Abnormal Psychology**

Advanced study in major issues and research methods in abnormal psychology. Focus on research design and protocols with clinical populations.

**Prerequisites & Notes:** PSY 210, PSY 220, PSY 230, PSY 240, PSY 250, PSY 303, PSY 351, all with C- or better.

Credits: 5

**PSY 470 - Psychological Issues in Substance Abuse and Dependence**

This class provides advanced information about psychological issues in substance abuse and dependence. In addition to surveying the most common substances of abuse and their effects, this course also addresses etiological theories, assessment and diagnosis, treatment, issues pertinent to diverse groups of individuals, and current controversies in the field.

**Prerequisites & Notes:** PSY 250 and PSY 351, or current enrollment in the graduate Mental Health or School Counseling Programs.

Credits: 3

**PSY 471 - Honors Thesis Seminar**

In-depth investigation of a selected topic in psychology culminating in an honors thesis. Should be taken the quarter before the thesis is begun and while it is in progress. Repeatable to a maximum of 6 credits. S/U grading.

**Prerequisites & Notes:** instructor permission

Credits: 2

**PSY 481 - Seminar in History and Systems of Psychology**

An historical perspective of the development of psychological systems and theories and their impact on contemporary psychology.

**Prerequisites & Notes:** C- or better in: PSY 210-250, PSY 302 plus completion of 45 credits in psychology

Credits: 4

**PSY 482 - Seminar in Psychological Theory**

A seminar examining the philosophical assumptions of science in general and psychology in particular.

**Prerequisites & Notes:** C- or better in: PSY 210-250, PSY 302 plus completion of 45 credits in psychology

Credits: 4

**PSY 501 - Behavioral Neuroscience**

Examines the basic anatomy, physiology and chemistry of the vertebrate nervous system within the context of both abnormal and normal behaviors. Topics vary but include sensory and motor systems, reward pathways, substance abuse, neural correlates of major mental illness, and regeneration/recovery of function in the central nervous system.

**Prerequisites & Notes:** admission to MS or MEd program in psychology

Credits: 4

**PSY 502 - Personality and Psychopathology**

Consideration of major theoretical perspectives on human personality and psychopathology to include psychoanalytic and neoanalytic, cognitive social learning, biomedical and humanistic perspectives. Current research into diagnostic classification, etiology, description, diagnosis and treatment of behavioral and mental disorders. Overall orientation is to seek integration of cultural, social, psychological and physiological processes into resultant patterns of personal, social and behavioral maladaptation.

**Prerequisites & Notes:** admission to MS or MEd program in psychology or instructor permission

Credits: 5

**PSY 503 - Cognition**

Provides an overview of theories, research and applications of cognitive psychology. Topics covered range from basic perception through higher mental processes.

**Prerequisites & Notes:** admission to MS or MEd program in psychology or instructor permission

Credits: 4

**PSY 504 - Lifespan Psychological Development**

An overview of the major theories and principles in developmental psychology. Theories, issues and principles are highlighted through an analysis of various topics across the lifespan and as they affect the psychological development of the individual.

**Prerequisites & Notes:** admission to MS or MEd program in psychology or instructor permission

Credits: 4

**PSY 505 - Social Psychology**

Designed to provide a thorough background in social psychology and to motivate a continuing exploration of theoretical problems and issues in the field. Students will be exposed to historical and contemporary theories and methods in social psychology.

**Prerequisites & Notes:** admission to MS or MEd program in psychology or instructor permission

Credits: 4

**PSY 509 - Proseminar**

Introduction to professional oral presentation, through a range of designs/methodologies. Individual faculty will present ongoing research. Each student will be required to make at least one oral presentation outlining their current research focus. S/U grading.

**Prerequisites & Notes:** admission to MS program in psychology (Experimental) or instructor permission

Credits: 2

**PSY 512 - Correlation Methods and Data Analysis**

Covers topics in bivariate and multivariate correlation and regression. Students learn to design correlation studies and to analyze correlational data involving one dependent variable and one or more independent variables. Indices covered include regression coefficients, bivariate product-moment correlations and their special cases, partial and semi-partial correlations, and multiple correlations/regression. Use of computer-based statistical software packages for data analysis and interpretation is stressed.

**Prerequisites & Notes:** admission to MS program in psychology or instructor permission

Credits: 4

**PSY 513 - Experimental Methods and Data Analysis**

Introduces ANOVA models as special cases of the General Linear Model and covers topics in the bivariate distribution. Includes basic topics in research design and data analysis; those ANOVA designs that represent a large portion of published research; the theoretical and mathematical issues that are of concern to the modern researcher. Computer examples of data analysis using computer-based statistical software are used to provide practical experience analyzing data and interpreting the analysis.

**Prerequisites & Notes:** PSY 512

Credits: 4

**PSY 515 - Multivariate Analysis**

Topics in advanced multivariate analysis including canonical analysis, discriminant functions analysis, cluster analysis and factor analysis. Logical and geometric properties of multivariate techniques and interpretation on research results are stressed.

**Prerequisites & Notes:** PSY 513

Credits: 3

**PSY 516 - Structural Equation Modeling**

Topics in restricted latent variable analysis including path analysis and structural equation modeling. Course will cover theoretical bases and computations of these procedures as well as the use of statistical software packages, with emphasis on interpreting and reporting results.

**Prerequisites & Notes:** PSY 515 or instructor permission

Credits: 3

**PSY 532 - Cross-Cultural Counseling**

This seminar is a basic introduction to the cross-cultural perspective in psychology. History of the modern cross-cultural movement will be covered along with a selection of a number of conceptual and methodological issues and problems. Topics include perception, cognition and emotion, developmental topics, social psychological variables, testing and measurement, personality and psychopathology, and virtually all areas of psychology mediated by culture and ethnicity. Some emphasis given to professional applications such as counseling.

**Prerequisites & Notes:** admission to MS or MEd program in psychology

Credits: 3

**PSY 541 - Seminar in Behavioral Neuroscience**

A detailed examination of brain-behavior relations and the neural bases of behavior. Review and discussion of current literature in a variety of areas.

**Prerequisites & Notes:** Admission to MS experimental program; PSY 501 and permission of instructor.

Credits: 3

**PSY 542 - Developmental Psychopathology**

Overall working model of mental disorders diathesis-stress model. Presentation of diverse theories (e.g., attachment, family systems, genetic/physiological, individual difference, social cognition). Review of current research literature on assessment, diagnosis and treatment of childhood mental disorders within a developmental framework. Ethical considerations in clinical research and therapy with children highlighted.

**Prerequisites & Notes:** Admission to MS or MEd program in Psychology and PSY 502 or permission of instructor.

Credits: 5

**PSY 543 - Seminar in Cognition**

In-depth coverage of selected topics in perception, memory, cognition, and higher order cognitive processing.

Repeatable up to 9 credits.

**Prerequisites & Notes:** Admission to MS experimental psychology program and PSY 503; or permission of instructor.

Credits: 3

**PSY 544 - Seminar in Developmental Psychology**

In-depth study of central themes of human development. Contemporary research questions addressed in professional literature and field investigations. Repeatable up to 9 credits.

**Prerequisites & Notes:** Admission to MS experimental psychology program and PSY 504; or permission of instructor.

Credits: 3

**PSY 546 - Seminar in Social Psychology**

In-depth study of social psychological theory and research to explain patterns of thought and behavior. Repeatable up to 9 credits.

**Prerequisites & Notes:** Admission to MS experimental psychology program and PSY 505; or permission of instructor.

Credits: 3

**PSY 550 - Research Methods in Counseling**

Covers content and research methods relevant to psychological processes in psychotherapy.

**Prerequisites & Notes:** admission to mental health counseling curriculum or MEd school counseling program; PSY 512

Credits: 1 TO 3

**PSY 551 - Developmental School Counseling**

A comprehensive overview of professional school counseling with particular emphasis upon recent advances in counseling program development, organization, evaluation and service delivery models.

**Prerequisites & Notes:** admission to MS mental health counseling curriculum or MEd school counseling program; general psychology program students with instructor permission

Credits: 4

**PSY 553 - Theories of Counseling and Psychotherapy**

Basic orientation to counseling theories including the history and development of theories of counseling; comparison of the theories in terms of goals, process, methods; and evaluation and research in counseling. Some consideration of consultation strategies, systemic skills and psychological education models used by psychological counselors and psychotherapists.

**Prerequisites & Notes:** admission to MS mental health counseling curriculum or MEd school counseling program; general curriculum students with instructor permission

Credits: 3

**PSY 554 - Standardized Tests**

Standardized group tests commonly used in the public schools; selection and administration of tests; interpretation of norms.

**Prerequisites & Notes:** Admission to MEd school counseling, MS mental health counseling, MS experimental psychology, or instructor permission

Credits: 4

**PSY 555 - Occupations and Career Development**

Critical examination of major theories of career development and vocational counseling. Sources of occupational materials and analysis of their use and distribution in counseling practice.

**Prerequisites & Notes:** admission to MS mental health counseling curriculum or MEd school counseling program;

PSY 553

Credits: 3

**PSY 556 - The Role of the School Counselor**

An advanced seminar in school counseling focusing on the professional roles and responsibilities of the counselor in elementary, middle/junior and high school settings. Particular emphasis placed upon a systems orientation to consultation services within the context of a developmental school counseling program.

**Prerequisites & Notes:** admission to MS mental health counseling curriculum or MEd school counseling program;

PSY 531, PSY 555

Credits: 2

**PSY 557 - Testing and Appraisal in Counseling**

The evaluation and use of various psychological tests, scales and inventories in the assessment of intelligence, personality, interests and other human dimensions. Some consideration of other modes of assessment (e.g., behavioral, projective and neurological). Emphasis is on the practical application of psychological assessment in counseling. Collection, evaluation, application and interpretation of case data.

**Prerequisites & Notes:** Admission to MS mental health counseling curriculum and PSY 511, or MEd school counseling program and PSY 554

Credits: 3

**PSY 558 - Family and Couple Counseling**

A review of major theories, techniques and research in psychological counseling with families. Emphasis is on parent-child developmental problems and the role of interpersonal relationships within the total family. Students are involved in limited supervised family counseling experiences.

**Prerequisites & Notes:** Admission to MS mental health counseling curriculum or MEd school counseling program and PSY 553, PSY 564

Credits: 3

**PSY 560 - Family Counseling Lab**

Students observe and conduct family counseling sessions through the psychology department clinic under the supervision of an appropriate faculty member. Repeatable to a maximum of 6 credits. S/U grading.

**Prerequisites & Notes:** Admission to MS mental health counseling curriculum or MEd school counseling program  
Credits: 1 TO 6

**PSY 561 - Seminar: Professional, Legal and Cultural Issues**

Consideration of the professional, cultural, ethical and legal issues and special problems in the application of psychological theories and research in educational settings, community clinics and private practice.

**Prerequisites & Notes:** Admission to MS mental health counseling curriculum or MEd school counseling program  
Credits: 3

**PSY 564 - Individual Counseling Techniques**

Skill development in individual counseling, psychotherapy and behavior modification techniques using actual interviews, simulations, videotape and other laboratory procedures. Prerequisite to practicum in individual counseling and psychotherapy.

**Prerequisites & Notes:** Admission to MS mental health counseling curriculum or MEd school counseling program  
Credits: 5

**PSY 565 - Group Processes in Counseling**

Current group counseling and psychotherapy techniques. Covers task-directed, encounter, decision-making and communication techniques.

**Prerequisites & Notes:** Admission to MS mental health counseling curriculum or MEd school counseling program  
Credits: 4

**PSY 567 - Professional Practice of Counseling**

A comprehensive overview of the history, philosophy, credentialing, and the development of the professional organizations in counseling. Professional roles and topics for counselors such as consultation, outreach, prevention, advocacy, program evaluation, medications, and economic considerations such as funding, managed care, and private practice will also be addressed.

**Prerequisites & Notes:** Admission to MS mental health counseling curriculum or MEd school counseling program  
Credits: 2

**PSY 570 - Practicum**

Professional practice under assigned departmental supervision. Repeatable to a maximum of 15 credits. S/U grading.

**Prerequisites & Notes:** Admission to MS mental health counseling curriculum or MEd school counseling program  
Credits: 1 TO 10

**PSY 581 - Practicum in College Teaching of Psychology**

Repeatable to a maximum of 12 credits. S/U grading.

**Prerequisites & Notes:** instructor permission

Credits: 1 TO 12

**PSY 582 - Practicum in Research in Psychology**

Student initiates and conducts a project under faculty supervision. Repeatable to a maximum of 12 credits. S/U grading.

**Prerequisites & Notes:** instructor permission

Credits: 1 TO 12

**PSY 661 - Advanced Seminar in Professional Issues in Counseling Practice**

An advanced seminar in professional, cultural, ethical and legal issues in counseling. For students who are in internships or for counselors with a year of practical experience. Repeatable for credit with different topics with no maximum. S/U grading.

**Prerequisites & Notes:** Admission to MS mental health counseling curriculum, MEd school counseling program, initial certification in school counseling or instructor permission

Credits: 2 TO 4

**PSY 670 - Internship**

An extension of PSY 570 with increasingly independent responsibilities for practice in a professional setting. Primary supervision is by appropriate staff in the cooperating agency. Repeatable to a maximum of 30 credits. S/U grading.

**Prerequisites & Notes:** Admission to MS mental health counseling curriculum or MEd school counseling program  
Credits: 1 TO 12

**PSY 690 - Thesis**

S/U grading.

**Prerequisites & Notes:** advancement to candidacy

Credits: 1 TO 12

## **Rehabilitation Counseling**

Courses numbered X37; X97; 300, 400, 500; 417, 445, 517, 545 are described in the University Academic Policies section of this catalog.

### **RC 501 - Rehabilitation Research**

An overview of research including: design and analysis; criteria for reading and interpreting existing studies; practice in identifying issues suitable for research; formulating hypotheses and appropriate methods; and guidance in preparing a program evaluation. Emphasis is on the application of research in clinical and rehabilitation settings.

Credits: 4

### **RC 519 - Current Issues in Rehabilitation Counseling**

Examination of several current and controversial issues in rehabilitation. Topics change. Repeatable to a maximum of 6 credits.

Credits: 3

### **RC 546 - Relapse Prevention and Rehabilitation**

Addresses personal, family and social rehabilitation issues that emerge first five from addiction. Discusses the processes and behaviors leading to relapse and theoretical models for prevention and promoting recovery.

Credits: 3

### **RC 580 - Theory of Rehabilitation Counseling**

An introduction to major counseling theories and their application in rehabilitation settings. Emphasis on understanding and demonstrating basic helping skills in a counseling relationship with individuals with disabilities.

Credits: 3

### **RC 581 - Readings and Projects in Rehabilitation**

Supervised readings and projects on selected contemporary topics that impact rehabilitation counseling. Repeatable to a maximum of 6 credits.

Credits: 2 TO 4

### **RC 582 - Introduction to Rehabilitation Counseling**

An overview of the principles and practices of rehabilitation counseling, including history, philosophy, ethics, legislative influences, organizational structures, and service-delivery models. Explores various specialties within the field of rehabilitation counseling.

Credits: 3

### **RC 583 - Practice of Rehabilitation Counseling**

Application of concepts and techniques that have been introduced from major counseling theories in RC 580. Emphasis on continued development and refinement of counseling skills through advanced role-play and actual counseling with individuals with disabilities.

**Prerequisites & Notes:** RC 580 or permission of instructor.

Credits: 3

### **RC 583A - Theory of Rehabilitation Counseling**

An introduction to major counseling theories and their application in rehabilitation settings. Emphasis on understanding and demonstrating basic helping skills in a counseling relationship with individuals with disabilities.

Credits: 3

### **RC 584 - Group Counseling Techniques in Rehabilitation**

A didactic and experiential course to introduce students to the dynamics of group counseling. Purpose, process and techniques related to various types of groups.

**Prerequisites & Notes:** RC 583 or permission of instructor.

Credits: 3

### **RC 585 - Social, Psychological and Attitudinal Aspects of Disability**

An examination of the impact of disability on the individual, the individual's environment, significant others, and society in general. The adjustment process that individuals and their families experience is compared and contrasted within developmental and environmental contexts.

Credits: 3

### **RC 586 - Medical Aspects of Disability**

An examination of the etiology, prognosis, treatment and vocational implications of major disabling conditions with an emphasis on physical and sensory impairments. Includes an introduction to medical specialties, therapeutic services, restorative techniques, medical terminology, and human growth and development.

Credits: 3

**RC 587 - Utilization of Tests and Evaluation Tools**

Gathering, analyzing, and synthesizing of vocationally relevant information for use in the rehabilitation process. Advantages and limitations of traditional psychological inventories, as well as various situational assessment tools. Emphasis on collaborative, client-centered approach to assessment.

Credits: 3

**RC 588 - Occupational Information and Career Development**

Examines career development theories, occupational information, labor market trends, and meaningful employment with a career focus. Explores lifespan and development issues as they relate to career decision-making.

Credits: 3

**RC 589 - Case Management in Rehabilitation**

Examines techniques and procedures related to individualized case management and caseload management. Explores case management issues of various disability groups, including educational and vocational community resources.

Credits: 3

**RC 590 - Employment Strategies and Job Placement**

Explores the process and techniques of work adjustment, job development, job maintenance, and building relationships with employers. Includes job analysis, employment techniques, labor market trends, accommodations, and legislation.

**Prerequisites & Notes:** RC 588 or instructor permission

Credits: 3

**RC 591 - Practicum in Rehabilitation Counseling**

Demonstration of counseling skills with individuals with disabilities in a rehabilitation agency. Supervision by agency personnel. S/U grading.

**Prerequisites & Notes:** RC 582, B or better in RC 583 and instructor permission.

Credits: 5

**RC 592 - Internship in Rehab Counseling**

Demonstration of counseling skills in a rehabilitation agency with primary supervision by agency personnel. Students are required to spend significant time within an agency functioning as a professional counselor. Repeatable to a maximum of 20 credits. S/U grading.

**Prerequisites & Notes:** RC 591 and permission of instructor.

Credits: 1 TO 10

**RC 593 - Introduction to Assistive Technology**

Understand the ecology of assistive technology for people with disabilities. Emphasis is on the functional assessment and relation to assistive technology needs and the physical, psychosocial, environmental and legal domains of assistive technology. Covers the use of various devices and their implications on an individual's rehabilitation program.

Credits: 3

**RC 594 - Introduction to Psychiatric Rehabilitation**

Understanding major psychiatric disorders, principles and practices of psychiatric rehabilitation. Examines the role of the rehabilitation counselor as an integral part of the treatment team.

Credits: 4

**RC 595 - Cognitive Disabilities in Rehabilitation**

An examination of the etiology, prognosis, treatment, and vocational implications of cognitive disabilities.

Credits: 3

**RC 596 - Advanced Assessment in Rehabilitation**

Application of medical, vocational, and assessment knowledge and skills to the planning, selection, and interpretation of the rehabilitation process for individuals with disabilities.

**Prerequisites & Notes:** RC 587 or permission of instructor.

Credits: 3

**RC 598 - The Family and Rehabilitation Counseling**

A theoretical understanding of how to work with families for achieving maximum outcomes in the rehabilitation counseling process.

**Prerequisites & Notes:** RC 583 or permission of instructor.

Credits: 3

**RC 599 - Advanced Practice of Rehabilitation Counseling**

A didactic and experiential course which emphasizes in-depth practice of the theories, concepts, and techniques introduced in RC 580 and 583. Continued development and refinement of counseling skills with proficiency as a desired outcome.

**Prerequisites & Notes:** RC 580 and RC 583 or instructor permission.

Credits: 3

**Recreation**

*Courses numbered X37; X97; 300, 400; 417, 445 are described in the University Academic Policies section of this catalog.*

**RECR 201 - Foundations of Recreation and Leisure**

Professional course dealing with the history, philosophy, present status, future goals, and challenges of leisure and the recreation service professions.

Credits: 4

**RECR 271 - Introduction to Community Recreation and Leisure Services**

Community-based recreation service agencies: philosophies, functions, services, personnel and facilities. Emphasis on the diversity and inter-relatedness of community recreation service agencies.

**Prerequisites & Notes:** RECR 201; variable fee

Credits: 3

**RECR 272 - Introduction to Outdoor Recreation**

Introduction to the major professional components of the outdoor recreation field: interpretive services, camping, resource management, programming, private recreation and tourism. Focuses on trends, programs and related professional issues.

**Prerequisites & Notes:** RECR 201

Credits: 3

**RECR 274 - Introduction to Therapeutic Recreation**

Introduction to the principles and practices of therapeutic recreation. Includes history, philosophy, and trends and issues. Also presents an overview of consumer groups associated with therapeutic recreation.

**Prerequisites & Notes:** RECR 201

Credits: 4

**RECR 275 - Professional Practicum and Seminar**

Career opportunities in leisure services investigated through organized visits to recreation and leisure agencies. Includes class meetings to explore professional development. S/U grading.

**Prerequisites & Notes:** RECR 201

Credits: 1

**RECR 276 - Introduction to Program Leadership**

Leading and processing recreation experiences in community, outdoor and therapeutic settings that promote individual and social well being.

**Prerequisites & Notes:** RECR 201

Credits: 2

**RECR 279 - Introduction to Tourism**

Introduction to the major professional components of tourism: tour development, guiding, visitor services, resort management, and event planning. Also examines history of travel, types of travelers, motives of travel, niche markets, and current trends.

**Prerequisites & Notes:** RECR 201

Credits: 3

**RECR 301 - Work and Leisure Through the Ages**

A historical survey of the evolution of work and leisure from antiquity to the present, examining developments from social, cultural, political, and economic perspectives. The course also explores how work and leisure have affected societies throughout history. The central goal of the course is to use the past as a means for students to examine beliefs, values, and practices regarding work and leisure in the present and the future.

**Prerequisites & Notes:** any 100-level history class or PSY 101, SOC 221, SOC 251, SOC 255, SOC 260, SOC 268, SOC 269

Credits: 4

**RECR 370 - Outdoor Program Development**

Methods and techniques in the organization, implementation and evaluation of recreation programs in outdoor settings.

**Prerequisites & Notes:** Phase I or permission of instructor.

Credits: 4

**RECR 372 - Management of Recreation and Leisure Services**

Entry-level administrative skills associated with managing personnel and organizational resources within parks and recreation systems.

**Prerequisites & Notes:** Phase I; variable fee

Credits: 4

**RECR 373 - Recreation Programming**

Systems approach to programming methods for individual and group program planning in all parks and recreation settings.

**Prerequisites & Notes:** Phase I; variable fee

Credits: 4

**RECR 376 - Therapeutic Recreation Program Design**

Methods and techniques in the organization, implementation and evaluation of recreation programs for special populations: needs assessment, activity modification, adaptive equipment, physical and behavioral management and intervention techniques.

**Prerequisites & Notes:** Phase I or written permission

Credits: 4

**RECR 378 - Human Relations: Concepts & Skills**

Knowledge of human relations concepts and development of basic helping skills needed by individuals working in therapeutic relationships in outdoor, community, tourism, and institutional settings. Designed to meet certification requirements for therapeutic recreation.

**Prerequisites & Notes:** Phase I Recreation Major or permission of instructor.

Credits: 4

**RECR 379 - Tourism Planning and Development**

Study of the nature and process of planning as a function of tourism industry development; focus on the application of resource and activity planning principles to the recreational travel and tourism experience.

**Prerequisites & Notes:** Phase I or written permission

Credits: 4

**RECR 380 - Therapeutic Recreation Principles, Practices and Techniques**

Concentrated analysis of the process and practice of therapeutic recreation. Includes medical terminology, disabling conditions, adaptations, models of health care, rehabilitation techniques, and further examination of the foundations and development of therapeutic recreation. Includes one hour arranged.

**Prerequisites & Notes:** Phase I or appropriate experience; written permission

Credits: 5

**RECR 385 - Leisure and Aging**

An overview of aging with respect to leisure services. Examines physical, social, psychological, economic and political aspects of aging as they relate to designing recreation programs and leisure opportunities.

**Prerequisites & Notes:** RECR 201 or instructor permission

Credits: 4

**RECR 421 - Therapeutic Recreation Trends and Issues**

Analysis of trends and issues affecting the profession of therapeutic recreation.

**Prerequisites & Notes:** Phase III or appropriate experience; written permission

Credits: 3

**RECR 444 - Recreation Budgeting and Finance**

Principles and techniques of obtaining, budgeting and managing financial resources in parks and recreation agencies.

**Prerequisites & Notes:** Phase III or permission of Instructor.

Credits: 4

**RECR 450 - Recreation Program Evaluation**

Quantitative and qualitative methods of program evaluation emphasizing experiential learning, questionnaire design and survey research, interviews, observations, and consensus techniques.

**Prerequisites & Notes:** Phase III or permission of Instructor.

Credits: 4

**RECR 470 - Adventure-Based Programming**

Methods and techniques in the assessment, design, implementation and evaluation of adventure programs in enrichment and therapeutic recreation settings.

**Prerequisites & Notes:** Phase III or instructor permission; variable fee

Credits: 3

**RECR 471 - Internship I**

Full-time supervised professional experience emphasizing functional proficiency under joint sponsorship of University and agency personnel. S/U grading.

**Prerequisites & Notes:** Phase II

Credits: 3

**RECR 472 - Internship II**

Full-time supervised professional experience emphasizing functional proficiency under joint sponsorship of University and agency personnel.

**Prerequisites & Notes:** Phase II Recreation Majors

Credits: 12

**RECR 473 - Internship III**

Full-time supervised professional experience emphasizing functional proficiency under joint sponsorship of University and agency personnel.

**Prerequisites & Notes:** Phase II, Recreation majors

Credits: 15

**RECR 475 - Community Development and Leisure Services**

An analysis of community development from the context of recreation and leisure services. Emphasis is placed on the roles and relationships among community members and recreation and leisure services for the purposes of promoting the health and well-being of communities.

**Prerequisites & Notes:** Phase III or instructor permission; variable fee

Credits: 3

**RECR 479 - Ecotourism: Principles and Practices**

Provides an understanding of the principles and practices of ecotourism. Examines theory, practice, history, terminology and issues in ecotourism planning and management. Emphasizes sustainable practices as they relate to traveler education, tour planning, and destination development.

**Prerequisites & Notes:** RECR 379 or instructor permission; variable fee

Credits: 3

**RECR 480 - Leisure and Society**

A senior capstone course that builds on general education and foundations of professional education. Goal is to synthesize diverse strands of theory and practice into an integrated understanding of recreation and leisure in modern society, with implications for professional service. Writing proficiency course.

**Prerequisites & Notes:** Phase III; variable fee

Credits: 4

## Russian

*Courses numbered X37; X97; 300, 400; 417, 445 are described in the University Academic Policies section of this catalog.*

**RUSS 110 - Beginning Russian 1**

Introduces the Russian alphabet, basic conversation and grammar. First course in the Russian language sequence.

Credits: 5

**RUSS 120 - Elementary Russian 2**

The second half of the introductory Russian language sequence.

**Prerequisites & Notes:** RUSS 110

Credits: 5

**RUSS 201 - Intermediate Russian**

Review of fundamentals: speaking, reading, writing and understanding.

**Prerequisites & Notes:** RUSS 103 or equivalent

Credits: 4

**RUSS 202 - Intermediate Russian**

Review of fundamentals: speaking, reading, writing and understanding.

**Prerequisites & Notes:** RUSS 201

Credits: 4

**RUSS 203 - Intermediate Russian**

Review of fundamentals: speaking, reading, writing and understanding.

**Prerequisites & Notes:** RUSS 202

Credits: 4

**RUSS 214 - Russian Phonetics**

Systematic practical and theoretical introduction to the Russian sound system.

**Prerequisites & Notes:** RUSS 101

Credits: 2

**RUSS 301 - Third-Year Composition**

Written and oral expression, advanced grammar, and vocabulary building.

**Prerequisites & Notes:** RUSS 203 or equivalent

Credits: 3

**RUSS 302 - Third-Year Composition**

Written and oral expression, advanced grammar and vocabulary building.

**Prerequisites & Notes:** RUSS 301 or equivalent

Credits: 3

**RUSS 314 - Russian Syntax**

Systematic survey of Russian declension, conjugation and sentence structure.

**Prerequisites & Notes:** RUSS 201

Credits: 2

**RUSS 330 - Civilization of Russia**

Significant elements of Russian civilization presented through Russian texts.

**Prerequisites & Notes:** RUSS 201, RUSS 202, RUSS 203; or equivalent

Credits: 3

**Student Affairs Administration**

*Courses numbered X37; X97; 300, 400, 500; 417, 445, 517, 545 are described in the University Academic Policies section of this catalog.*

**SAA 340 - Paraprofessional Advisement**

Emphasizes the helping relationship in various student affairs advising, educational and residential program areas.

Repeatable with different topics.

**Prerequisites & Notes:** anticipated employment in campus-based student services

Credits: 2 TO 4

**SAA 341 - Practicum in Paraprofessional Advisement**

Supervised practicum for students to work in university student services programs. Repeatable with various experiences to a maximum of 6 credits. S/U grading.

**Prerequisites & Notes:** AHE 340 or SAA 340; instructor permission

Credits: 1 TO 4

**SAA 375 - Diversity in Higher Education and Student Affairs**

An introduction to the study of diversity issues within the context of services and programs in higher education and student affairs. Emphasis on the relationship between growth in diversity of students and the range and complexity of services and programs designed to ensure their academic and personal success.

Credits: 4

**SAA 420 - Foundations of Student Leadership: Theory and Practice**

Introduces leadership theories and facilitates student understanding of their leadership styles and strategies as emerging leaders.

**Prerequisites & Notes:** Permission of instructor.

Credits: 3

**SAA 501 - Assessment and Research in Student Affairs**

Delineates history, philosophy, and goals of assessment and research in student affairs. Describes assessment and research models for student affairs practitioners using quantitative, qualitative, and mixed methods. Integrates theory of applied research methodologies with practical problems and current issues in student affairs. Emphasizes ethics throughout the research and assessment processes.

**Prerequisites & Notes:** Admission to Student Affairs Administration graduate program or permission of instructor.

Credits: 4

**SAA 555 - Foundations of Higher Education**

Studies of historical and philosophical foundations of higher education. Examines social and political forces influential in the evolution of colleges and universities, as well as current trends.

Credits: 3

**SAA 557 - Student Learning and Development Theories**

Examines cognitive, psychosocial and identity development theories and models as well as implications for student affairs programs, services and student interactions.

**Prerequisites & Notes:** admission to Student Affairs Administration program or instructor permission

Credits: 4

**SAA 558 - Interviewing and Interpersonal Effectiveness**

A didactic and experiential course addressing interpersonal communication skills used to effectively interview, assess, advise, refer and intervene in difficult student situations. Includes theoretical frameworks for effective interviewing.

**Prerequisites & Notes:** admission to Student Affairs Administration program or instructor permission

Credits: 3

**SAA 559 - Leadership and Organizational Management**

Study of contemporary theories of leadership and management techniques with application to higher education settings.

**Prerequisites & Notes:** admission to Student Affairs Administration program or instructor permission

Credits: 3

**SAA 560 - Student Affairs Practice and the College Student**

A foundational overview of the organizational structure and functions of student affairs administration.

Understanding the students served by student affairs provides context for understanding support and service systems.

**Prerequisites & Notes:** admission to Student Affairs Administration program or instructor permission

Credits: 4

**SAA 561 - Collaboration and Group Dynamics**

A didactic and experiential course addressing theories of group process and dynamics. Includes principles to work effectively with groups, including collaboration, leadership, and intervention skills, particularly in a higher education setting.

**Prerequisites & Notes:** admission to Student Affairs Administration program

Credits: 3

**SAA 562 - Cultural Pluralism and Higher Education**

Examines the social and historical roots of diversity in the academy, experiences and problems facing underrepresented groups and cultural competencies required of professionals in higher education.

**Prerequisites & Notes:** admission to Student Affairs Administration program or instructor permission

Credits: 4

**SAA 563 - Teaching, Learning and Programming**

Theories, models and research on conditions for learning, developing outcomes-based programs and facilitating student learning. Focus is on application to student affairs in higher education.

**Prerequisites & Notes:** admission to Student Affairs Administration program

Credits: 4

**SAA 564 - Current Issues and Trends in Higher Education**

Examines several current and controversial issues and trends in higher education. Repeatable to a maximum of 6 credits.

**Prerequisites & Notes:** admission to Student Affairs Administration program or instructor permission

Credits: 3

**SAA 592 - Internship in Student Affairs Administration**

Development of professional competencies through an internship in a college student affairs office. Repeatable to a maximum of 9 credits. S/U grading.

**Prerequisites & Notes:** admission to Student Affairs Administration program and completion of SAA 558.

Credits: 1 TO 6

**SAA 599 - Graduation Seminar**

Provides a capstone experience for graduating candidates. Readings and discussions to assist integration of overall program experience. Repeatable to a maximum of 3 credits. S/U grading.

**Prerequisites & Notes:** final quarter classes excluding thesis/field project; program advisor approval

Credits: 1 TO 3

**SAA 691 - Assessment and Research Seminar**

Graduate assessment and research project under the direction of program faculty. Repeatable to a maximum of 6 credits. S/U grading.

**Prerequisites & Notes:** SAA 501.

Credits: 1 TO 6

**Science Education**

*Courses numbered X37; X97; 300, 400, 500; 417, 445, 517, 545 are described in the University Academic Policies section of this catalog.*

**SCED 201 - Matter and Energy in Physical Systems**

This course is the first in a 3-quarter sequence designed for prospective elementary teachers but open to all students. The course uses a student-oriented pedagogy with an integrated content focus to help students develop important ideas in physical science.

**Prerequisites & Notes:** MATH 112 or higher

Credits: 4

**SCED 202 - Matter and Energy in Earth Systems**

This course is the second in a 3-quarter sequence designed for prospective elementary teachers but open to all students. The course uses a student-oriented pedagogy with an integrated content focus to help students develop important ideas in earth science.

**Prerequisites & Notes:** MATH 112, SCED 201 or instructor permission.

Credits: 4

**SCED 203 - Matter and Energy in Life Systems**

This course is the third in a 3-quarter sequence designed for prospective elementary teachers but open to all students. The course uses a student-oriented pedagogy with an integrated content focus to help students develop important ideas in life science.

**Prerequisites & Notes:** MATH 112 or higher, SCED 202 or instructor permission

Credits: 4

**SCED 294 - Investigative Science**

Course in experimental science for preservice elementary education students. Through "directed discovery," students collaborate in developing and executing a plan to investigate a topic as common thread in biology, chemistry, geology and physics. The course includes both experimental work and discussion/lecture, allowing students to develop a theoretical base and practice experimental design.

**Prerequisites & Notes:** Completion of 3 natural science GURs

Credits: 4

**SCED 370 - Science and Society**

An in-depth exploration of selected contemporary issues such as global climate change, energy crisis, genetically modified foods, and large-scale extinction of species. The course also explores what constitutes science and pseudo science, looking specifically at "creation science."

**Prerequisites & Notes:** Completion of science GURs and completion 90 credits or permission of instructor.

Credits: 3

**SCED 401 - Reading in Science Education**

In-depth study of science education literature with a view to writing one short and one extensive report, plus making two short presentations to class peers based on these reports.

**Prerequisites & Notes:** SCED 491 or concurrent

Credits: 1

**SCED 480 - Science Methods and Curriculum for the Elementary School**

Classroom/laboratory study of theory, curriculum, science content and processes and effective teaching methods in the context of national and Washington state standards in science and with activities appropriate for the elementary classroom.

**Prerequisites & Notes:** Minimum of 12 credits in natural science; MATH GURs; ELED 370.

Credits: 5

**SCED 481 - Fundamentals of Teaching Science**

Study of key topics related to teaching science including nature of science, science standards, constructivism, preconceptions, and assessment.

**Prerequisites & Notes:** CHEM 123 or CHEM 225 or GEOL 212 or BIOL 206 or PHYS 123.

Credits: 2

**SCED 490 - Laboratory/Field Experience in Elementary Science**

A field-based experience in which WWU students teach science within their internship year. Includes bi-weekly seminar.

**Prerequisites & Notes:** SCED 390

Credits: 3

**SCED 491 - Methods in Secondary Education for Science Teachers**

Study of literature, curriculum and teaching strategies in life, earth and physical sciences for grades 4-12, plus peer teaching and school observations.

**Prerequisites & Notes:** Admission to the secondary teaching program and a major or concentration in natural sciences; SEC 431 or SCED 532; SCED 481.

Credits: 5

**SCED 501 - Advanced Studies in Science Education**

A critical study of research and developments related to science education.

**Prerequisites & Notes:** teaching experience

Credits: 4

**SCED 511 - Internship in Science Education**

Assisting with the teaching of an on-campus science methods course for pre-service elementary school teachers. S/U grading.

**Prerequisites & Notes:** instructor permission

Credits: 3

**SCED 512 - In-Service Workshops in Science Education**

Planning and implementing a series of not less than three in-service workshops in elementary school science.

Repeatable for elective credit. S/U grading.

Credits: 3

**SCED 513 - Science Curriculum Grades K-12**

Examination of science curricula for grades K-12 with major emphasis on the elementary grades as a basis for selection of a science curriculum and teacher's guide for use in local school systems.

**Prerequisites & Notes:** teaching experience or instructor permission

Credits: 3

**SCED 514 - Seminar in Elementary Science Education**

Repeatable to a maximum of 3 credits.

**Prerequisites & Notes:** instructor permission

Credits: 1 TO 3

**SCED 515 - Assessment for Science Understanding**

A seminar addressing the development of a variety of formative and summative assessment techniques and exploring psychometric properties of science items and tests for practicing science teachers.

**Prerequisites & Notes:** SCED 501, EDU 501.

Credits: 3

**SCED 580 - Special Problems in Science Teaching in the Elementary School**

Problems related to science instruction and curriculum. Repeatable to a maximum of 10 credits.

**Prerequisites & Notes:** teaching experience or instructor permission

Credits: 2 TO 5

**SCED 582 - Special Topics in the Physical Sciences for Elementary School Teachers**

In-depth study of topics in the physical sciences most appropriate for instruction in the elementary school.

Repeatable with instructor and/or graduate advisor permission to a maximum of 8 credits.

**Prerequisites & Notes:** SCED 390, SCED 391 or equivalent

Credits: 4

**SCED 583 - Special Topics in the Biological Sciences for Elementary School Teachers**

In-depth study of topics in the biological sciences most appropriate for instruction in elementary school. Repeatable with instructor and/or graduate advisor permission to a maximum of 8 credits.

**Prerequisites & Notes:** SCED 390, SCED 391 or equivalent

Credits: 4

**SCED 584 - Special Topics in the Earth Sciences for Elementary School Teachers**

In-depth study of topics in earth sciences most appropriate for instruction in the elementary school. Repeatable with instructor and/or graduate advisor permission to a maximum of 8 credits.

**Prerequisites & Notes:** SCED 390, SCED 391 or equivalent

Credits: 4

**SCED 584A - Earth Science for Elem Teachers**

In-depth study of topics in earth sciences most appropriate for instruction in the elementary school. Repeatable with instructor and/or graduate advisor permission to a maximum of 8 credits.

Credits: 4

**SCED 590 - Special Problems in Science Teaching in the Junior and Senior High School**

Problems related to science instruction and curriculum. Repeatable with no maximum.

**Prerequisites & Notes:** teaching experience or instructor permission

Credits: 2 TO 5

**SCED 590S – Special Problems in Science Teaching in the Junior and Senior High School**

Problems related to science instruction and curriculum. Repeatable with no maximum.

**Prerequisites & Notes:** teaching experience or instructor permission

Credits: 2

**SCED 592 - Special Topics in the Physical Sciences**

Content topics in chemistry and physics of special interest to secondary teachers. Repeatable with instructor and/or graduate advisor permission to a maximum of 8 credits.

**Prerequisites & Notes:** secondary method course; admission to natural science MEd program; Completion of undergraduate courses required for admission

Credits: 4

**SCED 593 - Special Topics in the Biological Sciences**

Content topics in biology of special interest to the secondary teacher. Repeatable with instructor and/or graduate advisor permission to a maximum of 8 credits.

**Prerequisites & Notes:** secondary method course; admission to natural science MEd program; Completion of undergraduate courses required for admission

Credits: 4

**SCED 594 - Special Topics in the Earth Sciences**

Content topics in geology and related fields of special interest to secondary teachers. Repeatable with instructor and/or graduate advisor permission to a maximum of 8 credits.

**Prerequisites & Notes:** secondary method course; admission to natural science MEd program; Completion of undergraduate courses required for admission

Credits: 4

**SCED 598 - Research Project**

Research in fields of biology, chemistry, earth science, general science, physical science, physics or education for non-thesis option.

**Prerequisites & Notes:** Admission to MEd natural sciences program and completion of 15 credits of 500-level courses including EDU 501, EDU 506 and SCED 501.

Credits: 6

**SCED 690A - Research**

Restricted to thesis-related research. Repeatable to a maximum of 12 credits.

**Prerequisites & Notes:** admission to program

Credits: 1 TO 12

**SCED 690B - Field Project**

Field project under the direction of a faculty committee. A portion of the field project normally requires work off campus. Repeatable to a maximum of 12 credits. S/U grading.

**Prerequisites & Notes:** graduate committee approval

Credits: 1 TO 12

**Secondary Education**

*Courses numbered X37; X97; 300, 400, 500; 417, 445, 517, 545 are described in the University Academic Policies section of this catalog.*

**SEC 410 - Dynamics of Teaching**

Required of all secondary students the first quarter in the program. Methods and active learning of the use of visuals, vocals and verbals in becoming a better teacher/communicator in order to perfect teaching-learning as an expressive art. Examines differences in usage of the 3 "Vs" within multiple cultures.

**Prerequisites & Notes:** admission to Secondary Education

Credits: 2

**SEC 411 - Philosophical Foundations of Education**

This course examines the central concepts, basic premises and historical underpinnings that frame contemporary ideas of education and teachings practice.

**Prerequisites & Notes:** EDU 310.

Credits: 4

**SEC 415 - Analysis and Strategies of Teaching**

Systematic study of teaching; observation; analysis and development of teaching skills and strategies; individual projects.

**Prerequisites & Notes:** One course from educational psychology or foundations area, or instructor permission

Credits: 4

**SEC 423 - Curricula in Basic Language Arts Skills in Secondary Schools**

Designed for those who will be working in development and implementation of curricula to meet new accountability standards. Involves study of these standards and work with actual public school materials.

**Prerequisites & Notes:** admission to a professional studies program

Credits: 3

**SEC 425 - Developmental Reading, Writing and Learning in Secondary Schools**

Developmental reading, writing and learning skills and strategies specific to content area instruction in the secondary school. Techniques for assessing literacy levels, making appropriate referrals and, if necessary, prescribing appropriate remedial action. Evolution of literacy definitions, integration of reading, writing and communication EALRs into instruction and assessment. Includes supervised field experience working with 9th-12th grade students from diverse socioeconomic and ethnic backgrounds as well as students with special learning needs.

**Prerequisites & Notes:** admission to Secondary Education

Credits: 4

**SEC 426 - Social Studies for the Secondary School**

Social studies methods, resources, curriculum, objectives, planning. For secondary certification.

**Prerequisites & Notes:** SEC 431 or SEC 532

Credits: 4

**SEC 427 - Law-Focused Teaching and Curriculum**

Course to enable teachers to teach about criminal justice system, police, juvenile justice, consumer law, due process, etc. Provides teachers with tested classroom procedures, substantive law and field experience with justice agencies. Repeatable under different topics.

**Prerequisites & Notes:** junior standing

Credits: 1 TO 5

**SEC 428 - Social Studies in the Secondary Curriculum**

Functions, programs and materials in the social studies.

**Prerequisites & Notes:** teaching experience or instructor permission

Credits: 3

**SEC 429A - Innovative Techniques in Social Studies**

Designed for pre-service and in-service teachers. Materials and techniques to effectively teach social studies methods courses: a) discussion, primary sources, simulations, map use; b) integration of social studies content, current events,

inquiry, service learning; c) using technology to teach social studies.

**Prerequisites & Notes:** SEC 431 or teaching experience

Credits: 1 TO 4

#### **SEC 429B - Innovative Techniques in Social Studies**

Designed for pre-service and in-service teachers. Materials and techniques to effectively teach social studies methods courses: a) discussion, primary sources, simulations, map use; b) integration of social studies content, current events, inquiry, service learning; c) using technology to teach social studies.

**Prerequisites & Notes:** SEC 431 or teaching experience

Credits: 1 TO 4

#### **SEC 429C - Innovative Techniques in Social Studies**

Designed for pre-service and in-service teachers. Materials and techniques to effectively teach social studies methods courses: a) discussion, primary sources, simulations, map use; b) integration of social studies content, current events, inquiry, service learning; c) using technology to teach social studies.

**Prerequisites & Notes:** SEC 431 or teaching experience

Credits: 1 TO 4

#### **SEC 430 - Secondary School Methods I - Instructional Strategies, Daily Planning, and Standards**

An exploration of secondary curricula, lesson planning, instructional strategies and their relationship to assessment and classroom management. Introduces methods to infuse multicultural perspective into instruction and use of multicultural educational resources.

**Prerequisites & Notes:** Admission to Secondary Education, co-requisite: SEC 410.

Credits: 4

#### **SEC 431 - Secondary School Methods II-Assessment and Long Term Planning**

Develop professional practices that align long-range planning with assessment strategies. Develop unit plans and collect evidence of student learning through formative and summative assessment. Articulate that planning and assessment are linked to: classroom and time management; differentiating instruction; problem-based learning and culminating projects; and, community contexts. Discuss field experiences.

**Prerequisites & Notes:** EDUC 301, SEC 410, SEC 430 (or equivalent); corequisite: SEC 435.

Credits: 4

#### **SEC 432 - Secondary School Methods III - Management, Motivation and Discipline**

Study of theories of behavior management, motivation, and disciplinary approaches. Exploration of family and community contexts and their implications for student behavior.

**Prerequisites & Notes:** SEC 430, SEC 431; concurrent registration in SEC 433, SEC 436.

Credits: 4

#### **SEC 433 - Peer Teaching Laboratory**

Videotaped lesson presentations; peer, instructor, and self-evaluations. S/U grading.

**Prerequisites & Notes:** SEC 431 or SEC 532; SEC 432 concurrent

Credits: 1

#### **SEC 434 - Service Learning**

Introduction to the pedagogy of service learning. Addresses the definition, rationale, service-learning techniques, and assessment. Students articulate their own proposed service-learning curriculum. A 2-credit option for the course includes field-based practicum working with a school that is implementing a service-learning program. S/U grading.

Credits: 1 TO 2

#### **SEC 435 - Middle Level Practicum**

Assigned placement at the middle school level with opportunity to assist and learn from cooperating teacher. S/U grading.

**Prerequisites & Notes:** Concurrent registration in SEC 431 or 532.

Credits: 1

#### **SEC 436 - Secondary School Practicum**

Assigned placement at the high school level with opportunity to assist and learn from cooperating teacher. S/U grading.

**Prerequisites & Notes:** Concurrent registration in SEC 432 or 534

Credits: 1

#### **SEC 450 - Introduction to Middle Schools**

Designed to give students an overview of middle school curriculum and instruction. Examines various forms of curricula currently used in middle schools, developmental issues concerning middle school students and appropriate

instructional strategies. Provides an opportunity to closely examine issues through on-site visits to middle schools in the area.

Credits: 4

#### **SEC 451 - Curriculum and Instruction in Middle Schools**

Interdisciplinary middle school curricula; team planning strategies; thematic unit and lesson development; instructional and skill building strategies.

**Prerequisites & Notes:** EDF 310, PSY 351; PSY 316 or PSY 352 or PSY 353; (SEC 410 for secondary students)

Credits: 4

#### **SEC 451A - Intensive Middle School Practicum**

In-school observation with a focus on the needs of early adolescents; assisting teachers in their classrooms. Reflective journal writing and individual inquiry projects required. S/U grading.

**Prerequisites & Notes:** admission to Woodring College of Education; SEC 450

Credits: 3

#### **SEC 452 - Intensive Middle School Practicum**

In-school observation with a focus on the needs of early adolescents; assisting teachers in their classrooms. Reflective journal writing and individual inquiry projects required. S/U grading.

**Prerequisites & Notes:** Admission to Woodring College of Education and SEC 450.

Credits: 3

#### **SEC 464 - Multicultural Education for Teachers**

Preparation for teaching in a multicultural society. Participants will learn how to design a curriculum that reflects diversity and an instructional methodology that promotes the learning of diverse students.

Credits: 4

#### **SEC 480 - Evaluating Pupil Growth**

Evaluative techniques related to significant or complex objectives; assessing outcomes of innovative teaching.

**Prerequisites & Notes:** teaching experience or instructor permission; for experienced teacher or research worker

Credits: 3

#### **SEC 481 - Working With Student Teachers**

Techniques for the orientation of student teachers, major problems which confront student teachers, and evaluation of their achievement.

**Prerequisites & Notes:** teaching experience

Credits: 3

#### **SEC 490 - Teaching Laboratory**

Diagnosis of students, lesson preparation, videotaped peer teaching, analysis of teaching, lesson redesign.

**Prerequisites & Notes:** program advisor permission

Credits: 4

#### **SEC 490A - September Experience**

Observation and participation in the opening of school. S/U grading.

**Prerequisites & Notes:** department permission

Credits: 2 TO 3

#### **SEC 491 - Public School Practicum**

Practicum experience in a school setting. Designed to provide students with the opportunity to practice and receive feedback on instruction, management, assessment, and professionalism.

**Prerequisites & Notes:** SPED 484

Credits: 4

#### **SEC 495 - Internship - Secondary**

Supervised teaching experience to develop and demonstrate teaching competence at the junior high/middle school or senior high school level. Interact with diverse students and utilize planning and teaching strategies which attend to needs of diverse populations. Repeatable to a maximum of 24 credits. S/U grading.

**Prerequisites & Notes:** recommendation for supervised teaching

Credits: 2 TO 18

#### **SEC 501 - Introduction to Educational Research Inquiry for Secondary Teachers**

History, paradigms, and theories of action research in school settings. Examining and interpreting information about student performance; designing and planning school-based inquiry to improve professional teaching practice.

Includes community service learning component.

**Prerequisites & Notes:** Admission to Secondary MIT program or permission of instructor.

Credits: 4

**SEC 510 - Teacher As Communicator**

Methods and means of becoming a more effective communicator. Examination and practice of oral, visual and listening communication skills as part of the teaching/learning process. Review of current research in the area of teaching communication practice.

**Prerequisites & Notes:** Admission to graduate program or permission of program advisor.

Credits: 3

**SEC 512 - Seminar in Educational Philosophy**

Examines the central concepts, basic premises and underlying assumptions of controversial issues in contemporary educational practice.

**Prerequisites & Notes:** Admission to Secondary MIT or instructor permission

Credits: 4

**SEC 513 - Seminar in Socio-Cultural and Legal Issues in Education**

This seminar examines the larger cultural issues affecting education within a social, political and legal framework.

**Prerequisites & Notes:** SEC 501 or instructor permission

Credits: 4

**SEC 518 - Current Issues in Education**

Examination and discussion of current issues in contemporary education. Repeatable.

Credits: 1 TO 5

**SEC 518Y - Current Issues in Education**

Examination and discussion of current issues in contemporary education. Repeatable.

Credits: 1 TO 5

**SEC 520 - Teaching and Administering in Schools Abroad: K-12**

Practicum of education in various countries abroad. Preparation includes reading, test questions, research paper assignment spring quarter. Practicum requires supervised team teaching and/or administering in a school for one week.

Credits: 3

**SEC 521 - Summer Study Abroad**

Lectures and experiences in philosophy, administration, culture, history and curriculum integration in various schools abroad. Seminars on how principles and practices in schools abroad can be adapted to the context of U.S. schools. Culminating project is required.

Credits: 6

**SEC 524 - Seminar in Secondary School Language Arts Curriculum**

Planning and developing curriculum in language, literature and composition. Advanced study in specialized curriculum design and materials.

Credits: 2 TO 4

**SEC 525 - Content Reading, Writing and Communication in Secondary Schools**

Techniques for integrating the Essential Academic Learning Requirements in reading, writing and communication into the various subject areas taught in secondary schools. Strategies for assessing, teaching, and supporting students of diverse skill levels in literacy and with special needs through the context of content-area courses. May include a supervised field experience.

**Prerequisites & Notes:** Admission to Secondary MIT program or permission of instructor.

Credits: 4

**SEC 531 - Teaching Adolescents**

Advanced study of adolescents in educational settings. Application of the biopsychosocial theories of development of the adolescent to secondary classroom teaching and learning. Define and examine multicultural issues and their effect on the developing adolescent. Communicate and interact with parents and community agencies to support student learning. Includes community service learning component.

**Prerequisites & Notes:** program advisor permission

Credits: 4

**SEC 532 - Curriculum and Instruction in Secondary Schools**

Planning and development of curriculum. Advanced study of curriculum design, instructional strategies, unit planning and lesson design. Emphasis on current studies and trends. Introduces methods to infuse multicultural

perspective into instruction and the use of multicultural educational resources. Independent research.

**Prerequisites & Notes:** SEC 531; co-requisite: SEC 434 or SEC 435

Credits: 4

### **SEC 533 - Assessment and Professional Development in Secondary Schools**

Design effective lessons, study a variety of assessment strategies. Create curricula and assessments that address and support the many aspects of diversity. Student portfolio review, certification requirements, legal rights and responsibilities of the profession.

**Prerequisites & Notes:** SEC 525, SEC 532

Credits: 4

### **SEC 534 - Management, Motivation and Discipline in the Secondary Schools**

Theories of adolescent development, including issues of diversity as a basis for creating effective learning environments. Emphasis on classroom models of management, creating an individual management plan, and the importance of student motivation.

**Prerequisites & Notes:** SEC 435, SEC 525, SEC 532; co-requisite: SEC 436.

Credits: 4

### **SEC 555 - Middle School Curriculum Designs and Instructional Strategies**

Current trends in middle-level education; includes a review of developing curriculum ideas endorsed by the National Middle School Association. Physical, social and emotional growth of early adolescents; instructional strategies for middle-level schools; requires topical or action research project.

**Prerequisites & Notes:** SEC 531; co-requisite: SEC 452 or SEC 434

Credits: 4

### **SEC 580 - Seminar in Secondary Curriculum**

Historical and philosophical perspectives on school curriculum as these relate to modern curricula.

Credits: 4

### **SEC 582 - Analysis of Research in Secondary Education**

Examination and analysis of research related to contemporary issues in secondary education.

**Prerequisites & Notes:** EDU 501

Credits: 4

### **SEC 590 - Seminar in Analyzing Teaching and Supervision**

Advanced studies in the principles of supervision; utilization of instructional resources and the evaluation and improvement of teaching.

**Prerequisites & Notes:** SEC 481 or department permission

Credits: 3

### **SEC 595 - Graduate Internship**

Supervised teaching experience to develop and demonstrate teaching competence at the middle or senior high school level. Interact with diverse students and utilize planning and teaching strategies which attend to needs of diverse populations. Repeatable to a maximum of 24 credits. S/U grading.

**Prerequisites & Notes:** department permission

Credits: 2 TO 18

### **SEC 598 - Advanced Practicum: Secondary Education**

Supervised teaching performance. Participants develop plans and procedures designed for the improvement of instruction and submit a plan to the course instructor and appropriate public school authority for classroom implementation and evaluation. Repeatable to a maximum of 12 credits. S/U grading.

**Prerequisites & Notes:** graduate advisor permission

Credits: 2 TO 12

### **SEC 639 - Current Topics in Education**

Studies of current topics in Secondary Education.

**Prerequisites & Notes:** MA degree; instructor permission

Credits: 1 TO 5

### **SEC 690 - Thesis**

Research study under the direction of a faculty committee. S/U grading.

**Prerequisites & Notes:** advancement to candidacy; graduate committee approval

Credits: 1 TO 9

**SEC 691 - Research Seminar**

Graduate research under the direction of a program advisor/committee. Repeatable to a maximum of 6 credits. S/U grading.

**Prerequisites & Notes:** graduate committee/program advisor approval

Credits: 1 TO 6

**Seminar**

*Courses numbered X37; X97; 300, 400; 417, 445 are described in the University Academic Policies section of this catalog.*

**SMNR 101 - Perspectives on Learning**

Make connections with professors and peers and examine perspectives across different fields of study. Learn to find and evaluate information and collaborate with peers through discussions, projects, and presentations. Explore academic goals, campus resources, and enhance skills for learning in college.

**Prerequisites & Notes:** Open to first-year students only.

Credits: 2

**Sociology**

*Courses numbered X37; X97; 300, 400, 500; 417, 445, 517, 545 are described in the University Academic Policies section of this catalog.*

**SOC 210 - Introduction to Research Methods**

An introduction to scientific research in sociology: principles of research design, the nature of empirical observation, sampling and measurement techniques, and principles guiding the interpretation of social scientific research.

Credits: 5

**SOC 215 - Social Statistics**

This course introduces students to two important aspects of statistics: (1) graphical and numerical procedures for describing and summarizing data; and (2) quantitative analysis of data to make decisions and predictions and draw inferences. This course also involves the use of computers for statistical analysis.

**Prerequisites & Notes:** Complete or test out of MATH 107 or MATH 112, SOC 210.

Credits: 5

**SOC 221 - Introduction to Population Issues**

Processes determining population growth - fertility, mortality and migration - and their influence on economic development in the more- and less-developed countries of the world; population policies in various countries and their implications for population growth and future development.

Credits: 5

**SOC 251 - Sociology of Deviant Behavior**

A broad overview of concepts, issues and research findings in the sociological study of deviant behavior; how deviance is defined, reacted to and punished in American society. Emphasis on contemporary theoretical perspectives, along with current issues in deviance.

Credits: 5

**SOC 255 - Social Organization of Criminal Justice**

A survey of basic concepts, problems and issues in the sociological study of social organizations applied to the criminal justice system.

Credits: 5

**SOC 260 - The Family in Society**

Introduction to the study of family as a social institution in society. Overview of social theories on the family and methodological underpinnings of the field of family study. Emphasis on the family as agent of stratification in society, changing roles of men and women in the context of the American family, contemporary issues relating to family social policy today, and the interplay between family and society across time and cultures.

Credits: 5

**SOC 268 - Gender and Society**

Introduction to major concepts, issues and research findings regarding the relationship between gender and social structures. Aspects of society examined include education, work, family, law, government and the media. Discussion includes interrelationship between gender, race, class and age. Focus on the U.S., with some cross-national material.

Credits: 5

**SOC 269 - Race and Ethnic Relations**

Introduces students to the sociology of race and ethnic relations in the United States. Surveys racial and ethnic minority groups and provides a historical context for their relative positions in the United States by considering the dynamics of the political and economic climate, racial/ethnic attitudes, interminority relations, and social policy.

Credits: 5

**SOC 302 - Classical Sociological Theory**

The emergence of sociology: sociology as response to the Industrial Revolution and as an attempt to develop a scientific understanding of social organization, behavior and change; the development of social thought; Comte, Spencer, Marx, Durkheim and Weber.

**Prerequisites & Notes:** any from: SOC 221, SOC 251, SOC 255, SOC 260, SOC 268, SOC 269

Credits: 5

**SOC 303 - Contemporary Sociological Theory**

Contemporary sociological theory examines the roots of major theoretical perspectives in the late 19th century classical tradition. Such major perspectives as functionalism, world system theory and organizational theory are examined, as is the sociological analysis of modern culture.

**Prerequisites & Notes:** SOC 302.

Credits: 5

**SOC 310 - Methodological Applications in Social Research**

An applied course which follows sequentially from SOC 210 and 215 (was 207), drawing on conceptual and analytical skills in an actual research project. Engages students in the steps of the research process, integrating the qualitative phases of problem conceptualization and literature review, following through to the data gathering, analysis and interpretation stages.

**Prerequisites & Notes:** SOC 210, SOC 215 (was SOC 207)

Credits: 5

**SOC 320 - Computer Applications for Social Science Data**

Designed to integrate fundamental statistical knowledge with direct computer applications for the organization and analysis of data sets encountered in social science research. Training in the use of library statistical routines (e.g., SPSS) central to research in the social sciences is emphasized.

**Prerequisites & Notes:** any from: SOC 221, SOC 251, SOC 255, SOC 260, SOC 268, SOC 269; SOC 215 (was SOC 207) or equivalent

Credits: 4

**SOC 321 - Demography**

Systematic introduction to the study of human populations. Designed for students interested in the subject regardless of their major discipline. Examines social, economic and biological factors associated with fertility, mortality and migrations.

Credits: 5

**SOC 326 - American Family and Household Demography**

Description and explanation of trends in family behavior and family policy, with an emphasis on the influence of demographic factors. Topics include childhood, independent living, cohabitation, marriage, divorce, work and family, household structure, and aging.

**Prerequisites & Notes:** One of SOC 221, SOC 251, SOC 255, SOC 260, SOC 268 or SOC 269.

Credits: 5

**SOC 330 - Introduction to Social Psychology**

Interpersonal behavior, perception of others, attraction toward and liking of others, self evaluation, helping behavior, aggression, attitudes and their relationship to behavior, sexual behavior, types of interaction processes, childhood and adult socialization, deviance and conformity, personal space, environmental effects on behavior, sex role attitudes and behavior.

**Prerequisites & Notes:** any from: SOC 221, SOC 251, SOC 255, SOC 260, SOC 268, SOC 269

Credits: 5

**SOC 332 - The Sociology of Human Relationships**

A social psychological examination of liking, loving and relating. Emphasis on dyadic relationships such as marriage, friendship and parent-child relationships. Topics include socialization into romance and love, historical linkages between industrialization and the "feminization" of love, sociological perspectives on liking and loving, and research methods used in the study of dyadic relationships.

**Prerequisites & Notes:** any from: SOC 221, SOC 251, SOC 255, SOC 260, SOC 268, SOC 269

Credits: 5

**SOC 333 - Aging in America**

Basic theories, methods and concepts in the field of social gerontology highlighting demographic trends in aging, the effects of longevity on the larger society, individual accommodations to the aging process, the social construction of old age, and social policy in relation to the stratification of the aged and an increasingly elderly population.

**Prerequisites & Notes:** any from: SOC 221, SOC 251, SOC 255, SOC 260, SOC 268, SOC 269

Credits: 5

**SOC 338 - Sociology of Sexual Behavior**

Human sexuality, with an emphasis on Western cultures and the United States in particular, is studied from a scientific perspective. Emphasis on both description and explanation of patterns and diversity in sexuality. While focusing on the social dimensions of sexuality, the historical, biological and psychological aspects of sexuality are integrated into a comprehensive overview.

**Prerequisites & Notes:** any from: SOC 221, SOC 251, SOC 255, SOC 260, SOC 268, SOC 269

Credits: 5

**SOC 340 - Sociology of Organizations**

Introduction to major theoretical perspectives and research on public and private organizations, such as corporations, schools and health-care facilities. Formal and informal structures, the relationship between organizations and their environments, leadership, decision-making and labor markets.

**Prerequisites & Notes:** any from: SOC 221, SOC 251, SOC 255, SOC 260, SOC 268, SOC 269

Credits: 5

**SOC 348 - Global Health**

Introduces students to the main concepts of global health, with a particular emphasis on sociological determinants of health. Focuses on the demographic and epidemiological transitions, gender and reproductive health, human rights, and the global burden of disease. Evaluates the role of international institutions, such as the World Bank and non-governmental organizations, in the organization and delivery of health services in underdeveloped countries. Understanding the root causes of health disparities and strategies for the achievement of health equity is central to the course.

**Prerequisites & Notes:** any from: SOC 221, SOC 251, SOC 255, SOC 260, SOC 268, SOC 269

Credits: 5

**SOC 352 - Criminology**

The study of adult crime, defined as violation of legal norms. Focuses on problems of measurement and attempts to explain crime as a social phenomenon and a cultural product. Includes in-depth analysis of various forms and classes of crimes and their victims.

**Prerequisites & Notes:** any from: SOC 221, SOC 251, SOC 255, SOC 260, SOC 268, SOC 269

Credits: 5

**SOC 354 - Domestic Violence and the Criminal Justice System**

A survey of sociological research on domestic violence and the criminal justice system. Examines the historical and cultural changes that contributed to the classification of domestic violence as a crime, the characteristics of domestic assault, and the variety of criminal justice interventions into domestic violence.

**Prerequisites & Notes:** any from: SOC 221, SOC 251, SOC 255, SOC 260, SOC 268, SOC 269

Credits: 5

**SOC 355 - Criminal Justice System**

Overview of the social organization of the criminal justice system in the United States. Examination of the organizations that create and enforce the criminal law as well as major issues currently confronting this system (plea bargaining, discrimination, limitations on due process).

**Prerequisites & Notes:** SOC 255.

Credits: 5

**SOC 356 - Law Enforcement and Society**

Review of research on the organization of law enforcement. Topics include impact of legal and organizational controls on police behavior, police use of deadly force, minorities and policing, and community policing.

**Prerequisites & Notes:** any from: SOC 221, SOC 251, SOC 255, SOC 260, SOC 268, SOC 269

Credits: 5

**SOC 359 - Women and Deviance**

Examines the sociocultural/sociopolitical conditions that contribute to women being victims or perpetrators of crime. The course has three parts: 1) theoretical framework; 2) victimization and harm; and 3) crime and punishment.

Students explore various normative values and institutional sites as the source of women's deviant careers, including gender and sexuality norms, family, economic, corporation, law, and criminal justice.

**Prerequisites & Notes:** any from: SOC 221, SOC 251, SOC 255, SOC 260, SOC 268, SOC 269

Credits: 5

### **SOC 360 - Marital and Family Interaction**

Examines systems and interactional perspectives on marriage and family dynamics. The focus of this course is on family adaptation as a function of system processes and interactional patterns.

**Prerequisites & Notes:** SOC 260, SOC 268 or instructor permission

Credits: 5

### **SOC 361 - Sociology of Education**

Analysis of the historical origins and spread of public education, the internal organization of schools and classrooms and the social impact of education. Schooling as a major form of socialization and status placement; political and legal bases of education; non-formal schooling; education and nation-state formation.

**Prerequisites & Notes:** any from: SOC 221, SOC 251, SOC 255, SOC 260, SOC 268, SOC 269

Credits: 5

### **SOC 363 - Law and Social Stratification**

Examination of current sociological research on the ways in which the creation and application of law are conditioned by class, racial, gender, and ethnic inequalities in society. Applies several general sociological theories of stratification to a range of cases in both civil and criminal law.

**Prerequisites & Notes:** any from: SOC 221, SOC 251, SOC 255, SOC 260, SOC 268, SOC 269

Credits: 5

### **SOC 364 - Social Stratification**

Social causes and consequences of inequality in America. Social distribution of wealth, power and status; emphasis on poverty and racial social inequality.

**Prerequisites & Notes:** any from: SOC 221, SOC 251, SOC 255, SOC 260, SOC 268, SOC 269

Credits: 5

### **SOC 367 - Sociology of Work and Occupations**

Sociological and social-psychological significance of work; factors affecting contemporary career patterns/life cycle changes; sex, race, ethnic and social class differences; structural characteristics of selected occupational areas.

**Prerequisites & Notes:** any from: SOC 221, SOC 251, SOC 255, SOC 260, SOC 268, SOC 269

Credits: 5

### **SOC 368 - Gender and Education**

Examines the relationship between gender and education within the U.S. context and internationally. We will consider girls and boys, women and men, in various levels of schooling. The ways in which race and class interact with gender in educational attainment and achievement also will be examined.

**Prerequisites & Notes:** any from: SOC 221, SOC 251, SOC 255, SOC 260, SOC 268, SOC 269; SOC 268 preferred or course with equivalent gender content

Credits: 5

### **SOC 369 - Sociology of Race and Ethnicity**

Provides a review of historical, theoretical and empirical work in the sociology of race and ethnicity. Emphasis on primary material in the areas of ethnic assimilation, racial attitudes, and racial and ethnic inequality in the United States.

**Prerequisites & Notes:** any from: SOC 221, SOC 251, SOC 255, SOC 260, SOC 268, SOC 269; minority relations preferred

Credits: 5

### **SOC 370 - Historical Sociology**

Historical sociology is cross-disciplinary in theory and method, examining the interrelation of historical attention to detail and the sociological focus on general patterns. The application of conceptual frameworks and quantitative methods to specific historical events are elaborated to this end.

**Prerequisites & Notes:** SOC 302; and any from: SOC 221, SOC 251, SOC 255, SOC 260, SOC 268, SOC 269

Credits: 5

### **SOC 375 - Community and Urban Society**

Introduces students to some of the central theoretical perspectives on communities, cities, and the processes of urbanization and offers an overview of the challenges facing contemporary urban dwellers. Focuses on how political, social and economic forces have helped to shape processes of urban development and how this urbanization has reshaped the physical form, social structure, and functions of communities. Contemporary urban challenges such as concentrated poverty, residential segregation, riots, structural deterioration, and economic and political restructuring will receive central attention, as will issues of global urban development and theories about the future of cities.

**Prerequisites & Notes:** any from: SOC 221, SOC 251, SOC 255, SOC 260, SOC 268, SOC 269

Credits: 5

**SOC 376 - Research and Policy in Criminal Justice Organizations**

Examines the sociological studies of criminal justice policy formation and change. Outlines connections between criminal justice policy planning, program design, organizational structure and process considerations, and various methods used to assess change processes and to evaluate program outcomes.

**Prerequisites & Notes:** any from: SOC 221, SOC 251, SOC 255, SOC 260, SOC 268, SOC 269

Credits: 5

**SOC 380 - Sociology of Youth**

Sex and age status definitions and role-taking; historical, institutional and social process aspects of maturation, with special emphasis on Western industrial society from the 18th century to the present.

**Prerequisites & Notes:** any from: SOC 221, SOC 251, SOC 255, SOC 260, SOC 268, SOC 269

Credits: 5

**SOC 387 - Sociology of Correctional Institutions**

Critical analysis of the history and structure of formal social control, including the asylum and corrections. Emphasizes the role of institutions in regulating the poor and marginal populations; contemporary control practices; men's versus women's prisons; failure of community corrections; probation and parole; and the future of therapeutic and correctional institutions.

**Prerequisites & Notes:** any from: SOC 221, SOC 251, SOC 255, SOC 260, SOC 268, SOC 269

Credits: 5

**SOC 388 - Sociology of Jails**

This course emphasizes sociological analysis of local jail operations, including populations, funding, management, legal, and regulatory aspects and roles of various professions operating in the jail environment.

**Prerequisites & Notes:** One of SOC 221, SOC 251, SOC 255, SOC 260, SOC 268, SOC 269

Credits: 5

**SOC 390 - Global Families**

An analysis of families in their institutional context through the comparative study of family life in one or more societies outside the United States. This analysis could be of a single society or of multiple societies with the goal of enhancing our understanding of the diversity of family life and the ways in which family life is shaped by and helps other institutions.

**Prerequisites & Notes:** Any one of SOC 221, SOC 251, SOC 255, SOC 260, SOC 268, SOC 269

Credits: 5

**SOC 421 - Demographic Analysis**

Theory and method of population analysis; measures of mortality, fertility and migration; population forecasting techniques.

**Prerequisites & Notes:** SOC 215 (was SOC 207), SOC 320, SOC 321; and any from SOC 221, SOC 251, SOC 255, SOC 260, SOC 268, SOC 269; or instructor permission

Credits: 4

**SOC 426 - Advanced Topics in Demography**

Analysis of fertility or mortality issues in both developed and developing countries; proximate determinants of fertility; birth-spacing and family limitation practices; infant and child mortality; life expectancy.

**Prerequisites & Notes:** Sociology core and SOC 320

Credits: 5

**SOC 430 - Field Research Methods**

Presents skills to conduct qualitative sociological research. Emphasizes ethnographic techniques such as direct observation, participant observation, intensive interviewing, data analysis, literature review, and report writing. Each student conducts original sociological research by entering a specific social setting, collecting and analyzing data within that setting, and producing a comprehensive paper on the findings.

**Prerequisites & Notes:** Sociology core. SOC 330 highly recommended.

Credits: 5

**SOC 440 - Globalization**

Examines the economic, cultural and political components of globalization. Special topics include the new forms of inequality that have emerged with global interdependence and debates concerning the benefits and dangers associated with globalization.

**Prerequisites & Notes:** Sociology core.

Credits: 5

**SOC 450 - Sociology of Law**

A capstone research seminar in which students develop an individual project, write a review of previous research, and conduct an analysis using secondary data sources to study the effects of laws on society (e.g., consequences of no-fault divorce laws) and the social bases of legal change (e.g., factors influencing state adoption of sentencing guidelines).

**Prerequisites & Notes:** Sociology core.

Credits: 5

**SOC 452 - Advanced Criminology**

An in-depth examination of selected areas in sociological criminology.

**Prerequisites & Notes:** Sociology core and SOC 352.

Credits: 5

**SOC 456 - Seminar in Policing**

Review of research on the organization of law enforcement. Topics include impact of legal and organizational controls on police behavior, police use of deadly force, minorities and policing, and community policing.

**Prerequisites & Notes:** Sociology core

Credits: 5

**SOC 460 - Advanced Topics in Family**

Focus varies, depending on instructor. Emphasis on current research in family sociology. Topics may include family violence, demographic analysis of family structures, family life course development, family and the economy, parent-child interaction, family and social policy, and others.

**Prerequisites & Notes:** Sociology core.

Credits: 5

**SOC 461 - Advanced Sociology of Education**

Focus varies, depending on instructor. Topics may include the organization of educational systems within the United States and cross-nationally, school/classroom organization and their effects on student learning and educational attainment; examination of special topics on-site in specific school settings.

**Prerequisites & Notes:** One of SOC 221, SOC 251, SOC 255, SOC 260, SOC 268, SOC 269; and SOC 210, SOC 215, SOC 302, and SOC 310.

Credits: 5

**SOC 471 - Directed Internship**

Students apply sociological concepts and methods to better understand social issues and problems while engaged in on-site work experiences in approved settings. All interns work at least 10 hours per week at the work site, in the type of work specified in the contract. In addition, students complete several written assignments, including a research paper. Repeatable to a maximum of 10 credits.

**Prerequisites & Notes:** SOC 210, SOC 215, SOC 302, and either SOC 310 or permission of instructor.

Credits: 5

**SOC 480 - Learning and Teaching Sociology**

The teaching assistantship is intended to provide students with practical experience in the teaching of sociology at the undergraduate level. To that end, students will get hands-on experience in the various activities associated with teaching a particular course in the department. TA duties may include leading discussion groups, assisting the instructor in preparing lecture material, and assisting students in the class with understanding course material. A more detailed list of sample activities may be obtained from the academic advisor. Actual duties will vary by course and instructor. Credit is determined by the instructor depending on the actual duties of the teaching assistant.

Repeatable to a maximum of 5 credits. S/U grading.

**Prerequisites & Notes:** One of SOC 221, SOC 251, SOC 255, SOC 260, SOC 268, SOC 269; and SOC 210, SOC 215, SOC 302, and SOC 310; a minimum grade of B+ in the course for which the student will be a teaching assistant; permission of instructor.

Credits: 2 TO 5

**SOC 481 - Research Assistantship**

Course is structured consistent with the apprenticeship model. Students will work closely with one faculty member, assisting in sociological research. Actual activities will vary depending upon the nature and stage of the research project. Responsibilities may include data set construction and/or analysis, interviewing and interview transcription, and library searches. Students are required to submit a report or project journal to the supervising instructor in a format to be mutually agreed upon at the start of the assistantship. Repeatable to a maximum of 10 credits.

Credits: 2 TO 5

**SOC 492 - Senior Thesis**

The student is required to complete the senior thesis contract in consultation with his/her senior thesis faculty advisor prior to taking the SOC 400/492 sequence.

**Prerequisites & Notes:** Sociology core; 5 credits SOC 400 taken with student's senior thesis faculty advisor before and in preparation for senior thesis

Credits: 5

**SOC 501 - Sociology As a Discipline**

Study of sociology as an academic field; description of subfields, with emphasis on relation between theory and research in each subfield. S/U grading.

Credits: 2

**SOC 504 - Advanced Theory**

Examines the continuity of social theory from the 18th century to contemporary European and American work. Broad themes that span this time are explored in both primary works and current reviews.

Credits: 4

**SOC 505 - Computer Applications in Sociology**

Emphasis on computer applications in the analysis of large-scale data sets; training in the use of SPSS and other library statistical routines.

Credits: 4

**SOC 515 - Seminar: Quantitative Techniques**

Regression, path analysis and related techniques as applied to sociological research.

Credits: 4

**SOC 521 - Seminar: Demography**

Critical review of demographic theory, methods and applications in the light of contemporary world population problems.

Credits: 4

**SOC 526 - Advanced Topics in Demography**

Analysis of fertility or mortality issues in both developed and developing countries; proximate determinants of fertility; birth-spacing and family limitation practices; infant and child mortality; life expectancy.

Credits: 4

**SOC 533 - Advanced Aging**

Analysis of the social, medical and legal issues surrounding growing old in American society, including to "protect" the elderly. Cross-cultural comparisons concerning the economic and social support of older populations.

Credits: 4

**SOC 540 - Comparative Social Institutions**

Examines the relationship between large-scale social structures and processes. Current theory and research on topics may include world system theories, comparative state structures and social organization, and the network of relationships among formal organizations, and others.

Credits: 4

**SOC 555 - Seminar: Social Control and Deviance**

Critical review of theories and concepts of deviance; analytic and philosophic problems of attempts at programmed social control.

Credits: 4

**SOC 560 - Advanced Topics in Family**

Emphasis on current research in family sociology. Topics may include family violence, demographic analysis of family structures, family life course development, family and the economy, parent-child interaction, family and social policy, and others.

Credits: 4

**SOC 563 - Advanced Statistics**

The application of advanced statistical methods to particular types of data and research questions. Emphasis on selecting and implementing various techniques under different measurement and analysis conditions.

Credits: 4

**SOC 581 - Advanced Sociology of Education**

Advanced study of topics and research presented in Soc 461: educational stratification, origins and expansion of educational systems in the U.S. and cross-nationally, school and classroom organization and their effects on student learning and socialization; interaction processes in classrooms.

Credits: 4

**SOC 595 - Teaching in the Social Sciences**

Examination of conceptual frameworks and techniques for teaching social science subjects at the high school and community college levels. Also offered as ANTH 595 and PLSC 595.

Credits: 3

**Spanish**

*Courses numbered X37; X97; 300, 400; 417, 445 are described in the University Academic Policies section of this catalog.*

**SPAN 101 - Elementary Spanish**

Fundamentals of the language: pronunciation, grammar, aural comprehension, reading and speaking.

Credits: 5

**SPAN 102 - Elementary Spanish**

Fundamentals of the language: pronunciation, grammar, aural comprehension, reading and speaking.

**Prerequisites & Notes:** SPAN 101.

Credits: 5

**SPAN 103 - Elementary Spanish**

Fundamentals of the language: pronunciation, grammar, aural comprehension, reading and speaking.

**Prerequisites & Notes:** SPAN 102.

Credits: 5

**SPAN 104 - Review of Elementary Spanish**

Designed for students with two years of high school Spanish or equivalent to prepare them for the intermediate level through review and development of basic structure and vocabulary. Also for students needing a review of the first year. Offered fall only.

**Prerequisites & Notes:** Two years of high school spanish recommended.

Credits: 5

**SPAN 201 - Intermediate Spanish**

Review of fundamentals: understanding, speaking, reading and writing.

**Prerequisites & Notes:** SPAN 103 or SPAN 104 or equivalent.

Credits: 5

**SPAN 202 - Intermediate Spanish**

Review of fundamentals: understanding, speaking, reading and writing.

**Prerequisites & Notes:** SPAN 201.

Credits: 5

**SPAN 203 - Intermediate Spanish**

Review of fundamentals: understanding, speaking, reading and writing.

**Prerequisites & Notes:** SPAN 202.

Credits: 5

**SPAN 301 - Grammar Review and Composition**

Language development, including written composition, vocabulary building, analysis of grammatical problems and discussion of selected Spanish texts.

**Prerequisites & Notes:** SPAN 203 or equivalent.

Credits: 4

**SPAN 302 - Grammar Review and Composition**

Language development, including written composition, vocabulary building, analysis of grammatical problems and discussion of selected Spanish texts.

**Prerequisites & Notes:** SPAN 301.

Credits: 4

**SPAN 305 - Third-Year Conversation**

Development of speaking skills in communicative situations. S/U grading.

**Prerequisites & Notes:** SPAN 203 or equivalent.

Credits: 3

**SPAN 310 - Writing Through Film**

Writing Through Film is designed to give students the opportunity to improve, stimulate, and strengthen their writing skills. This class captures the history and culture in the selection of Hispanic films, providing students with the cultural context, vocabulary, and societal themes for written compositions.

**Prerequisites & Notes:** SPAN 203

Credits: 3

**SPAN 314 - Phonetics**

Improvement of student pronunciation, familiarization with phonetic transcription and description of Spanish sounds.

**Prerequisites & Notes:** SPAN 301 or equivalent.

Credits: 4

**SPAN 331 - Culture of Spain**

Survey of Spanish culture.

**Prerequisites & Notes:** SPAN 301 or equivalent.

Credits: 3

**SPAN 332 - Culture of Latin America**

Survey of Latin American culture.

**Prerequisites & Notes:** SPAN 301 or equivalent.

Credits: 3

**SPAN 340 - Introduction to Hispanic Literature**

Selected works of major Hispanic authors, with emphasis on reading improvement and methods of textual interpretation.

**Prerequisites & Notes:** SPAN 302 or equivalent.

Credits: 3

**SPAN 351 - Survey of the Literature of Spain**

Historical survey of ten centuries of Spanish (Peninsular) literature.

**Prerequisites & Notes:** SPAN 340.

Credits: 4

**SPAN 352 - Survey of the Literature of Latin America**

Historical survey of Latin American literature from the pre-Hispanic period until the present.

**Prerequisites & Notes:** SPAN 340.

Credits: 4

**SPAN 401 - Advanced Grammar**

Analysis of special problems in Spanish syntax.

**Prerequisites & Notes:** SPAN 302 or equivalent.

Credits: 4

**SPAN 402 - Advanced Composition**

Composition and stylistics; analysis of textual examples of style and organization.

**Prerequisites & Notes:** SPAN 401 or equivalent.

Credits: 4

**SPAN 405 - Fourth-Year Conversation**

Advanced speaking practice in communicative situations. S/U grading.

**Prerequisites & Notes:** SPAN 302 or equivalent.

Credits: 3

**SPAN 425 - Teaching-Learning Processes in Elementary Spanish**

Practicum in teaching Spanish. Repeatable. S/U grading.

**Prerequisites & Notes:** Permission of department and two courses in upper- division Spanish.

Credits: 2

**SPAN 440 - Studies in Hispanic Linguistics**

Study of major areas in Hispanic linguistics. Topics may include history of Spanish, lexicology, phonology, morphology, syntax, dialectology. Repeatable with different topics with no maximum.

**Prerequisites & Notes:** SPAN 314 or LING 201.

Credits: 3 TO 5

**SPAN 450 - Studies in Hispanic Literature**

Major authors and movements. Repeatable with various topics with no maximum.

**Prerequisites & Notes:** SPAN 351 or SPAN 352.

Credits: 3 TO 5

**SPAN 450A - Studies in Hispanic Literature**

Major authors and movements. Repeatable with various topics with no maximum.

**Prerequisites & Notes:** SPAN 351 or SPAN 352.

Credits: 3 TO 5

**SPAN 450B - Studies in Hispanic Literature**

Major authors and movements. Repeatable with various topics with no maximum.

**Prerequisites & Notes:** SPAN 351 or SPAN 352.

Credits: 3 TO 5

**Special Education**

*Courses numbered X37; X97; 300, 400, 500; 417, 445, 517, 545 are described in the University Academic Policies section of this catalog.*

**SPED 360 - Introduction to Special Education**

An introduction to characteristics and categories of exceptionality, and the rules and regulations concerning provision of special education and related services. Includes federal and Washington state legislation pertinent to special education from preschool through high school. A minimum of 15 hours of practicum experience required during the quarter.

Credits: 4

**SPED 363 - Secondary Students With Special Needs**

Introduction to the characteristics and needs of secondary students with special needs; pertinent federal and state laws; curricular and behavior management adaptations in the regular classroom; assessment of learning problems; instructional techniques; behavior management strategies.

**Prerequisites & Notes:** Admission to Woodring College of Education or instructor permission

Credits: 4

**SPED 363A - Elementary Students With Special Needs**

Introduction to the characteristics and needs of elementary students with special needs; pertinent federal and state laws; curricular and behavior management adaptations in the regular classroom; assessment of learning problems; instructional techniques; behavior management strategies.

**Prerequisites & Notes:** Admission to the Woodring College of Education, co-requisite: ELED 320, ELED 429, ELED 394A and IT 444A.

Credits: 3

**SPED 363B - Secondary Students With Special Needs**

Introduction to the characteristics and needs of secondary students with special needs; pertinent federal and state laws; curricular and behavior management adaptations in the regular classroom; assessment of learning problems; instructional techniques; behavior management strategies.

**Prerequisites & Notes:** Pre or corequisite: Admission to the Woodring College of Education, SEC 431, SEC 431A.

Credits: 3

**SPED 364 - Teaching All Students**

Introduction to impact of disability and English language acquisition on access to the general education curriculum. Research-based practices in instructional planning to provide access to all elementary students.

**Prerequisites & Notes:** Admission to the Woodring College of Education.

Credits: 4

**SPED 390 - Special Education Practicum I**

Practicum experience in a school setting. Designed to provide opportunities for students to observe instructional intervention programs for individual students, small groups, and large groups. S/U Grading

**Prerequisites & Notes:** Special education majors or permission.

Credits: 3

### **SPED 420 - Effective Teaching**

Research-based recommended practices in the design, delivery and evaluation of instruction for diverse learners.

**Prerequisites & Notes:** Admission to Woodring College of Education or permission of instructor and concurrent enrollment in SPED 440 and SPED 460.

Credits: 4

### **SPED 430 - Problem Solving for Diverse Needs**

Legal issues and inclusive practices for diverse populations. A collaborative, problem-solving approach to best practices, with an emphasis on school-based services for students with academic, behavioral, and linguistic needs.

**Prerequisites & Notes:** SPED 364; concurrent enrollment in ELED 471

Credits: 3

### **SPED 440 - School Practicum**

Practicum experience in school setting designed to provide opportunities to demonstrate effective teaching and behavior management practices.

**Prerequisites & Notes:** Admission to Woodring College of Education; SPED 390 or permission of instructor; SPED 420 and SPED 460 concurrent.

Credits: 1 TO 4

### **SPED 441 - Analysis and Strategies of Teaching**

Systematic study of teaching; observation; analysis and development of teaching skills and strategies; individual projects. Repeatable to a maximum of 10 credits.

**Prerequisites & Notes:** One course from educational psychology or foundations area, or permission of instructor.

Credits: 3 TO 5

### **SPED 441A - Analysis and Strategies of Teaching**

Systematic study of teaching; observation; analysis and development of teaching and classroom management skills and strategies; individual projects. Repeatable to a maximum of 10 credits. S/U grading.

**Prerequisites & Notes:** One course from educational psychology or foundations area, or permission of instructor.

Credits: 1 TO 5

### **SPED 441B - Analysis and Strategies of Teaching**

Systematic study of teaching; observation; analysis and development of teaching and classroom management skills and strategies; individual projects. Repeatable to a maximum of 10 credits. S/U grading.

**Prerequisites & Notes:** One course from educational psychology or foundations area, or permission of instructor.

Credits: 1 TO 5

### **SPED 441C - Analysis and Strategies of Teaching**

Systematic study of teaching; observation; analysis and development of teaching and classroom management skills and strategies; individual projects. Repeatable to a maximum of 10 credits. S/U grading.

**Prerequisites & Notes:** One course from educational psychology or foundations area, or permission of instructor.

Credits: 1 TO 5

### **SPED 441D - Analysis and Strategies of Teaching**

Systematic study of teaching; observation; analysis and development of teaching and classroom management skills and strategies; individual projects. Repeatable to a maximum of 10 credits. S/U grading.

**Prerequisites & Notes:** One course from educational psychology or foundations area, or permission of instructor.

Credits: 1 TO 5

### **SPED 441E - Analysis and Strategies of Teaching**

Systematic study of teaching; observation; analysis and development of teaching and classroom management skills and strategies; individual projects. Repeatable to a maximum of 10 credits. S/U grading.

**Prerequisites & Notes:** One course from educational psychology or foundations area, or permission of instructor.

Credits: 1 TO 5

### **SPED 441F - Analysis and Strategies of Teaching**

Systematic study of teaching; observation; analysis and development of teaching and classroom management skills and strategies; individual projects. Repeatable to a maximum of 10 credits. S/U grading.

**Prerequisites & Notes:** One course from educational psychology or foundations area, or permission of instructor.

Credits: 1 TO 5

**SPED 441G - Analysis and Strategies of Teaching**

Systematic study of teaching; observation; analysis and development of teaching and classroom management skills and strategies; individual projects. Repeatable to a maximum of 10 credits. S/U grading.

**Prerequisites & Notes:** One course from educational psychology or foundations area, or permission of instructor.

Credits: 1 TO 5

**SPED 441H - Analysis and Strategies of Teaching**

Systematic study of teaching; observation; analysis and development of teaching and classroom management skills and strategies; individual projects. Repeatable to a maximum of 10 credits. S/U grading.

**Prerequisites & Notes:** One course from educational psychology or foundations area, or permission of instructor.

Credits: 1 TO 5

**SPED 441I - Analysis and Strategies of Teaching**

Systematic study of teaching; observation; analysis and development of teaching and classroom management skills and strategies; individual projects. Repeatable to a maximum of 10 credits. S/U grading.

**Prerequisites & Notes:** One course from educational psychology or foundations area, or permission of instructor.

Credits: 1 TO 5

**SPED 441J - Analysis and Strategies of Teaching**

Systematic study of teaching; observation; analysis and development of teaching and classroom management skills and strategies; individual projects. Repeatable to a maximum of 10 credits. S/U grading.

**Prerequisites & Notes:** One course from educational psychology or foundations area, or permission of instructor.

Credits: 1 TO 5

**SPED 441K - Analysis and Strategies of Teaching**

Systematic study of teaching; observation; analysis and development of teaching and classroom management skills and strategies; individual projects. Repeatable to a maximum of 10 credits. S/U grading.

**Prerequisites & Notes:** One course from educational psychology or foundations area, or permission of instructor.

Credits: 1 TO 5

**SPED 441L - Analysis and Strategies of Teaching**

Systematic study of teaching; observation; analysis and development of teaching and classroom management skills and strategies; individual projects. Repeatable to a maximum of 10 credits. S/U grading.

**Prerequisites & Notes:** One course from educational psychology or foundations area, or permission of instructor.

Credits: 1 TO 5

**SPED 441M - Analysis and Strategies of Teaching**

Systematic study of teaching; observation; analysis and development of teaching and classroom management skills and strategies; individual projects. Repeatable to a maximum of 10 credits. S/U grading.

**Prerequisites & Notes:** One course from educational psychology or foundations area, or permission of instructor.

Credits: 1 TO 5

**SPED 441N - Inclusion Strategies for Regional Education**

S/U grading.

Credits: 2

**SPED 442 - Working With Student Teachers**

Techniques for the orientation of student teachers, major problems which confront student teachers, and evaluation of their achievement. Repeatable to a maximum of 8 credits.

**Prerequisites & Notes:** Teaching experience.

Credits: 3

**SPED 443 - Early Development Variations**

Typical sequences and patterns of development and interrelationships across all areas from prenatal to age eight, and implications of developmental delays and disabilities.

**Prerequisites & Notes:** SPED 360 or SPED 364; or instructor permission

Credits: 4

**SPED 444 - Assessment and Intervention in Early Childhood Special Education**

Issues and resources related to developmental assessment, intervention, and monitoring of infants, toddlers, and preschoolers with delays and/or disabilities. Emphasizes family-centered services, cross-cultural competence, activity-based strategies and teaming.

**Prerequisites & Notes:** SPED 360 or SPED 364, SPED 420, or ELED 370, or permission of instructor.

Credits: 4

**SPED 460 - Interventions for Classroom Management**

Universal and targeted strategies for classroom management including behavioral, social, and cognitive interventions.

**Prerequisites & Notes:** SPED 360; corequisite: SPED 420, SPED 440; or instructor permission

Credits: 4

**SPED 461 - Education for the Gifted and Talented**

Exploration of characteristics, identification and special needs of the highly capable student. In-depth analysis of the application of local, regional and state programs. Time outside of class will be spent working on site in ongoing programs such as Young Authors, National History Day, arts.

**Prerequisites & Notes:** SPED 360 or permission of instructor.

Credits: 4

**SPED 462A - Reading Instruction for Students With Special Needs**

Basic reading instruction for K-12 students in inclusive classrooms; emergent literacy, instructional methods, curriculum and materials; accommodating for individual differences.

**Prerequisites & Notes:** SPED 466A, SPED 469A. Corequisite: SPED 465B.

Credits: 4

**SPED 462B - Curriculum and Methods in Special Education**

Curriculum selection and adaptation of methods and materials for students who receive special education services. Includes direct instruction, survey and adaptation of instructional materials, task analysis, unit objectives, peer teaching and transition services.

**Prerequisites & Notes:** SPED 469A, SPED 462A. Corequisite: SPED 465C.

Credits: 4

**SPED 462C - Math Instruction for Students With Special Needs**

Specially designed, differentiated instruction for P-12 students in inclusive, resource and self-contained classrooms. Concepts include: emergent numeracy, computation, problem solving, generalization, and functional application to measurement, time and money. Covers a range of assessment strategies, instructional methods, curricula, and materials, as well as accommodations and modifications for addressing individual student needs.

**Prerequisites & Notes:** MATH 381, SPED 466A, SPED 469A. Corequisite: SPED 462B, SPED 465C, SPED 465D, SPED 469B.

Credits: 4

**SPED 463A - Interventions for Learning Problems**

Learning characteristics of P-12 students with academic problems. Focuses on attention, motivation and self-monitoring. Emphasis on teaching the task-related skills, strategies and content area knowledge needed for students to learn efficiently and effectively.

**Prerequisites & Notes:** SPED 320, SPED 460.

Credits: 4

**SPED 463B - Behavior Assessment and Intervention**

Assessment and intervention for students with intensive behavioral needs; strategies for internalizing and externalizing behaviors utilizing positive behavior supports and the principles of applied behavior analysis; legal issues specific to students with emotional and behavioral disorders.

**Prerequisites & Notes:** SPED 460, SPED 466A, SPED 469A.

Credits: 3

**SPED 463C - Promoting Resiliency in Vulnerable Students**

Exploration of characteristics, identification and special needs of students who are at risk for academic and/or social failure in school due to chemical dependence issues, bilingualism, poverty, dysfunctional family situations or other factors that may interfere with a student's ability to succeed. Analyzes strategies that combine the skills of special and regular education teachers.

**Prerequisites & Notes:** Admission to the Woodring College of Education or permission of instructor.

Credits: 3

**SPED 463D - Students With Complex Special Needs**

History, philosophy, characteristics and services for students with low incidence disabilities. Empirically-based design of instruction and monitoring of functional curricula for people who need some level of continual support.

**Prerequisites & Notes:** SPED 466A.

Credits: 4

**SPED 465A - Special Education Practicum I**

Practicum experience in school/community settings. Designed to provide opportunities for students to observe/demonstrate effective educational practices. S/U grading.

Credits: 2

**SPED 465B - Special Education Practicum II**

Practicum experience in school/community settings. Designed to provide opportunities for students to observe/demonstrate effective educational practices.

**Prerequisites & Notes:** reserve 1 hour/day Monday-Thursday 9:30am-noon to be at practicum site plus travel time to and from (refer to Planning for Practica Guide)

Credits: 2

**SPED 465C - Special Education Practicum III**

Practicum experience in school/community settings. Designed to provide opportunities for students to observe/demonstrate effective educational practices.

Credits: 2

**SPED 465D - Special Education Practicum IV**

Practicum experience in school/community settings. Designed to provide opportunities for students to observe/demonstrate effective educational practices.

Credits: 2

**SPED 466 - Assessment, Evaluation and IEP**

Referral and assessment for special education eligibility, norm-referenced and teacher-developed assessments, legal and procedural issues in IEP development, and strategies for assessing students from culturally and linguistically diverse backgrounds.

**Prerequisites & Notes:** SPED 420, SPED 360, EDUC 302, Co-requisite: SPED 467

Credits: 4

**SPED 466A - Assessment, Evaluation and IEP**

Referral and assessment for special education eligibility, norm-referenced and teacher-developed assessments, legal and procedural issues in IEP development, and strategies for assessing students from culturally and linguistically diverse backgrounds.

**Prerequisites & Notes:** SPED 320, SPED 360, EDUC 302. Corequisite: SPED 469A.

Credits: 4

**SPED 467 - Curriculum-Based Evaluation**

Curriculum-based procedures and formative evaluation. Determining present levels of educational performance, developing associated goals and objectives and monitoring progress. Guidelines for implementation of comprehensive Response to Intervention (RtI) procedures.

**Prerequisites & Notes:** SPED 360, SPED 420, EDUC 302; co-requisite: SPED 466; or instructor permission

Credits: 4

**SPED 467A - Early Developmental Variations**

Typical sequences of development from birth to age eight, and educational implications of atypical patterns.

**Prerequisites & Notes:** SPED 360.

Credits: 3

**SPED 467B - Assessment and Intervention in Early Childhood Special Education**

Issues and resources related to developmental assessment, intervention, and monitoring of infants, toddlers, and preschoolers with delays and/or disabilities. Emphasizes family-centered services, cross-cultural competence, activity-based strategies and teaming.

**Prerequisites & Notes:** SPED 466A

Credits: 4

**SPED 468 - Families, Professionals and Exceptional Children**

Techniques for collaborating and communicating with professionals and families of children and youth who have disabilities and challenges.

**Prerequisites & Notes:** SPED 360.

Credits: 4

**SPED 469A - Curriculum-Based Evaluation**

Curriculum-based procedures for formative evaluation. Determining present levels of educational performance, developing associated goals and objectives and monitoring progress.

**Prerequisites & Notes:** SPED 360, SPED 320 and EDU 302. Corequisite: SPED 466A.

Credits: 3

**SPED 469B - Case Study Applications in Special Education**

Uses the case study method to present situations frequently encountered in special education settings, in review of special education course content and application in preparation for student teaching internships.

**Prerequisites & Notes:** All required SPED 400-level courses can be taken as prerequisites or concurrent.

Credits: 2

**SPED 470 - Violent and Aggressive Youth**

This course is designed to present information on the problem of violent and/or aggressive youth in school. The class will stress an educative approach by focusing on what educators can do to prevent, respond to and follow up on acts of violence. S/U grading.

Credits: 3

**SPED 471 - Interventions for Learning Problems**

Learning characteristics of students with academic problems. Focuses on attention, motivation and self-monitoring.

Emphasis on teaching task-related skills, strategies and content area knowledge needed for students to learn efficiently and effectively.

**Prerequisites & Notes:** SPED 360, SPED 420, SPED 460.

Credits: 4

**SPED 472 - Behavior Assessment and Intervention**

Assessment and intervention for students with intensive behavioral needs including functional behavior assessment, positive behavior supports, crisis management, and applied behavior analysis.

**Prerequisites & Notes:** SPED 460, SPED 466, SPED 467; or instructor permission

Credits: 4

**SPED 473 - Promoting Resiliency in Vulnerable Students**

Exploration of characteristics, identification and special needs of students who are at risk for academic and/or social failure in school due to chemical dependence issues, bilingualism, poverty, dysfunctional family situations or other factors that may interfere with a student's ability to succeed. Analyzes strategies that combine the skills of special and regular education teachers.

**Prerequisites & Notes:** Admission to Woodring College of Education or instructor permission.

Credits: 3

**SPED 474 - Students With Complex Needs**

History, philosophy, characteristics and services for students with low incidence disabilities. Empirically-based design of instruction and monitoring of functional curricula for people who need some level of continual support.

**Prerequisites & Notes:** SPED 420, SPED 360, SPED 466.

Credits: 4

**SPED 480 - Practicum II: Literacy I**

Practicum experience in school/community settings. Designed to provide opportunities for students to develop, implement, and monitor literacy intervention programs for individuals or small groups of students.

**Prerequisites & Notes:** SPED 466, SPED 467; corequisite: SPED 483

Credits: 1 TO 3

**SPED 481 - Practicum III: Literacy 2**

Practicum experience in school/community settings. Designed to provide opportunities for students to develop, implement, and monitor instructional intervention programs in literacy for small and large groups.

**Prerequisites & Notes:** Special education majors or permission.

Credits: 1 TO 3

**SPED 482 - Practicum IV: Math**

Practicum experience in school/community settings. Designed to provide opportunities for students to develop, implement, and monitor instructional intervention programs in Math for small and large groups.

**Prerequisites & Notes:** Special education majors or permission.

Credits: 1 TO 3

**SPED 483 - Reading Instruction for Students With Special Needs**

Basic reading instruction for K-12 students in inclusive classrooms; emergent literacy, instructional methods, curriculum and materials; accommodating for individual differences.

**Prerequisites & Notes:** SPED 466, SPED 467; Co-requisite: SPED 480

Credits: 4

**SPED 484 - Designing Written Expression Interventions**

Written expression decision-making and instruction strategies within the context of Response to Intervention. Aligning instructional strategies to student need through the application of problem-solving, progress monitoring and decision making. Focus on topics such as emergent writing skills, mechanics, sentence fluency, and the writing process.

**Prerequisites & Notes:** SPED 467, SPED 483. Co-requisite: SPED 481, SPED 482, SPED 485, SPED 486.

Credits: 4

**SPED 485 - Designing Math Interventions**

Math decision-making and instruction strategies within the context of Response to Intervention. Aligning instructional strategies to student need through the application of problem-solving, progress monitoring and decision making. Focus on emergent numeracy, computation, problem solving, algebra and functional applications of measurement, time and money.

**Prerequisites & Notes:** MATH 381, SPED 466, SPED 467; Co-requisite: SPED 481, SPED 482, SPED 484, SPED 486

Credits: 4

**SPED 486 - Case Study Applications in Special Education**

Uses the case study method to present situations frequently encountered in special education settings, in review of special education course content and application in preparation for student teaching internships.

**Prerequisites & Notes:** All required SPED 400-level courses can be taken as prerequisites or concurrent.

Credits: 2

**SPED 490 - Teaching Laboratory**

Diagnosis of students, lesson preparation, videotaped peer teaching, analysis of teaching, lesson redesign.

Credits: 4

**SPED 491 - September Experience**

Observation and participation in the opening of school. Repeatable to a maximum of 9 credits. S/U grading.

Credits: 2 TO 3

**SPED 496 - Internship - Exceptional Children/Early Childhood**

Supervised teaching experience to develop and demonstrate teaching competence for exceptional children.

Repeatable to 24 credits. S/U grading.

**Prerequisites & Notes:** Recommendation for supervised teaching.

Credits: 2 TO 18

**SPED 498 - Internship - Exceptional Children/Elementary**

Supervised teaching experience to develop and demonstrate teaching competence for exceptional children.

Repeatable to 24 credits. S/U grading.

**Prerequisites & Notes:** Recommendation for supervised teaching.

Credits: 2 TO 18

**SPED 499 - Internship - Exceptional Children/Secondary**

Supervised teaching experience to develop and demonstrate teaching competence for exceptional children.

Repeatable to 24 credits. S/U grading.

**Prerequisites & Notes:** Recommendation for supervised teaching.

Credits: 2 TO 18

**SPED 501 - Research in Special Education**

Introduction to the concepts and procedures of contemporary research within special education. Reviewing, analyzing and interpreting research literature applicable to special education. Planning research with exceptional populations including defining research problems, developing relevant hypotheses, and selecting appropriate research designs (including quantitative and qualitative approaches).

**Prerequisites & Notes:** Admission to Graduate school

Credits: 4

**SPED 503 - Instructional Design for Diverse Learners**

Systematic analysis, design, development and evaluation of instructional systems and practices for diverse learners. Application of instructional design principles and supporting technologies in P-12 and transitional settings, within decision making frameworks and Response to Intervention.

**Prerequisites & Notes:** IT 443 or equivalent; Graduate status; SPED 501 or instructor permission

Credits: 4

**SPED 510 - Secondary Students With Special Needs**

Rules, regulations, and related funding categories within special education. Includes specialized instruction and evaluation procedures for use in general education settings.

**Prerequisites & Notes:** Admission to Secondary MIT or instructor permission

Credits: 4

**SPED 518 - Current Issues in Education: Special Education**

Examination and discussion of current issues in special education. Repeatable to a maximum of 10 credits.

Credits: 1 TO 5

**SPED 542 - Issues in Inclusive Early Education**

Current issues and best practices in early childhood program design and implementation. Emphasis on family-centered, play-based interagency models that serve children of all abilities. Applied research focus.

**Prerequisites & Notes:** Admission to Graduate School or permission of instructor.

Credits: 3

**SPED 543 - Assessment of Young Children (Birth to 8 Years)**

Issues and resources for accurate and appropriate assessment of young children. Current best practices in instructionally relevant assessment, monitoring child progress and evaluating overall program success. Alternative strategies for assessing the very young child, family needs and special populations. Emphasis on critical evaluation of instruments, psychometric adequacy and technical aspects of test development.

**Prerequisites & Notes:** Admission to Graduate School or permission of instructor.

Credits: 4

**SPED 544 - Inclusive Curriculum in Early Childhood**

Curriculum development and adaptation for infants, toddlers and preschool children. Includes available resources, best practices with the developmentally young and play-based curricula. Focus on model program curricular approaches, the use of daily routines and parent-child interaction as a context and content for curriculum, and peer-mediated learning strategies. Emphasis on efficacy research and the impact of various curricular models.

**Prerequisites & Notes:** Admission to Graduate School or permission of instructor.

Credits: 3

**SPED 560 - Literacy Instruction for Students With Special Needs**

Advanced study of literacy instruction for K-12 students in inclusive classrooms; emphasis on supportive learning environments including computers, adaptive equipment, peer-mediated learning strategies, and accommodation for individual differences; includes theories of literacy acquisition, research-based instructional methods, curriculum and material, related disabilities, and assessment and evaluation.

**Prerequisites & Notes:** SPED 480, SPED 483; or equivalent; or permission of instructor.

Credits: 4

**SPED 562 - Learning Problems**

Information processing and learning theory as it applies to students with mild disabilities. Discusses assessment and evaluation of cognitive strategies and their application to academic and social skill development.

**Prerequisites & Notes:** Admission to graduate program or permission of instructor.

Credits: 4

**SPED 562A - Learning Problems**

Information processing and learning theory as it applies to students with mild disabilities. Discusses assessment and evaluation of cognitive strategies and their application to academic and social skill development.

Credits: 4

**SPED 562B - Middle and Secondary Level Learning Problems**

Information processing and learning theory as it applies to disabled learners. Discusses assessment and evaluation of cognitive strategies, social skills and academic skill development. Designed for students who do not have a teaching certificate or endorsement in special education. Emphasis on middle school and secondary students.

Credits: 4

**SPED 563 - Curriculum and Methods in Special Education**

Analysis and application of curricular design, research-based instructional models, and assistive technology with discussions of universal design and legal mandates.

Credits: 4

**SPED 564 - Social Skills**

Applied behavior analysis for children with learning and behavioral problems. Emphasis on functional assessment, single-subject research design and the teaching of social skills.

**Prerequisites & Notes:** Admission to graduate program or permission of instructor.

Credits: 4

**SPED 565 - Communication and Collaboration in Special Education**

The collaborating teacher's role in providing special education services to children in integrated settings. Emphasizes instructional and communication skills needed to achieve that role.

**Prerequisites & Notes:** SPED 468; or equivalent; or permission of instructor

Credits: 4

**SPED 567 - Advanced Issues in Special Education**

Intensive study of legal, intervention and ethical issues in special education. Repeatable to a maximum of 6 credits.

Credits: 2

**SPED 568 - Curriculum-Based Evaluation and Decision Making**

Advanced evaluation and decision-making processes. Focus on curriculum-based procedures, formative evaluation, and educational decision making. Emphasis on generating present levels of educational performance and associated goals and objectives.

Credits: 4

**SPED 569A - Issues in Inclusive Early Education**

Current issues and best practices in early childhood program design and implementation. Emphasis on family-centered, play-based interagency models that serve children of all abilities. Applied research focus.

Credits: 3

**SPED 569B - Assessment of Young Children (Birth to 8 Years)**

Issues and resources for accurate and appropriate assessment of young children. Current best practices in instructionally relevant assessment, monitoring child progress and evaluating overall program success. Alternative strategies for assessing the very young child, family needs and special populations. Emphasis on critical evaluation of instruments, psychometric adequacy and technical aspects of test development.

Credits: 4

**SPED 569C - Inclusive Curriculum in Early Childhood**

Curriculum development and adaptation for infants, toddlers and preschool children. Includes available resources, best practices with the developmentally young and play-based curricula. Focus on model program curricular approaches, the use of daily routines and parent-child interaction as a context and content for curriculum, and peer-mediated learning strategies. Emphasis on efficacy research and the impact of various curricular models.

Credits: 3

**SPED 570 - Violent and Aggressive Youth**

This course is designed to present information on the problem of violent and/or aggressive youth in school. The class will stress an educative approach by focusing on what educators can do to prevent, respond to and follow up on acts of violence. S/U grading.

Credits: 3

**SPED 590 - Seminar in Demonstration Teaching and Supervision**

Advanced studies in the principles of supervision; utilization of instructional resources and the evaluation and improvement of teaching.

**Prerequisites & Notes:** ELED 442.

Credits: 3

**SPED 598 - Residency in Special Education**

Full-time residency placement in a special education environment in the public schools. Repeatable to a maximum of 16 credits.

Credits: 4 TO 16

**SPED 599 - Internship: Exceptional Children**

Full-time teaching placement in a special education environment environment for ME. certification students. Not applicable to graduate plans of study. Repeatable to 24 credits. S/U grading.

Credits: 8 TO 16

**SPED 690 - Thesis**

Research study under the direction of a faculty committee. Repeatable to a maximum of 9 credits. S/U grading.

**Prerequisites & Notes:** Approval of student's graduate committee and successful completion of the qualifying exam.

Credits: 1 TO 9

**SPED 691 - Research Seminar**

Graduate research under the direction of a program advisor/committee. Repeatable to a maximum of 6 credits. S/U grading.

**Prerequisites & Notes:** Approval of student's graduate committee and successful completion of the qualifying exam.  
Credits: 1 TO 6

**Teaching English to Speakers of Other Languages**

Courses numbered X37; X97; 300, 400; 417, 445 are described in the University Academic Policies section of this catalog.

**TESL 401 - Introduction to English Linguistics for TESOL**

Students are introduced to the structure, history and use of English with emphasis on their application to the teaching of ESL. Includes an outline of basic linguistic aspects of language (phonology, syntax, semantics and pragmatics) and their historical, geographical and social variation. Students who have successfully completed an equivalent introductory linguistics course may replace TESL 401 with TESL 403 with permission of the program director.

Credits: 4

**TESL 403 - Applications of Linguistics to TESOL**

A one-credit version of TESOL 401 for students who have successfully completed an equivalent course in introductory linguistics. S/U grading.

**Prerequisites & Notes:** Permission of program director.  
Credits: 1

**TESL 404 - Understanding English Grammar for TESOL**

Theory of English grammar including parts of speech, syntactic structure, coordination, subordination, and discourse patterns. Participation in an embedded practicum with English language learners required. Not eligible for students who have taken TESL 402.

**Prerequisites & Notes:** TESL 401 or TESL 403 or permission of instructor.  
Credits: 3

**TESL 405 - Methods for Teaching English Grammar**

Demonstration and practice in explaining key structures in English. Creating and teaching lesson plans with explicit English grammar components. Not eligible for students who have taken TESL 402. S/U grading.

**Prerequisites & Notes:** TESL 401 or TESL 403, or permission of instructor; and TESL 404.  
Credits: 2

**TESL 410 - Second Language Acquisition Theory for TESOL**

The insights of modern linguistic and psychological theory into the process of second language learning, with special reference to the acquisition of English by speakers of other languages. Emphasis on why certain aspects of English structure pose particular difficulty for the non-native speaker.

**Prerequisites & Notes:** Admission to TESOL program or permission of instructor; TESL 401 recommended.  
Credits: 4

**TESL 420 - Methods and Materials for Basic Communication**

Theoretical and practical concerns in teaching English as a second language to students with beginning to low-intermediate proficiency in English. Emphasis on innovative approaches to the teaching of listening, speaking, and culture within a communicative framework. Guidance in the evaluation, development, and use of creative materials, including media-based materials. Required participation in embedded practicum with English language learners.

**Prerequisites & Notes:** Admission to TESOL program or permission of instructor; TESL 401 recommended.  
Credits: 5

**TESL 421 - Methods and Materials for Academic Language Proficiency**

An expansion on theoretical and practical concerns in teaching English as a second language to students with intermediate to advanced proficiency in English. Emphasis on innovative approaches to the teaching of literacy within a communicative framework, with particular focus on structure, reading, writing, and culture in academic content areas. Guidance in the evaluation of textbooks and the development and use of creative materials, including media-based materials. Required participation in embedded practicum with English language learners.

**Prerequisites & Notes:** TESL 420 or permission of instructor; TESL 401 recommended.  
Credits: 5

**TESL 425 - Methods and Programming for the Bilingual Classroom**

Participants extend their knowledge of second language acquisition, instructional methods, and assessment techniques to effectively teach within bilingual models of instruction.

**Prerequisites & Notes:** TESL 410 and TESL 421 or instructor permission  
Credits: 5

**TESL 431 - Seminar and Practicum in Bilingual Education**

Supervised teaching in content-based ESL as well as teaching content coursework presented in a second language of instruction. Weekly seminar focuses on working cooperatively and effectively in bilingual instructional settings, and discussion of observations, materials, and teaching strategies. S/U grading.

**Prerequisites & Notes:** TESL 402, TESL 410, TESL 421, TESL 425 (TESL 425 concurrent with director permission)

Credits: 5

**TESL 432 - Seminar in TESOL and Bilingual Education**

Provides a forum for reflection and sharing of the diverse practicum teaching experiences of a co-requisite practicum course. Research resolves current classroom needs in classroom management and ELL student advocacy. Provides practice working collaboratively to deliver professional development to colleagues and the community. Repeatable to a maximum of 4 credits. S/U grading.

**Prerequisites & Notes:** TESL 404, TESL 405, TESL 420, TESL 421; and TESL candidates - TESL 410 or concurrent, and, co-requisite TESL 433; and Bilingual candidates - TESL 410 and TESL 425, or concurrent, and co-requisite TESL 434.

Credits: 2

**TESL 433 - TESOL Practicum**

Supervised teaching of English language learners in K-12, adult education, or international placements. S/U grading.

**Prerequisites & Notes:** TESL 404, TESL 405, TESL 420 and TESL 421; and TESL 410 or concurrent; and co-requisite TESL 432.

Credits: 2

**TESL 434 - Bilingual Practicum**

Supervised teaching in content-based ESL and teaching content coursework presented in a second language of instruction. K-12, adult education, and international placements available. S/U grading.

**Prerequisites & Notes:** TESL 404, TESL 405, TESL 420, TESL 421; and TESL 410, TESL 425, or concurrent; and co-requisite TESL 432.

Credits: 3

## Theatre Arts

*Courses numbered X37; X97; 300, 400, 500; 417, 445, 517, 545 are described in the University Academic Policies section of this catalog.*

**THTR 101 - Introduction to the Art of the Theatre**

An introduction to the nature of the theatre, to plays and the way they work, and to the arts of the theatre and the activities of those who perform them.

Credits: 3

**THTR 160 - Introduction to Acting**

Fundamentals of acting with emphasis on basic techniques and tools used by the actor. Includes improvisation; resume writing; auditioning; and vocal, physical and emotional awareness.

Credits: 3

**THTR 168 - Introduction to Film: Acting and Production**

Introduction to rudimentary acting and production techniques, including professional conduct, script analysis and audition process.

**Prerequisites & Notes:** THTR 101, THTR 160.

Credits: 3

**THTR 201 - Introduction to the Cinema**

Training eye and ear to appreciate the work of the filmmaker. Analysis of the basic conventions of technique with an emphasis on critical exposition.

Credits: 3

**THTR 202 - Film Genre**

Exploring the development, structure, conventions, aesthetics, historical and cultural facets that comprise a specific genre in film. Examples include Film Noir, Western, Horror, etc.

Credits: 3

**THTR 210 - Foundations in Design Communication**

Introduction to theatre design concepts and principles, art techniques and theatre design critical language. Exploration of art media, drawing, painting and design presentation in relation to theatre design through dramatic

analysis and design expression.

Credits: 3

**THTR 212 - Introduction to Stage Technology**

Basic theory of planning, drafting, construction and rigging for stagecraft and lighting technology.

Credits: 4

**THTR 213 - Stage Technology Practicum**

Practice of basic theory in stagecraft and lighting technology. One production crew assignment or construction/technology assignment required as lab.

**Prerequisites & Notes:** THTR 212 or permission of instructor.

Credits: 4

**THTR 215 - Stage Make-Up**

Theory and practice of applying makeup for the stage with emphasis on character development, facial anatomy and aging.

**Prerequisites & Notes:** Variable fee.

Credits: 1

**THTR 216 - Introduction to Costuming**

Introduction to costume technology, design and color theory, play analysis, costume history, and drawing/rendering techniques. 8 hours of lab work required.

**Prerequisites & Notes:** THTR 101 recommended. Variable fee.

Credits: 3

**THTR 228 - Understanding Plays**

Reading a playscript with an eye to theatrical production. Introduction to primary dramatic forms (tragedy, comedy).

Practice in speaking and writing intelligently about plays.

**Prerequisites & Notes:** THTR 101 or permission of instructor.

Credits: 3

**THTR 255 - Theatre Production: Technology**

Practical hands-on experience in production: rehearsal and/or run crew with lighting, sound, costumes, scenery, makeup, etc. Repeatable up to 3 times. S/U grading.

**Prerequisites & Notes:** THTR 212 or Permission of instructor.

Credits: 1

**THTR 256 - Rehearsal and Performance**

For theatre majors (before 50 hours in major) and nonmajors: practical experience in rehearsal and performance. S/U grading.

**Prerequisites & Notes:** Permission of Instructor.

Credits: 2

**THTR 257 - Theatre Production: Performance**

For theatre majors and non majors: direct instruction and experience in performance work. S/U grading.

**Prerequisites & Notes:** Permission of Instructor.

Credits: 2

**THTR 260 - Acting Studio I: Theory**

Exploration of the theory of the physical, vocal, intellectual and emotional instrument of the individual actor in relation to character demands of a scene or play through the studio approach. Students demonstrate their knowledge of theory in both written and oral forms.

**Prerequisites & Notes:** Audition and permission of instructor.

Credits: 3

**THTR 261 - Acting Studio I: Scene Study**

Application of the actor/character theory learned in THTR 260 is presented in at least two different scenes which the instructor must approve. It is in the actor's self-interest that, while in the category of American realism, each selection should offer a different writing style.

**Prerequisites & Notes:** Permission of Instructor.

Credits: 3

**THTR 263 - Movement for Actors**

An actor's introduction to the history, vocabulary and basic techniques of several styles of theatrical movement and dance. Topics may include ballet, modern, jazz, tap, hip-hop, mask, combat and period styles. The actor will also

explore character development through movement and dance. Repeatable to a maximum of 6 credits.

Credits: 2

**THTR 264 - Movement Studio I: Grotowski**

An introduction to Jerzy Grotowski's approach to acting, resulting in scenework based on emotional need discovered through movement.

**Prerequisites & Notes:** THTR 260

Credits: 3

**THTR 310 - Scene Painting**

A survey of traditional scene painting with emphasis on color, technique, materials, tools and formulas.

**Prerequisites & Notes:** THTR 212.

Credits: 3

**THTR 311 - Beginning Scene Design**

Theory and practical experience in communicating technical and artistic information through drafting and color-rendering.

**Prerequisites & Notes:** THTR 210, THTR 212.

Credits: 3

**THTR 313 - Beginning Lighting Design**

Technical and artistic study of light and color as they affect other theatre arts and contribute to artistic design; laboratory work in production.

**Prerequisites & Notes:** THTR 213, 311.

Credits: 3

**THTR 314 - Stage Management**

An in-depth study of the stage manager's role and responsibilities before, during and after production. Assignment to one major production.

**Prerequisites & Notes:** 2 credits of acting and THTR 212.

Credits: 3

**THTR 316 - Beginning Costume Design**

Theory, critical language, play analysis and studio experience for design and rendering of costumes for the stage.

**Prerequisites & Notes:** THTR 210, THTR 216 or instructor permission

Credits: 3

**THTR 318 - Puppetry**

Design, construction and manipulation of puppets with focus on the history of puppets and puppet making.

Credits: 3

**THTR 319 - Millinery**

History, design and construction of hats for the theatre.

**Prerequisites & Notes:** THTR 216.

Credits: 2

**THTR 320 - Computer Drafting and Design for the Theatre**

Practical working knowledge of drafting and design software.

**Prerequisites & Notes:** THTR 101, THTR 210, THTR 211, THTR 212, THTR 213 or permission of instructor.

Credits: 3

**THTR 328 - Writing for Theatre**

Writing for the theatre discipline: including review and critique, technical writing and methods of research and citation.

**Prerequisites & Notes:** ENG 101 and THTR 228.

Credits: 3

**THTR 330 - Beginning Theatre Pedagogy**

A teaching assistant discussion/observation course designed to provide theatre students with experience and guidance in assisting an instructor in a particular theatre course. Repeatable up to 4 credits.

**Prerequisites & Notes:** instructor permission

Credits: 1 TO 2

**THTR 350 - Theatre for Youth**

Exploration of the history, philosophy, literature and techniques for creating theatre for young audiences.

Credits: 3

**THTR 351 - Creativity Across the Curriculum**

Instructional methods in theatre arts, design, analysis and practical application of theatre arts techniques and pedagogy through observation, seminar and practicum in the theatre department.

**Prerequisites & Notes:** Permission of instructor.

Credits: 4

**THTR 353 - Touring Theatre I**

An intensive and comprehensive involvement in the study and practice of creating and performing theatre for youth.

This is a two-quarter commitment. Repeatable once for a maximum of 6 credits.

**Prerequisites & Notes:** Permission of instructor.

Credits: 3

**THTR 354 - Touring Theatre II**

Participants prepare all aspects of a touring production and accompanying educational support materials offered to elementary or secondary schools in Washington. This is a two-quarter commitment. Repeatable once for a maximum of 6 credits.

**Prerequisites & Notes:** THTR 353 and permission of instructor.

Credits: 3

**THTR 355 - Intermediate Theatre Technology**

Directly supervised practice of theatre crafts relating to a design, management or technology concentration.

**Prerequisites & Notes:** THTR 210, 212, 213, 216 or instructor permission

Credits: 2

**THTR 356 - Rehearsal and Performance II**

For theatre majors (after 50 hours in major) and non majors: practical experience in rehearsal and performance. S/U grading.

**Prerequisites & Notes:** THTR 256 and permission of Instructor.

Credits: 3

**THTR 360 - Acting Studio II: Physical Interpretation of a Role**

Continuation of skills and refinement of techniques presented in earlier acting studios, but with a strong emphasis on the use of the body and physical characterization. Scene work of several periods and styles is required.

**Prerequisites & Notes:** Written permission of instructor.

Credits: 4

**THTR 361 - Acting Studio II: Vocal Interpretation of a Role**

Continuation of skills and refinement of techniques presented in Acting Studio I, but with strong emphasis on voice and vocal characterization. Scene work from several major periods and styles is required.

**Prerequisites & Notes:** Written permission of Instructor.

Credits: 4

**THTR 363 - Voice and Diction**

Sequence of exercises and drills challenging improvement in resonance, breath support, articulation, relaxation, placement and vocal work ranging from good stage speech (mid-Atlantic) to dialect.

Credits: 3

**THTR 364 - Movement Studio II: Suzuki/Viewpoints**

An introductory exploration of the Suzuki and Viewpoints actor training movement systems.

**Prerequisites & Notes:** THTR 264 and THTR 360.

Credits: 4

**THTR 366 - Musical Theatre**

Practical application of singing and acting to performance-related work from American musical theatre through solo, duet and group exploration.

**Prerequisites & Notes:** THTR 260 or instructor permission

Credits: 3

**THTR 368 - Acting for the Camera**

An exploration and application of techniques and approaches for actors reflected currently in the film and television industry.

**Prerequisites & Notes:** THTR 260, THTR 261, acceptance into THTR 360.

Credits: 3

### **THTR 370 - Play Direction**

Theory and practice of stage direction including selection of play, casting and blocking. Production of a scene for public performance is required.

**Prerequisites & Notes:** THTR 160, THTR 212, THTR 213, THTR 228; or instructor permission

Credits: 3

### **THTR 371 - Directing Projects**

Individualized practicum in directing for the stage. Repeatable up to 6 credits.

**Prerequisites & Notes:** THTR 370

Credits: 1 TO 6

### **THTR 380 - Theatre History I**

Development of theatre to the Renaissance.

**Prerequisites & Notes:** THTR 101, THTR 228

Credits: 4

### **THTR 381 - Theatre History II**

Development of theatre from the Renaissance to the beginning of realism.

**Prerequisites & Notes:** THTR 101, THTR 228; THTR 380 recommended

Credits: 4

### **THTR 382 - Theatre History III**

Development of theatre from the beginnings of realism to contemporary theatre.

**Prerequisites & Notes:** THTR 101, THTR 228; THTR 380, THTR 381 recommended

Credits: 4

### **THTR 383 - Costume History**

Evolution of costume from ancient Greece through present-day fashion with reference to theatrical production.

Credits: 4

### **THTR 384 - Introduction to Dramatic Writing**

Beginning exercise in dramatic writing, with emphasis on primary forms and conventions.

**Prerequisites & Notes:** THTR 228 or permission of instructor.

Credits: 4

### **THTR 411 - Advanced Scenic Design**

Design for the modern theatre; emphasis on interpretation of the play through design; practical designs and techniques.

**Prerequisites & Notes:** THTR 312, THTR 313 or permission of instructor.

Credits: 4

### **THTR 412 - Advanced Stagecraft**

Technical analysis of scripts, special effects, computers and properties. Laboratory work on productions.

**Prerequisites & Notes:** THTR 212, THTR 312.

Credits: 4

### **THTR 413 - Advanced Lighting Design**

Concepts and techniques of drafting and computer-assisted drafting, text work sheets, and application programs related to lighting design.

**Prerequisites & Notes:** THTR 313.

Credits: 4

### **THTR 414 - Theatre Business Practices**

Examination of the theories and approaches to business management in the theatre as well as practical application of those theories discussed including budgeting, promoting and producing.

**Prerequisites & Notes:** THTR 314; THTR 101 recommended.

Credits: 4

### **THTR 416 - Advanced Costume Design**

Exploration and execution of complete designs of costumes for the modern theatre with emphasis on the development of the design concept and interpretation.

**Prerequisites & Notes:** THTR 316, THTR 382, THTR 383.

Credits: 4

**THTR 420 - Advanced Theatre Design and Portfolio Development**

Exploration and project execution of complete design paper project including all supporting technical and research materials leading to a final presentation of designer portfolio.

**Prerequisites & Notes:** THTR 212; and one from THTR 411, THTR 413, THTR 416

Credits: 5

**THTR 428 - Major Dramatists**

The in-depth exploration of an individual playwright or group of playwrights who were influential in the development of a particular style of drama. Topics include Greek and Roman, British, Continental, North American, contemporary or individual playwrights. Repeatable under separate topics.

**Prerequisites & Notes:** THTR 222 or THTR 228.

Credits: 3

**THTR 428A - Major Dramatists**

The in-depth exploration of an individual playwright or group of playwrights who were influential in the development of a particular style of drama. Topics include Greek and Roman, British, Continental, North American, contemporary or individual playwrights. Repeatable under separate topics.

Credits: 3

**THTR 428B - Major Dramatists**

The in-depth exploration of an individual playwright or group of playwrights who were influential in the development of a particular style of drama. Topics include Greek and Roman, British, Continental, North American, contemporary or individual playwrights. Repeatable under separate topics.

Credits: 3

**THTR 428C - Major Dramatists**

The in-depth exploration of an individual playwright or group of playwrights who were influential in the development of a particular style of drama. Topics include Greek and Roman, British, Continental, North American, contemporary or individual playwrights. Repeatable under separate topics.

Credits: 3

**THTR 428D - Major Dramatists**

The in-depth exploration of an individual playwright or group of playwrights who were influential in the development of a particular style of drama. Topics include Greek and Roman, British, Continental, North American, contemporary or individual playwrights. Repeatable under separate topics.

Credits: 3

**THTR 428E - Major Dramatists**

The in-depth exploration of an individual playwright or group of playwrights who were influential in the development of a particular style of drama. Topics include Greek and Roman, British, Continental, North American, contemporary or individual playwrights. Repeatable under separate topics.

Credits: 3

**THTR 428F - Major Dramatists: Contemporary Women**

The in-depth exploration of an individual playwright or group of playwrights who were influential in the development of a particular style of drama. Topics include Greek and Roman, British, Continental, North American, contemporary or individual playwrights. Repeatable under separate topics.

Credits: 3

**THTR 450 - Theatre for Youth II**

Advanced techniques in youth theatre. Each student selects and prepares a script for performance for and/or by youth.

**Prerequisites & Notes:** THTR 350.

Credits: 3

**THTR 451 - Creativity Across the Curriculum II**

Advanced techniques; supervised laboratory work with young people.

**Prerequisites & Notes:** THTR 351.

Credits: 3

**THTR 452 - Secondary Theatre Techniques**

Exploration of techniques and curriculum for use in secondary theatre classrooms. Creation of lesson plans and projects aimed specifically for theatre students. This course has a required academic Service-Learning component.

**Prerequisites & Notes:** THTR 351; acting and directing courses strongly recommended.

Credits: 4

**THTR 455 - Advanced Production and Design**

Directly supervised practice in theatre design/large group leadership. Students work as collaborators in scenic, lighting, costume, sound, makeup, property design, set dressing, technical direction or stage management.

Repeatable to a maximum of 8 credits.

**Prerequisites & Notes:** THTR 355 and permission of Instructor.

Credits: 4

**THTR 460 - Acting Studio III: Style - Shakespeare**

Continued refinement of skills and techniques presented in Acting Studio II, adding the physical, vocal and emotional styles of performing Shakespeare plays.

**Prerequisites & Notes:** Permission of Instructor.

Credits: 5

**THTR 461 - Acting Studio III: Personal Performance**

Continued refinement of skills and techniques introduced in previous studios, with special emphasis on individual acting problems.

**Prerequisites & Notes:** Permission of Instructor.

Credits: 5

**THTR 462 - Advanced Acting Topics**

Students study specific advanced acting techniques and styles and apply them directly through summer production performance, styles such as Commedia dell'arte, Clown, Restoration, and High Comedy. Offered only in summer quarter.

**Prerequisites & Notes:** THTR 264

Credits: 5

**THTR 463 - Audition Preparation**

Preparation of several contrasting monologues and development of specific performance skills to best demonstrate the varied talents of the individual actor in an audition format. S/U grading.

**Prerequisites & Notes:** THTR 460 or permission of Instructor.

Credits: 2

**THTR 464 - Movement Studio III: Advanced Suzuki/Viewpoints**

An advanced exploration of the Suzuki and Viewpoints actor training movement systems.

**Prerequisites & Notes:** THTR 364

Credits: 5

**THTR 465 - Summer Stock II**

Offered only summer quarter. Contact director of theatre for details. Repeatable once.

**Prerequisites & Notes:** Written permission of director of Summer Stock. Offered only summer quarter.

Credits: 1 TO 15

**THTR 470 - Play Direction II**

Producing and directing a one-act play for public performance; special emphasis on working with the actor.

**Prerequisites & Notes:** THTR 314, THTR 370; 30 hours in the major and permission of instructor.

Credits: 4

**THTR 471 - Advanced Directing Projects**

Individualized practicum in directing for the stage. Repeatable up to 6 credits.

**Prerequisites & Notes:** THTR 470

Credits: 1 TO 6

**THTR 480 - Devising Production**

Students devise an original work for the main stage theatre season through phases of research, creation, and development. All students write, design, and perform the piece.

**Prerequisites & Notes:** Audition Course - Permission of Instructor.

Credits: 5

**THTR 485 - Dramatic Writing Workshop**

Opportunity for disciplined expression in writing for stage, film, television or other media. May be repeated as THTR 485, 486 or 487 to a maximum of 12 credits.

**Prerequisites & Notes:** THTR 384 or 385 and permission of instructor.

Credits: 4

**THTR 486 - Dramatic Writing Workshop**

Opportunity for disciplined expression in writing for stage, film, television or other media. May be repeated as THTR 485, 486 or 487 to a maximum of 12 credits.

**Prerequisites & Notes:** THTR 384 or THTR 385 and permission of instructor.

Credits: 4

**THTR 487 - Dramatic Writing Workshop**

Opportunity for disciplined expression in writing for stage, film, television or other media. May be repeated as THTR 485, 486 or 487 to a maximum of 12 credits.

**Prerequisites & Notes:** THTR 384 or THTR 385 and permission of instructor.

Credits: 4

**THTR 495 - Internship**

Qualified third- and fourth-year students may apply to apprentice with theatre companies, performing arts agencies or producing organizations. Repeatable to a maximum of 24 credits. S/U grading.

**Prerequisites & Notes:** Junior status or above and permission of Chair.

Credits: 1 TO 12

**THTR 496 - Senior Project**

Capstone course demonstrating accomplishment in the departmental concentration.

Credits: 1 TO 4

**THTR 501 - Introduction to Research in Theatre**

Interpretation and evaluation of research outcomes; purposes and design of various methods with particular emphasis on historical and descriptive methods.

Credits: 4

**THTR 511 - Seminar in Scenic Design**

Topics in the practice and principles of the scenic arts with individual projects in design.

**Prerequisites & Notes:** Permission of instructor.

Credits: 4

**THTR 512 - Seminar in Stagecraft**

Advanced topics in the practice and principles of the scenic arts with individual projects in design.

**Prerequisites & Notes:** Permission of Instructor.

Credits: 4

**THTR 513 - Seminar in Lighting Design**

Topics in the practice of light design for the stage with focus on individual projects.

**Prerequisites & Notes:** Permission of instructor.

Credits: 4

**THTR 514 - Seminar in Theatre Business Practices**

Study of approaches, procedures and practices employed by managers and producers in for-profit as well as nonprofit theatres.

**Prerequisites & Notes:** Permission of instructor.

Credits: 4

**THTR 516 - Seminar in Costume Design**

Topics in the practice and principles of costume design with individual projects in design.

**Prerequisites & Notes:** Permission of instructor.

Credits: 4

**THTR 522 - Seminar in Dramatic Theory and Criticism**

Dominant concepts and issues of dramaturgical thought. Principles and practices of dramatic criticism.

**Prerequisites & Notes:** Undergraduate major in theatre or permission of instructor.

Credits: 4

**THTR 528 - Seminar in Dramatic Literature**

Intensive study of major dramatists or periods. Topics could include Greek and Roman, British, Continental, North American, contemporary or individual playwrights. Repeatable under separate topics.

Credits: 3

**THTR 528A - Major Dramatists**

Intensive study of major dramatists or periods. Topics could include Greek and Roman, British, Continental, North American, contemporary or individual playwrights. Repeatable under separate topics.

Credits: 3

**THTR 528B - Major Dramatists**

Intensive study of major dramatists or periods. Topics could include Greek and Roman, British, Continental, North American, contemporary or individual playwrights. Repeatable under separate topics.

Credits: 3

**THTR 528C - Major Dramatists**

Intensive study of major dramatists or periods. Topics could include Greek and Roman, British, Continental, North American, contemporary or individual playwrights. Repeatable under separate topics.

Credits: 3

**THTR 528D - Major Dramatists**

Intensive study of major dramatists or periods. Topics could include Greek and Roman, British, Continental, North American, contemporary or individual playwrights. Repeatable under separate topics.

Credits: 3

**THTR 528E - Major Dramatists**

Intensive study of major dramatists or periods. Topics could include Greek and Roman, British, Continental, North American, contemporary or individual playwrights. Repeatable under separate topics.

Credits: 3

**THTR 528F - Major Dramatists: Contemporary Women**

Intensive study of major dramatists or periods. Topics could include Greek and Roman, British, Continental, North American, contemporary or individual playwrights. Repeatable under separate topics.

Credits: 3

**THTR 550 - Theatre in Education I**

Critical review and research in creative theory and theatre for youth. Individual artistic or research projects.

**Prerequisites & Notes:** Undergraduate major in theatre or permission of instructor.

Credits: 4

**THTR 551 - Theatre in Education II**

Advanced individual projects in creative pedagogy.

**Prerequisites & Notes:** Permission of instructor.

Credits: 4

**THTR 552 - Theatre in Education III**

Implementation of strategies and techniques for theatre production in the public schools.

**Prerequisites & Notes:** Permission of Instructor.

Credits: 4

**THTR 555 - Graduate Production Project**

Directly supervised graduate practice in theatre practicum. Projects focus on collaboration and leadership within scenic, lighting, costume, sound, makeup, theatrical research (dramaturgy), production management or directing areas. Repeatable to a maximum of 9 credits with different projects.

Credits: 3

**THTR 560 - Acting**

Training for the actor with an emphasis on the historical; stage mechanics; self awareness, character action and development, styles, and script analysis.

**Prerequisites & Notes:** Permission of Instructor.

Credits: 4

**THTR 561 - Advanced Acting**

A continuation of THTR 560 with emphasis on contemporary approaches and application in production.

**Prerequisites & Notes:** THTR 560.

Credits: 4

**THTR 562 - Summer Stock**

Advance workshop in Summer Stock. Only 8 credits can be applied to the graduate degree program. Repeatable.

**Prerequisites & Notes:** Summer Stock director's approval.

Credits: 1 TO 15

**THTR 570 - Directing Theory**

The exploration of a wide range of directorial aesthetics and practices.

Credits: 4

**THTR 571 - Seminar in Play Direction**

Topics in the principles and practices of the art of play direction with individual student projects.

**Prerequisites & Notes:** THTR 570.

Credits: 4

**THTR 572 - Advanced Seminar in Play Direction**

Advanced principles and practices of play direction with individual student projects.

**Prerequisites & Notes:** THTR 571.

Credits: 4

**THTR 585 - Playwriting Seminar**

Individual projects in dramatic writing are submitted for group discussion.

Credits: 5

**THTR 586 - Advanced Playwriting Seminar**

Individual projects in playwriting.

**Prerequisites & Notes:** THTR 585 or permission of instructor.

Credits: 5

**THTR 594 - Practicum in Teaching**

Supervised teaching for MA candidates. Repeatable to a total of 5 credits. S/U grading.

**Prerequisites & Notes:** THTR 501; permission of instructor.

Credits: 2 TO 5

**THTR 595 - Final Project**

(Option II.) Experimentation leading to the development of new methods and materials in the teaching and/or practice of theatre. May involve on- or off-campus projects. Repeatable to a maximum of 6 credits.

Credits: 1 TO 6

**THTR 690 - Thesis**

Repeatable to a maximum of 9 credits.

Credits: 1 TO 9

**THTR 691 - Research Paper**

Planning and execution of a publishable scholarly paper. Repeatable to a maximum of 3 credits.

Credits: 1 TO 3

**Women Studies**

*Courses numbered X37; X97; 300, 400; 417, 445 are described in the University Academic Policies section of this catalog.*

**WMNS 211 - Introduction to Women Studies**

Introduction to the issues, questions, conceptual frameworks and methods basic to a study of human societies, their institutions and cultural artifacts from a perspective that comprehends women's experience.

Credits: 4

**WMNS 212 - Feminist Theory and Expression**

This course will engage students in critical thinking, reading and writing about multicultural and global perspectives that women have developed from a feminist consciousness. Class material may include oral, written, and visual texts.

**Prerequisites & Notes:** ENG 101; 30 credits.

Credits: 4

**WMNS 311 - American Women Studies: 1620-1850**

Women's role in American society from colonial times to the mid-19th century, with attention to differences of race and class. Emphasis on changing sex roles for both women and men as a result of changes in the structure of the family, immigration, urbanization, expansion of the frontier, education, religion, development of the nation and industrialization.

**Prerequisites & Notes:** HIST 103 or 104 or ENG 216 or other WMNS course.

Credits: 5

**WMNS 313 - American Women Studies: 1850-Present**

Factors influencing the female gender role as it changed in the last century and a half from the "Cult of True Womanhood" to the "New Woman" to the "Feminine Mystique" to the "Liberated Woman." Emphasis on the impact of changing modes of American capitalism; women's efforts for equal rights and social reform; changing patterns of fertility; women's increased participation in the work force; changes in women's role in the domestic sphere.

**Prerequisites & Notes:** HIST 103 or 104 or ENG 216 or other WMNS course.

Credits: 5

**WMNS 314 - Global Women**

Introduces the concepts of transnational feminism. Examines the experiences of women in a global economy, explores the strategies women develop to resist global patriarchal structures, and to organize and mobilize globally.

**Prerequisites & Notes:** WMNS 211 or four credits of 300-level Women Studies.

Credits: 4

**WMNS 315 - Issues of Women's Movement**

**Prerequisites & Notes:** PLSC 101, SOC 101 or permission of instructor.

Credits: 3

**WMNS 411 - Senior Project**

Projects serve as a capstone experience for minors and majors in which students demonstrate their ability to apply knowledge of subject matter and methodology. Students are encouraged to develop interdisciplinary research or field projects that gives them opportunity to put into practice the theories and skills they have been learning during the course of their study. Students are encouraged to develop project internships with women's community organizations. Repeatable to a maximum of 15 credits.

**Prerequisites & Notes:** Completion of Women Studies core.

Credits: 1

**WMNS 453 - Women of the Global South**

Explores women's economic, religious, political and familial roles through topics such as development and globalization, violence, and women's movements. Student contributions to course topics emphasized through individual papers and group panel work. Also offered as ANTH 453.

**Prerequisites & Notes:** Fifteen credits of 300-level Anthropology or related discipline; WMNS 211; ANTH 353 highly recommended; or permission of instructor.

Credits: 5