



## President's Message

Western Washington University is a comprehensive baccalaureate institution that comprises seven academic colleges and a master's-level graduate school. Situated on a residential campus in the northwest corner of Washington state, WWU enjoys the temperate climate and majestic beauty of the Pacific Northwest. The University is known for its strong liberal arts curriculum, selective graduate programs, and an excellent library that combines advanced technology with physical access to the collections of hundreds of libraries. The high caliber of Western's students and faculty enable the university to support an active teaching and learning environment.

Students enjoy frequent artistic and scholarly collaboration with faculty mentors, with many opportunities for internships and community service that offer practical application of theories learned in the classroom. We place the highest value on achieving academic excellence in a climate that promotes individual development, scholarly and creative achievement, and civic engagement. Many students participate in recreational or NCAA Division II sports and innovative academic programs often include recreational and service learning components.

Bellingham is consistently ranked among the most livable cities for its excellent quality of life. The University enjoys strong partnerships with the community and collaborates on a multitude of projects that strengthen the entire area. The community embraces tradition while seeking appropriate venues for carefully considered development. WWU alumni enjoy an excellent record of success in graduate school, the Peace Corps, the public sector, and the work force. Many of them return to the area and continue to enrich the town and campus.

We welcome you to our community and extend best wishes for your success.

  
President

# 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 2 percent or 220 students per year) to the currently planned capacity of 22,500 FTE by 2022. If the University desires additional growth, it should consider such options as developing additional capacity on the waterfront or expanding Extended Programs.
  - 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.



David Scherrer / WWU Publishing Services



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# THE UNIVERSITY

Western Washington University is situated in Bellingham, a city of 73,460 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 #5, Reston, VA 22090; • **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, 10801 Rockville Pike, Rockville, MD, 20852-3279; • **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; Council on Rehabilitation in Education — 835 Rohlwing Road, Suite E, Rolling Meadows, IL 60008; and the Office of Superintendent of Public Instruction (OSPI for Washington State), P.O. Box 47200, Olympia, WA 98504-7200.

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, Environmental Protection Agency, Canadian Embassy, Readers' Digest, National Endowment for the Humanities, U.S. Department of Agriculture Forest Service, American Chemical Society, National Park Service, U.S. Department of Defense, U.S. Small Business Administration, U.S. Air Force, National Aeronautics and Space Administration, The Research Corporation 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

Western Washington University in compliance with state and federal laws and regulations, does not discriminate on the basis of race, color, national origin, religion, sex, sexual orientation and gender expression or identity, marital status, age, or disability 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. Inquiries regarding the University's equal opportunity policies

may be directed to the Equal Opportunity Office at 360-650-3307.

## ACADEMIC FACILITIES

The main campus and its 85 buildings occupy 215 acres along Sehome Hill overlooking Bellingham Bay and downtown Bellingham. Other University properties, such as the marine laboratory at Shannon Point near 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 3,900 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

The WWU libraries house more than 1.3 million volumes of books, periodicals, government documents, sound recordings and videos. The collection also includes nearly 2 million units of microforms and 6,500 subscriptions in print and electronic formats. Western is a member of the Orbis Cascade Alliance, a consortium of 33 academic institutions that share library materials.

The Mabel Zoe Wilson Library provides open stacks for its collections together with reading and study areas, carrels and group study rooms. The Music Library in the Performing Arts Center provides a large collection of scores and recordings as well as books and journals about music.

The libraries offer instruction in information-seeking skills, reference service and research guidance, computerized information retrieval and document delivery services. The online library information system offers access to library holdings, networked and web-based databases in many disciplines (many of them including full-text articles), and the catalogs of regional and national libraries.

Extension program students utilize library services through a combination of on-site services, e-mail, electronic delivery, and host library access.

## 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 web page 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. In 2006 new works by six artists were added to the collection. Web site 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 Minorities in Marine Science Undergraduate Programs, 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.

September 2007-August 2008

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# UNIVERSITY CALENDAR\*

## 2007-2008 ACADEMIC YEAR

### Fall Quarter 2007

September 26 (Wednesday) — 8 a.m., classes begin\*\*

November 12 (Monday) — Veterans Day (no classes, offices closed)

November 22, Noon, to November 26 — Thanksgiving recess

December 10-14 — Final examination week

December 15 (Saturday) — Commencement

### Winter Quarter 2008

January 7 (Monday) — Registration for new students

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

January 21 (Monday) — Martin Luther King, Jr., Day

February 18 (Monday) — Presidents Day holiday

March 17-21 — Final examination week

March 22 (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.

September 2008-August 2009

**Spring Quarter 2008**

March 31 (Monday) —  
Registration for new students

April 1 (Tuesday) —  
8 a.m., classes begin\*\*

May 26 (Monday) —  
Memorial Day holiday

June 9-13 —  
Final examination week

June 14 (Saturday) —  
Commencement

**Summer Quarter 2008**

June 24 to August 1 —  
Six-week session

June 24 to August 22 —  
Nine-week session

June 23 (Monday) — Registration

June 24 (Tuesday) — Classes begin\*\*

July 4 (Friday) —  
Independence Day holiday

August 23 (Saturday) —  
Commencement

September 2008						
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March 2009						
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October 2008						
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August 2009						
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\*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.



# UNDERGRADUATE ADMISSION

Old Main 200, 360-650-3440

**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 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. Washington state residents generally are given admission priority.

An Undergraduate Application for Admission is required of all freshman, transfer and post-baccalaureate applicants. International students must complete the International Student Undergraduate Application. Applicants for readmission as undergraduate or post-baccalaureate students must submit the Returning Student Application for Readmission. 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 — March 1 (includes all Running Start applicants)
  - International Students — March 1
  - All others — April 1
- Winter Quarter — October 1
- Spring Quarter — January 15
- Summer Continuing to Fall
  - Freshman — March 1
  - International students — March 1
  - All others — April 1

Western extension program deadlines and fees may vary. Please contact the specific program for information. See the Extended Education and Summer Programs section in this catalog or [www.acadweb.wvu.edu/eesp](http://www.acadweb.wvu.edu/eesp).

All application materials, including official transcripts, 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 payment. 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.

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 Student Admissions Representative program at 360-650-3861 or by visiting [admissions.wvu.edu](http://admissions.wvu.edu).

### *Students of Color*

Reflecting national and global realities, Western has a proactive commitment to diversify its student body. A variety of academic, financial, cultural and personal support services are available to interested students. Students of color comprised 15.8 percent of Western's fall, 2006, enrollment, compared with 7.8 percent of Western's fall, 1990, student body.

### *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.

### *International Students*

Western's student body includes representation from more than 32 countries. In addition to meeting admissions standards comparable to those required of other non-Washington state residents, international students must demonstrate English proficiency with a minimum TOEFL score of 550 (paper-based), 213 (computer-based), or 80 (Internet-based), and proof of full financial support for all expenses. No financial assistance is provided to new international students. Due to application processing time constraints, out-of-country international student applications are not accepted for winter and spring quarters.

Taking the ACT or SAT exam is required for freshman applicants and transfer applicants with fewer than 40 credits at time of application.

### *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@cc.wvu.edu or visit the IEP home page at [www.wvu.edu/depts/iep](http://www.wvu.edu/depts/iep).

## 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 a personal statement with the application for admission.

Minimum freshman requirements include a 2.5 GPA and the following high school course pattern:

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

**Mathematics:** Three years 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 year of the requirement if second-year algebra is completed in high school.

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

**Social Science:** Three years 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.

**Foreign Language:** Two sequential years in a single foreign 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-half year 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-half year in any of the above areas is required.

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

Since the number of qualified applicants greatly 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.

### *Running Start/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. Students are responsible for submitting official college transcripts.

Regardless of number of college credits, 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) and International Baccalaureate Exams*

Western encourages students to take Advanced Placement/International Baccalaureate courses and exams. 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 pages 33 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.

## 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 are generally served by the Space Available to Nonmatriculated Students (SPAN) program that 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 WVU scholarships.

## TRANSFER ADMISSION

In general, 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.

Admission priority is given to Washington state residents transferring directly from a Washington state community college with the Direct Transfer Agreement (academic) associate degree, the statewide Associate of Science-Transfer Degree, or who can otherwise no longer progress toward their educational goals at the community college. Cumulative GPA, grade trends, number of transfer credits, academic program, preparation for major, related activities, multicultural experience, residency and space availability also may be 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

## UNDERGRADUATE ADMISSION

than 40 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, is listed on the transfer admission section of Western's Web site.

#### *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 Committee on Admissions 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 only 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.

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

#### *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 a DD-214 or DD-295 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.

#### *General Education Transfer Agreement*

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, provided the sending institution so certifies.

#### *Transfer of Associate Degrees*

**Direct Transfer Agreement (DTA) Associate Degree.** Students who complete the DTA associate degree 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 ICRC guidelines and include at least 90 credits. The DTA degree must include 75 credits (of specified distribution) that are directly transferable to Western. Up to 15 credits not normally transferable may transfer if used as part of the associate degree. 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.

To meet Western's GURs, an approved associate degree normally is 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, environmental sciences, 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 the 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.

### POST-BACCALAUREATE ADMISSION

Space for students wishing to pursue teaching certification or a second bachelor's degree is limited, and therefore admission is quite 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. See the *Extended Education and Summer Programs* section in this catalog.

Post-baccalaureate applicants interested in pursuing a residency teaching certificate must simultaneously apply to Woodring College of Education.

### 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 priority 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 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. For specific program information, see the *Extended Education and Summer Programs* section in this catalog.

Applicants to Western's Extended Programs must complete the 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 Web site.

The extension program sites offer informational visits for prospective students. For specific program information, see the *Extended Education and Summer Programs* section in this catalog or [www.ExtendedEd.wvu.edu](http://www.ExtendedEd.wvu.edu).

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.

### 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.

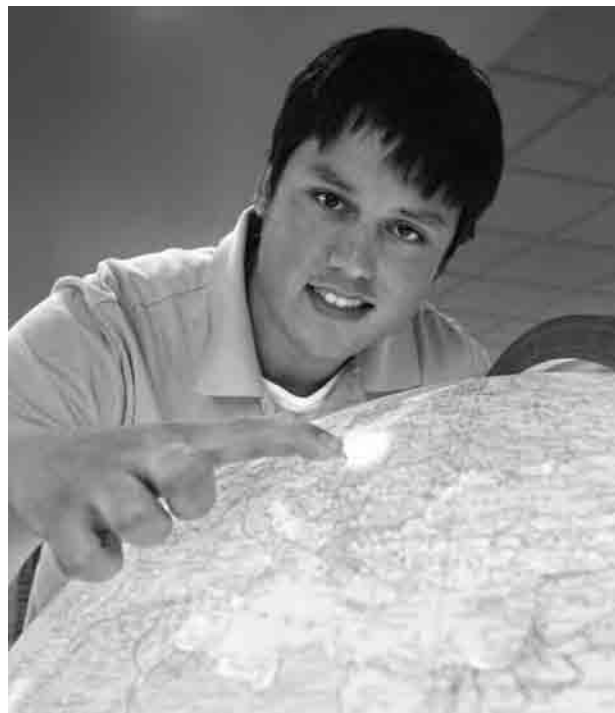
### SPECIAL STUDENTS AND AUDITORS

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.

All other nonmatriculated students should contact Extended Education and Summer Programs to explore other educational opportunities. Fee reductions and tuition waivers are not applicable to self-supporting extension courses. Students may elect to audit an extension course at full tuition if space is available.



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# REGISTRATION

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

Registration for each quarter is conducted in three phases using Web for Student, [www.wvu.edu/web4u](http://www.wvu.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 — First-week registration beginning the first day of classes and ending the fifth day of the quarter. Students may register through the first week 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 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 advisement program for new fall quarter transfer students, is conducted during the summer to prepare students for Phase I of fall registration. 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.

## REGISTRATION RESTRICTIONS

Due to 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 should expect to be required by the instructor to withdraw from the course.

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 the end of the first week of instruction.

Late registration is permitted only in exceptional cases. After the first five days of instruction in any quarter, a student may register for and enter a course only 1) by obtaining written permission from the course instructor, and 2) by paying the late registration fee.

## 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.



# TUITION AND FEES

Student Accounts, 360-650-2865  
[www.acadweb.wvu.edu/studentaccounts/sfs\\_staccts.shtml](http://www.acadweb.wvu.edu/studentaccounts/sfs_staccts.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 Web site under Dates and Deadlines.**

At Western the various expenses of an undergraduate who is a resident of the state of Washington are about \$5,288 each quarter.

Approximate Quarterly Costs for 2007-08

Tuition and Fees..... \$1,763\*  
 Room and Board.....2,284

Books and Supplies .....	308
Personal Expenses .....	574
Transportation .....	454
<b>Total</b> .....	<b>\$5,288</b>

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.)

\*Includes \$63 health services fee, \$35 nonacademic building fee, \$17 technology fee, \$94 recreation center fee, renewable energy fee of \$0.70 per credit to a maximum of 10 credits, and \$25 transportation fee.

## Auditing a Class

Students enrolled for 10 or more 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. Auditors are required to pay the full course fee for self-supporting extended education courses. See Selected Academic Regulations for restrictions on auditing.

## 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.

2006-07 Schedule of Tuition and Required Fees

Classification	Per credit charge	Number of credit								
		1-2	3	4	5	6**	7**	8**	9**	10-18**
Resident <sup>1</sup> , Undergraduate	145	290	435	484	725	870	1069	1160	1,305	1,452
Resident <sup>1</sup> , Graduate	199	398	597	666	995	1,194	1,393	1,592	1,791	1,987
Nonresident <sup>1</sup> , Undergraduate	497	994	1,491	1,988	2,982	3,479	3,976	4,473	4,970	4,968
Nonresident <sup>1</sup> , Graduate	540	1,080	1,620	2,160	2,700	3,240	3,780	4,320	4,860	5,399

Classification	Amount per credit in excess of 8 credits	Number of credits			
		19	20	21	22
Resident, Undergraduate	130	882	1,712	1,842	1,972
Resident, Graduate	183	2,170	2,353	2,536	2,719
Nonresident, Undergraduate	481	5,449	5,930	6,411	6,892
Nonresident, Graduate	525	5,924	6,449	6,974	7,499

### \*Required fees not included:

Health Service .....	\$63 <sup>00</sup>
Non-Academic Building Fee .....	35 <sup>00</sup>
Recreation Fee.....	93 <sup>00</sup>
Technology Fee .....	17 <sup>00</sup>
Renewable Energy Fee <sup>^</sup> .....	10 <sup>50</sup>
<b>Total.....</b>	<b>\$215<sup>50</sup></b>

<sup>^</sup>The Renewable Energy Fee will be assessed at \$1<sup>55</sup> per credit hour to a maximum of \$10<sup>50</sup> per quarter.

Enrollment Fee (first-time students only) .....\$250<sup>00</sup>

A tuition estimator can be accessed from the "Pay Tuition, Housing & Fees" link on the main WWU Web page 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.

## TUITION AND FEES

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. Click on *View/Print/Pay Account*.

**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://acadweb.wvu.edu/studentaccounts/paytuitionandfees/index.shtml>. Or go to the Student Accounts Web site or the Student Accounts office in Old Main 360.

The University expects that such communications will be received and read in a timely fashion. Official e-mail communications are intended only to meet the academic and administrative needs of the campus community.

**Students are responsible for maintaining their e-mail account and address with WWU.**

### BILLING STATEMENTS

The QuikPAY™ electronic billing and payment system is Western's official means of billing. **The University does not mail student billing statements.** Students are notified of their monthly billing via their University e-mail account. A copy of the e-bill notification can be sent to a second e-mail address. Online statements are produced between the 20th and 25th of each month. 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 D in the *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 are 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). No convenience fee is charged on e-checks. To pay, follow the links from the "Pay Tuition and Housing" link on the main WWU Web page. 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 top portion of the statement/invoice along with a check to the University Cashier, 516 High St., MS-9003, Bellingham, WA 98225-9003. Do not use campus mail for payments.

Allow seven to 10 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 5 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 student accounts, 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, INTEREST, AND REINSTATEMENT

Tuition, fees, and housing charges **are due on the first day of class.** Payment is late if all charges are not paid by the deadline each quarter and a late fee of \$75 will be assessed.

The deadlines to avoid late fees are:

**Fall** — October 15

**Winter** — January 15

**Spring** — April 15

**Summer** — July 15

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

A 1 percent interest charge will be assessed monthly to all past due accounts.

**Short-term emergency loans.** The Financial Aid office 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.

### CANCELLATION FOR NONPAYMENT

Failure to pay an overdue balance will result in withdrawal from all classes. Withdrawal from classes for nonpayment is done after the half-refund period is over. Tuition is still owed for the classes.

Once the nonpayment withdrawal action has been taken, it is possible to be reinstated by the final day of classes, but only by paying all outstanding charges, including late fee and interest,

plus a reinstatement fee of \$10 per credit and a \$35 handling fee. **Reinstatements are not made after the end of the quarter.**

### CHANGE 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.

Students who pay full tuition and drop classes such that the remaining total of credits is nine or fewer will receive a refund of a) the difference between the full- and part-time tuition /fees if the change is made before the sixth day of instruction, or b) one-half the difference if the change is made from the sixth day of instruction through the 30th calendar day following the first day of instruction, or c) no refund if the change is made after the 30th day of instruction.

### FINANCIAL OBLIGATIONS

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

Financial obligations also include completing an exit interview with Western's loan department for students who had a federal loan disbursed to their account while attending the University. Federal loans include Perkins loans (formerly National Direct loans), William D. Ford Direct Loans, Joy Stokes loans, or other federally sponsored loans. The exit interview is designed to acquaint students with their rights and responsibilities regarding their student loans. Students with federal loans **must** complete an exit interview before graduation, before withdrawing from Western, or when their credit load drops to less than half time. Exit interviews are mandatory. Failure to complete your exit interview 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. If payment is not received, the account will be forwarded to an outside collection agency and a 33.33 percent collection charge will be added to the account.

### TUITION AND FEE REFUND POLICY

Students who **formally 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 formally withdraw on or after the sixth day of the quarter and within the first 30 calendar days will receive a refund of one-half of their tuition. After the fifth day of instruction, the health services, building, technology,

recreation and renewable energy and course and audit fees are nonrefundable. A statutory pro rata refund schedule is required for students who received Title IV federal financial aid. That refund policy is available in the Office of Student Financial Resources.

Students who withdraw after the 30th day will not receive a refund.

The refund deadlines for each quarter are listed on the Registrar's Web site.

Students who received federal or state financial aid or other support may be required to return part or all of the aid. See Student Accounts Web pages for details: [www.acadweb.wvu.edu/studentaccounts/paytuitionandfees/index.shtml](http://www.acadweb.wvu.edu/studentaccounts/paytuitionandfees/index.shtml).

### 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 fill out a Tuition/Fees Refund Exception Petition Form which is available in the Student Accounts office or online through the Student Accounts *Important Forms* link.

### 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 goes 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 either 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.

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

For 2005-06, Western received approximately \$5,508 per full-time equivalent undergraduate student and \$8,312 per full-time equivalent graduate student from the state of Washington. The appropriation received from the state represents approximately 60 percent of the educational costs for students. The remaining 40 percent is covered through the tuition operating fee.

In addition, state-funded financial aid per student was approximately \$929 for undergraduates and \$312 (2005-06) 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

## TUITION AND FEES

students, upon registration for their first quarter of attendance. This fee is nonrefundable.

The fee amounts are 2006-07 rates; 2007-08 amounts are not yet available.

### *Renewable Energy Fee*

Assessed to all students at \$1<sup>95</sup> per credit hour to a maximum of \$10<sup>50</sup> 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*

**\$63 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*

**\$93 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.wvu.edu/recreate/](http://www.acadweb.wvu.edu/recreate/).

### *Nonacademic Building Fee*

**\$35 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.wvu.edu](http://www.as.wvu.edu).

### *Technology Fee*

**\$17 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.wvu.edu/stf/](http://www.wvu.edu/stf/).

## MISCELLANEOUS FEES

### *Parking Permits*

For parking and traffic regulations, see Appendix I.

Quarterly 2006-07 Rates (2007-08 rates are not available yet).

All parking rates are subject to change.

**Rates do not include 8.8 percent sales tax.**

#### **Quarterly Total**

Campus resident parking .....	\$82 <sup>31</sup>
Adjacent (C zone) commuter permit.....	71 <sup>83</sup>
Peripheral (CR) commuter/resident.....	71 <sup>83</sup>
C-Car pool permit.....	53 <sup>60</sup>
Motorcycle Parking.....	14 <sup>65</sup>

### *Extended Student Services Fee*

**\$6 per credit**

This fee is charged on self-support extension and SPAN courses (see Self-Supporting Tuition and Fees section under Tuition and Fees 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.

### *Degree and Certification Fees*

Residency teaching certificate — student with WWU degree or completing combined degree/certification program.....\$60

Residency teaching certificate — post-baccalaureate student with no WWU degree .....

Residency teaching certificate fees include state and WWU processing fees and are in addition to the degree applications.

### *Official Transcripts*

**\$8**

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.

### *Graduation*

**\$40 graduation application fee.**

Late fee for applying after the deadline.....\$25

### *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 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.

*Washington Student Lobby (WSL)***\$2 per quarter**

During registration, students are given the option of contributing \$2 to support the Washington Student Lobby (WSL). 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 "Notice of Financial Aid" from the Financial Aid office. That notice 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 the 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***Self-Supporting Tuition and Fees**Extension Education:*

Undergraduate .....	\$184 per credit*
Graduate .....	\$229 per credit*
Nonprogram online courses.....	\$129 per credit*
SPAN courses.....	\$169 per credit*
Individual credit option.....	\$48 per credit*
Correspondence (Independent Learning).....	\$95 per credit*
Independent Learning registration fee (nonrefundable) .....	\$20

\*Includes \$6 per credit Extended Student Services fee. (See the *Miscellaneous Service Charges* section for description.)

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

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

**REFUNDS OF TUITION AND FEES — EXTENDED EDUCATION***Self-Supporting Tuition and Fees Refund Policies**Extended Education and Summer Programs*

A full tuition refund is given if a class is canceled or a registration is not accepted.

**Full refund** — Same as regular Western policy. Through the fifth day of Western's Bellingham campus quarter or before the second class meeting, whichever is later. For online classes, contact the program manager for deadlines.

**50 percent refund** — Same as regular Western deadline (within the first 30 calendar days following the first day of Western's Bellingham campus quarter) or the first day of class, whichever is later.

**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.

*Less than 6-week course*

**Full refund** — A full refund is given if the refund request is made before the second class meeting.

**50 percent refund** — A 50 percent refund is given if the refund request is made or postmarked before one-half of the class meetings have been held.

**No refund** — No refunds are given after one-half of the class meetings have been held.

*Flexible enrollment 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 \$20 registration fee is nonrefundable.

See the *Summer Session* Web site for the refund policy for summer fees.



# FINANCIAL AID

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 grants, scholarships, work study and loans or some combination of these student aid 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 and personal 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. 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 as funds are available.

**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.wvu.edu/scholarships](http://www.finaid.wvu.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.

**Work Study and student employment** 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. 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. 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.wvu.edu/studentjobs](http://www.finaid.wvu.edu/studentjobs).

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 in the residence hall system and through the Student Employment Center.

## 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. Filing can be performed by using a paper FAFSA or online at [www.FAFSA.ed.gov](http://www.FAFSA.ed.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, 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 office 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 time frame component of Western Washington University's Satisfactory Academic Progress Policy; please refer to Appendix J 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 April from the Financial Aid office at [www.finaid.wvu.edu](http://www.finaid.wvu.edu).

**SELF-SUPPORT COURSES**

Financial aid may be granted for self-supported courses. Contact the Financial Aid office 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 office 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 office 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 been paid. 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 Office and Student Accounts.

Students must maintain the minimum number of credits associated with the enrollment status that they reported to the Financial Aid office to receive aid. Otherwise, aid could be delayed or reduced. On the second Friday of each quarter, the enrollment status is recorded, which provides a final basis for determining eligibility for the following programs: Pell Grant, Federal Academic Competitiveness Grant, Federal National Smart Grant, State Need Grant, Federal Supplemental, Educational Opportunity Grant, Federal Work Study, Federal Perkins Loan, Federal Direct Loan, Western 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 likely would be owed. Students whose enrollment status increases by the lock date may be eligible for additional funding.

**Lock dates:**

- Fall Quarter..... October 5, 2007
- Winter Quarter .....January 18, 2008
- Spring Quarter.....April 11, 2008
- Summer Quarter..... July 7, 2008

	Graduate	Undergraduate	Post-bac
<b>Full time</b>	8 or more	12 or more	12 or more
<b>3/4 Time</b>	6-7	9-11	9-11
<b>1/2 Time</b>	4-5	6-8	6-8
<b>&lt;1/2 Time</b>	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 student aid and Washington State Need Grant programs must be recalculated in accordance with Title IV aid requirements. The withdrawal date will be the earlier 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. This date will be 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 office and the Registrar's Office of their intent to withdraw as soon as possible (even prior to totally withdrawing). Notification will allow either of these two departments to initiate steps to bring 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 for the complete satisfactory academic progress policy.

### VETERANS INFORMATION

When applying for financial aid, veterans must report their

monthly veterans benefit on the Free Application for Student Aid (FAFSA).

Each veteran enrolling at Western for the first time on the GI Bill must either apply for education benefits with the Veterans Administration or transfer his/her authorization from the last college attended. To ensure that allowances are received on time, this should be done well in advance of the academic quarter the student wishes to attend. Assistance in making application is available in the Registrar's Office, Old Main 230.

Veterans should also make certain that the academic objective they plan to pursue is the one authorized by the Veterans Administration. For instance, if the authorization is for the master's degree, the veteran must enroll in courses applicable to that degree. Any necessary changes in objective should be made in advance of registration.

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

A veteran enrolling for at least a half-time credit load may request advance payment. This request must be received by the Veterans Administration at least 30 days before the beginning of the quarter.

New transfer students may qualify for advance payment if there has been one calendar month since the last date of attendance.

The advance check will be sent to the University for temporary care by the controller until the veteran registers.

If a veteran does not seek advance payment or does not register through Western for benefits until the start of the quarter, payments will not begin arriving until the end of the second month of the quarter.

# UNIVERSITY RESIDENCES AND DINING SERVICES

Edens Hall, 360-650-2950  
[www.housing.wvu.edu](http://www.housing.wvu.edu)  
[infodesk@wvu.edu](mailto:infodesk@wvu.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, and three residential dining centers.

The residential program supports Western's vision to become the premiere public comprehensive university in the country through engaged excellence through investments in programs for 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.

The residential program is intentionally designed to actively engage students in their own learning and success. Residential students engage in leadership opportunities — appointed, elected, hired, paid and volunteer — particularly returning students who provide peer relationships for first-year freshman and transfer students. Social and recreational activities support students making friends and personal connections. Programs are specifically designed to help new freshmen and transfer students transition to life at Western.

The residential communities intentionally support students who have historically experienced discrimination, including members of groups who have been marginalized due to their race, gender, ethnicity, disability, sexual orientation, or other social identity. Diversity enriches the educational experience. Inclusive education helps students from all racial and ethnic backgrounds learn, increases college retention, and better prepares graduates to participate in society. We learn from those whose experience, beliefs, and perspectives are different from our own, and those lessons can be taught best in a richly diverse intellectual and social environment.

Professional 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 in which students can feel "at home" at Western. 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. All residence halls and apartments are coeducational by floor, wing or suite. Residential communities also maintain courtesy and quiet hours which help create an academic atmosphere.

University Dining Services 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.

All residence hall students are required to have a meal plan. A meal plan is optional for residents of Birnam Wood apartments. University Dining Services offers a variety of options to meet

each student's eating habits. The program is designed to deliver a full complement of excellent food services customized to Western's unique higher education community. High-quality nutritious meals in an engaging ambience are designed to meet the expectations of the 18 to 24 age groups. Opportunities for continuous dining, "unlimited seconds" formats, with flexible hours of operations are basic elements necessary to support the Western student's educational endeavors. University Dining Services operates three residential facilities that include late-night dining options, as well as 10 retail venues located on campus in academic and support areas. Students with meal plans will experience campuswide services while offering the convenience of being minutes away from their residence hall and academic buildings. Students may increase their debit account portion of their meal plan by adding Munch Money to their account. Residential dining meals are not served during intercession (break) periods; limited dining is available in campus retail locations.

The quality and character of the dining experience reflects the culture of the campus and supports the active, healthy lifestyles of Western's students, including those who follow a vegan or vegetarian diet. The learning environment is enhanced with dining venues that reflect the educational message supporting the University's mission. Western's dining services are characterized by a collaborative partnership that is a model for achieving the best in innovation within the context of rich enduring traditions which create opportunities for the development of community. The dining experience encourages students to meet their individual nutritional needs while developing a diet for life that promotes health.

The dining program supports the University's sustainability initiatives to be better, smarter and wiser in the way resources are used and actively participates in the campus vision and strategic plan that envisions the steps needed for Western to become a leader in sustainable practices with a cost-effective step-by-step implementation and actualization plan that integrates sustainability into Western's dining experience.

## RESIDENCE HALL AND APARTMENT INFORMATION

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 single bed, mattress and pad, a wardrobe or closet, desk, desk lamp, TV cable, high-speed Internet connectivity and local phone service. The student furnishes linens, towels, alarm clocks, telephone and other personal necessities.

Birnam Wood apartments are furnished and consist of two bedrooms, a kitchen, bathroom, living room, dining area and deck. They include utilities, TV cable, high-speed Internet connectivity, and local phone service. Birnam Wood apartments can accommodate up to four people, or a family.

Public areas provide lounge, study and recreational space.

Generally, the residence halls are open during the academic terms. The Birnam Wood apartments include a 12-month living option for students continuing their residency through the following academic term.

Reservations for space in residence halls and apartments are made by completing a housing application and returning it to University Residences, Edens Hall, Western Washington University, 516 High St., Bellingham, Washington 98225-9195 or by applying online at the University Residences Web site, [www.housing.wvu.edu](http://www.housing.wvu.edu).



## UNIVERSITY RESIDENCES

Apply early for admission to the University to ensure an early priority in housing. Housing applications and brochures will be sent with admit packets upon official admission to the University.

Space in a particular hall or apartment is assigned according to the date of the receipt of the application for admission to the University and upon group priority. 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.wvu.edu](http://www.housing.wvu.edu) in the application section.

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.wvu.edu/parking/](http://www.ps.wvu.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 following rates

are for planning purposes only. For a double room with the gold meal plan, the 2006-07 rate is \$6,785. Residence hall rates include room, food and utilities. 2006-07 apartment rates are \$2,328 for a double with two persons and \$8,964 for a family in a two-bedroom apartment. Apartment rates do not include the cost for food service (while not required for apartment residents, optional meal plans are available). Summer apartment rates are available at the Web site.

Housing rates are subject to increase each academic year. For more information, call 360-650-2950, or send e-mail to [infodesk@wvu.edu](mailto:infodesk@wvu.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 Web site with an off-campus registry at [www.union.wvu.edu/](http://www.union.wvu.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 Web site 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 download a copy, go to <http://www.acadweb.wvu.edu/hr/disability/EvacGuideForPWD.pdf>.



David Scherrer / WWU Publishing Services



# STUDENT AFFAIRS AND ACADEMIC SUPPORT SERVICES

Student Affairs and Academic Support Services plays a distinct and essential role in creating a campus culture that promotes the integration of the whole student experience within the university learning community. Staff provide a diverse, comprehensive student learning experience through programs, activities, facilities and support services that integrate academic success and personal development. Offices assist students and provide services through residence hall life, academic advising, tutoring, financial aid, student activities, new student and parent programs, counseling and health services, wellness programs, student assistance services, athletics, career services, registration and admissions.

By enhancing the student's abilities in decision making, problem solving, planning and interpersonal relations, staff help students take an active role in their education. This includes development and appreciation of diverse cultures and lifestyles and active participation in activities that increase the quality of their academic experience. In addition, the division is well known for its long tradition of supporting experiences which enable students to supplement classroom learning, i.e., through development of community service opportunities, student leadership programs, and active participation in intramurals, club sports and athletics.

## OFFICE OF THE VICE PRESIDENT FOR STUDENT AFFAIRS AND ACADEMIC SUPPORT SERVICES

Old Main 445, 360-650-3839

[www.wvu.edu/depts/vpsa](http://www.wvu.edu/depts/vpsa)

This is the central administrative office for the Division of Student Affairs and Academic Support Services. The vice president and staff provide leadership within the University to ensure that the ongoing needs of students are addressed. This goal is accomplished through maintaining quality student programs and services, working closely with the academic units to create an integrated and comprehensive student experience, and assessing students' needs and concerns.

Students with general concerns regarding University policies, procedures and resources may contact this office for assistance.

The University's administrative rules regarding student conduct, use of University facilities, and others of general applicability can be found at [www.wvu.edu/depts/dos/stulife/JA\\_sturesp.shtml](http://www.wvu.edu/depts/dos/stulife/JA_sturesp.shtml).

## ACADEMIC ADVISING AND TUTORIAL SERVICES

Old Main 380, 360-650-3850

Academic Advising and Tutorial Services (AATS) provides administrative leadership to the Academic Advising Center and the Tutorial and Academic Skills Center. Combining the resources of these two centers provides a focal point for learner-centered academic support and success initiatives. Through coordinated and collaborative programming between these two centers AATS provides students with the correct balance of support, challenge, structure, and independence to develop education plans, and develop as independent learners. AATS further endeavors to play a leadership role for academic

advising and student academic success programs throughout the University community.

### Academic Advising Center

Old Main 380, 360-650-3850

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

The Academic Advising Center (AAC) is committed to providing Western Washington University undergraduates with the support and guidance necessary to succeed in their academic endeavors. The center strives to communicate the ideals of a liberal arts education and balance that with helping students navigate the complexity of issues and options encountered as they pursue their academic goals. AAC's primary service populations are first-year freshmen and transfer students, students who are undecided about their choice of major, and students who are experiencing academic difficulties.

The AAC is a place where students are assisted in exploring Western's curriculum and selecting course schedules. Professional staff and peer advisors clarify academic requirements and regulations, assist with course selection and help students to effectively use the academic and support resources of the University.

The process of academic advising is a shared responsibility between the student and advisor. The AAC strives to connect advisors to their students by providing academic advising and support interventions at important points throughout the academic year. Ultimately, however, it is each student's responsibility to meet with his or her advisor and use these services. Academic advisors help students plan their academic programs, monitor student progress, explain University policies and help students navigate through University procedures. The services of the Academic Advising Center include:

- Academic exploration and assistance with choosing a major
- Information and advice concerning graduation requirements
- Advice concerning General University Requirements (GURs) and preparation for declaring a major
- Assistance developing academic plans and registering for courses
- Assistance and support for students experiencing academic difficulty
- Information concerning math placement and writing proficiency requirements
- Information regarding GUR-equivalent courses from Washington community colleges
- Academic advising in the residence halls
- Referrals to appropriate resources to help with other concerns that affect academic success

Students can contact their advisors any time they need assistance or simply want to review their progress and plans. Advisors are available by appointment or during scheduled walk-in hours. Students can also contact their advisors by telephone and e-mail.

### Tutorial and Academic Skills Center

Old Main 387, 360-650-3855

[www.wvu.edu/depts/tutorialcenter](http://www.wvu.edu/depts/tutorialcenter)

The Tutorial and Academic Skills Center (TASC) provides Western Washington University undergraduates with support to help them achieve their highest academic potential. The core of TASC's services has two primary focuses: to provide academic assistance through individual tutoring for GUR courses, and to offer structured programs that provide opportunities for students to develop or enhance their academic skills. Central to all activities

## STUDENT AFFAIRS AND ACADEMIC SUPPORT SERVICES

in the TASC is the development of the intellectual capabilities and scholarly attributes that are embodied in a liberal arts education and necessary to be successful independent learners.

The TASC provides tutorial assistance for GUR courses, primarily entry-level math and science. Tutors are available in the center to help students develop their command of the subject area and improve their academic ability.

The TASC also provides assistance with enhancing academic skills in the areas of time management, test taking, note taking, and textbook comprehension. The center offers workshops and individualized sessions on these topics and offers supportive encouragement for students to recognize and improve their intellectual capabilities. Tutoring is offered in a variety of formats, including individual and small group sessions, and each student determines his or her personal level of success. Students who use the center include academically strong students working to maintain a grade of A or B, as well as students experiencing difficulty passing a course. Specific services include:

- Drop-in hours: GUR tutors are available for students to “drop in” to ask questions
- Academic skills, study skills tutorials and workshops
- Small group and individual tutoring in GUR courses, particularly math and science
- Calculator workshops and GraphLink technology
- Assistance formulating study groups
- Referrals to other appropriate services in support of academic success

### ADMISSIONS

Old Main 200, 360-650-3440

See the *Undergraduate Admissions* section of this Catalog.

### THE WRITING CENTER

College Hall 09, 360-650-3219

[www.ac.wvu.edu/~writepro](http://www.ac.wvu.edu/~writepro)

M-R 10-4; F-10-2; Su, M, W 7-9 p.m.

*“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

As a free resource for students, the Writing Center welcomes writers engaged in all stages of writing, 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). Our services include:

- Face-to-face response on course papers, essay exams, and applications/résumés
- Written response to drafts submitted through our Web site
- Web-based grammar practices
- Specialized assistance for writers with learning differences or with English as an additional language
- Books and handouts

Writers may call for appointments or just drop by — in person or online.

### ASSOCIATED STUDENTS BOOKSTORE

360-650-3655

501 High St., between the Viking Union and the Performing

Arts Center. Open 8 a.m. to 5 p.m. Monday-Friday, 11 a.m. to 3 p.m. most Saturdays during the academic year.

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

e-mail: [asbookstore@wvu.edu](mailto:asbookstore@wvu.edu)

The Associated Students Bookstore is a nonprofit, self-supporting organization of Western Washington University. Net revenues go to support student programs sponsored by the Associated Students. Textbooks are discounted 10 percent. The store serves the campus by providing educational and convenience items, including textbooks; school and art supplies; WWU apparel; computer software; general books, and gift items.

### ATHLETICS

Carver Gym 100, 360-650-3109

[www.wvuvikings.com](http://www.wvuvikings.com)

Intercollegiate athletics involves many students as participants and spectators. Men’s sports include football, soccer, cross country, basketball, golf, and indoor and outdoor track and field; women’s sports include volleyball, soccer, cross country, basketball, golf, indoor and outdoor track and field, rowing, and fastpitch softball. The University Athletic Program is a member of the National Collegiate Athletics Association Division II, and the Great Northwest Athletic Conference.

Students are encouraged to join The Blue Crew, Western’s student sports fan organization. There is no cost to join. Free Blue Crew prizes are awarded to all Western students attending Viking athletic events. For ticket information, call 650-BLUE (2583). For further information contact the Department of Athletics, Carver Gymnasium, 360-650-3109.

### CAREER SERVICES CENTER

Old Main 280, 360-650-3240, fax 360-650-3293

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

The Career Services Center offers a full range of services and programs, including individualized counseling, designed to assist individuals at all stages of the career development process — from self-assessment and initial career and major decision-making to job searching.

#### Career Planning

The center’s career planning services assist individuals in choosing academic majors and establishing career goals. Individual counseling, workshops, and resource materials are provided to help individuals:

- Examine interests, temperaments and values
- Identify transferrable skills
- Explore occupations and job market trends
- Relate career choices to educational programs

Specific assessment instruments include the Strong Interest Inventory and the Myers-Briggs Type Indicator.

#### Internship Program

Internship programs offer opportunities for students to expand their education into the world of work. Students are able to put classroom theory into practice, test tentative career choices, and gain valuable experience and contacts to enhance their employment prospects after graduation.

The center publishes a bimonthly listing of internship openings, advises students on developing their own internship opportunities, and serves as a liaison between students, employers and faculty. Through the center’s on-campus recruiting program, students can interview with employers offering internship opportunities.

### Career and Job Market Information

The center maintains a comprehensive Career Resource Library. Reference materials include information relating academic majors to career fields, surveys on the employment of WWU graduates, employer files and directories, job search guides, and references on starting salaries and job market trends. Computer work stations with Internet access are available for student use.

### Job Search Services

The center offers a variety of services to assist students in learning the techniques and developing the skills necessary to conduct a successful job search:

- Individual counseling on job search strategies
- Workshops on resume writing, job search letters and interview techniques
- Job market and salary information
- Employer contact lists and files
- Mock interviews

Graduating students who register with the center are eligible to participate in **on-campus interviews**, the candidate referral service and can access the Center's job opportunity bulletin board on the center's Web site. Registered seniors, master's degree candidates and post-baccalaureate students may establish placement files during the academic year in which they will graduate or receive certification. Placement files provide valuable documentation of training and experience to share with prospective employers.

### Special Programs

The center offers two career fairs each year, during winter and spring quarters. Other special programs provide information on graduate/professional school, internships and international opportunities.

### Alumni Services

The center provides services to alumni seeking to change jobs or careers. Alumni who register with the Center are eligible to use the following:

- Individual counseling
- On-campus interviews (on a space-available basis)
- Workshops
- Job Opportunity Bulletin
- Placement file service

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

## COUNSELING, HEALTH AND WELLNESS SERVICES

Old Main 563, (360) 650-2926

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

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

Counseling, Health and Wellness Services is an organization with a variety of services dedicated to the provision of quality physical and emotional health 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, Health and Wellness Services are available to all Western students currently enrolled in six or more credits on the Bellingham campus. A student registered for three to five credits has the option to pay the Counseling, Health, and Wellness fee and be seen during a quarter. Services provided include unlimited office visits at the Health Center, individual and group counseling sessions, and Alcohol and Drug Counseling and Assessment Services. Other specific services are available at reduced cost, such as prescription medications, medical equipment/supplies, and lab tests. *It is not necessary to be a member of any health insurance plan to use these services.*

### 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. Inner turmoil over choices may mount. Stress may erode performance. The Counseling Center's staff of professionally trained and experienced psychologists, counselors and graduate trainees is here to help you work through these problems in a caring and confidential environment. All counseling services are voluntary, free, and confidential.

In addition to individual counseling for most problems that arise for students, the Counseling Center also provides workshops each quarter aimed at meeting special needs of college students, such as dealing with stress, math anxiety, and healing from traumatic events. There also are many self-help books and other materials available in the Counseling Center.

The Counseling Center provides brief counseling that works for most problems that arise for students. The Counseling Center staff is also knowledgeable about referrals when campus resources are not enough. The center is open 8:30 a.m. to 4:30 p.m. Monday through Friday. The Counseling Center provides same-day appointments for students whose concerns are urgent. Also, a counselor is on-call at hours the Counseling Center is closed.

### Prevention and Wellness Services

Old Main 560, 360-650-2993

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

The mission at Prevention and Wellness Services is to foster a healthy learning environment at WWU by teaching students self-care and self-responsibility and by engaging students as leaders for safe, caring, and socially just communities.

The professional health educators at Prevention and Wellness Services seek to assist Western students in preventing illness and injury and achieving high levels of wellness. Prevention and Wellness Services offers students free educational outreach services in stress management, healthy eating and positive body image, alcohol abuse and drug use prevention, sexual assault and violence prevention, and sexual health. Additionally, Prevention and Wellness Services serves as the center for individual professional consultation services for students seeking assistance for alcohol and drug concerns and for advocacy and support following experiences of violence. Students are encouraged to empower themselves by using these capacity-building services:

### Lifestyle Advisor Program

[www.wwu.edu/chw/preventionandwellness/laprogram/lap.html](http://www.wwu.edu/chw/preventionandwellness/laprogram/lap.html)

## STUDENT AFFAIRS AND ACADEMIC SUPPORT SERVICES

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The Lifestyle Advisor Program is the largest all-volunteer service learning group at Western Washington University. Lifestyle Advisors are diverse student leaders who come from all majors to be trained to offer other students peer health education services. Lifestyle Advisors have these characteristics in common: they are committed to making a difference in their community, they care about health and well-being, they are interested in taking on a peer leadership role, and they care about social justice. They also want quality training for practical work experience, to be involved in a program that can impact life plans and career choices, and to connect with other students who care about these things. Lifestyle Advisors specialize in areas such as sexual health, alcohol and drug risk reduction, violence prevention, women's empowerment, positive body image, CPR and First Aid, and social justice. The Lifestyle Advisor Program is located within Prevention and Wellness Services, Old Main 560, 360-650-2993.

### **Alcohol and Drug Consultation, Assessment Services (ADCAS)** [www.wwu.edu/chw/preventionandwellness/student-services/adcas.html](http://www.wwu.edu/chw/preventionandwellness/student-services/adcas.html)

ADCAS is a confidential, free service for students want accurate and current information about alcohol, tobacco products, and other drugs. Students come for personal issues with drinking, tobacco or other drug use, questions, resource information, or concerns about alcohol/drug use by friends, roommates, partners or family. Information about Western alcohol and drug use norms and risk reduction moderation tips are also specialties of ADCAS. A fee is assessed for students who are required to attend ADCAS services for a university or Bellingham Municipal Court sanction. Call for an appointment or for more information. ADCAS is located within Prevention and Wellness Services, Old Main 560C, 360-650-3643.

### **Self-Care Center**

[www.wwu.edu/chw/preventionandwellness/student-services/shaic.html](http://www.wwu.edu/chw/preventionandwellness/student-services/shaic.html)

The Self-Care Center provides assessments of colds and minor injuries, confidential HIV testing, consultations on sexual health, sexually transmitted diseases, and birth control, seasonal affective disorder light (SAD), cold self-care packets, sexual health packets, and consultation and referral for medical concerns. HIV testing is \$15. All other services are free and available to Western students. The Self-Care Center is staffed by a registered nurse and trained Western students who are Lifestyle Advisors. The center is open from 9:30 a.m. to 4 p.m. Monday through Friday fall, winter, and spring quarters, phone 360-650-2961. The Self-Care Center is located in the Campus Services Building, 2nd Floor.

### **Sexual Assault and Relationship Violence Services (CASAS)** [www.wwu.edu/chw/preventionandwellness/casas/index.html](http://www.wwu.edu/chw/preventionandwellness/casas/index.html)

CASAS is Western's caring and compassionate 24-hour response 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, text messages, harassing e-mail, indecent exposure, incest, molestation, hate crimes, or threatened or actual physical violence to yourself or those close to you. CASAS provides a 24-hour help line and case management services to guide students through the details of available services, including:

- medical/legal assistance
- professional counseling
- academic support services

- accompaniment to hospital or police station
- support group
- information and referral

Anyone who has ever experienced any form of violence is encouraged to utilize this service. To reach CASAS, call the 24-hour help line, 360-650-3700, or send questions by e-mail to [casas@wwu.edu](mailto:casas@wwu.edu). CASAS is part of Prevention and Wellness Services, located in Old Main 585B.

### **Wellness Outreach Center (WOC)** [www.wwu.edu/chw/preventionandwellness/wellnessoutreachcenter.htm](http://www.wwu.edu/chw/preventionandwellness/wellnessoutreachcenter.htm)

The Wellness Outreach Center provides print and online health resources to improve the quality of daily life for Western students in areas such as stress reduction, access to SAD lights, positive body image, nutrition and fitness, and getting involved in the campus community. Students can find the resources to answer many of their health questions in the relaxed, positive atmosphere of the Wellness Outreach Center in Viking Union 432 or call 360-650-4321.

#### **At the WOC, students will find:**

- friendly, knowledgeable peer health educators
- tea (to aid relaxation)
- CPR/First Aid registration
- Bulletin boards (health informational)
- stress relievers
- cold packs
- condom packs
- books, pamphlets, health resource library, and other print information, SAD (seasonal affective disorder) light
- and much more

### **Student Health Center**

*Campus Services Building, 2nd Floor (corner of 21st Street and Bill McDonald Parkway), 360-650-3400*  
[www.wwu.edu/chw/student\\_health/index.html](http://www.wwu.edu/chw/student_health/index.html)

The Student Health Center is available to eligible students. A Health Services fee is billed with tuition for students enrolled in six or more credits on the Bellingham campus, and this entitles them to use the service. Office calls are free at the center and there is no limit to the number of visits a student may have per quarter. There are, however, modest charges for medications, lab tests, procedures, and equipment. It is not necessary to be a member of any health insurance plan to use these services.

The health center provides students with a broad range of primary medical care services such as those you would find in a family practice clinic. Services include, but are not limited to, the following: contraceptive services, evaluation/referral for specialized conditions, evaluation/treatment of common illnesses, immunizations, men's and women's health care, monitoring and treatment of chronic illnesses, preventive medicine, rapid lab tests (such as mono and pregnancy tests), sexually transmitted disease testing and treatment, travel consultation, and well physical exams. A team of physicians, nurse practitioners, nurses, medical assistants, and a nutritionist staff the center.

The center is open to students from 8:30 a.m. to 4 p.m. Monday, Tuesday, Wednesday, and Friday and 9:30 a.m. to 4 p.m. Thursday when classes are in session. Summer quarter hours are 8:30 a.m. to noon and 1 to 4 p.m. Monday-Friday when classes are in session.

When the Student Health Center is closed, students are advised to seek 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 engage other health facilities must plan to use private funds or their health insurance policy to cover resulting charges.

A comprehensive insurance policy is available to eligible students. Brochures with enrollment cards are available at the Student Health Center and Cashier's Office and online at [www.wellsfargo.com/studentinsurance](http://www.wellsfargo.com/studentinsurance). Students who enroll in the plan for spring quarter may enroll in the plan 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 Registration Requirement

**NOTE:** With a commitment to the health and safety of all members of our campus community, WWU requires that all students born after January 1, 1957, provide medical documentation of immunity to rubeola measles to the Student Health Center **before they will be allowed to register for classes**. Required is medical documentation of having received two measles shots: 1) after January 1, 1968, 2) when recipient was at least one year of age and 3) at least 30 days apart. Or, prove immunity to rubeola measles by submitting a copy of a positive rubeola antibody blood test. Any questions may be directed to the Student Health Center.

### FINANCIAL AID

Old Main 265, 360-650-3470

See the *Financial Aid* section of this catalog.

### NEW STUDENT SERVICES/FAMILY OUTREACH

Old Main 330F, 360-650-3846

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

e-mail: [nssfo@wvu.edu](mailto:nssfo@wvu.edu)

New Student Services/Family Outreach provides programs and services to enhance students' and family members' connection to the University, and assist with their transition to the University and Bellingham community. Services provided include:

- Coordination of new student programs and orientation (Summerstart, Transitions, fall orientation, quarterly orientation, weekly e-mails and ongoing programs). Orientation provides students the opportunity to begin the academic advising process, become familiar with services, meet faculty, staff and current students, and complete placement tests
- Coordination of family orientation and outreach (summer orientation programs, Fall Family Open House, Western Showtime Family Weekend, and Parent Connection)
- Referral to campus and community resources
- Leadership opportunities for current students (orientation student advisors and coordinators)

### REGISTRAR

Old Main 230, 360-650-3430

See the *Registrar's* section of this catalog for information.

### STUDENT LIFE OFFICE

Viking Union 506, 360-650-3706

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

The Student Life office is comprised of Judicial Affairs and Student Assistance Services, and is dedicated to the

promotion of academic integrity and success, the development of students, and the creation of an environment that fosters retention and graduation.

### 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 judicial officer. Western Washington University affirms student standards of behavior to ensure respectful and lawful behavior, to enhance personal safety on campus, and to maintain our educational mission. The conduct system confronts students about 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, and at [www.wvu.edu/depts/dos/stulife/JA\\_sturesp.shtml](http://www.wvu.edu/depts/dos/stulife/JA_sturesp.shtml).

### Student Assistance Services

Student Assistance provides advice about academic and administrative policies, procedures and grievances, i.e., the academic grievance procedure; hardship withdrawal; approves emergency leaves of absence for nonmedical emergencies and personal crises; provides information about the University and about community resources; and assists students in problem solving within the University system.

### STUDENT OUTREACH SERVICES

Old Main 110, 360-650-3843

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

Student Outreach Services (SOS) supports the educational needs of all students; particularly, first generation, nontraditional, and multicultural students. SOS advisors provide students with personalized academic advising, assistance in developing educational plans, and positive intervention for those in academic risk. SOS also serves as a resource to academic departments. The SOS office is committed to academic success, retention, and graduation of all students.

### DISABILITY RESOURCES FOR STUDENTS

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

[www.wvu.edu/depts/drs/index.htm](http://www.wvu.edu/depts/drs/index.htm)

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



## STUDENT AFFAIRS AND ACADEMIC SUPPORT SERVICES

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### UNIVERSITY RESIDENCES

Edens Hall, 360-650-2950

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

See the *University Residences* section of this catalog.

### VIKING UNION/STUDENT ACTIVITIES

Viking Union 547, 360-650-3450

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

### STUDENT ACTIVITIES

Viking Union 547, 360-650-3450

The program of student activities at Western is designed to provide maximum opportunity for student engagement in a wide range of co-curricular experiences. Student activities are integral and highly important parts 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 educational and social experiences that build on classroom learning.

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

Opportunities to serve fellow students and to develop skills in a paraprofessional capacity are available in a wide variety of student-provided services. These include the Drug Information, Legal Information and Sexual Awareness centers; the Environmental Center; the Veterans Outreach Center; the Associated Students Recycling Center; the Ethnic Student Center; the Women's Center; the Lesbian/Gay/Bisexual/Transgender Alliance; the Social Issues Resource Center; and the Associated Students Child Development Center.

#### *Child-Care Facilities*

The Associated Students Child Development Center, a student/parent cooperative operated in Western's Fairhaven College 11 and 12, serves children of students and staff from 7:30 a.m. to 5:30 p.m. on the days Western is in session and during winter and spring breaks. Children from two through five years of age may be enrolled. To get on the waiting list, submit an application. Students' fees are on a sliding scale based on income. Rates are established according to the Center's annual budget. In addition to these payments, each member selecting the co-op option works a required number of hours per week at the Center. Others pay a non co-op fee. The center is accredited by the National Association for the Education of Young Children.

#### *KUGS Radio*

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 engineers, disc jockeys, newswriters, and managers. Offices and studios are on the seventh floor of the Viking Union.

#### *KVIK Western Television Production Organization*

KVIK creates and maintains broadcast television programs to showcase the work of Western students. KVIK seeks to provide firsthand experience for those interested in the fields of television broadcasting and video production. These productions represent students' original work and serve the campus by providing interesting, informative and entertaining media.

#### *Outdoor Activities*

Taking full advantage of the beautiful and varied country of Northwest Washington, the Outdoor Center functions as a catalyst and resource center for hiking, ski touring, mountaineering, snowshoeing, rock climbing, bicycling, backpacking, river rafting, camping, sailing, canoeing, kayaking, and many other activities. Included in the Outdoor Center are environmental, map, and outdoor libraries and sign-up sheets for trips, instructional activities, and many special events for both beginners and experts. A full range of outdoor equipment — such as kayaks, backpacks, skis and cycling/camping gear — is available for rent from the Outdoor Center Rental Shop. The Bike Shop provides the tools and supplies for students to maintain and repair their bicycles for a nominal fee and conducts related workshops. Location: First Floor Viking Union with outside access at North Garden Street.

#### *Associated Students Productions*

From socializing to social issues, Associated Students Productions is a student-run programming agency that brings to campus films, musical performances, open mics, musical performances, art shows, and current events presentations. Programs range from coffeehouse concerts to national speakers and weekly films to large concerts. Location: Viking Union 422.

#### *Recreational Opportunities*

Recreational facilities available to the University community include Lakewood, a 15-acre site on Lake Whatcom, which is operated by the Associated Students, and offers sailing, canoeing, swimming, boating and picnicking. Conference and meeting facilities are also available and Western's varsity crew program is housed at Lakewood. In addition, Viqueen Lodge, located on a 13-acre tract on Sinclair Island and operated by the Associated Students, offers overnight accommodations at the entrance to the San Juan and Gulf Islands. Intramurals, competitive sport clubs, instruction, and open recreational activities are also offered through the office of Campus Recreation in the Wade King Student Recreation Center.

#### *Clubs and Organizations*

Student clubs and student organizations offer involvement in a wide range of activities. Approximately 225 different organizations exist within the Associated Students, including groups such as Circle K, Kulshan Aikido Club, Swing Kids, and Western Animal Rights Network. Groups center around cultural, political, special interest, social issue, departmental/professional, service, religious, and recreational pursuits. Clubs offer opportunities to meet new people, develop new skills, and just have fun. A directory of clubs is available at [www.as.wvu.edu/clubs](http://www.as.wvu.edu/clubs).

#### *Viking Union*

As the community center of the campus, the Viking Union plays an integral role in the co-curricular program. The Union houses offices for the Associated Students' government, services and activities, and the Viking Union/Student Activities administrative offices. Also located in the 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, activity center, a publicity center/print shop, and program areas. Viking Union food service locations are Viking Union Market, VU Café, and the Underground Coffeehouse.

### *Associated Students Bookstore*

The Associated Students Bookstore provides textbooks, class supplies and materials, computers, and convenience and sundry items for the University community. All textbooks are discounted 10 percent. Gift items and specialty services, such as film processing, are available. AS Bookstore net revenues support student activities and programs.

### *Ethnic Student Center*

Located on the fourth floor of the Viking Union, the Ethnic Student Center contains offices for 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 Chicano de Aztlan), Mixed Identity Student Organization, Muslim Student Association, Native American Student Union, Punjabi Student Union, South Asian Student Association, and the Vietnamese Student Association. The Center also houses a coordinator/advisor, meeting and lounge spaces, and a central work space. In addition to serving as a base of operation and programming for student ethnic groups, the Center also is a meeting place for the entire University community. Location: Viking Union 420.

## **CAMPUS RECREATION SERVICES**

*Wade King Student Recreation Center 138, 360-650-3766*  
[www.acadweb.wvu.edu/recreate](http://www.acadweb.wvu.edu/recreate)

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, sport clubs, open recreation and noncredit exercise classes.

### *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 Western Washington University's campus community recreational needs. The SRC gives students, alumni, faculty and staff a dynamic and inviting place to stay fit alongside one another. All undergraduate and graduate students currently enrolled in 6 or more credits are automatically members by paying the mandatory student recreation center fee included in tuition. The SRC features a climbing wall; a three-court gym for basketball, volleyball, badminton, et cetera; three weight and cardio areas; an indoor jogging track; a multiactivity court for floor hockey, basketball, tennis, 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.

### *Noncredit 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, strength/toner, cardio kickboxing, yoga, hip hop dance, step aerobics, spin cycle and more. Classes are taught by qualified student and nonstudent instructors and serve nearly

500 students, faculty and staff. The classes are designed with the individual differences of the student population in mind.

### *Intramurals*

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 several events and provide additional promotional materials, special prizes and invitational playoff berths. Intramural sports are structured for different skill levels and are conducted in a safe, supervised environment.

### *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 time. Some of the sport club programs are co-recreational and allow members to be involved in scheduling and hosting events, arranging transportation and lodging, developing budgets and fundraising activities, 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, fencing, ice hockey, judo, lacrosse, men's volleyball, rugby, sailing, cycling, swimming, ultimate disc, tennis, water polo, men's crew, equestrian, and water skiing.

## **DEPARTMENT-RELATED ACTIVITIES**

Department-related activities provide opportunities for students to participate in a wide range of programs. Although faculty from appropriate departments work closely with these activities, students need not 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:

### *Dance Program*

*Carver 28, 360-650-3129*

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 that include everything from experimental movement theatre productions to collaborations between art and music departments to strictly traditional dance concert events. Students also have the opportunity to choreograph and perform for the dance touring program that visits the public schools in Washington. The program regularly 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 participation. Auditions are announced regularly. Contact the Dance Program in Carver Gymnasium Room 28 for further information.

### *Forensics*

*Communication Facility 295, 360-650-4879*

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

## STUDENT AFFAIRS AND ACADEMIC SUPPORT SERVICES

encourages achievement in tournament participation at all levels of competition, ranging from novice to championship division. 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.

For more information, contact the Department of Communication, Communication Facility 295.

### *Music Activities*

*Performing Arts 273, 360-650-3130*

The presence of the Department of Music has resulted in numerous student activities of high artistic and professional quality. The wide range of vocal and instrumental groups on campus provides musical activity for students at acceptable levels of ability, and the variety of musical entertainment available is sufficient to satisfy listeners of all tastes. Some of the opportunities for participation available to students are 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. See the Department of Music section of this catalog or contact the Department of Music for further information regarding organized music ensembles and auditions for membership.

### *Publications*

*Communications Facility 230, 360-650-3171*

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 the 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 and Huxley College of the Environment.

### *Theatre Arts*

*Performing Arts 395, 360-650-3876*

The Department of Theatre Arts offers a rich variety of opportunities in faculty- and student-directed productions — both on stage and off — to write, act and design. The broad range of productions during the academic year include musicals, dramas and comedies for a variety of periods. The touring theatre and the annual Summer Stock programs provide concentrated applied theatre experiences for both the beginner and the advanced student. Previous experience is not required 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/American College Theatre Festival. For further information, contact the Department of Theatre Arts, Performing Arts Center 395.

### *Western View (Video)*

*Communication Facility 295, 360-650-3870*

Student activity offers digital video production and editing experience. Informational and educational video instruction includes hands-on course work. Students produce video shown on the campus and for special off-campus audiences. Credit is available through the Department of Communication.



David Scherrer / WWU Publishing Services

# UNIVERSITY ACADEMIC POLICIES

## STUDENT RESPONSIBILITY FOR OBSERVING POLICIES

Students are directed to the Appendices in this *Catalog* for information on academic honesty, academic grievances, and other important policies.

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. Departments, faculty and staff may use e-mail for providing students with information relating to official University business instead of the U.S. Postal Service. The use of e-mail is not required; 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

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

College Board Advanced Placement Examinations			
Department	Minimum Score	Subject Examination	WWU Courses/Credit/GUR
Art	3 3 3	Art History Studio Art: Drawing Studio Art: 2-D or 3D Design	Electives (4 credits)/HUM Electives (4 credits) Electives (4 credits)
Biology	3	Biology	BIOL 101 (4 credits)/LSCI BIOL 102 (4 credits)/LSCI
Chemistry	3	Chemistry	CHEM 121 (5 credits)/LSCI CHEM 122 (5 credits)/LSCI
Computer Science	3	Computer Science A/AB	CSCI 141 (4 credits)/QSR
Economics	3 3	Micro Economics Macro Economics	ECON 206 (4 credits)/SSC ECON 207 (4 credits)/SSC
English	3-4	English composition and literature or English composition and language  (Students may receive credit for either English exam, but not both)	Minimum score of 3 earns 4 credits in Humanities. Score of 4 or higher earns 4 Humanities credits plus ENG 101 (4 credits)/ACOM
Environmental Science	3	Environmental Science	ESCI 101 (3 credits)/SCI
Geography	3	Human Geography	EGEO 201 (4 credits)/SSC
History	3 3 3	U.S. History European History World History	HIST 103, 104 (8 credits)/HUM HIST 113 (4 credits)/HUM Electives (4 credits)/HUM
Mathematics	3 3	Calculus AB/BC Statistics	Electives (5 credits)/QSR MATH 240 (4 credits)/QSR
Modern and Classical Languages	3 4 4	Language or Literature Exam in Chinese, French, German, Italian, Japanese, Latin, Spanish Language or Literature Exam in Chinese, French, German, Japanese, Latin, Spanish Language or Literature Exam in Italian (Students may receive credit for either Language or Literature exam but not both)	101 (5 credits) 101/102 (10 credits) 101 + 5 credits electives
Music	3 3	Music Listening/Literature Music Theory	MUS 104 (3 credits)/HUM Electives (3 credits)
Physics	3 3 3	Physics B Physics C — Mechanics  Physics C — Electricity and Magnetism	PHYS 114 (5 credits)/SCI PHYS 121 and 131 (5 credits)/LSCI PHYS 123 and 133 (5 credits)/LSCI
Political Science	3 3	U.S. Government and Politics Comparative Government and Politics	PLSC 250 (5 credits)/SSC PLSC 291 (5 credits)
Psychology	3	Psychology	PSY 101 (5 credits)/SSC



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. The maximum credit granted for Advanced Placement and Course Challenges is 45 total credits. 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* section)
- 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)*. The appropriate department determines acceptance and application of IB exams. Only higher level exams with a score of 4 or above may be considered for credit in certain subjects.

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.*

### 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

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 courses generally offered only once.

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 numbers 417, 517 are reserved for *Senior Seminar or Special Topics* (1-6). Topics vary. Repeatable with different subjects.

The numbers 217(m-z) and 317(m-z) are reserved for *Special Topics* (1-6) in extension programs. Topics vary. Repeatable with different subjects.

The numbers 445, 545 are reserved for *Current Trends* (1-6). Topics vary. Repeatable with different subjects.

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. 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, Summer Bulletin* on the web or by contacting Extended Education and Summer Programs.

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, the Summer Bulletin* on the web or by contacting Extended Education and Summer Programs.

### PREREQUISITES

The student is responsible for ensuring that he or she has satisfied all prerequisites 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 of classroom discussion or lecture, and one credit for every two hours 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; 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.

**SPAN CREDIT**

The Space Available to Nonmatriculated Students (SPAN) program 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 through SPAN.

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

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

**AUDITORS**

*Auditors* are persons who desire to attend courses without earning credit. Admission as an auditor requires prior approval of the instructor and registrar, and payment of required fees. Since auditors are not active participants, certain courses may not be audited (physical education activities, laboratory courses, studio courses, independent study, et cetera). Registering as an auditor is not allowed until the first day of classes, and only if space is available in the class. Changes to or from audit cannot be made after the first week of the quarter. See *Tuition and Fees* section for a description of audit fees.

Auditors are required to pay the full course fee for self-supporting courses.

**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**

For most purposes, it is necessary for an undergraduate to be enrolled for 12 credits or more in order to be considered full-time (e.g., eligibility for financial assistance, full-time veterans' benefits, participation in intercollegiate athletics). Graduate students, officially admitted to the Graduate School, are considered full-time for financial aid purposes and veterans' benefit purposes at 8 credits. *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.

### 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. 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. Nonmedical leaves of absence are available through the Student Life office and medical leaves through Health Services.

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 course instructors and/or the Student Life office.

### WITHDRAWAL FROM A COURSE

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.

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.

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 Web site and the *Summer Session Bulletin* on the Web.

To withdraw from an extension course (including SPAN), 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.

**Hardship Withdrawal.** A student who is unable to complete the quarter or a class 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 the 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.

Summer withdrawal deadlines and policies are published in the *Summer Session Bulletin* or on the Web.

### WITHDRAWAL FOR NONPAYMENT

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. A late fee of \$75 is applied for charges not paid by the quarterly payment deadline: Fall — October 15; Winter — January 15; Spring — April 15; Summer — July 15. A 1 percent interest charge will be assessed monthly on all past due accounts. Failure to pay an overdue balance will result in a fee of \$10 per credit. Once the nonpayment withdrawal action has been taken, it is possible to be reinstated by the final day of the quarter, but only with full payment of outstanding charges, late and reinstatement fees described above, and a \$35 handling fee. Reinstatements are not made after the end of the quarter.

### 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 (including SPAN). 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.

## 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 reviewed. 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* 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), NA (not applicable).

### 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 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 required for the major and minor, supporting courses, professional education requirements, writing proficiency requirement and General University Requirements cannot be taken Pass/No Pass; courses graded P/NP may not be applied to master's degree programs
- Graduate courses taken for the graduate degree cannot be taken Pass/No Pass; courses graded satisfactory/

- unsatisfactory cannot be taken pass/no pass
- Undergraduate 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 are not 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
- Courses applying to a major (including supporting courses) or a minor cannot be taken on the Pass/No Pass grading system; 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 concentrations
- 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 obtain a contract form from the appropriate department 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 grade point average for the quarter in which the K was assigned, nor will it affect the quarterly grade average in the quarter in which the final grade is recorded. 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 Intellectual 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). Intellectual 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 dishonesty, 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 above). 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, K and W 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 course that satisfies a student's 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, 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 or a public speaking course for admission to teacher education to achieve a grade of B- or better; the repeat registration for English composition or public speaking course prior to Phase III requires the written permission of the chair of the respective department
- Repeating a course will reduce a student's total credits used in determining his or her Phase I registration time



for the subsequent quarter

The student who registers to repeat a course should file with the Registrar's Office a "Course Repeat Card." 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.

### 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, Woodring College of Education, and All-University Programs (General Studies majors). Fairhaven College, 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 this action is taken before a student's record deteriorates to the point that reinstatement or admission to another college or university becomes impossible. In all cases involving poor scholarship, students are encouraged to consult with their advisers, instructors or the Academic Advising Center.

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 (including SPAN).

**Academic Warning.** A warning is issued to a first-quarter freshman 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, whose cumulative grade average falls below 2.00 is placed on academic probation. Such a student is in danger of academic dismissal and must make immediate improvement in his or her grade average (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 (including SPAN) 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 or summer and fall quarter, July 6 for fall quarter, October 6 for winter quarter and January 6 for spring quarter.

### ACADEMIC DISHONESTY 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 dishonesty policy and procedures at Western, see *Appendix D* in this bulletin.

### ACADEMIC GRIEVANCE POLICY

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

### STUDENT RECORDS POLICY

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

## GENERAL 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.

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.

### *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. See each major area's section of this catalog to determine whether a minor is offered. 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)
- ❑ **Complete an approved writing proficiency course at WWU** prior to graduating with a minimum grade of C-. (**NOTE:** Courses with an attribute of WP1 or WP2 do not, by themselves, complete the requirement. A total of 3 WP points are required to satisfy the University Requirement)
- ❑ **General University Requirements** (see following section). 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 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

### 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 CAPP Web page, <http://www.wvu.edu/depts/registrar/capp.shtml> for additional information.

In addition, each entering student is provided a Degree Planning Guide, a personal educational record and planning guide. It provides a convenient check list for completion of General University Requirements and includes space for records regarding admissions test scores, transfer credit evaluations, completion of major requirements, procedures for declaration of major and the degree application process.

### 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 Web site.

### PROCEDURES FOR APPLYING FOR A RESIDENCY TEACHER CERTIFICATE

Teaching certificates are not automatically issued when professional education endorsement requirements are met. It is the responsibility of the student to apply for the Residency Teacher Certificate through the Woodring College of Education Teacher Certification Office. Students must apply by the last day of classes, two quarters prior to entering their student teaching internship. Upon verification that program and 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 in the Teacher Certification Office, Miller Hall 216, 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 Western's Web site. 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, BA/Ed, 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 significantly on the same constellation of courses.

#### *Second Baccalaureate Degree*

A student who has already earned a baccalaureate degree 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 writing proficiency course at WWU (with a minimum grade of C-).

*\*\*Exception: The BFA in art 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 writing proficiency course 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 BA/Ed 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 BA/Ed degree.

## WRITING PROFICIENCY REQUIREMENTS

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.

- Block A of the GUR communications requirement: to be completed, with a grade of C- or better, prior to the accumulation of 45 credits, see the GUR section; ENG 101, *Writing and Critical Inquiry*, (4), (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 course requirement: to be completed, with a grade of C- or better, prior to graduation; students must complete Block B or C of the Communications GUR requirement before enrolling in a writing proficiency course; all students must satisfy this requirement by taking an approved writing proficiency course at Western (**Note:** courses with an attribute of WP1 or WP2 do not, by themselves, complete the requirement. A total of 3 WP points are required to satisfy the University Requirement)

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 base 75-100 percent of the course grades on revised versions of assigned writings

Upper-division writing proficiency courses emphasize research and writing above all other aspects of the course. 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*.

## GENERAL EDUCATION AT WESTERN WASHINGTON UNIVERSITY

The General University Requirements (GUR) 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.

General education engages 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 general education. Through the general education offerings, it is believed that students will lead fuller and more interesting lives, perceive and understand more the world around and within them, and encourage them to be 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



## UNIVERSITY GRADUATION REQUIREMENTS

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

### GENERAL UNIVERSITY REQUIREMENTS (GURs)

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, the Woodring College of Education, and Huxley College of the Environment. Students enrolled in Fairhaven College of Interdisciplinary Studies, see the Fairhaven College area 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 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. 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- (math courses must be passed with a grade of C- or higher if used as a prerequisite to another course).

### SYMBOLS

Please note the use of GUR symbols in the Timetable of Classes. Courses which qualify as General University Requirements are designated by the appropriate code (ACOM, BCOM, CCOM, QSR, HUM, SSC, ACGM, BCGM, LSCL, 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 C.

- **Block A (ACOM)**
  - **ENGLISH (ENG)**
    - 101 — Writing and Critical Inquiry (4). 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)
    - 203 — Writing in Context (5)
  - **JOURNALISM (JOUR)**
    - 207 — Newswriting (4)
  - **MODERN AND CLASSICAL LANGUAGES**
    - Arabic (Arab) 103 (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) 103 (4), 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)
  - **HISTORY (HIST)**
    - 203 — Writing about Gender and Race in the U.S. 1492-1877 (5)
  - **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 symbolic reasoner has the ability to understand the logic and validity of an



argument 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:**

**NOTE:** A student may test out of MATH 107 or 112, but not both. MATH 112 was formerly MATH 102.

**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)**  
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:**

- **MATH (MATH)**  
112 — Functions and Algebraic Methods (5)
- **PHILOSOPHY (PHIL)**  
102 — Introduction to Logic (3)

**Option 4, One course from:**

- **MATH (MATH)**  
114, Precalculus I (5)  
115 — Precalculus II (5)  
118 — Accelerated Precalculus (5)  
124 — Calculus and Analytic Geometry (5) (*Only one of MATH 124 and MATH 134 may be taken for credit*)  
134 — Honors Calculus I (5) (*Only one of MATH 124 and MATH 134 may be taken 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, Bachelor of Arts in Education — Elementary Education Students Only:**

- **MATH (MATH)**  
381 — Teaching K-8 Mathematics I (4)  
382 — Teaching K-8 Mathematics II (4)

## HUMANITIES

The Humanities requirement provides and 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 principle 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 I, Complete three 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)
- **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 (5)  
282 — Introduction to Global Literatures (5)  
283 — Introduction to Global Literatures (5)  
336 — Scriptural Literatures (5) (*Only one of ENG 336 and LBRL 335 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)  
151 — Communities of the Ancient World (4)

## UNIVERSITY GRADUATION REQUIREMENTS

- 155 — The Idea of Utopia (4)
- 199 — Thinking Historically (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)
- 205 — Colloquium in History (4)
- 255 — Ethics (3) *(Only one of HNRS 255 and PHIL 112 may be taken for credit)*
- 256 — Knowledge and Reality (3) *(Only one of HNRS 256 and PHIL 114 may be taken for credit)*

- **JOURNALISM (JOUR)**

- 340 — History of Mass Media (3)

- **LIBERAL STUDIES (LBRL)**

- 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 (4)
- 232 — Myth and Folklore (4)
- 243 — Art and Ideas (4)
- 323 — The Romantic Paradox: Love, Life, and Death (4)
- 332 — Universal Religions: Founders and Disciples (4)
- 333 — Religion in America (5)
- 335 — The Biblical Tradition (5) *(Only one of LBRL 335 and ENG 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

- 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) *(Only one of PHIL 112 and HNRS 255 may be taken for credit)*
- 113 — Introduction to Philosophy: Philosophy of Religion (3)
- 114 — Introduction to Philosophy: Knowledge and Reality (3) *(Only one of PHIL 114 and HNRS 256 may be taken for credit)*
- 340 — Philosophy of Science (3)
- 350 — Political Philosophy (3) *(Only one of PHIL 350 and PLSC 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 PLSC 261 and PHIL 350 may be taken for GUR credit)*

- **RECREATION (REC)**

- 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)

- **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 three 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 ANTH 201 and HNRS 253 may be taken for credit)*
- 210 — Introduction to Archaeology (5)
- 247 — Language and Culture in Society (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 — Explorations in the Scholarship of Teaching (4)

- **ENVIRONMENTAL STUDIES (ESTU)**

- 202 — Introduction to Environmental Studies and Sustainability (3)

- **FAIRHAVEN (FAIR)**

- 211b — The American Legal System (5) *(Only one of FAIR 211b, MGMT 271, PLSC 311 may be taken for GUR credit)*

- **GEOGRAPHY (GEO)**

- 201 — Human Geography (4)
- 209 — Geography and World Affairs (2)
- 312 — Geography of the World Economy (4)

- **HONORS (HNRS)**

- 121 — Introduction to Political Science (4) *(Only one of HNRS 121 and PLSC 101 may be taken for credit)*
- 251 — Psychology (4) *(Only one of HNRS 251 and PSY 101 may be taken for credit)*
- 252 — Sociology (4)
- 253 — Anthropology (4) *(Only one of HNRS 253 and ANTH 201 may be taken for credit)*
- 254 — Economics (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 PLSC 311, FAIR 211b, and MGMT 271 may be taken for GUR credit)*

- **PHYSICAL EDUCATION (PE)**

- 201 — Perspectives of Human Lifestyle and Wellness (3)

- **POLITICAL SCIENCE (PLSC)**

- 101 — Government and Politics in the Modern World (5) *(Only one of PLSC 101 and HNRS 121 may be taken for credit)*
- 250 — The American Political System (5)
- 271 — Introduction to International Relations (5)
- 311 — Introduction to Law and Judicial Process (5) *(Only one of PLSC 311, FAIR 211b and MGMT 271 may be taken for GUR credit)*
- 372 — International Political Economy (5)

- **PSYCHOLOGY (PSY)**

- 101 — Introduction to Psychology (5) *(Only one of PSY 101 and HNRS 251 may be taken for credit)*
- 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 AND BCGM)

This section of the GUR provides an introduction to the 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 two courses, one from Block A and one from Block B:

□ **Block A: Primary Emphasis Outside North America**

- **ANTHROPOLOGY (ANTH)**
  - 362 — Peoples of Asia (5)
  - 364 — Peoples of the Pacific (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: 1492-1824 (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)
  - 155 — The Non-Western Traditions (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)
- 338 — Mysticism (5)
- 370 — Major Asian and African Traditions: The Traditional Order (4)
- 371 — Major Asian and African Traditions: Their Modern Fate (4)
- 372 — Individual and Society in Recent African and Asian Literature (4)
- 373 — Ideology, Policy and Experience in the Contemporary Non-European World (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.*)
  - CHINESE (CHIN) 200 level and above
  - JAPANESE (JAPN) 200 level and above

- **MUSIC**
  - 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 Native-American 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)
  - 261 — Black History in the Americas (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)
  - 362 — Asian American History (5) [Also taught as AMST 362]
- **HONORS (HNRS)**
  - 106 — Major Cultural Traditions IV (4)
- **JOURNALISM (JOUR)**
  - 375 — Diversity, Mass Media and Social Change (4)
- **PSYCHOLOGY (PSY)**
  - 119 — Psychology of Gender (4)

## UNIVERSITY GRADUATION REQUIREMENTS

- **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 AND SCI)

The Natural Sciences requirement provides an introduction to the content 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 three of the following courses. At least two of the courses must include a laboratory component (LSCI attribute), marked in the list with an asterisk (\*).**

**NOTE:** Several of the courses in this list have prerequisites.

- ANTHROPOLOGY (ANTH)**
  - \*215 — **Introductory Biological Anthropology (5) LSCI**
- ASTRONOMY (ASTR)**
  - 103 — Introduction to Astronomy (4) SCI
- BIOLOGY (BIOL)**
  - \*101 — Introduction to Biology (4) LSCI
  - \*102 — Biological Diversity: Evolution and Systems (4) LSCI
  - 150 — Marine Biology (3) SCI
  - \*204 — Introduction to Evolution, Ecology Biodiversity (4) LSCI
  - \*205 — Introduction to Cellular and Molecular Biology (5) LSCI
  - \*206 — Introduction to Organismal Biology (5) LSCI
- CHEMISTRY (CHEM)**
  - \*101 — Chemical Concepts (4) LSCI
  - \*115 — General Chemistry (5) LSCI
  - \*121 — General Chemistry I (5) LSCI
  - \*122 — General Chemistry II (5) LSCI
  - \*123 — General Chemistry III (4) LSCI
  - \*125 — General Chemistry I, Honors (5) LSCI
  - \*126 — General Chemistry II, Honors (5) LSCI
  - \*225 — General Chemistry III, Honors (5) LSCI
  - \*251 — Elementary Organic Chemistry (5) LSCI
- COMMUNICATION SCIENCES AND DISORDERS (CSD)**
  - 253 — Speech and Hearing Sciences for the Liberal Arts (4) SCI
- ENVIRONMENTAL SCIENCE (ESCI)**
  - 101 — Environmental Studies: A Scientific Approach (3) SCI
  - 204 — The Oceans: Topics in Marine Science (4) SCI
- GEOGRAPHY (EGEO)**
  - \*203 — Physical Geography (4) LSCI
- GEOLOGY (GEOL)**
  - \*101 — Introduction to Geology (4) LSCI
  - 202 — Plate Tectonics and Continental Drift (4) SCI
  - 204 — Geology and Society (3) SCI
  - \*211 — Physical Geology (5) LSCI
  - \*212 — Historical Geology (4) LSCI
  - 214 — Environmental Geology (3) SCI
  - \*252 — The Earth and Its Weather (4) LSCI
  - 308 — Earthquake Geology (3) SCI
  - 315 — Minerals, Energy, and Society (4) SCI
  - 340 — Geological Oceanography (3) SCI
- HONORS (HNRS)**
  - \*157 — Physics (4) LSCI
  - \*158 — Geology (4) LSCI
  - \*159 — Biology (4) LSCI

- INTERDISCIPLINARY SCIENCES, TECHNOLOGY AND MATHEMATICS (ISTM)**
  - 201 — Scientific Literacy (3) SCI
- PHYSICS (PHYS)**
  - \*101 — Physics Analysis (4) LSCI
  - 102 — Physics and Society (3) SCI
  - \*104 — Physics Applications (4) LSCI
  - 114 — Principles of Physics I (5) SCI
  - \*115 — Principles of Physics II (5) LSCI
  - \*116 — Principles of Physics III (5) LSCI
  - \*121 — Physics with Calculus I (4) with PHYS 131 lab (1) LSCI
  - \*122 — Physics with Calculus II (4) with PHYS 132 lab (1) LSCI
  - \*123 — Electricity and Magnetism (4) with PHYS 133 lab (1) LSCI
- SCIENCE EDUCATION (SCED)**
  - \*201 — Matter and Energy in Physical Systems (4) LSCI
  - \*202 — Matter and Energy in Earth Systems (4) LSCI
  - \*203 — Matter and Energy in Life Systems (4) LSCI
  - \*294 — Investigative Science (4) LSCI

### 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 'first-year' students, 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:**
- HIST 155, The Idea of Utopia
  - HIST 158, Race and Identity in Modern America
  - DNC 120, Making Movement Art
  - PSY 117, Psychology of Identity

### 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 Web site.

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 graduation requirements for baccalaureate degrees as listed in the *Degree Planning Guide* and catalog.

### 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.

GURs must be completed by a candidate for a baccalaureate degree except where the student has demonstrated proficiency through an acceptable college-level examination or through challenge procedure (see "Advanced Placement and Course Challenge" in the *Academic Regulations* section of the catalog).

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.

# ALL-UNIVERSITY 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 SERVICE-LEARNING

360-650-7542

[www.wvu.edu/depts/cls](http://www.wvu.edu/depts/cls)

Service-learning is an experiential learning method that combines academic instruction with community-based learning by connecting classroom learning to community needs through service projects. Service-learning offers students the opportunity to explore the richness and diversity of their community, examine social justice issues, and make a contribution to the well-being of the community.

The Center for Service-Learning has a vision to seamlessly integrate the needs and assets of the community with the learning needs and resources offered by Western students and faculty. Through service-learning, Western students will combine their academic learning with the fundamental skills of social responsibility and service. Western offers many courses that include service-learning.

## 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 can earn credit from Asia University and are not matriculated at Western. Approximately 120 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 and Community Friends programs; these programs provide intercultural contacts that go 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 public schools throughout Whatcom County; the AUAP's "Friends from Japan" program 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@cc.wvu.edu](mailto:auap@cc.wvu.edu); or visit the AUAP Web site at [www.wvu.edu/~auap](http://www.wvu.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. The noncredit IEP classes focus on preparing students for these academic experiences, and helping them to adapt socially and culturally to living in the U.S. The program emphasizes creating opportunities for Western students and IEP international students to interact, both in the classroom and through informal conversational situations.

While in the IEP, some international students enroll in Western classes through a conditional admission agreement with the undergraduate Office of Admissions or through SPAN, the space-available enrollment program administered by Extended Education and Summer Programs.

The Intensive English Program is linked to academic areas of the University in these ways:

- The advanced students may gain conditional admission to the University, enrolling in both IEP and Western credit classes, thus continuing to polish language and academic skills during the first quarters of matriculation
- IEP works with Western faculty to facilitate intercultural experiences for current Western students in communications, management, psychology, speech pathology, 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@cc.wvu.edu](mailto:iep@cc.wvu.edu), or visit the Web page at [www.wvu.edu/depts/iep/](http://www.wvu.edu/depts/iep/)

### International Programs and Exchanges

International Programs and Exchanges (IPE) administers Western's study abroad and international exchange 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. Qualified students for all study abroad, international exchange, and

domestic exchange programs are concurrently enrolled at the University and at the host university or institution, earn WWU credit, and maintain financial aid eligibility.

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, preparation and maintenance of immigration records and programs. IPE also assists internationals with resolving financial, academic, employment and personal difficulties in coordination with other university offices and community resources.

The minor in International Studies consists of completion of an approved international study program or exchange, International Studies courses, a foreign language, and course work in other related fields. See the *International Studies* section in the *Interdisciplinary Programs* section of this catalog.

Study abroad and exchange 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).

### 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.

### 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 the 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 280M, 360-650-3268, [careers@wwu.edu](mailto: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](mailto:Paul.Chen@wwu.edu); Julie Helling, Fairhaven College, FA 333, 360-650-4907, [Julie.Helling@wwu.edu](mailto: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 280M, 360-650-3268, [careers@wwu.edu](mailto:careers@wwu.edu); [www.careers.wwu.edu/premedweb/PrePro4.asp](http://www.careers.wwu.edu/premedweb/PrePro4.asp)

## ALL-UNIVERSITY PROGRAMS

### Pharmacy

Programs at Washington State University and University of Washington lead to a Doctor of Pharmacy degree. Western provides courses which prepare students for admission to the College of Pharmacy at either institution. 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. Students are encouraged to contact the school of their choice for detailed information.

Recommended curriculum:

- BIOL 204, 205, 206, 321 or 323, 345, 346, 348, 349
- CHEM 121, 122, 123 (begin 121 as soon as possible), 351, 352, 353, 354, 471, 472
- ENG (Expository Writing) 101 and 202, 203 or 302
- MATH 124, 240 or 341, 342
- Humanities — 10 credits minimum
- Social sciences — 10 credits minimum

Program Advisor: Dr. George Kriz, Director of Advising for Pre-Healthcare Professions, OM 280, 360-650-3268, 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 204, 205, 348, 349
  - CHEM 121, 122, 123
  - PHYS 114, 115, 116
  - PSY 101, 230 or 250
  - Statistics
- Other recommended courses:
- Microbiology (5 credits)
  - PE 308, 311, 312, 410, 413
  - CHEM 251

Advisor: Dr. Kathleen Knutzen, Department of Physical Education, Health and Recreation, CV 107, 360-650-3055, Kathy.Knutzen@wwu.edu, [www.ac.wwu.edu/~knutzen/PTAdvise](http://www.ac.wwu.edu/~knutzen/PTAdvise)

## 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 transferrability 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, 131, 132, 133, 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 110, 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, newcomj@cc.wvu.edu.



David Scherrer / WWU Publishing Services

# GRADUATE SCHOOL

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
- Master in Teaching (MIT)

The purpose of graduate study at WWU is to provide students with 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 Association of Schools and Colleges. Graduate programs which result in educator certification are also accredited by the National Council for the Accreditation of Teacher Education. 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 and by the National Council for the Accreditation of Teacher Education. The mental health and school counseling programs are accredited by CACREP. The Rehabilitation Counseling program is accredited by the Council on Rehabilitation in Education. 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 Summer Session *Bulletin* (online) 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 Web site. Paper application

forms may be requested or downloaded from the Web site 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. The fee also applies if the student enrolls in self-supporting courses. 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. 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 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 course work must be upper division. Post-baccalaureate course work 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 Web site). 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.
  - 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 two years, then destroyed. If during this two-year period an applicant reapplies, 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, in effect since October 1985, states that scores are reportable for five years. The Graduate School will accept scores from admissions tests no older than five years at the time of application and taken within the last five years.

### *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 of 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. International students must file a satisfactory statement of financial responsibility and of sponsorship 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. To apply, submit the graduate assistantship application (online) to the Graduate School. Some programs have specific due dates; see individual

## GRADUATE SCHOOL

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program description. Additional information is available from the Graduate School Web site.

### *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.wvu.edu/](http://www.finaid.wvu.edu/).

### **PROGRAM REQUIREMENTS**

Graduate programs at WWU generally require a minimum of 45 credits with thesis/field project (referred to as Option I) and 48 credits without thesis/field project (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, 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.wvu.edu/depts/rsp](http://www.wvu.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 two years, then destroyed. Files of students who are admitted and register for course work 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 course work 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**

Course work 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 course work 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/field project) or Option II (additional course work and, in most programs, a comprehensive exam). See specific program descriptions for information. Minimally, the thesis committee has three members, and the field project committee has two. For thesis committees, the chair and a second member must be regular graduate faculty members from the student's department or program. For a field project, the chair must be a regular graduate faculty member from the student's department. Guidelines for the thesis and field project are available online at the Graduate School Web site. Joint manuscripts are not permitted. Only an individually authored manuscript will meet the thesis or field project requirements. Departments that require the thesis/field project customarily provide additional guidance.

A minimum of three hard-bound copies of the thesis or field project is required, two for the Graduate School and one for the committee chair. Some departments also require a fourth copy for their departmental library.

Prior to registration for thesis or field project, departments and the Graduate School require that a student be advanced to candidacy and have an approved thesis/field project topic card 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.wvu.edu/depts/rsp](http://www.wvu.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 course work 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 is allowed toward completion of the program (courses listed on the approved plan of study). More than 10 credits of C+ or lower and U grades removes a

student from the master's program. (No graduate credit is allowed for D+ or lower, or U grades.) There are certain courses that must be passed with a grade of B or better; course descriptions note such courses. 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/field project and certain research courses. In these cases, the K grades are allowed to stand until the thesis/field project 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/field project 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

## GRADUATE SCHOOL

interested in certification at the P-12 or secondary level, contact the Secondary Education Department, MH 306, 360-650-3327. Students interested in Special Education P-12 certification, contact the Special Education Department, MH 320, 360-650-3330. Other certification questions can be directed to the Teacher Certification Office, Miller Hall 216, 360-650-4930 or [www.wce.wvu.edu/resources/certification/](http://www.wce.wvu.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 course work 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.

## Anthropology

*College of Humanities and Social Sciences*

### 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.

**Grimes, Michael**, PhD, biological anthropology, physiology, nutrition and metabolism, reproduction, endocrinology, lactation, fertility analysis.

**Hammond, Joyce D.**, PhD, visual anthropology, gender studies, expressive culture, fieldwork methods, and Pacific Asian Rim tourism.

**Kimball, Linda A.**, PhD, anthropological linguistics, archaeoastronomy, Central, Southeast and Island Asia, Pacific.

**Koetje, Todd A.**, PhD, archaeology, quantitative methods, spatial studies, method and theory; paleolithic Old World, paleoindian-archaic Northeast U.S.

**Loucky, James**, PhD, applied anthropology, socialization, immigration, cross-cultural education, Latin America.

**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.

### MA — ANTHROPOLOGY, THESIS ONLY

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 career 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 backgrounds in anthropological history, or in theory and methods, 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.

#### Basic Requirements

- ANTH 501 (5)
- ANTH 502 (5)
- ANTH 503 (5)
- At least one course from each of the following areas or another course selected under advisement: Culture Region: ANTH 460, 462, 511, 553, 563, 564, 565, 576
- Methods: ANTH 470 (3-5), 473, 506, 510, 515, 520, 528, 554, 571, 572, 580 [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, 457, 475, 484, 522, 524, 525, 529, 531, 540, 566, 576, 581

- ANTH 690 (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.

## Art

### College of Fine and Performing Arts

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).

## Biology

College of Sciences and Technology  
<http://www.biol.wwu.edu/biology/>

### GRADUATE FACULTY

Acevedo-Gutierrez, Alejandro, PhD, marine vertebrate ecology.  
 Anderson, Roger A., PhD, vertebrate behavioral and physiological ecology.  
 Broadhagen, 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.  
 Muller-Parker, Gisèle, PhD, marine algal ecology and symbiosis.  
 Otto, Joann J., PhD, cell biology.  
 Peterson, Merrill A., PhD, insect ecology and evolutionary biology.  
 Schulze, Sandra, PhD, chromatin structure and nuclear organization in drosophilia.  
 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.  
 Williams, Don C., PhD, cellular and molecular biology.  
 Young, Jeff C., PhD, plant genetics.

### MS — BIOLOGY, THESIS ONLY

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

- Thesis research: BIOL 690 (12-36)
- BIOL 501 (3)
- BIOL 525 (4)
- BIOL 598 (2)
- 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.

### MS — BIOLOGY (MARINE AND ESTUARINE SCIENCE), THESIS ONLY

Visit the Marine and Estuarine Science graduate program Web site, [www.ac.wwu.edu/~mesp/](http://www.ac.wwu.edu/~mesp/)

Curriculum Coordinators: Dr. Brian Bingham, Huxley College of the Environment; Dr. Deborah Donovan, Department of Biology

For a complete list of participating faculty and their research interests, and for additional information, visit the MESP Web site.

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

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an understanding of coastal marine and estuarine environments, biota and topical management issues, and fundamental biological and chemical oceanographic processes.

### Prerequisites

Students matriculated through the biology department must meet the prerequisites for admission described in the "Biology, Thesis Only" option.

### Application Information

**Admit Quarter:** Fall quarter only.

**Deadline:** For full consideration, completed applications must be received by February 1.

### Supporting Materials:

- A statement of interest and identification of three potential faculty advisors, plus transcripts, references, and test scores

## PROGRAM REQUIREMENTS

At least 45 total combined credits from the following areas:

### Requirements in Specialization

- Thesis research: BIOL 690 (12-36)
- BIOL 501 (3)
- BIOL 525 (4)
- BIOL 505 (1)
- BIOL 598 (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 (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.

## Business & Economics

*College of Business & Economics*

### GRADUATE FACULTY

**Bajwa, Deepinder**, PhD, management information systems.  
**Benson, Earl D.**, PhD, finance.  
**Burton, Brian K.**, PhD, business environment.  
**Dunn, Craig P.**, PhD, business environment.  
**Dupont, Brandon**, PhD, economic history, labor economics.  
**Fewings, David R.**, PhD, finance.  
**Garcia, Joseph E.**, PhD, organizational behavior.  
**Gilbertson, David L.**, PhD, auditing/financial accounting.  
**Globerman, Steven**, PhD, international business.  
**Hagen, Daniel A.**, PhD, environmental/international/labor/micro economics.  
**Hall, Pamela L.**, PhD, finance.  
**Hansen, Julia L.**, PhD, urban/labor economics.  
**Harder, K. Peter**, PhD, economic history.  
**Haug, Peter**, PhD, operations management.  
**Henson, Steven E.**, PhD, microeconomics, applied econometrics.

**Hodges, Hart**, PhD, economics.  
**Hua, Stella**, Operations management and quantitative methods.  
**Hutton, Marguerite R.**, PhD, taxation.  
**Jagdish, Vinit K.**, PhD, microeconomics, managerial economics.  
**Kim, Eugene**, PhD, marketing.  
**Kim, Ilhyung**, PhD, operations and technology management.  
**Kim, Jongwook**, business policy and strategic management.  
**Knabb, Shawn D.**, PhD, macroeconomics, public finance, growth.  
**Krieg, John**, PhD, econometrics, money and banking, macroeconomics.  
**Lewis, L. Floyd**, PhD, management information systems.  
**Liao-Troth, Matthew**, PhD, human resources/organizational behavior.  
**Lockhart, Julie A.**, MS/CPA/CMA, managerial accounting.  
**Mottner, Sandra**, PhD, marketing.  
**Murphy, Dennis R.**, PhD, managerial decisions/international finance.  
**Nelson, David M.**, PhD, macroeconomics/money markets.  
**Nielsen, Bo Bernhard**, PhD, international business.  
**Olney, Thomas J.**, PhD, marketing.  
**Plumlee, E. Leroy**, DBA, business environment.  
**Reynolds, Mary Ann**, PhD, accounting.  
**Roehl, Thomas**, PhD, international business.  
**Roelofs, Matthew**, PhD, managerial economics.  
**Ross, Steven C.**, PhD, management information systems.  
**Rystrom, David S.**, PhD, finance.  
**Safavi, Farrokh**, DBA, marketing.  
**Sailors, William M.**, MS/CPA, accounting systems.  
**Sanders, George D.**, PhD, financial/governmental accounting.  
**Sandvig, J. Christopher**, management information systems.  
**Sass, Mary**, PhD, organizational behavior and development.  
**Singleton, William R.**, PhD, taxation.  
**Smith, Steven H.**, PhD, managerial accounting.  
**Springer, Mark**, PhD, operations management.  
**Storer, Paul**, PhD, economics.  
**Sula, Ozan**, PhD, international finance, macroeconomics, money and banking.  
**Taylor, Audrey**, managerial accounting.  
**Tyran, Craig K.**, PhD, management information systems.  
**Tyran, Kristi M.**, PhD, organizational behavior.  
**Warner, Daniel M.**, JD, business law.  
**Wilhelm, Wendy J. Bryce**, PhD, marketing.  
**Williams, Terrell G.**, PhD, marketing.  
**Wonder, Bruce D.**, PhD, human resource management.  
**Wonder, Nicholas**, corporate finance  
**Zhang, Zhe George**, PhD, statistics.

## MASTER OF BUSINESS ADMINISTRATION, NON-THESIS

*MBA Program Office, Parks Hall 419, 360-650-3898*  
e-mail: mba@wwu.edu; fax: (360) 650-4844  
Program Director: Dr. Brian K. Burton

### Goals

The MBA program in CBE provides 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.

### Application Information

**Admit Quarters:** Summer (accelerated track), fall (regular track), 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
- 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 Description*

The MBA curriculum offers three specific programs of study to meet the needs of different groups of students. MBA program applicants must have a bachelor's degree; however, that degree need not be in business or a business-related area. Additional information on the regular full-time MBA, the accelerated full-time MBA, and the evening part-time MBA is available in the *MBA program* section of this catalog.

**MASTER OF PROFESSIONAL ACCOUNTING (MPAcc), NON-THESIS**

**Graduate Program Office:** Parks Hall 419, 360-650-3898

**E-mail:** mba@wwwu.edu

**Fax:** 360-650-4844

**Program Director:** Dr. Brian K. Burton

*Goals*

The MPAC 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.

*Admissions 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
- Two sets of official transcripts from all previous college-level work
- Personal statement of background and intention
- Résumé showing work experience
- Application deadline: May 1

*Program Description*

Additional information on the MPAcc is available in the *College of Business and Economics, Accounting* section of this catalog.

*College 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.

**Chemistry**

*College of Sciences and Technology*

**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.

**Daley, Christopher J.A.**, PhD, bioinorganic chemistry, asymmetric catalysis.

**Emory, Steven R.**, PhD, analytical chemistry, spectroscopy, nanomaterials.

**Gammon, Steven D.**, PhD, chemical education, computer-based instruction.

**Kriz, George S.**, PhD, physical organic chemistry.

**Lampman, Gary M.**, PhD, synthetic organic chemistry, organometallic chemistry.

**Patrick, David L.**, PhD, analytical and computational chemistry of condensed phases.

**Pavia, Donald L.**, PhD, synthetic and structural organic chemistry, computer applications.

**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.

**Vyryan, James R.**, PhD, organic synthesis, natural products, asymmetric catalysis.

**Williams, Loren D.**, PhD, nucleic acid structure, interactions, folding, design, covalent damage and deformation.

**MS — CHEMISTRY, THESIS AND NON-THESIS**

Program Advisor: Dr. Mark E. Bussell

*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: CHEM 595 (2), 596 (3), 690 (12), plus 28 credits under advisement
- Non-thesis options: Industrial Internship — CHEM 501 (6), 595 (2), 596 (3), 694 (6-12), plus 31 credits under advisement

### Thesis Option for Master of Science Chemistry Students

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.

### Industrial Internship Option for Master of Science Chemistry Students

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.

## Communication Sciences and Disorders

*College of Humanities and Social Sciences*

### 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.

**Seilo, Michael T.**, PhD, audiology, aural rehabilitation, speech acoustics, aural (re)habilitation, speech perception.

**Zeine, Lina**, PhD, adult language disorders, voice/laryngectomee.

## MA — COMMUNICATION SCIENCES AND DISORDERS, THESIS AND NON-THESIS

### 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.

### Options: Thesis or Non-Thesis

Graduate Coordinator: Dr. Lina Zeine, Parks Hall 17, 360-650-3178

Speech-language pathology and audiology are disciplines which 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 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 their locales.

### 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.

**Deadline:** Application deadline is February 1. The communication sciences and disorders program is a lock-step program which offers courses in sequence once a year beginning in the fall.

**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
- 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

### Speech-Language Pathology (minimum 71 credits for non-thesis; minimum 74 for thesis)

- Requirements:
  - *Academic:* CSD 502, 510, 515, 548, 550, 551, 552, 552a, 553, 554, 555, 556, 557, 558, 564, 575, 580<sup>#</sup>, 581<sup>\*</sup>, 582<sup>\*</sup>, 585, 586, 587, 588, 589, 599a or b
  - CSD 690 thesis (6 credit minimum) or 691 non-thesis option (3 credits)
  - Comprehensive exam
- Electives
  - CSD 552b, 560, 564, 570, 598a or b, 599b<sup>\*\*</sup>, and other 400- and 500-level courses selected under departmental advisement

<sup>#</sup> Required for students intending to apply for Washington state CDS certificate.

<sup>\*</sup>Two of three courses in the series (580, 581, 582) are required.

<sup>\*\*</sup>Although the internship courses (598a,b; 599a,b) are 1-4 and 8 credits each, respectively. Only a total of 6 credits can apply toward the MA degree.

### 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. 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 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)

## GRADUATE SCHOOL

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.

## Computer Science

*College of Sciences and Technology*

### 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.

### MS — COMPUTER SCIENCE

Program Advisor: Dr. Debra S. Jusak. Send e-mail related to the graduate program in computer science to [gradinfo.cs@wwu.edu](mailto:gradinfo.cs@wwu.edu). For further information concerning the program, consult the departmental Web pages 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. For example, the applicant may have extensive work experience in the field.

#### 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 Web site.

**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 510 Automata Theory and Complexity
- CSCI 511 Design and Analysis of Algorithms
- CSCI 512 Design and Implementation of Computer Programming Languages
- CSCI 513 Systems Programming and Operating Systems Internals
- 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.

- CSCI 590 Graduate Seminar

#### 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 510-513 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 510 replaces CSCI 401, CSCI 511 replaces CSCI 405, CSCI 512 replaces CSCI 410, CSCI 513 counts as four of the 12 elective credits required for the BS degree. 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.

### *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.

### *Qualifying Examination*

A qualifying exam covering CSCI 510, 511, 512 and 513 will be given to the student after the completion of the four core curriculum 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.

### *Elective Courses*

Each student in the MS program in computer science must identify an area of concentration. This is chosen in conjunction with a research project area described below. The student is required to take the elective courses offered in support of this area of concentration. Some areas will require two courses while others may require three. In addition, the student must select additional elective courses from all remaining elective offerings to total five elective courses. In any event, the student must complete all elective courses associated with the chosen area of concentration as designated by the program advisor.

### *Research Experience*

In addition to the four core courses and six 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 CS 601, CS 602 and CS 603. Section numbers for these courses are used to identify the specific project. The CS 601, CS 602 and CS 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:* 3-6 courses x 1 credit = 3-6 credits (variable)

*Elective Courses:* 5 courses x 4 credits = 20 credits

*Research Experience Courses:* 3 courses x 4 credits = 12 credits

*Total:* 55-58 credits

## Education

### GRADUATE FACULTY

*Woodring College of Education*

Carney, Joanne, PhD

Carroll, David, PhD

Clark Blickenstaff, Jacob, PhD

Coskie, Tracy, PhD

Daffron, Sandra, EdD

Derrington, Mary Lynne, EdD

Fox, Sheila L., PhD

Goto, Stanford, PhD

Harwood, Angela, PhD

Henniger, Michael, PhD

Hoelscher, Karen, EdD

Howell, Kenneth W., PhD

Hughes, Eileen, PhD

Hyatt, Keith, EdD

Jongejan, Anthony, PhD

Kasprisin, Lorraine, PhD

Kelley, Bridget, PhD

Keiper, Robert W., EdD

Keiper, Timothy, PhD

Krogh, Suzanne L., PhD

Lambert, M. Chuck, PhD

Larson, Bruce, PhD

Larsen, Donald E., PhD

Mancuso, Susan, EdD

MacConnell, Kristen L., PhD

McDuffy, E. Kristine, EdD

Marrs, Lawrence W., PhD

McClanahan, Lauren, PhD

Miller, Matthew, PhD

Nolet, Victor, PhD

Ohana, Chris, PhD

Riddle Buly, Marsha, PhD

Robinson, LeAnne, PhD

Salzman, Stephanie, EdD

Sheppard, Shelby L., PhD

Slentz, Kristine L., PhD

Swett, Elizabeth, PhD

Thorndike-Christ, Tracy, PhD

Wayne, Kathryn, PhD

Wolpow, Ray, PhD

## COMMON REQUIREMENTS

### *Admission*

## GRADUATE SCHOOL

Students' applications are first reviewed by the Graduate School before consideration for admission to a specific program. Contact the graduate program advisor for information about specific test requirements for admission. Test requirements: Graduate Record Exams (GRE) or Miller Analogies Test (MAT). Consult program advisor for recommended test. No graduate Record Exams (GRE) or Miller Analogies Test (MAT) is required if an applicant holds an advanced degree.

### *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.

## **MEd — ADVANCED CLASSROOM PRACTICE**

*Woodring College of Education*

Dr. Sheila Fox, Coordinator

Miller Hall 256E, 360-650-3332

No new applications are being accepted at this time.

## **GRADUATE FACULTY**

See Woodring Graduate Faculty listing.

The Master of Education in Advanced Classroom Practice focuses on the knowledge and skills associated with the accomplished practice of teaching in P-12 classrooms. The curriculum of the program is based on current research on teaching and learning, including principles and practices in educational research, learning and motivation theory, instructional design, curriculum and philosophical foundations, assessment and technology.

### *Application Information*

Candidates must meet the requirements of the Graduate School in addition to the following departmental requirements:

**Specific Test Requirements:** Miller Analogies Test or Graduate Record Exam, General Test.

#### **Supporting Materials:**

- A résumé
- Two years' teaching experience (P-12 classroom)
- 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.

### *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.

### *Program Option — Thesis or Research*

#### *Seminar and Inquiry Project*

The department requires students to submit a proposal for a thesis (690) or inquiry project (691) for approval by the student's committee prior to registering for 690 or 691 (ELED, IT or SPED, depending on the focus area). The thesis (690) and inquiry project (691) represent the independent research component of the program. For both options, students design and carry out independent research under the direction of a faculty committee. The thesis option (690) requires a committee of three faculty. Two faculty are required for the committee directing the inquiry project (691).

### *Comprehensive Assessment*

Comprehensive assessment of 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 and defense
- Research seminar and inquiry project

### *Courses*

- Option I: Thesis — 48 credits
  - Core Requirements: EDUC 501, 502, 504, 505, 506; IT 503 [24]
  - Thesis Requirements: 690\* [5]
  - Focus (Electives) under Advisement: Emphasis in specialized fields; courses selected under advisement from instructional technology, literacy, special education, and related fields [19]
- Option II: Non-Thesis — 48 credits
  - Core Requirements: EDUC 501, 502, 504, 505, 506; IT 503 [24]
  - Research Seminar: 691\* [5]
  - Focus (Electives) under Advisement: Emphasis in specialized fields; courses selected under advisement from instructional technology, literacy, special education, and related fields [19]

\*ELED, IT, or SPED, depending on the focus area.

**Med — CONTINUING AND COLLEGE EDUCATION**

*Department of Educational Leadership*

**GRADUATE FACULTY**

Daffron, Sandra, EdD.

Goto, Stanford, PhD.

Jongejan, Anthony, PhD.

Mancuso, Susan, EdD.

Program Advisor: Dr. Sandra Daffron, Miller Hall 314A, 360-650-2977, Sandra.Daffron@wwu.edu

**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 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 three optional areas:

- Community and Technical College Teaching [19 credits]
- Teaching English to Speakers of Other Languages (TESOL) [26 credits]
- Instructional Design and E-Learning [20 credits]; refer to the *Instructional Technology* section under Woodring

College of Education

For more information, see the Continuing and College Education Web site at [www.wce.wwu.edu/depts/cce](http://www.wce.wwu.edu/depts/cce).

**PROGRAM OF STUDY****Requirements**

- Option I: Thesis — 50 credits
  - Core courses: CCE 501, IT 546, CCE 554 or SAA 555, CCE 571 or IT 560, CCE 576, CCE 577 [23-24]
  - Field Experience: CCE 592 [4 minimum-8 maximum]
  - Thesis: CCE 690 [6-9]
  - Electives under advisement [9-17]
- Option II: Non-Thesis — 50 credits
  - Core courses: CCE 501, IT 546, CCE 554 or SAA 555, CCE 571 or IT 560, CCE 576, CCE 577 [23-24]
  - Research: CCE 591 [2]
  - Field Experience: CCE 592 [4 minimum-8 maximum]
  - Electives under advisement: [15-20]
  - Graduation seminar: CCE 599 [1]
  - Comprehensive assessment

**Certificate Program*****Certificate In Community And Technical College Teaching***

*Department of Educational Leadership*

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 OF STUDY*****Graduate Certificate Option (19 credits)***

- CCE 518, 542, 556, 577, 580
- Internship: CCE 592

**Med — EDUCATIONAL ADMINISTRATION**

*Department of Educational Leadership*

**GRADUATE FACULTY**

Jongejan, Anthony, PhD.

## GRADUATE SCHOOL

Derrington, Mary Lynne, EdD.  
Larsen, Donald E., PhD.  
Marrs, Lawrence W., PhD.  
McDuffy, E. Kristine, EdD.

### Program Goals

The program prepares elementary and secondary school teachers to assume leadership roles as principals, vice principals or instructional technology specialists.

The Educational Administration program is designed to prepare elementary and secondary school teachers to assume leadership roles as principals, vice principals 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.

### Elementary/Secondary, Instructional Technology

Graduate Advisor and Director: Dr. Kristine McDuffy, Miller Hall 204C, 360-650-2546, Kristine.McDuffy@wwu.edu

Program Manager: Judy Gramm, Miller Hall 204A, 360-650-3708, Judy.Gramm@wwu.edu

Instructional Technology: Dr. Tony Jongejan, 360-650-3381, Tony.Jongejan@wwu.edu

The Educational Administration program is offered at four sites — Bellingham, Bremerton, Seattle, and Everett (superintendent certification).

For more information, see the Educational Administration Web site at [www.wce.wwu.edu/depts/edad/](http://www.wce.wwu.edu/depts/edad/) or the Instructional Technology Web site at [www.wce.wwu.edu/depts/it/](http://www.wce.wwu.edu/depts/it/).

### Application Information

#### Supporting Materials:

- Course background appropriate to level of specialization
- One year (180 days) of successful school-based instructional experience with students (e.g., teaching) — three years preferred
- Application for admission to Graduate School
- A current résumé
- Two letters of recommendation from sponsoring district for school administrator candidates, in lieu of Graduate School personal reference forms
- Official transcript(s) showing all previous course work
- Satisfactory Graduate Record Exam (GRE) or Miller Analogies Test (MAT) scores
- Two-page or 500-word essay titled "Why I Want to Pursue a Career in Administration"
- 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 430

### Options

Consistent references will be made in this section to Options I, II and III.

Option I is a minimum of 52 credits, including EDAD 690 (thesis). Option II is a minimum of 52 credits followed by a comprehensive assessment. Option III is a minimum of 54 credits, including 6 credits of EDAD 556 and a comprehensive assessment.

### Courses

- Option I: Thesis— 52 credits
  - Core courses: EDAD 501, 512, 541, 543, 552 [20]
  - Thesis: EDAD 690 or IT 690 [9]

- Electives selected under advisement, e.g., law, finance, personnel, staff/community relations, instructional technology [23]
- Option II: Non-Thesis with Comprehensive Assessment — 52 credits
  - Core courses: EDAD 501, 512, 541, 543, 552 [20]
  - Electives selected under advisement, e.g., law, finance, personnel, staff/community relations, instructional technology [32]
  - Comprehensive assessment
- Option III: Non-Thesis with Field Study and Comprehensive Assessment — 54 credits
  - Core courses: EDAD 501, 512, 541, 543, 552 [20]
  - Field study: EDAD 556 [6]
  - Electives selected under advisement, e.g., law, finance, personnel, staff/community relations, instructional technology [28]
  - Comprehensive assessment

New standards for the principal (administrator) preparation program went into effect August 2004. According to WAC 180-78A-100(2):

*All principal/program administrator programs shall be reviewed for approval standards of Chapter 181-78A by August 31, 2004. Colleges and universities may permit individuals accepted into principal/program administrator programs on or before August 31, 2004, to obtain certification by meeting requirements of programs approved under 1997 approval standards described in Chapter 181-78A WAC if the individuals complete the program on or before August 31, 2006, and the college/university verifies program completion to the superintendent of public instruction on or before December 31, 2006.*

### Principal's Residency Certificate

Candidates for the Washington State Residency Principal's Certificate shall have a valid Washington state teaching or ESA certificate,\* one year (180 days) of successful school-based instructional experience with students (e.g., teaching), although three years is preferred, and a master's degree in educational administration (program to include approved certification course work). A 12-credit, one-year internship with a mentoring principal is required in addition to the master's degree. 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.

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), although three years is preferred, and have a master's degree in a field other than educational administration may become eligible for the initial principal's certificate by completing 36 credits of required course work under advisement and a 12-credit, one-year internship with a mentoring principal.

Applicants for admission to this program should contact the Educational Administration Office, Miller Hall 204A.

### Principal's Continuing Certificate

For the Washington State Continuing Principal's Certificate, candidates must hold a valid Washington state teaching or ESA certificate,\* complete a 15 quarter hour (10 semester hour) continuing education program (through SBE-approved college/university) or 150 clock hours (in consultation with and approved by employer) based on performance domains, in addition to three years (540 days) of contracted employment as principal, vice principal, or assistant principal. In addition, a course or course work (minimum 1 quarter hour or 10 clock hours)



relating to issues of abuse is required. Course work must be done under advisement and after proper application has been made to the Educational Administration office, Miller Hall 204A.

*\*NOTE: Verification of good moral character and personal fitness (forms available in the Educational Administration Office, Miller Hall 204A, 360-650-3708, are required if the applicant does not hold a valid Washington certificate at the time of application and recommendation.*

### Superintendent's Certificate

Candidates for the Washington State Initial Superintendent's Certificate must hold a valid\* teacher, educational staff associate, program administrator, or principal certificate; 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. Applicants for admission to this program should contact the educational administration office, Miller Hall 204A.

*\*NOTE: Verification of good moral character and personal fitness (forms available in the educational administration office, Miller Hall 204A, 360-650-3708) are required if the applicant does not hold a valid Washington certificate at the time of application and recommendation.*

### MEd — ELEMENTARY

Department of Elementary 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

### MEd — READING

Department of Elementary 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

### MA — REHABILITATION COUNSELING

Department of Human Services and Rehabilitation

Program Director: Dr. Elizabeth Swett, 425-771-7435, Elizabeth.Swett@wwu.edu.

#### Goals

The Master of Arts in Rehabilitation Counseling prepares rehabilitation professionals to assist individuals with disabilities to enhance their lives in meaningful ways, including self-determination, independence, meaningful 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.

### GRADUATE FACULTY

Swett, Elizabeth, PhD.

#### Application Information

**Admit Quarters:** Fall, winter. For cohort option, summer admit only.

**Application Deadlines:** Application deadlines are June 1 for fall quarter and October 1 for winter quarter. Application deadline for the cohort option is April 1, with early admission decisions beginning January 1. Late applications may be considered until May 1 on a space available basis.

#### 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
- Computer competence is expected

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 shown by either work or volunteer experiences with persons with disabilities. Applicants are expected to demonstrate strong writing skills.

#### Retention

In addition to the Graduate School retention requirement, 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 Information

The Rehabilitation Counseling program prepares students to work with individuals with disabilities in a variety of public and private settings. Students learn how to assist individuals to adjust to the psychological, social, medical, and vocational impact of a disability on their lives. Graduates of the program are competent to assess abilities and functional limitations

## GRADUATE SCHOOL

of people with disabilities, develop a plan consistent with their needs, and assist them to achieve their goals through appropriate training, education, and employment.

Rehabilitation counselors are employed in state rehabilitation agencies, private nonprofit agencies, hospitals, mental health centers, private counseling firms, and universities, among other organizations. Students in graduate rehabilitation counseling programs typically have undergraduate degrees in human services, psychology, sociology, nursing, or some other area of social services. Rehabilitation counseling is a dynamic, exciting field with excellent employment opportunities in both the public and private sectors.

Two options are available for completing the degree program: a cohort option with a combination of distance learning courses and two face-to-face courses each fall and a Seattle-based option of classroom-based courses in the evening in the Seattle area combined with distance learning courses.

For further information, see the Rehabilitation Counseling program Web site at [www.wwu.edu/rc](http://www.wwu.edu/rc).

### Comprehensive Examination

Students are required to pass a comprehensive examination prior to graduation during the last quarter in the program.

## PROGRAM OF STUDY

### Requirements (Option II, non-thesis only)

minimum 72 credits

- RC 501, 580, 582, 583, 584, 585, 586, 587, 588, 589, 590, 594, 595 [41]
- Practicum/Internship: RC 591 (5), 592 (20) [25]
- Electives selected under advisement [6]

## CERTIFICATE IN DISABILITY MANAGEMENT

A special certificate 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, two or more years of experience in a field relating to vocational rehabilitation and/or serving individuals with disabilities or concurrent enrollment in a master's program in counseling. The program includes 15 credits of course work, taken in the classroom or using distance learning methodologies.

For application materials and more information, contact the Rehabilitation Counseling program at 425-771-7429.

## MEd AND MIT — SECONDARY EDUCATION

*Department of Secondary Education*

### GRADUATE FACULTY

Ashcraft, Catherine, PhD.

Clark Blickenstaff, Jacob, PhD.

Harwood, Angela, PhD, graduate advisor.

Kasprisin, Lorraine, PhD.

Keiper, Robert, EdD, graduate advisor.

Keiper, Timothy, PhD.

Larson, Bruce, PhD.

McClanahan, Lauren, PhD., graduate advisor.

Nolet, Victor, PhD.

Sheppard, Shelby L., PhD.

Wolpov, Ray, PhD.

### Goals

The program prepares students to teach at the secondary school level.

### Department of Secondary Education

Graduate Advisor: Dr. Robert Keiper, Miller Hall 306D, 360-650-3986, [Robert.Keiper@wwu.edu](mailto:Robert.Keiper@wwu.edu)

The secondary education graduate faculty offer the following graduate degree programs:

### Master in Teaching (MIT)

This degree program is designed for students who wish to complete a master's degree while gaining state of Washington residency certification. Students must have completed a baccalaureate degree and must have a major in one of the state-approved endorsable academic majors. This degree program combines the endorsable major 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 at the extension site in Seattle.

### Master in Education

This degree program is designed for certified teachers and includes the following specializations or concentrations:

- High School Curriculum and Instruction
- Middle School Curriculum and Instruction
- Instructional Technology
- Native American Education
- Professional Certification

The secondary education department is not accepting applications for this program at this time.

### Prerequisites

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 (45 on pre-2004 tests). Test scores are not required if an applicant holds an advanced degree
- Satisfactorily complete the WEST-B exam. For schedule and registration information, refer to the WEST-B Web site, [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
- Résumé
- English composition course with a grade of B or better
- 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
- 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 bachelor's degree with a state-approved endorsable major (see listing 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 the Washington State Patrol fingerprint check, 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.

### Graduate Study Options

Western's Graduate School offers both Option I (thesis/field project) and Option II (comprehensive assessment/research seminar) degree programs. The MIT is an Option II only degree program which requires completion of a comprehensive assessment and a seminar research course, with a program of at least 48 credits.

### Deadlines

Applications and supporting materials must be received by the Graduate School for the corresponding quarter of admission by the following deadlines:

Fall quarter .....	April 1
Winter quarter .....	October 1
Seattle location (summer quarter only)*.....	February 1

for priority consideration; late applications accepted only on a space available basis

*\*This self-supporting, off-campus, summer-start program admits students only for summer.*

### Master in Teaching — Option II

(74 credits)

- Research and Foundations — 12 credits
  - SEC 501, 512, 513 [12]
- Secondary Master's Requirements — 34 credits
  - SEC 433 [1]
  - SEC 435 [2]
  - SEC 436 [1]
  - SEC 510 [2]
  - SEC 525, 531, 532, 533, 534 [20]
  - SPED 510 [4]
  - IT 544 [4]
- Internship — 24 credits
  - SEC 595 [24] (see Internships)
- Research Course [4-6]
- SEC 691 [1-6]

Remaining program and certification requirements can be found in the *Secondary Education* section of this catalog.

## MEd — SPECIAL EDUCATION

Department of Special Education  
Miller Hall 326, 360-650-3981

### GRADUATE FACULTY

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 certificated teachers who 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 the departmental admission requirements may be granted provisional admission by the Graduate School.

### Advancement to Candidacy

Advancement to candidacy is formal recognition that the student has met all admission requirements and has demonstrated satisfactory performance in at least 12 credits of graduate study.

### Program Options — Thesis (690) or Research Paper (691)

Qualified students can choose from the following options:

- Option I — Thesis
  - Master's degree with Thesis (690) and special education endorsement
  - Master's degree with thesis (690) only
- Option II — Research Paper
  - Master's degree with Research Paper (691) and special education endorsement
  - Master's degree with Research Paper (691) only

### Thesis and Research Paper

The department requires students to submit a proposal for a thesis (690) or research paper (691). This proposal must be approved by the student's committee prior to registering for SPED 690 or SPED 691. In SPED 690 or SPED 691 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. 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:

- Thesis proposal, paper, and defense
- Research seminar and research paper

### Courses

Options including a special education teaching endorsement (52 credits)

- Core requirements: EDUC 501, IT 503, SPED 567\* [14]
- SPED course work: SPED 466, 474, 560, 562, 563, 564, 565, 568 [32]
- Research paper requirement: SPED 691 [6] or thesis requirement SPED 690 [6]

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\* [14]
- SPED course work: A minimum of 10 hours in Special Education and others by advisement [32]
- Research paper requirement SPED 691 [6] or this requirement SPED 690 [6]

\*Repeatable — 6 credits required.

## MEd — STUDENT AFFAIRS ADMINISTRATION IN HIGHER EDUCATION

Department of Educational Leadership

Program Advisor: Dr. Susan Mancuso, Miller Hall 314C, 360-650-6552, Susan.Mancuso@wwu.edu

### GRADUATE FACULTY

Mancuso, Susan, EdD.

### Goals

The program prepares professionals for work in student affairs in higher education.

### Application Information

**Admit Quarters:** Summer (each cohort begins summer quarter).

**Deadline:** Application deadline is February 1 for priority consideration.

**Graduate Assistant Deadline:** Deadline to apply for a graduate assistantship is February 1 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 collect all application materials, then forward the packet directly to the Graduate School, Old Main 530.

**Interview:** An interview with the admissions committee will take place in April.

### 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 manage 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 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 student affairs is an integral component of the program. The research requirement is a comprehensive practitioner research project, though students may choose a thesis option.

For more information, see the Student Affairs Administration program Web site at [www.wce.wwu.edu/depts/saa](http://www.wce.wwu.edu/depts/saa).

### PROGRAM OF STUDY

#### Requirements

- Core courses: SAA 501, 555, 557, 558, 559, 560, 561, 562, 564, CCE 556 (I and II: 34)
- Elective: With advisement (II only:3)
- Research: SAA 690 (I:7); SAA 691 (II:6)
- Internship: SAA 592 (I and II:9)
- Graduation Seminar: SAA 599 (I and II:2)
- Comprehensive assessment (I and II)

#### Graduation Requirements

- Thesis (I:52)
- Non-thesis (II:54)

## Engineering Technology

College of Sciences and Technology

### GRADUATE FACULTY

Dillman, Steven, PhD.

Kitto, Kathleen, MSME.



Oslapas, Arunas, MFA.

## MEd — TECHNOLOGY EDUCATION

Program Advisor: Dr. Steven H. Dillman, Ross Engineering Technology 204

The graduate program in technology education is not currently 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, Dr. Steven Dillman, dillman@cc.wvu.edu.

## English

*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 cybercultural 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, cyberculture, 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.

**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, cyberculture, science fiction, 18th century women's literature.

**Purdy, John Lloyd**, PhD, contemporary American literature, Native American literatures, Canadian and New Zealand literatures.

**Qualley, 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.

**Vulić, Kathryn**, PhD, medieval British and Continental literatures and culture, devotional literature.

**Yu, Ning**, PhD, American literatures, science and literature.

## MA — ENGLISH, THESIS AND NON-THESIS

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

## GRADUATE SCHOOL

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 and Non-Thesis)

#### Core Requirements

- ENG 501 and 25 credits in literature, criticism, rhetoric or ENG 513; 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) for the non-thesis student; 10 credits from those areas for the thesis student and five credits in ENG 690; occasionally electives in other departments may be chosen in consultation and with permission of the English department graduate program advisor

### Creative Writing (Thesis)

#### Core Requirements

- ENG 501, 20 credits in creative writing (fiction, drama, poetry, nonfiction prose) and five credits in ENG 690
- Electives: 15 credits in literature, criticism, rhetoric or ENG 513; only five of these 15 credits may be in English 500, Independent Study; occasionally electives in other departments may be chosen in consultation and with permission of the English department graduate program advisor

### 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 English Studies must demonstrate reading competence in a foreign language acceptable to the department's Graduate Studies Committee. Normally competence 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 in creative writing may either fulfill the foreign language requirement or take five additional credits in literature, criticism or rhetoric.

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.

## Environmental Studies

#### Huxley College of the Environment

- Department of Environmental Sciences
- Department of Environmental Studies: Policy, Planning, Education and Geography

### GRADUATE FACULTY

**Abel, Troy**, 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, island geography, community development.

**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, paleontology, energy, ecological models.

**Cancilla, Devon A.**, PhD, environmental chemistry, environmental toxicology, chemical ecology.

**Harper, Ruth M.**, PhD, aquatic toxicology, biochemical and genetic toxicology, environmental chemistry.

**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.

**Levy, Jason K.** PhD, emergency management, hazard mitigation, risk analysis, multicriteria decision support systems.

**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**, PhD, sustainable development for disaster risk reduction, social vulnerability, community resilience.

**Mookherjee, Debnath**, PhD, comparative urbanization, regional development and planning.

**Myers, O. Eugene**, PhD, environmental education, conservation psychology, human ecology, environmental history and ethics.

**Rossiter, David A.**, PhD, geographies of 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.

**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, human dimensions of natural resources, multicultural perspectives in resource management.

**Zaferatos, Nicholas C.**, PhD, community and environmental planning, sustainable development, European environmental policy.

### MS — ENVIRONMENTAL SCIENCE, THESIS ONLY

Program Advisor: Dr. Leo R. Bodensteiner, Environmental Studies 442

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.

## Goals

The program prepares students to describe, predict and/or manage natural systems and to assess human impacts on those systems

## MS Specializations

- *Freshwater Ecology*. This specialization focuses on the study of physical, chemical and biological processes in freshwater systems, including lakes, streams and watersheds.
  - Specialization courses: ESCI 411, 421, 425, 463, 500 (when freshwater topic), 502, 503, 517 (when freshwater topic), 522, 529, 530, 533, 540, 545 (when freshwater topic), 559, 597 (when freshwater topic), 599 (when freshwater topic)
- *Environmental Toxicology and Chemistry*. 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.
  - Specialization courses: ESCI 450, 500 (when toxicology/chemistry topic), 502, 503, 517 (when toxicology/chemistry topic), 533, 545 (when toxicology/chemistry topic), 555, 556, 557, 558, 559, 590, 597 (when toxicology/chemistry topic), 599 (when toxicology/chemistry topic)
- *Regional, Global and Terrestrial Ecosystems*. 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.
  - Specialization courses: ESCI 431, 500 (when terrestrial ecosystem topic), 502, 503, 507, 517 (when terrestrial ecosystem topic), 523, 533, 535, 536, 539, 542, 545 (when terrestrial ecosystem topic), 562, 590, 592, 597 (when terrestrial ecosystem topic), 599 (when terrestrial ecosystem topic); EGEO 504, 535, 552
- The Marine and Estuarine Science 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

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.

Additional requirement in MES option: BIOL 505 (1)

Specialization courses: ESCI 421, 425, 426, 500 (when marine topic), 502, 503, 517 (when marine topic), 521, 522, 533, 540, 542, 545 (when marine topic), 597 (when marine topic), 599 (when marine topic); BIOL 503, 508, 545 (when marine topic)

Visit the Marine and Estuarine Science graduate program Web site, [www.ac.wvu.edu/~mesp](http://www.ac.wvu.edu/~mesp), for a complete list of participating faculty and their research interests.

## 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 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 Web site, [www.ac.wvu.edu/~huxley](http://www.ac.wvu.edu/~huxley), prior to contacting potential faculty advisors; students are admitted into the program only upon agreement of potential faculty advisors

## Program Requirements

Forty-five to 69 credits; a minimum of 45 credits are required, including: ESCI 501 (3); 30 credits of course work, including three courses from one of the areas of specialization, or course substitutions, under advisement; and 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 on campus at Western Washington University 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.wvu.edu](mailto:huxgrad@cc.wvu.edu).

## MS — GEOGRAPHY, THESIS

Program Advisor: Dr. Michael J. Medler, Arntzen Hall 210

## Program Goals

The program prepares students in the development and management of environmental resources for careers in business, government, planning, consulting, teaching and research.

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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. The program prepares students for careers in business, government, planning, consulting, teaching and research.

### *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.

### *Program 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 Web site, [www.wvu.edu/depts/huxley](http://www.wvu.edu/depts/huxley), prior to contacting potential advisors; students are admitted to the program only upon agreement of potential faculty advisors.

### *Program Requirements*

45 to 69 credits; a minimum of 45 credits are required, including: EGEO 501 (3), 502 (4), 503 (4), 504 (5); 17 credits of elective courses selected under advisement; and 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.

### *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.

## Med — ENVIRONMENTAL EDUCATION

- *Residency in Environmental Education*
- *Environmental Education Thesis or Field Project*

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.

### Residency in Environmental Education — Non-thesis 52-54 credits

#### 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

- Core requirements
  - ESTU 571, 575, 587, 588, 589 (21)
  - A written and oral comprehensive exam
- Requirements in specialization
  - ESTU 572, 573, 574, 576, 577, 578, 581 (28)
- 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.

### Thesis or Field Project in Environmental Education (47-53 credits)

#### 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

- Core requirements
  - ESTU 571, 575, 587, 588, 589 (21)
- Requirements in specialization
  - ESTU 690a or 690b (6-12)
- Electives
  - Courses selected under advisement and including at least 10 credits in environmental studies, geography, or environmental science (20)

## Geology

### College of Sciences and Technology

### 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.

## MS — GEOLOGY, THESIS

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

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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.

### *Program Requirements*

#### *Course Work — Thesis Option*

Forty-five to 48 credits; 35 or more credits of graduate-level courses (500- and 600-level) and no more than 10 from 400-level courses. The 600-level credits shall include 12-15 credits of GEOL 690. The 500-level courses shall include 6 credits of GEOL 595.

#### *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.

## History

*College of Humanities and Social Sciences*

### **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.

**Mariz, George**, PhD, European intellectual history, Great Britain.

**Miran, Marie H.**, PhD, West Africa, Muslim Africa.

**Neem, Johann N.**, PhD, Early U.S. Republic.

**Ritter, Harry R.**, PhD, modern Europe.

**Stewart, Mart A.**, PhD, 19th-century U.S., Civil War and Reconstruction, Environmental.

**Thompson, Roger R.**, PhD, China.

**Truschel, Louis W.**, PhD, African history.

**van Deusen, Nancy E.**, PhD, Latin America.

**Wright, Diana E.**, PhD, Japan.

### **Affiliates**

**Friesen, Kitty**, paper conservator, Archives.

**Kurtz, Anthony**, MA, MLS, Arcives and Records Management.

### **FIELDS OF STUDY**

- National, Continental, or Regional Studies
- Ancient, Medieval, Early Modern or Modern Periods
- Comparative History (see graduate faculty areas of specialization)
- Archives and Records Management

### **MA — HISTORY, THESIS AND NON-THESIS**

For further information, contact departmental office, Bond Hall 364, 360-650-3429.

### *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 Options*

The department offers two programs — Option I (thesis) and Option II (non-thesis):

*Option I (Thesis): Basic Requirements 45 credits*

- HIST 505 (4)
- HIST 690 [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

*Option II (Non-Thesis): Basic Requirements 48 credits*

- HIST 505 (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

*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; and archives and records management. Students who choose Option I 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. Students who choose Option II 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 either Option I or II, 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.

## GRADUATE PROGRAM IN 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 recordkeeping 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.

*Course 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 (4)
- HIST 525 (4)
- HIST 526 or 528 (4)
- HIST 530 or 532 (4)
- HIST 535 AND 536 (20)
- HIST 538 (4)
- HIST 690 (12)
- Two graduate courses in history (8)
- Elective courses (12)

*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

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to any aspect of archives, records management, or to any field of history.

### ARM Certificate Program

The department also offers a 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.

#### Requirements

ARM certificate students with an advanced degree in history must complete 36 credits.

- HIST 525 [4]
- HIST 530 or 532 [4]
- HIST 535 and 536 [20]
- Two of the following: HIST 526, 528, 530, 534, 532, or 538 [8]

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).

#### Language Requirement

The foreign language requirement is the same as for the MA in history. 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, 202, MIS 314) with final course grade of B or better, or as approved by the history faculty.

## Mathematics

*College of Sciences and Technology*

### 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.

**Byrtek, Michelle L.**, PhD, statistics.

**Cave, Linda M.**, PhD, mathematics education.

**Chalice, Donald R.**, PhD, Banach algebras, complex dynamics.

**Chan, Victor**, PhD.

**Curgus, Branko**, PhD, differential equations, operator theory.

**Gardner, Richard J.**, DSc, geometry, tomography.

**Glimm, Tillman**, 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.

**Lindquist, Norman F.**, PhD, coding theory, partition theory.

**McDowall, Stephen R.**, PhD, inverse problems.

**Naylor, Michael E.**, PhD, mathematics education.

**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.

**Woll, John W.**, PhD, algebra and probability.

**Ypma, Tjalling J.**, DPhil, numerical analysis.

**Zhang, Jianying**, PhD, numerical partial differential equations.

#### Prerequisites

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.

#### Application Information

**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 Web page at [www.ac.wvu.edu/~mathweb/](http://www.ac.wvu.edu/~mathweb/) for specifics.

### MS — MATHEMATICS, PROJECT WITH THESIS OPTION

Program Advisor: Dr. Don Chalice, Bond Hall 232, 360-650-3454

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.
- mental health counseling

#### Program Requirements — MS In Mathematics

In most cases the student's program must include at least 45 credits (thesis option) or 48 credits (without thesis). 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, 503, 560, 564, 566
- Analysis: MATH 523, 524, 525, 527, 528, 539, 562
- Decisions: MATH 535, 542, 545, 547, 548, 570
- Applied: MATH 510, 511, 573, 575, 577

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 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 department's 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.

## Music

*College of Fine and Performing Arts*

### GRADUATE FACULTY

**Banister, Suzanne**, PhD, music education.

**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.

## MASTER OF MUSIC, THESIS ONLY

Program Advisor: Dr. Edward Rutschman, Performing Arts Center 273

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.

### *Basic Requirements for All Concentrations*

- MUS 541, 542, 543 (12)
- MUS 503 (4)
- MUS 532 and 533 (6)
- 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.

### *Requirements and Electives for Each Concentration*

## GRADUATE SCHOOL

### *Composition Concentration*

- MUS 534 (12)
- Electives (5)

### *History and Literature Concentration*

- MUS 443 [select two] (6)
- MUS 441 (3)
- MUSIC 540 [for three quarters] (6)
- MUS 550 (3)

### *Performance Concentration*

- Elect one of the following courses in each of three quarters:
- MUS 540, 574, 575, 578, 581, 583 or any approved 400-level or 500-level course(s) (6)
  - MUS 511, 512, 513, 514, 515, 518 or 576 (9)
  - Electives (2)

### *Conducting Concentration (Choral Conducting, Orchestral Conducting, Band Conducting)*

- Conducting Studies (9-17)
  - 9 credits from MUS 501, 502, 519; 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, 542, 543, 544, 550, 531, 534 and approved 400-level and/or 500-level course(s)
- Applied Music (0-9)
  - MUS 511-515, 518 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, 502, 525 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, 534, 541, 542, 543, 544, 550, or any approved 400-level or 500-level course(s)
- Applied Music (0-9)
  - MUS 511-515, 518 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)

### *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.

*Students in history and literature concentration* must pass a reading exam in French or German.

*Candidates for the Master of Music degree* must successfully complete a final oral exam.

## Natural Science/Science Education

*College of Sciences and Technology*

### GRADUATE FACULTY

Acevedo-Gutierrez, Alejandro, PhD, biology.

Clark Blickenstaff, Jacob, PhD, secondary education.

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.

Whitmer, John C., PhD, chemistry.

### Med — NATURAL SCIENCE/SCIENCE EDUCATION

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 Options

#### Option I — Thesis or Field Project (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.

#### Option II — Research Project, non-thesis (48 credits)

This option involves an action research project culminating in an oral presentation and written summary.

### 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

- EDUC 501, 506; IT 503; SCED 501, 513, 515 [I, II: 22]

#### Focus (electives) under advisement [I, II:20]

- Emphasis in specific disciplines, pedagogy, assessment or science education research. At least 11 credits must be taken at the 500 level.

#### Option I

- Thesis or Field Project — SCED 690a or 690b [6-12 credits]

#### Option II

- Research Project — SCED 598 [6]

## Physical Education, Health and Recreation

College of Humanities and Social Sciences

### 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.

**Vernacchia, Ralph**, PhD, psychology of sport/sociology of sport/motor learning.

### MS — HUMAN MOVEMENT AND PERFORMANCE, THESIS

Program Coordinator: Dr. Dennis Caine, CV 24  
360-650-3529

#### 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 program provides educational experiences that develop individuals who understand human movement, can make informed decisions about improving human movement, and can promote health and physically active lifestyles through human movement and performance.

#### Prerequisites

Physical education 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 (PE 306, 308, 311, 312, 410, 413), one behavioral and cultural foundations course (PE 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 (PE 306, 308, 311, 312, 410, 413), two behavioral and cultural foundations courses (PE 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.

Students applying for the sport psychology program must have a minimum of 15 credits in undergraduate psychology courses.

#### 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 sports psychology programs is limited, all applicants are strongly encouraged to submit application materials by February 1. For sport psychology, applicants are accepted in the fall quarter of odd-numbered years. The next admission for sport psychology will be for the 2009-2010 school year. The exercise science area accepts students every year.

**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

#### Exercise Science (47-50)

- Basic requirements: PE 506, 520, 690 (13-16)
- Required courses: PE 510, 513, 540, 543, 544 (20)
- Electives: select 14 credits from PE 502, 507, 511, 533, 541, 546, 592; PSY courses (to be determined; curriculum undergoing revision)

#### Sport Psychology (45-48)

- Basic requirements: PE 506, 520, 690 (13-16)
- Required courses: PE 541, 542, 551, 592; PSY 511 (19)
- Electives: 13 credits from PE 502, 507, 511, 513, 533, 540, 543, 544, 546; and 6 credits from PSY courses (to be determined; curriculum undergoing revision)

## Political Science

*College of Humanities and Social Sciences*

### GRADUATE FACULTY

**Abedi, Amir**, PhD, comparative politics, European politics, parties and party systems.**Alper, Donald K.**, PhD, Canadian-American studies, American politics.**Biswas, Bidisha**, PhD, international relations, ethnic and civic conflicts, terrorism, diaspora politics.**Chen, Paul**, PhD, law and society, legal philosophy, U.S. Supreme Court.**Donovan, Todd A.**, PhD, American politics, 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, comparative politics, development, race and public policy.**Parris, Kristen D.**, PhD, comparative politics, Chinese politics, East Asian studies.**Salazar, Debra J.**, PhD, environmental policy and political economy, methodology.**Singleton, Sara**, PhD, American politics, environmental politics, public policy.**Weir, Sara J.**, PhD, American politics, public policy, gender issues.

### MA — POLITICAL SCIENCE, THESIS ONLY

Program Advisor: Dr. Vernon Johnson, Arntzen Hall 438

#### Goals

The program prepares students for

- employment in management positions in government and the nonprofit 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

**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. Prospective applicants are also encouraged to review faculty research interests on the departmental Web site at [www.wvu.edu/depts/polsci/index.shtml](http://www.wvu.edu/depts/polsci/index.shtml) before applying.

**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.

#### Degree Requirements

##### Basic 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, 502 (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 or PLSC 540
  - *Comparative Politics*: PLSC 505
  - *Political Theory*: PLSC 560
- 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 (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

## MA — POLITICAL SCIENCE (ENVIRONMENTAL STUDIES), THESIS ONLY

Curriculum Coordinators: Dr. Debra Salazar, Political Science, Arntzen Hall 401; Jean Melious, Environmental Studies, Huxley College of the Environment, AH 208.

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.

### Degree Requirements

#### Basic Requirements (45 credits)

- PLSC 501, 502 (a graduate course in another department, as determined by the political science department, may be substituted for 502), 524
- The core course from one of the fields of concentration:
  - *American Politics and Policy*: PLSC 503 or PLSC 540
  - *Comparative Politics*: PLSC 505
  - *Political Theory*: PLSC 560
- 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 or ESTU 690a (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

*College of Humanities and Social Sciences*

### GRADUATE FACULTY

**Byrne, Christina**, PhD, psychological trauma and intimate partner violence.  
**Cvetkovich, George**, PhD, social psychology, environmental and population psychology.

**Devenport, Jennifer**, PhD, legal psychology, jury decision-making, factors influencing erroneous eyewitness identifications.

**Dinnel, Dale L.**, PhD, teaching and learning mathematics, achievement motivation, social phobia.

**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.

**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.

**Grote, Frederick W., Jr.**, PhD, psychology of child rearing, child psychology and social issues.

**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.

**Kleinknecht, Ronald A.**, PhD, anxiety disorders, phobias and avoidance of medical treatment.

**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.

**Lippman, Louis G.**, PhD, learning, verbal learning.

**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.

**Prim, Merle M.**, PhD, subhuman primate behavior, physiological psychology, sensory, comparative.

**Rommel, Ethan**, PhD, cognitive development, theory of mind development in preschool children, child development and social policy.

**Sampaio, Cristina**, PhD, mechanisms and processes of memory, representations, memory errors, metacognition.

**Sattler, David**, PhD, natural disasters, social dilemmas, small group research.

**Sue, David**, PhD, clinical community counseling, Asian-American issues, sex therapy.

**Symons, Lawrence**, PhD, perception.

**Thorndike, Robert M.**, PhD, multivariate statistics, measurement, assessment of intelligence.

**Trimble, Joseph E.**, PhD, social, cross-cultural.

## Med — SCHOOL COUNSELOR, THESIS AND NON-THESIS

Program Advisor: Dr. Arleen Lewis, Miller Hall 279

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 CACREP and the National Council for Accreditation of Teacher Education.

The program contains a thesis option for those students interested in pursuing a research project related to the degree program.

### Goals

## GRADUATE SCHOOL

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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

### *Course Requirements (83 credit minimum)*

All students (thesis and non-thesis) in the school counseling program must complete the following courses:

- PSY 502, 504, 532, 542, 551, 553, 554, 555, 556, 557, 558, 560, 561, 564, 565, 570 (4-15), 670 (18-30); EDUC 501; thesis students must also complete PSY 690 (minimum 6 credits)
- Electives: 6 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.

### *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.

## **MS — PSYCHOLOGY**

Program Advisor: Dr. Deborah Forgays, Miller Hall 333

### *Curriculum*

The MS in psychology has two curricular branches — experimental psychology and mental health counseling. The experimental program requires a thesis and the mental health counseling program has a thesis option. Particular curriculum requirements for each program are listed below. However, the

following information applies to both the experimental psychology and mental health counseling programs.

### *Prerequisites*

**Mental Health Counseling:** 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.

**Experimental Psychology:** Introductory psychology, statistics, and a minimum of one course in each of three of the following concentration areas: social, cognitive, abnormal, developmental, physiological/behavioral neuroscience. Research experience is strongly recommended.

### *Application Information*

**Admissions Procedures:** Applicants are reviewed for admission to the MS programs in psychology by the curriculum committee corresponding to the curriculum applied for (i.e., experimental psychology or mental health counseling). Applicants must submit separate and complete sets of materials if applying to more than one curriculum. Applicants are required to submit at least three letters of reference and a questionnaire. When it is possible or necessary, students may also be notified for an interview. Students can enroll in only one curriculum. Admission to, and completion of, a specified curriculum will be recorded on each student's transcript.

**Specific Test Requirements:** Graduate Record Examination, General, required; subject in psychology recommended; no test scores are required if an applicant holds an advanced degree.

**TA Deadline:** To be considered for a graduate teaching assistantship, applicants must have their application materials submitted by February 1. 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 each program is limited, all applicants are strongly encouraged to submit application materials by February 1.

### *Retention Requirements*

Each candidate should note that the department has requirements affecting retention in the MS program which are in addition to those general requirements of the Graduate School. Among these are the requirements that all admission prerequisites be satisfied by the end of the first quarter of study and that full, continuing enrollment in the required courses be maintained as specified for each curriculum. 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 upon permission of the admission/retention subcommittee, following consultation with the appropriate curriculum coordinator. It is necessary to maintain at least a 3.00 (B) grade point average for all graded course 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. Continuous evaluation by the appropriate curriculum committees will be the basis for retention of the student in the mental health counseling curriculum.

## MS IN PSYCHOLOGY — EXPERIMENTAL PSYCHOLOGY CURRICULUM, THESIS ONLY

Curriculum Coordinator: Dr. Kristi Lemm, Miller Hall 338A

### Goals

The program prepares students for in-depth research experience within specific domains of psychology; cognitive, social, developmental or physiological.

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 or physiological. This goal is accomplished through a balance of required content and research courses.

Students in the 48-credit (minimum) experimental psychology curriculum must complete the following course requirements: PSY 509, 582 (2 to 12 credits across two quarters), 512 and 513; three courses from 501, 503, 504, and 505; three seminars from PSY 530-546; PSY 690 (6 to 12 credits). A minimum of one research presentation at Psychfest or a public colloquium as part of the thesis defense is required. Additional elective courses will be under advisement.

A 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 511, 515, 516, 530. The student completing this concentration will gain competencies applicable to areas of employment requiring research design, data analysis, statistical evaluation and computer skills.

## MS IN MENTAL HEALTH COUNSELING, THESIS OPTION

Curriculum Coordinator: Dr. Christina Byrne, Miller Hall 275

### Goals

This two-year (92-credit thesis, 90-credit non-thesis) curriculum is designed to prepare students for careers in the field of mental health. The mental health counseling program is accredited by CACREP. The intent of the mental

health counseling curriculum is to provide 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 a variety of clients, and on-site internships in various community and mental health clinics. An important component of the mental health counseling curriculum is exposure to cross-cultural counseling strategies. Attention to work with families and children is also included in the concentration.

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.

All students (thesis or non-thesis) in the mental health counseling curriculum must complete the following core courses: PSY 502, 504, 511, 512 and 550. In addition, thesis students complete either PSY 501 or 503, and 690 (minimum 6 credits). No written exam is required. Non-thesis students enroll in two courses from PSY 501, 503 and 505. In addition, the following courses must be completed: PSY 532, 542, 553, 555, 557, 558, 560, 561, 564, 565, 567, 570 (4-15 credits), 670 (24-30 credits).

### Written examinations

Each student in the non-thesis option is required to satisfactorily write an area comprehensive exam. For information, contact the program advisor.

## Sociology

### College of Humanities and Social Sciences

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).



David Scherrer / WWU Publishing Services

# Baccalaureate Majors/Minors and Master's Degrees at Western Washington University

COLLEGE OF BUSINESS AND ECONOMICS				
Degree	Department	Major	Minor	Master's
BA	Accounting	Accounting		
BA	Accounting	Accounting/Computer Science		
BA	Accounting	Accounting/Economics		
	Accounting		Accounting	
MPAcc	Accounting			Professional Accounting
BA	Decision Sciences	Business Administration		
BA	Decision Sciences	Business Administration- Management Information Systems		
BA	Decision Sciences	Business Administration-Operations Management		
BS	Decision Sciences	Manufacturing & Supply Chain Management		
	Decision Sciences		Business Administration	
	Decision Sciences		Manufacturing & Supply Chain Management	
BA	Economics	Economics		
BA	Economics	Economics/Accounting		
BA	Economics	Economics/Environmental Studies		
BA	Economics	Economics/Mathematics		
BA	Economics	Economics/Political Science		
BA	Economics	Economics/Social Studies		
BA	Economics	Financial Economics		
BA	Economics	Politics/Philosophy/Economics		
	Economics		Economics	
BA	Finance and Marketing	Business Administration		
BA	Finance and Marketing	Business Administration-Finance		
BA	Finance and Marketing	Business Administration-Marketing		
BA	Finance and Marketing	Financial Economics		
	Finance and Marketing		Business Administration	
BA	Management	Business Administration		
BA	Management	Business Administration-Human Resource Management		
BA	Management	Business Administration-Management		
BA	Management	Business Administration-International Business		
	Management		Business Administration	
MBA	Business Administration			Business Administration
FAIRHAVEN COLLEGE OF INTERDISCIPLINARY STUDIES				
Degree	Department	Major	Minor	Master's
BA	Fairhaven	Fairhaven Upside Down Program		
BA	Fairhaven	Interdisciplinary Concentration		
BAE	Fairhaven	Interdisciplinary Concentration		
COLLEGE OF FINE AND PERFORMING ARTS				
Degree	Department	Major	Minor	Master's
BA	Art	Art		
BFA	Art	Art		
BA	Art	Art-Ceramics		
BA	Art	Art-Drawing		
BAE	Art	Art-Elementary		
BA	Art	Art-Fiber/Fabrics		
BA	Art	Art History		
BA	Art	Art-Inter and Mixed Media		
BAE	Art	Art P-12		
BA	Art	Art-Painting		
BA	Art	Art-Photography		
BA	Art	Art-Printmaking		
BA	Art	Art-Sculpture		
BA	Art	Design		



**COLLEGE OF FINE AND PERFORMING ARTS (CONTINUED FROM PREVIOUS PAGE)**

<b>Degree</b>	<b>Department</b>	<b>Major</b>	<b>Minor</b>	<b>Master's</b>
BFA	Art	Design		
	Art		Art History	
BA	Dance	Dance		
BFA	Dance	Dance-Choreography Concentration		
BFA	Dance	Dance-Performance Concentration		
BFA	Dance	Dance-Performance and Choreography Concentration		
	Dance		Dance	
BA	Music	Music		
BMus	Music	Music Composition		
BMus	Music	Music Education P-12		
BAE	Music	Music-Elementary		
BMus	Music	Music History & Literature		
BMus	Music	Music Performance		
	Music		Music	
MMus	Music			Music
BA	Theatre	Theatre		
BAE	Theatre	Theatre P-12		
	Theatre		Theatre	

**COLLEGE OF HUMANITIES AND SOCIAL SCIENCES**

<b>Degree</b>	<b>Department</b>	<b>Major</b>	<b>Minor</b>	<b>Master's</b>
BA	American Cultural Studies	American Cultural Studies		
	American Cultural Studies		African American Studies	
	American Cultural Studies		American Cultural Studies	
	American Cultural Studies		Asian American Studies	
	American Cultural Studies		Diversity in Higher Education	
	American Cultural Studies		Gay, Lesbian, Bisexual, Transgender Studies	
	American Cultural Studies		Native American Studies	
BA	Anthropology	Anthropology		
BA	Anthropology	Anthropology/Biology		
BA	Anthropology	Anthropology/Social Studies		
BA	Anthropology	Anthropology-Archaeology Concentration		
BA	Anthropology	Anthropology-Biocultural Concentration		
BAE	Anthropology	Anthropology-Elementary		
	Anthropology		Anthropology	
MA	Anthropology			Anthropology
BA	Canadian-American Studies	Canadian-American Studies		
	Canadian-American Studies		Canadian-American Studies	
BA	Communication	Communication		
BAE	Communication	Communication-Elementary		
	Communication		Communication	
BA	Communication Sciences & Disorders	Communication Sciences & Disorders		
	Communication Sciences & Disorders		Audiology	
	Communication Sciences & Disorders		Communication Sciences & Disorders	
MA	Communication Sciences & Disorders			Communication Sciences and Disorders
BA	East Asian Studies	East Asian Studies		
	East Asian Studies		East Asian Studies	
BA	English	English-Creative Writing Emphasis		
BAE	English	English-Elementary		

**COLLEGE OF HUMANITIES AND SOCIAL SCIENCES (CONTINUED FROM PREVIOUS PAGE)**

<b>Degree</b>	<b>Department</b>	<b>Major</b>	<b>Minor</b>	<b>Master's</b>
BAE	English	English-Language Arts Secondary		
	English		Creative Writing	
	English		English	
	English		Film Studies	
	English		Women's Literature	
MA	English			English
BA	History	History		
BA	History	History/Social Studies		
BAE	History	History-Elementary		
	History		Foreign Cultures	
	History		History	
	History		Latin American Studies	
MA	History			History
	International Studies		International Studies	
BA	Journalism	Environmental Studies-Journalism		
BA	Journalism	Journalism		
BA	Journalism	Journalism-Public Relations		
BA	Journalism	Journalism-Visual Journalism		
	Journalism		Journalism	
BA	Liberal Studies	Humanities-Elementary		
BA	Liberal Studies	Humanities-History of Culture		
BA	Liberal Studies	Humanities-Religion and Culture		
	Liberal Studies		Humanities	
	Liberal Studies		The Study of Religion	
BA	Linguistics	Linguistics		
	Linguistics		Linguistics	
BA	Modern & Classical Languages	French		
BAE	Modern & Classical Languages	French-Elementary		
BA	Modern & Classical Languages	French/German		
BA	Modern & Classical Languages	French/Spanish		
BA	Modern & Classical Languages	German		
BAE	Modern & Classical Languages	German-Elementary		
BA	Modern & Classical Languages	German/Spanish		
BA	Modern & Classical Languages	Japanese		
BA	Modern & Classical Languages	Spanish		
BAE	Modern & Classical Languages	Spanish-Elementary		
	Modern & Classical Languages		Chinese	
	Modern & Classical Languages		Classical Studies	
	Modern & Classical Languages		Eurasian Studies	
	Modern & Classical Languages		French	
	Modern & Classical Languages		German	
	Modern & Classical Languages		Greek	
	Modern & Classical Languages		Japanese	
	Modern & Classical Languages		Latin	
	Modern & Classical Languages		Russian	
	Modern & Classical Languages		Spanish	
BS	Physical Education, Health & Recreation	Community Health		
BS	Physical Education, Health & Recreation	Physical Education-Exercise & Sport Science: Fitness Science		
BS	Physical Education, Health & Recreation	Physical Education-Exercise & Sport Science: Health and Fitness Specialist		
BS	Physical Education, Health & Recreation	Physical Education-Exercise & Sport Science: Pre-Healthcare Professions		

**COLLEGE OF HUMANITIES AND SOCIAL SCIENCES (CONTINUED FROM PREVIOUS PAGE)**

<b>Degree</b>	<b>Department</b>	<b>Major</b>	<b>Minor</b>	<b>Master's</b>
BS	Physical Education, Health & Recreation	Physical Education-Exercise & Sport Science: Pre-Physical Therapy		
BS	Physical Education, Health & Recreation	Physical Education-Exercise & Sport Science: Sport Psychology		
BAE	Physical Education, Health & Recreation	Physical Education and Health P-12		
BA	Physical Education, Health & Recreation	Recreation		
	Physical Education, Health & Recreation		Health Promotion	
	Physical Education, Health & Recreation		Sport Psychology	
MS	Physical Education, Health & Recreation			Human Movement & Performance
BA	Philosophy	Philosophy		
BA	Philosophy	Politics/Philosophy/Economics		
	Philosophy		Philosophy	
BA	Political Science	Economics/Political Science		
BA	Political Science	Political Science		
BA	Political Science	Political Science/Social Studies		
BA	Political Science	Politics/Philosophy/Economics		
	Political Science		Political Science	
MA	Political Science			Political Science
BA	Psychology	Behavioral Neuroscience		
BA	Psychology	Psychology		
BAE	Psychology	Psychology: Human Development-Elementary		
	Psychology		Psychology	
	Psychology		Sport Psychology	
MED	Psychology			School Counselor
MS	Psychology			Mental Health Counseling
MS	Psychology			Psychology (Experimental)
BA	Social Studies Education	Anthropology/Social Studies		
BA	Social Studies Education	Economics/Social Studies		
BA	Social Studies Education	Geography/Social Studies		
BA	Social Studies Education	History/Social Studies		
BA	Social Studies Education	Political Science/Social Studies		
BA	Social Studies Education	Sociology/Social Studies		
BAE	Social Studies Education	Social Studies-Elementary		
BA	Sociology	Sociology		
BS	Sociology	Sociology		
BA	Sociology	Sociology-Social Studies		
BAE	Sociology	Sociology-Elementary		
	Sociology		Sociology	
	Sociology		Criminology/Sociology of Law	
	Sociology		Population Studies	
	Women Studies		Women Studies	

**HUXLEY COLLEGE OF THE ENVIRONMENT**

<b>Degree</b>	<b>Department</b>	<b>Major</b>	<b>Minor</b>	<b>Master's</b>
BS	Environmental Science	Environmental Science		
BS	Environmental Science	Environmental Science-Environmental Chemistry		
MS	Environmental Science			Environmental Science
BS	Environmental Science	Environmental Science-Environmental Toxicology		
BS	Environmental Science	Environmental Science-Freshwater Ecology		
BS	Environmental Science	Environmental Science-Marine Ecology		

**HUXLEY COLLEGE OF THE ENVIRONMENT (CONTINUED FROM PREVIOUS PAGE)**

<b>Degree</b>	<b>Department</b>	<b>Major</b>	<b>Minor</b>	<b>Master's</b>
BS	Environmental Science	Environmental Science-Terrestrial Ecology		
	Environmental Science		Environmental Science	
BA	Environmental Studies	Environmental Education-Community Education & Mass Communication		
BA	Environmental Studies	Environmental Education-Outdoor Education & Interpretation		
BAE	Environmental Studies	Environmental Studies-Elementary		
BA	Environmental Studies	Environmental Studies/Journalism		
BA	Environmental Studies	Geography/Social Studies		
BAE	Environmental Studies	Geography-Elementary		
BA	Environmental Studies	Geography-Environmental Resource Management		
BA	Environmental Studies	Geography-Human and International Geography		
BA	Environmental Studies	Planning and Environmental Policy-Emergency Planning and Hazards Mitigation		
BA	Environmental Studies	Planning and Environmental Policy-Planning		
BA	Environmental Studies	Planning and Environmental Policy-Policy		
	Environmental Studies		Environmental Education	
	Environmental Studies		Environmental Policy	
	Environmental Studies		Environmental Studies	
	Environmental Studies		Geographic Information Systems	
	Environmental Studies		Geography	
	Environmental Studies		Sustainable Design	
MED	Environmental Studies			Environmental Education
MS	Environmental Studies			Geography

**COLLEGE OF SCIENCES AND TECHNOLOGY**

<b>Degree</b>	<b>Department</b>	<b>Major</b>	<b>Minor</b>	<b>Master's</b>
BA	Biology	Behavioral Neuroscience		
BA	Biology	Biology		
BS	Biology	Biology		
BS	Biology	Biology/Anthropology		
BS	Biology	Biology-Cell Emphasis		
BS	Biology	Biology-Ecology, Evolution, and Organismal Biology Emphasis		
BS	Biology	Biology-Marine Emphasis		
BS	Biology	Biology/Mathematics		
BS	Biology	Biology-Secondary Teaching Emphasis		
BS	Biology	Cellular & Molecular Biology		
BAE	Biology	Chemistry/Biology-Secondary		
	Biology		Biology	
MS	Biology			Biology
BS	Chemistry	Biochemistry		
BA	Chemistry	Chemistry		
BS	Chemistry	Chemistry		
BAE	Chemistry	Chemistry/Biology-Secondary		
BAE	Chemistry	Chemistry/Mathematics-Secondary		
BAE	Chemistry	Chemistry/Physics-Secondary		
	Chemistry		Chemistry	
MS	Chemistry			Chemistry
BA	Computer Science	Accounting/Computer Science		
BS	Computer Science	Computer Science		
BS	Computer Science	Mathematics/Computer Science		
	Computer Science		Computer Science	
	Computer Science		Computer Systems	



**COLLEGE OF SCIENCES AND TECHNOLOGY (CONTINUED FROM PREVIOUS PAGE)**

<b>Degree</b>	<b>Department</b>	<b>Major</b>	<b>Minor</b>	<b>Master's</b>
	Computer Science		Internet Resource Creation & Management	
MS	Computer Science			Computer Science
BS	Engineering Technology	Electronics Engineering Technology		
BS	Engineering Technology	Industrial Design		
BS	Engineering Technology	Industrial Technology		
BS	Engineering Technology	Industrial Technology-CAD/CAM Specialization		
BS	Engineering Technology	Industrial Technology-Vehicle Design Specialization		
BS	Engineering Technology	Manufacturing Engineering Technology		
BS	Engineering Technology	Plastics Engineering Technology		
BS	Engineering Technology	Plastics Engineering Technology-Vehicle Engineering Technology		
BS	Engineering Technology	Technology Education		
	Engineering Technology		Embedded Systems	
	Engineering Technology		Industrial Technology-Vehicle Design	
	Engineering Technology		Manufacturing Engineering Technology-Computer Aided Manufacturing	
	Engineering Technology		Manufacturing Engineering Technology-Engineering Design	
	Engineering Technology		Manufacturing Engineering Technology-Engineering Polymers	
	Engineering Technology		Manufacturing Engineering Technology-General Manufacturing	
	Engineering Technology		Sustainable Design	
BAE	Geology	Earth Science/General Science-Secondary		
BAE	Geology	Earth Science-Elementary		
BAE	Geology	Earth Science-Secondary		
BS	Geology	Geology-Environmental Geology Concentration: Thesis Option		
BS	Geology	Geology-Geophysics Concentration: Thesis Option		
BA	Geology	Geology		
BS	Geology	Geology		
BS	Geology	Geology-Environmental Geology Concentration		
BS	Geology	Geology-Geophysics Concentration		
BA	Geology	Geology-Thesis Option		
BS	Geology	Geology-Thesis Option		
	Geology		Geology	
MS	Geology			Geology
BS	Mathematics	Applied Mathematics		
BS	Mathematics	Biology/Mathematics		
BAE	Mathematics	Chemistry/Mathematics-Secondary		
BA	Mathematics	Economics/Mathematics		
BA	Mathematics	Mathematics		
BS	Mathematics	Mathematics		
BS	Mathematics	Mathematics/Computer Science		
BAE	Mathematics	Mathematics-Elementary		
BAE	Mathematics	Mathematics-Secondary		
BAE	Mathematics	Physics/Mathematics-Secondary		
	Mathematics		Mathematics	
	Mathematics		Mathematics-Secondary Education	
MS				Mathematics
BAE	Physics and Astronomy	Chemistry-Physics-Secondary		
BS	Physics and Astronomy	Physics		
BAE	Physics and Astronomy	Physics/Mathematics-Secondary		
	Physics and Astronomy		Astronomy	

**COLLEGE OF SCIENCES AND TECHNOLOGY (CONTINUED FROM PREVIOUS PAGE)**

<b>Degree</b>	<b>Department</b>	<b>Major</b>	<b>Minor</b>	<b>Master's</b>
	Physics and Astronomy		Physics	
BAE	Science Education	General Science with Biology-Elementary		
BAE	Science Education	General Science with Chemistry-Elementary		
BAE	Science Education	General Science with Earth Science-Elementary		
BAE	Science Education	General Science with Physics-Elementary		
BAE	Science Education	General Science-Elementary		
BAE	Science Education	General Science-Secondary		
MEd	Science Education			Natural Science/Science Education

**WOODRING COLLEGE OF EDUCATION**

<b>Degree</b>	<b>Department</b>	<b>Major</b>	<b>Minor</b>	<b>Master's</b>
	Education Leadership		Teaching English to Speakers of Other Languages	
MED	Education Leadership			Continuing & College Education
MED	Education Leadership			Educational Administration
MED	Education Leadership			Student Affairs Administration in Higher Education
BAE	Elementary Education	Child Development Studies P-3		
BAE	Elementary Education	Elementary Education Studies		
BA	Human Services and Rehabilitation	Human Services		
MA	Human Services and Rehabilitation			Rehabilitation Counseling
MIT	Secondary Education			Master in Teaching
BAE	Special Education	Early Childhood Special Education P-3		
BAE	Special Education	Special Education P-12		
BAE	Special Education	Special Education P-12 + Elementary		
MED	Special Education			Special Education

**GENERAL STUDIES**

<b>Degree</b>	<b>Department</b>	<b>Major</b>	<b>Minor</b>	<b>Master's</b>
BA	All University	General Studies		

NOTE: For Student/Faculty Designed Majors, see individual colleges.

**Western Washington University Subjects and Rubrics**

<b>SUBJECT</b>	<b>RUBRIC</b>	<b>SUBJECT</b>	<b>RUBRIC</b>	<b>SUBJECT</b>	<b>RUBRIC</b>	<b>SUBJECT</b>	<b>RUBRIC</b>
Accounting.....	ACCT	Education.....	EDUC	Interdisciplinary Science(s), Technology, and Mathematics.....	ISTM	Physical Education.....	PE
American Cultural Studies.....	AMST	Educational Administration.....	EDAD	International Studies.....	INTL	Physics.....	PHYS
Anthropology.....	ANTH	Elementary Education.....	ELED	Italian.....	ITAL	Political Science.....	PLSC
Arabic.....	ARAB	Engineering Technology.....	ETEC	Japanese.....	JAPN	Portuguese.....	PORT
Art.....	ART	English.....	ENG	Journalism.....	JOUR	Psychology.....	PSY
Art History.....	A/HI	Environmental Science.....	ESCI	Latin.....	LAT	Recreation.....	RECR
Astronomy.....	ASTR	Environmental Studies.....	ESTU	Liberal Studies.....	LBRL	Rehabilitation Counseling.....	RC
Biology.....	BIOL	Eurasian Studies.....	EUS	Library.....	LIBR	Russian.....	RUSS
Canadian-American Studies.....	C/AM	Extended Education.....	EXT	Linguistics.....	LING	Science Education.....	SCED
Chemistry.....	CHEM	Fairhaven.....	FAIR	Management.....	MGMT	Secondary Education.....	SEC
Chinese.....	CHIN	Finance.....	FIN	Management Information Systems.....	MIS	Seminar.....	SMNR
Classical Studies.....	CLST	French.....	FREN	Marketing.....	MKTG	Sociology.....	SOC
Communication.....	COMM	Geography.....	EGEO	Master of Accounting.....	MPAC	Spanish.....	SPAN
Communication Sciences & Disorders.....	CSD	Geology.....	GEOL	Master of Business Program.....	MBA	Special Education.....	SPED
Computer Science.....	CSCI	German.....	GERM	Mathematics.....	MATH	Student Affairs Administration.....	SAA
Continuing & College Education.....	CCE	Greek.....	GREK	Math/Computer Science.....	M/CS	Teaching English as a Second Language....	TESL
Dance.....	DNC	Health Education.....	HLED	Modern & Classical Languages.....	LANG	Theatre Arts.....	THTR
Decision Sciences.....	DSCI	History.....	HIST	Music.....	MUS	University.....	UNIV
Design.....	DSGN	Honors.....	HNRS	Operations Management.....	OPS	Women Studies.....	WMNS
East Asian Studies.....	EAST	Human Services.....	HSP	Philosophy.....	PHIL		
Economics.....	ECON	Instructional Technology.....	I T				

# COLLEGE OF BUSINESS AND ECONOMICS

Interim Dean, Dr. Brian K. Burton

Dr. Joseph E. Garcia, 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 a general graduate program in business administration and provides instruction to students from other colleges within the University. As a supporting part of this educational mission, the faculty of the College engage in applied, integrative, and pedagogical scholarship and provide 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 a sensitivity to environmental aspects of business enterprise, promotes a commitment to ethical behavior, and provide a strong emphasis on forward-looking, goal-setting 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.

## Department Chairs

Professor Julie A. Lockhart .....Accounting  
 Dr. Paul Storer .....Economics  
 Dr. L. Floyd Lewis..... Decision Sciences  
 Dr. Terrell G. Williams ..... Finance and Marketing  
 Dr. Bruce D. Wonder.....Management

## Directors

Dr. Matthew Liao-Troth..... MBA Program, MPAcc Program  
 Thomas W. Dorr ..... Small Business Development Center  
 Dr. Joseph E. Garcia ..... Center for Excellence  
 in Management Education  
 Dr. L. Hart Hodges .....Center for Economic  
 and Business Research

Pamela Whalley ..... Center for Economic Education  
 Dr. Steven Globerman ..... Center for International Business

## 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.

## Combined Majors

Interdepartmental majors are given in accounting/computer science, accounting/economics, economics/environmental studies, economics/mathematics, economics/political science, economics/social studies, financial economics and politics/philosophy/economics. See departments for details.

## 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 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 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 be admitted to 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 admission, they will be dropped from the College. They may reapply should they cure the deficiency.

Provisional admit status in the College is provided to students completing their last foundation course(s) and would be eligible to enroll for upper-division 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 will result in cancellation of upper-division registration and removal from major status.

For students to be considered for pre-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 making application to the College of Business and Economics. The application process originates with the College office when the student turns in an application form. 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.

Applications for economics majors originate in the Department of Economics and applications for the BS degree in manufacturing management originate in the Department of Decision Sciences. Students interested in either of these areas of study should contact their intended department for an interview prior to applying.

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.

### *World Wide Web Page*

Information concerning admission and application to the College of Business and Economics is available on the World Wide Web at [www.cbe.wvu.edu](http://www.cbe.wvu.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 average below 2.0 will not be 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 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 and communications requirements; all CBE majors are required to take one communication focus and one writing proficiency course, 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.

### *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.

### *Special Programs*

**Small Business Development Center (SBDC).** The SBDC 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 SBDC counselors.

**Center for Economic Education.** The Center for Economic 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 request 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 Institute (SBI).** The Small Business Institute provides free advice to small businesses. Students can become involved and earn college credit while studying actual enterprises and helping local businesses solve problems.

**Internships** are available through individual departments. These can provide college credit for on-the-job work experience.

### **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.



# ACCOUNTING

[www.cbe.wvu.edu/acct](http://www.cbe.wvu.edu/acct)

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 which, 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. Please see the Web site at [www.cbe.wvu.edu/acct](http://www.cbe.wvu.edu/acct) for details.

## DEPARTMENTAL MISSION

The Department of Accounting provides high-quality, balanced accounting education to majors and other undergraduate and MBA 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. Accordingly, 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 OF MAJOR

See the *College of Business and Economics* introductory section of this catalog for declaration of major procedure.

## ACCOUNTING FACULTY

**JULIE A. LOCKHART** (1982) Chair and Professor. BS, MS, University of Illinois; CPA, state of Illinois; CMA.

**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) Associate Professor. BS, Brigham Young University; PhD, University of Utah.

**WILLIAM M. SAILORS** (1974) Associate Professor. BSME, University of Illinois; MBA, MS Engr., University of Southern California; CPA, states of Washington and California.

**GEORGE D. SANDERS** (1995) Professor. BS, Louisiana State University; MBA, University of New Orleans; PhD, The University of Alabama; CPA, state of Louisiana.

**STEPHEN V. SENGE** (1985-2000; 2007) Professor. BA, California Western University; MPA, Denver University; MA; DBA, Kent State University, CMA.

**WILLIAM R. SINGLETON** (1976) Professor. BBA, Memphis State University; MBA, University of Portland; PhD, University of Hawaii; CPA, state of Washington.

**STEVEN H. SMITH** (2001) Assistant Professor. BBA, Iowa State University; MS, Oklahoma State University; PhD, Arizona State University; CPA, state of Iowa.

**AUDREY G. TAYLOR** (2002) Assistant 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.

## COMMUNICATIONS REQUIREMENTS

All accounting majors are required to take one communication focus (CF) and one writing proficiency (WP) course, both within the College of Business and Economics, prior to graduation. Consult the *Timetable of Classes* for the specific course sections that fulfill the CF and WP requirements.

## BACHELOR OF ARTS

### Major — Accounting

100 credits

- ACCT 240, 245, 321, 331, 341, 342, 343, 375, 461, 470
- 12 upper-division accounting credits under advisement
- DSCI 205
- ECON 206, 207, 309
- FIN 341
- MATH 157
- MGMT 271, 311, 482, 492 or 495
- MKTG 380
- OPS 360

## ACCOUNTING

### Combined Major — Accounting/Computer Science

109 credits

- ACCT 240, 245, 321, 331, 341, 342, 461
- ACCT 421 or CSCI 430
- CSCI 141, 145, 211, 241, 311, 341, 342, 344
- DSCI 205
- ECON 206, 207, 309
- FIN 341
- MATH 157
- MGMT 271, 311, 482, 492 or 495
- MKTG 380
- OPS 360

### Combined Major — Economics/Accounting

100-101 credits

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 declare this major.

- ECON 206, 207, 303, 306, 307, 311
- MATH 124 or MATH 157 or equivalent
- 8 additional credits in upper-division economics courses, under departmental advisement
- ACCT 240, 245, 321, 341, 342, 343
- 8 additional credits in upper-division accounting courses, under departmental advisement
- DSCI 205 or equivalent
- FIN 341
- MGMT 271, 311, 482
- MGMT 492 or 495
- MKTG 380
- OPS 360
- One communication focus course and one writing proficiency course must be taken, both within the College of Business and Economics

### Minor

24 credits

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.

- ACCT 240, 245, 331
- ACCT 341 or 375
- 8 additional credits in accounting under advisement

## MASTER OF PROFESSIONAL ACCOUNTING (MPAcc), NON-THESIS

### PROGRAM GOALS

- To provide opportunities for students to improve their expertise in a field that is rapidly becoming more complex
- To provide students with an opportunity to acquire the knowledge and skills required in Washington for professional licensing as CPAs in an effective manner
- To help meet the demand in Washington for well-trained professional accountants

### ADMISSION

- 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 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 Admission Test (GMAT). Test of English as a Foreign Language (TOEFL) must be submitted by applicants who are not native speakers of English

### APPLICATION

To apply for admission, send a completed official application form to the Graduate School, along with an application fee, official transcripts, GMAT scores and TOEFL scores (if applicable), a personal statement of background and intention, and a résumé showing work experience. Further information, including deadlines, is provided in the *Graduate School* section of this catalog.

### Program Requirements

#### Core curriculum

- MPAC 521, 531, 541, 551, 561, 565, 581

#### Option

- MPAC 590

#### Electives

- Students may take electives from the MBA program or from other graduate programs on campus under advisement. **NOTE:** Students taking the internship option will be required to take 8 elective MBA credits. Students who do not take the internship option will be required to take 12 additional credits in the MBA program, as listed below, or from other graduate programs for a total of 20 elective credits

## COURSES IN ACCOUNTING (ACCT)

Courses numbered X37; X97; 300, 400, 417, 445 are described on page 34 of this catalog.

### 240 FINANCIAL ACCOUNTING (4)

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.

### 245 MANAGERIAL ACCOUNTING (4)

Prereq: ACCT 240. 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.

### 321 ACCOUNTING INFORMATION SYSTEMS I (4)

Prereq: ACCT 245, MIS 220 or equivalent skills. 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 commercial applications. Additional topics include internal controls, systems analysis, systems design and systems implementation.

### 331 COST MANAGEMENT (4)

Prereq: ACCT 245, DSCI 205, MIS 220 or equivalent skills. Procedures used for classifying, recording, summarizing and allocating current, and estimated costs for planning, controlling and reporting purposes.

### 341 INTERMEDIATE ACCOUNTING THEORY AND PRACTICE I (4)

Prereq: ACCT 245. An in-depth study of accounting theory and practice for students who require more than introductory coverage. Both conceptual and application topics are studied.

**342 INTERMEDIATE ACCOUNTING THEORY AND PRACTICE II (4)**

Prereq: ACCT 341. Accounting principles related to stockholders' equity matters, investments, revenue recognition, deferred taxes, pension plans, leases, and preparation and analysis of financial statements.

**343 INTERMEDIATE ACCOUNTING THEORY (4)**

Prereq: ACCT 342. A study of the accounting theory underlying current practice. Existing and emerging issues in accounting.

**375 INCOME TAXATION I (4)**

Prereq: ACCT 240. Taxation of individuals and sole proprietorships. Introduction to tax planning and sources of authority of tax law.

**421 ACCOUNTING INFORMATION SYSTEMS II (4)**

Prereq: ACCT 321. 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.

**431 TOPICS IN MANAGEMENT ACCOUNTING (4)**

Prereq: ACCT 331. 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.

**435 SEMINAR IN COST MANAGEMENT (4)**

Prereq: ACCT 331. Provides an in-depth study of cost management systems. Topics include activity-based management, Japanese cost management techniques, and strategic cost management.

**441 ADVANCED ACCOUNTING THEORY AND PRACTICE (4)**

Prereq: ACCT 342. An introduction to business combinations and fund accounting. Partnerships, SEC reporting, interim reports and other topics.

**447 ACCOUNTING IN NOT-FOR-PROFIT ORGANIZATIONS (4)**

Prereq: ACCT 342. 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.

**451 INTERNATIONAL ACCOUNTING (4)**

Prereq: ACCT 343. Analysis of accounting for multinationals; area studies of accounting and financial reporting standards; and an evaluation of the international accounting harmonization effort.

**461 AUDITING THEORY AND PRACTICE (4)**

Prereq: ACCT 321, 342. A study of the role of auditing and auditors in corporate financial reporting, and the importance of this role to the public. Topics include the audit planning process, audit reports, professional standards, and the legal and ethical responsibilities of auditors to their clients, the accounting profession and the public.

**462 ADVANCED AUDITING (4)**

Prereq: ACCT 461. 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.

**470 LAW OF COMMERCIAL TRANSACTIONS (4)**

Prereq: MGMT 271. Legal principles underlying the law of contracts, sales, secured transactions, real property security, bankruptcy and suretyship.

**475 INCOME TAXATION II (4)**

Prereq: ACCT 375. Taxation of corporations and partnerships. Advanced topics in tax planning and compliance.

**477 TAX RESEARCH AND PLANNING (4)**

Prereq: ACCT 375. 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.

**484 ENVIRONMENTAL ACCOUNTING (4)**

Pre- or co-req: ACCT 331, 343, 375. An in-depth analysis of accounting for the natural environment. Readings, discussion and case analyses cover current is-

ues, such as financial reporting and disclosure, management decision making and evaluation techniques, taxation and the profession's role in environmental issues.

**490 INTERNSHIP IN ACCOUNTING (1-2)**

Prereq: CBE major; ACCT 341; GPA of at least 2.75 in 300- and 400-level accounting courses and approval of internship coordinator. 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. Repeatable to a maximum of 4 credits.

See the Graduate School section of this catalog for a description of the MBA program.

**MASTER'S IN PROFESSIONAL ACCOUNTING (MPAC) COURSES****521 SEMINAR IN ACCOUNTING INFORMATION SYSTEMS (4)**

Prereq: ACCT 321 or equivalent. 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.

**531 ACCOUNTING COMMUNICATIONS (4)**

Focus on developing skills for communication as a professional accountant in an organizational setting. Intended to enhance the experience of students enrolled in MPAC 590. Online interactive course 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.

**541 SEMINAR IN ADVANCED FINANCIAL ACCOUNTING (4)**

Prereq: ACCT 342 or equivalent. Develops accounting skills for business combinations, consolidated financial statements, partnerships, corporate reorganizations, segment reporting, and foreign currency financial statements. Emphasizes critical thinking, teamwork, and communication, along with current technology used in accounting practice.

**551 SEMINAR IN INTERNATIONAL ACCOUNTING (4)**

Prereq: ACCT 342 or equivalent. 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.

**561 SEMINAR IN PROFESSIONAL AUDITING (4)**

Prereq: ACCT 461 or equivalent. Capstone course 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 functions of audits, professional standards and malpractice, and new auditing techniques and services. Activities include cases, readings, individual research, and discussion.

**565 SPECIAL TOPICS IN ACCOUNTING (4)**

Advanced course in accounting examines a broad range of issues of current concern to both the accounting profession and users of accounting information. Course content will vary to provide opportunities to study current issues in accounting.

**581 ETHICS AND ACCOUNTABILITY (4)**

Capstone course in the MPAC 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.

**590 INTERNSHIP IN PROFESSIONAL ACCOUNTING (12)**

Prereq: approval of internship coordinator; co-req: enrollment in MPAC 531. Practical application of academic curriculum beyond that contained in graduate course work. A one quarter internship under supervision with an approved certified public accounting firm, business entity, not-for-profit organization, or government agency.

# DECISION SCIENCES

The Department of Decision Sciences (DSCI) provides the opportunity for study in two related fields of business administration. The primary fields include 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

## 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.

## 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 WEB SITE MANAGEMENT

Students concentrating in MIS may also be interested in earning a Certificate in Web Site 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 web site, [www.cs.wvu.edu/ISC/](http://www.cs.wvu.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 are required to take one communication focus (CF) course and one writing proficiency (WP) course prior to graduation, both within the College of Business and Economics (CBE). Consult the *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.

## DECLARATION OF MAJOR

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 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 if space is available in the department program of choice.



## 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.

## FACULTY

**L. FLOYD LEWIS** (1983) Chair and Professor. BA, California State University, Sacramento; MS, San Jose State University; PhD, University of Louisville.  
**DEEPIK 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) Assistant Professor. BS, Shanghai Jiao Tong University; MBA, Baylor University; PhD, University of Wisconsin-Madison.  
**ILHYUNG KIM** (2004) Assistant Professor. BS, MS, Seoul National University; MBA, Oregon State University; PhD, University of California, Los Angeles.  
**STEVEN C. ROSS** (1989) Professor. BS, Oregon State University; MS, PhD, University of Utah.  
**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) Associate Professor. BS, MS, Stanford University; MBA, UCLA Graduate School of Management; PhD, University of Arizona.  
**ZHE GEORGE ZHANG** (2000) Associate Professor. BS, MA, Naukai University; MBA, York University; PhD, University of Waterloo.

## BACHELOR OF ARTS

*Major — Business Administration (Decision Sciences)*  
 91-92 credits

- Foundation Courses (28 credits)
  - ACCT 240, 245
  - ECON 206, 207
  - DSCI 205
  - MGMT 271
  - MATH 157
- Core Courses (36 credits):
  - ECON 309
  - DSCI 305
  - MIS 320
  - OPS 360
  - FIN 341
  - MKTG 380
  - MGMT 311, 482, 495
- Concentration Electives (27-28 credits):
  - Students may select one or two of the faculty-recommended concentrations or may choose to have no concentration and complete 27 to 28 credits under advisement

### Concentrations

#### Management Information Systems

- MIS 492 or OPS 461 or MGMT 313; MIS 321, 322, 421, 495
- Select 8 credits from upper-division MIS courses, DSCI 405, OPS 461 or ACCT 421; other upper-division courses (including computer science) may be possible under advisement
- Familiarity with an additional programming language highly recommended

**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.

#### Operations Management

- MGMT 313
- OPS 460, 461, 463, 465, 468
- One course under advisement

*Minor — Business Administration*  
 40 credits

- ACCT 240, 245
- MGMT 271, 311
- DSCI 205; FIN 341; MKTG 380
- ECON 206, 207
- MATH 157

*Major — Manufacturing and Supply Chain Management*  
 131-132 credits

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.

- Foundation Courses (38 credits)
  - ACCT 240, 245
  - CHEM 115
  - ECON 206, 207
  - DSCI 205
  - MGMT 271
  - MATH 157
  - PHYS 114
- Core Courses (74 credits)
  - ECON 309
  - ETEC 110, 111, 220
  - DSCI 305
  - FIN 341
  - MGMT 311, 313, 482
  - OPS 360, 460, 461, 463, 465, 468, 469
  - MIS 320
  - MKTG 380
  - MGMT 495 or MGMT 491 and 492\*
- Two practica (8 credits)
- Three courses under advisement (11-12 credits)

\*These two courses would substitute for MGMT 495 and one of the courses selected under advisement.

*Minor — Manufacturing and Supply Chain Management*  
 27-28 credits

- MGMT 311
- OPS 360 (including prerequisites) or ETEC 327 (including prerequisites)
- OPS 460, 463
- Select 3 courses from MGMT 313; OPS 461, 465, 466, 467, 468

## DECISION SCIENCES

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### COURSES IN DECISION SCIENCES

*NOTE: Not all courses are offered every year. Several elective courses are offered only once each year. See the **Timetable of Classes** for current offerings. Consult department for answers to specific questions.*

#### General Courses (DSCI)

##### **205 BUSINESS STATISTICS (4)**

Prereq: MATH 157 or equivalent. 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.

##### **305 APPLIED BUSINESS STATISTICS (4)**

Prereq: DSCI 205. 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.

##### **405 SIMULATION MODELS FOR DECISION MAKING (4)**

Prereq: DSCI 305 or equivalent. 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.

#### Management Information Systems (MIS)

##### **220 INTRODUCTION TO BUSINESS COMPUTER SYSTEMS (2)**

Prereq: ACCT 240 or declared economics major. Introduction to use of commercial software packages for business applications, including spreadsheet analysis, word processing, data management, and communications. S/U grading.

##### **304 INTRODUCTION TO WEB SITE DEVELOPMENT (4)**

Prereq: MIS 320. 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.

##### **313 COMPUTER HARDWARE AND OPERATING SYSTEMS (4)**

Prereq: MIS 320 or ACCT 321. 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.

##### **314 FUNDAMENTALS OF WEB SITE DEVELOPMENT AND MANAGEMENT (4)**

Prereq: CSCI 112. Introduction to server-side programming. Topics include 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.

##### **320 PRINCIPLES OF MANAGEMENT INFORMATION SYSTEMS (4)**

Prereq: MIS 220 or equivalent. 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.

##### **321 SYSTEMS ANALYSIS AND DESIGN (4)**

Prereq: MIS 320 or ACCT 321. 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.

##### **322 BUSINESS APPLICATIONS DEVELOPMENT (4)**

Prereq: MIS 320 or ACCT 321; pre- or co-req: MIS 321. Business application development using an object-oriented language. Design of user interfaces and integration with other development platforms such as spreadsheets and databases.

##### **323 TELECOMMUNICATIONS (4)**

Prereq: MIS 320 or ACCT 321. 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.

##### **324 INTERMEDIATE WEB SITE DEVELOPMENT AND MANAGEMENT (4)**

Prereq: MIS 314 or permission of instructor. Intermediate server-side programming. Topics include data management, XML, security, reusability, scalability and reliability. Students refine their skills by constructing Web sites that utilize XML for data sharing.

##### **421 BUSINESS DATABASE DEVELOPMENT (4)**

Prereq: MIS 321. 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.

##### **422 MANAGEMENT SUPPORT SYSTEMS (4)**

Prereq: MIS 322. 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.

##### **423 NETWORK ADMINISTRATION (4)**

Prereq: MIS 321, 323. Theory and principles, design, implementation, and management of local area network systems, including predominant networking products and technologies.

##### **424 E-COMMERCE SYSTEMS MANAGEMENT (4)**

Prereq: MIS 324. 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.

##### **431 ADVANCED BUSINESS DATABASE SYSTEMS (4)**

Prereq: MIS 322, 421. 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.

##### **432 EXPERT SYSTEMS IN BUSINESS (4)**

Prereq: MIS 321 or ACCT 321. 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.

##### **491 PRACTICUM IN MANAGEMENT INFORMATION SYSTEMS (4)**

Prereq: MIS 321 and permission of instructor. 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.

##### **492 SYSTEMS IMPLEMENTATION PROJECT (4)**

Prereq: MIS 322 or 324 or 421 or 422 or 432. 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.

##### **495 CORPORATE INFORMATION SYSTEMS MANAGEMENT (4)**

Prereq: MIS 321; pre- or co-requisite: one 400-level MIS elective. 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.

#### Operations Management (OPS)

##### **360 OPERATIONS MANAGEMENT (4)**

Prereq: DSCI 205, ACCT 245 and spreadsheet competence. 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.

**367 MANAGEMENT OF SERVICE OPERATIONS (4)**

Prereq: OPS 360. 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.

**460 DESIGNING AND IMPROVING OPERATIONS (4)**

Prereq: OPS 360. 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.

**461 PROJECT MANAGEMENT (4)**

Prereq: OPS 360. 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.

**463 ENTERPRISE RESOURCE PLANNING SYSTEMS (4)**

Prereq: OPS 360. Examines the principles and techniques for planning and managing resource usage across a 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.

**464 MANUFACTURING MANAGEMENT PRACTICUM (4)**

Prereq: OPS 360 and permission of instructor. 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 credits; eight of these may be applied to the manufacturing management major.

**465 QUALITY MANAGEMENT (4)**

Prereq: OPS 360. Examines the principles and techniques for managing and improving quality in a manufacturing facility. Topics include new product design control, incoming material control, manufacturing process control, and continuous quality improvement.

**466 SUPPLY CHAIN MANAGEMENT (4)**

Prereq: OPS 360. Examines the principles, techniques, and practices for the design and managing integrated supply chain operations. Investigates supply chain strategy, distribution, facility location decisions, purchasing, and information systems for managing supply chain activities.

**467 GLOBAL OPERATIONS STRATEGY (4)**

Prereq: OPS 360. 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.

**468 MANUFACTURING STRATEGY (4)**

Prereq: OPS 360. 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.

**469 SEMINAR IN MANUFACTURING AND SUPPLY CHAIN MANAGEMENT (4)**

Prereq: OPS 460, 463, 464 and permission of instructor. Operations management theory and concepts applied to current manufacturing and supply chain problems.

# ECONOMICS

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 young economists are diverse. Economists are most typically employed at all levels of government, in the nation's 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: [Theresa.Gresley@wwu.edu](mailto:Theresa.Gresley@wwu.edu). Web site: [www.cbe.wwu.edu/deptHome.asp?dept=ECON](http://www.cbe.wwu.edu/deptHome.asp?dept=ECON).

## 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.

## 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 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 such fields as anthropology, Canadian/American studies, environmental science, foreign languages, history, journalism, psychology, sociology, and urban and regional planning.

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.

## DECLARATION OF MAJOR

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 for help in program planning, registration priority for certain upper-division courses, access to computer facilities, and protection against possible future catalog revisions that change degree requirements. Declared majors also are eligible for the departmental tuition/fee waiver scholarship and other departmental 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.

## ECONOMICS 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) Assistant 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) Associate Professor. BA, California State University; MS, PhD, University of Oregon.

**L. HART HODGES** (2000) Assistant Professor and Director of the Center for Economic and Business Research. BA, Williams College; MEM, Duke University; PhD, University of Washington.

**VINIT JAGDISH** (2005) Assistant Professor. BA, University of Texas; MA, PhD, Michigan State University.

**SHAWN KNABB** (2005) Assistant Professor. BA, Miami University; MA, PhD, University of California-Santa Barbara.

**JOHN KRIEG** (2000). Associate Professor. 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.

## BACHELOR OF ARTS

### Major — Economics

66-67 credits

- ECON 206, 207, 303, 306, 307, 375
- MATH 124 or MATH 157 or equivalent
- DSCI 205 or equivalent
- MIS 220 or CSCI 101
- 32 credits of electives in CBE, under departmental advisement; at least 24 of these credits must be in economics; a minimum of 16 of these 24 credits must be at the 400 level
- One communication focus and one writing proficiency course must be taken, both within CBE

### Major — Financial Economics

94-96 credits

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.

- ECON 206, 207, 303, 306, 307, 375, 411
- MATH 124 or MATH 157 or equivalent
- 12 credits of economics electives under departmental advisement; a minimum of 8 economics credits must be at the 400 level
- FIN 341, 440, 441, 444 (financial economics majors only may substitute ECON 375 for DSCI 305 as the prerequisite for FIN 441)
- 12 credits of upper-division finance electives under departmental advisement; a minimum of 8 of these credits must be at the 400 level
- ACCT 240, 245, 341, 342
- CSCI 101 or MIS 220
- DSCI 205 or equivalent
- One communications focus course and one writing proficiency course, both within CBE; these courses can be taken as part of the above requirements or electives

**NOTE:** ECON 311 may not be counted toward this major.

### Minor — Economics

24 credits

- ECON 206, 207
- Additional courses selected under departmental advisement (may not include ECON 446 or ECON 447)

### Combined Major — Economics/Mathematics

94-95 credits

This major is suitable for students who wish considerable depth in both disciplines, and is particularly recommended as preparation for graduate study in economics.

- ECON 206, 207, 303, 306, 307, 406 or 407, 475
- 16 additional credits in upper-division courses in economics, of which 4 credits must be a communication focus class, under prior departmental advisement; 8 of these 16 credits must be at the 400 level
- MATH 124, 125 (or 134, 135), 204, 224, 225, 226, 304, 331 (**Note:** The sequence 203-303 may be substituted for 204 and 331); 341, 342 or 441, 442
- MATH 203 and 303, or MATH 204 and 331
- MATH/CSCI 435
- One of CSCI 140 or 141 or MATH 207

### Combined Major — Economics/Accounting

100-101 credits

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 major for students wanting to pursue graduate study for the MBA. Completion of the CBE foundation courses is required to declare this major.

- ECON 206, 207, 303, 306, 307, 311
- MATH 124 or MATH 157 or equivalent
- 8 additional credits in upper-division economics courses, under departmental advisement
- ACCT 240, 245, 321, 341, 342, 343
- 8 additional credits in upper-division accounting courses, under departmental advisement
- DSCI 205 or equivalent
- FIN 341
- OPS 360
- MKTG 380
- MGMT 271, 311, 482
- MGMT 495 or 492
- One communication focus course and one writing proficiency course must be taken, both within CBE

### Combined Major — Economics/Political Science

94-95 credits

This major is available for students who have a strong interest in both of these disciplines and whose career interests lie in fields such as government or law.

- ECON 206, 207, 303, 306, 307, 310
- MATH 124 or MATH 157 or equivalent
- DSCI 205 (or equivalent)
- 12 additional credits in upper-division economics courses, under departmental advisement
- PLSC 250; 261; 271 or 291; 372, 462
- ECON/PLSC 491 (or approved alternative)
- 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 total 94 credits of the program
- One communication focus course must be taken

## ECONOMICS

### *Combined Major — Economics/Environmental Studies* 85-89 credits

A combined major in environmental studies and economics is available to students having a strong interest in the economic aspects of environmental studies and natural resources. The degree awarded is a BA in economics. Students need to consult the *Huxley College of the Environment* section of this catalog for information on preparatory courses for this major.

- ECON 206, 207, 303, 306, 307, 383, 384, 483
- DSCI 205 or equivalent
- MATH 124 or MATH 157 or equivalent
- ECON/ESTU 493 or 4 credits of ESTU 499
- 13 upper-division credits of electives in economics or environmental studies under faculty advisor
- One communication focus course must be taken
- ESTU 306
- One of the following: ESCI 302, 310, 325
- One of the following: ESCI 321, 330, 333, 361a, 463
- Approved capstone courses
- ESTU 436, 464, 468
- One of the following: EGEO 310, 312, 340

### *Combined Major — Politics/Philosophy/Economics* 83 credits

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.

- ECON 206, 207, 303, 310
- 12 additional upper-division economics credits
- PLSC 250, 261
- PLSC 271 or 291
- 9 additional credits from the American Politics and Public Policy field
- 4 additional credits from the Political Theory field
- PHIL 102, 112, 114, 310, 320, 350, 360, 364, 420
- One communication focus course must be taken

### *Combined Major — Economics/Social Studies* 90-91 credits

This major is open to any student, but is specifically designed for students desiring to pursue a career in teaching.

#### **Economics courses (50-51 credits)**

- ECON 206, 207, 303, 306, 307
- MATH 124 or MATH 157 or equivalent
- DSCI 205 or equivalent
- MIS 220 or CSCI 101
- One communication focus course in economics
- 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. (19 or 20 credits, includes communication focus course.)

#### **Social Studies courses (40 credits)**

- ANTH 201 or one of SOC 221, 251, 260, 268
- EGEO 201; and EGEO 250 or two additional geography credits
- PLSC 250
- HIST 103 and 104 and 391
- 12 credits in history, including one course in world or Western or Pacific Rim or civilization

A 2.0 (C) minimum course grade is required in each course taken in the major.

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. Courses required for a state teaching endorsement must be completed with a grade of C (2.0) or better.

### **PREREQUISITES**

Prerequisites for a particular course indicate its level of analysis and tool requirements. The exceptional student who has already acquired these skills elsewhere, or who can readily acquire them, must secure special permission for enrollment from the instructor.

### **WRITING PROFICIENCY COURSE GUIDELINES**

The economics department has a multitiered system for writing proficiency courses. Courses are assigned writing proficiency (WP) points based on the percentage of the course grade that is determined by writing assignments that go through revisions as follows:

Greater than or equal to 30 percent of the grade = 1 WP pt.

Greater than or equal to 50 percent of the grade = 2 WP pt.

Greater than or equal to 75 percent of the grade = 3 WP pt.

A total of 3 WP points in Economics courses are required to satisfy the University requirement of one approved writing proficiency course at WWU (taking a WP course outside the Department of Economics will also satisfy the University requirement). These points can be accumulated in any combination of courses, i.e., in one course worth 3 WP points, three courses worth 1 WP point each, et cetera.

### **COURSES IN ECONOMICS (ECON)**

*Courses numbered X37; X97; 300, 400; 417, 445 are described on Page 34 of this catalog.*

#### **101 MARKETS AND SOCIETY (4)**

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. Examines the emergence of globalization and regionalism, and their implications for workers and the environment.

#### **206 INTRODUCTION TO MICROECONOMICS (4)**

Prereq: MATH 112 or equivalent. 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.

#### **207 INTRODUCTION TO MACROECONOMICS (4)**

Prereq: ECON 206 or 446; MATH 112 or equivalent. 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.

**301 ECONOMICS ISSUES (4)**

Prereq: ECON 206 and 207. 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.

**303 THE HISTORY OF ECONOMIC THOUGHT (4)**

Prereq: ECON 206 and 207. Development of economic thought from the Greek philosophers to the present. Emphasis on the micro, macro and critical traditions in economics following Adam Smith.

**306 INTERMEDIATE MICROECONOMICS (4)**

Prereq: ECON 206; MATH 124 or MATH 157 or equivalent. 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.

**307 INTERMEDIATE MACROECONOMICS (4)**

Prereq: ECON 207; MATH 124 or MATH 157 or equivalent. 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.

**309 MANAGERIAL ECONOMICS (4)**

Prereq: ECON 206; MATH 157 or MATH 124. 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, industrial organization, agency theory and personnel economics. Cannot be counted towards majors in economics.

**310 PUBLIC FINANCE (4)**

Prereq: ECON 206 and 207. The efficiency, equity and stabilization impacts of public expenditure and revenue programs; emphasis on problems and institutions at the national level.

**311 MONEY AND BANKING (4)**

Prereq: ECON 206 and 207. 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.

**315 HEALTH ECONOMICS (4)**

Prereq: ECON 206; DSCI 205 or permission of instructor. Introduction to health economics. Students will learn about the supply and demand of health services as well as spending on health care. Students will gain sufficient knowledge of the health care sector and health economics in the U.S. to allow intelligent discussion/analysis of policy proposals.

**317 EUROPEAN ECONOMIC HISTORY (4)**

Prereq: ECON 206 and 207. 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.

**325 LABOR MARKET ECONOMICS (4)**

Prereq: ECON 206. 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.

**333 INTRODUCTION TO GAME THEORY (4)**

Prereq: ECON 206. 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.

**337 ECONOMICS STUDY ABROAD (4)**

Prereq: enrollment in a WWU-approved study abroad program. 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 credits in economics.

**343 POPULATION, ENVIRONMENT, AND WORLD AGRICULTURE (4)**

Prereq: ECON 206. Utilizes economic principles to understand the interac-

tions among population growth, food demand, agricultural development, and natural resource utilization, degradation, and conservation.

**355 THE POLITICAL ECONOMY OF LANGUAGE AND CULTURE (2)**

Prereq: ECON 206 or admission to Fairhaven College or permission of instructor. Examines the economics and politics of language and language policy.

**364 TOPICS IN CANADIAN ECONOMIC HISTORY (2)**

Prereq: ECON 206. 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.

**365 THE CANADIAN ECONOMY (4)**

Prereq: ECON 206 and 207. Examination of 20th-century Canadian economic policy. Topics focus on current economic issues in Canada.

**375 INTRODUCTION TO ECONOMETRICS (4)**

Prereq: ECON 206, 207; MATH 341 or DSCI 205; MATH 124 or 157 or equivalent. 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.

**380 URBAN ECONOMICS (4)**

Prereq: ECON 206. 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.

**381 AMERICAN ECONOMIC HISTORY (4)**

Prereq: ECON 206 and 207. 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.

**383 ENVIRONMENTAL ECONOMICS (4)**

Prereq: ECON 206. 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.

**384 ENERGY ECONOMICS (4)**

Prereq: ECON 206. 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.

**385 COMPARATIVE ECONOMIC SYSTEMS (4)**

Prereq: ECON 206 or 207. 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.

**388 ECONOMICS OF THE EUROPEAN UNION (2)**

Prereq: ECON 206 and 207. 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 policy and agenda issues of the 1990s, and a look at EU economic relations with the U.S. and world economies.

**389 ECONOMIES OF THE PACIFIC RIM (2)**

Prereq: ECON 206 and 207. 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.

**390 INTERNSHIP IN ECONOMICS (2-10)**

Prereq: Declared major in economics department and eligibility outlined in departmental internship policy statement. Repeatable to a maximum of 10 credits.

### **406 TOPICS IN MICROECONOMICS (4)**

Prereq: ECON 306; DSCI 205 or MATH 341. 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.

### **407 TOPICS IN MACROECONOMICS (4)**

Prereq: ECON 306, 307; DSCI 205 or MATH 341. 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.

### **410 BENEFIT-COST ANALYSIS (4)**

Prereq: ECON 306 or 309 or equivalent. Benefit-cost analysis is an important tool for evaluating the economic impacts of public or private actions. Provides a thorough understanding of the logical underpinnings of benefit-cost analysis and experience in applying benefit-cost analysis to "real-world" problems.

### **411 MONETARY ECONOMICS (4)**

Prereq: ECON 307; ECON 375. Examines the theory and implementation of monetary policy. Topics may include the transmission mechanism of monetary policy, interest rate rules, the credibility of policy makers, and exchange rates. Special consideration is given to empirically measuring the impact of money on real economic variables and optimal monetary policy.

### **430 EXPERIMENTAL ECONOMICS (4)**

Prereq: ECON 306 or 309; DSCI 205 or MATH 341. Introduces experiments as a tool in economic analysis. Examines experimental methodology and provides a first exposure to various experimental results. Stresses 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.

### **442 INDUSTRIAL ORGANIZATION AND PUBLIC POLICY (4)**

Prereq: ECON 306, 307; DSCI 205 or MATH 341. 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.

### **446 ECONOMICS FOR THE TEACHER (3)**

Prereq: teaching experience or current or expected enrollment in teacher education program. 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.

### **447 METHODS FOR TEACHING ABOUT THE NATIONAL ECONOMY IN THE PUBLIC SCHOOLS (3)**

Prereq: ECON 206 or 446, plus teaching experience or current or expected enrollment in a teacher education program. 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.

### **462 INTERNATIONAL TRADE (4)**

Prereq: ECON 306 or 309. 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.

### **463 INTERNATIONAL FINANCE (4)**

Prereq: ECON 307. 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.

### **465 DEVELOPMENTAL ECONOMICS (4)**

Prereq: ECON 306, 307; DSCI 205 or MATH 351. Studies 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 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, and economic integration.

### **470 ECONOMIC FLUCTUATIONS AND FORECASTING (4)**

Prereq: ECON 306 or 307; ECON 375 or MATH 342. 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.

### **475 ECONOMETRICS (4)**

Prereq: ECON 306 or 307; ECON 375 or MATH 342 or MATH 442. 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.

### **482 ADVANCED TOPICS IN ENVIRONMENTAL ECONOMICS (4)**

Prereq: ECON 383 or equivalent. 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 the methodological issues. Topics include climate change, solid waste management and recycling, water quality, and other issues of current interest.

### **483 RESOURCE ECONOMICS (4)**

Prereq: ECON 306 or 309. 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.

### **491 ISSUES IN POLITICAL ECONOMY (4)**

Prereq: senior status in the economics/political science combined major, or an economics major and political science minor, or permission of instructor. Discussion and analysis of selected issues of significant economic and political content. Also offered as PLSC 491.

### **493 SENIOR SEMINAR: ECONOMICS, THE ENVIRONMENT AND NATURAL RESOURCES (4)**

Prereq: senior status in economics/environmental studies combined major. Discussion and analysis of selected issues in the economics of the environment and natural resources. Also offered as ESTU 493.



# FINANCE AND MARKETING

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.

## 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.

## 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 Web site, [www.cbe.wvu.edu/deptHome.asp?dept=FMKT](http://www.cbe.wvu.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 register for MIS 220 prior to their registration in DSCI 305, MIS 320, FIN 341, and MKTG 380. Additional specific information can be found at [www.cbe.wvu.edu/deptHome.asp?dept=FMKT](http://www.cbe.wvu.edu/deptHome.asp?dept=FMKT).

## COMMUNICATIONS REQUIREMENTS

All business majors are required to take one communication focus (CF) course and one writing proficiency (WP) course prior to graduation, both taken within the College of Business and Economics (CBE). Consult the *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 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 finance and marketing department *Planning Guide*, available in the finance and marketing department office and the department Web site. 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.

## DECLARATION OF MAJOR

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, if space is available in the department program of choice.

## 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

## FINANCE AND MARKETING

requirements rather than electives. Priority is given to majors in CBE and other declared majors for whom the classes are required.

### FINANCE AND MARKETING FACULTY

**TERRELL G. WILLIAMS** (1990) Chair and Professor. BS, MS, University of Wyoming; PhD, University of Arizona.

**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.

**PAMELA L. HALL** (1990) Associate Professor. BS, MPA, DBA, Louisiana Tech University.

**EUGENE SONG KIM** (2004) Assistant Professor. BA, Korea University, Seoul, Korea; MS, PhD, University of Hawaii-Manoa.

**SOPHIE X. KONG** (2006) Assistant Professor. BA, Nanjing University of China; MS, PhD, Florida State University.

**SANDRA MOTTNER** (2001) Associate Professor. BA, Mary Baldwin College; MBA, The College of William and Mary; PhD, Old Dominion University.

**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.

### BACHELOR OF ARTS

*Major — Business Administration (Finance or Marketing)*

91-92 credits

- Foundation Courses (28 credits):
  - ACCT 240, 245
  - DSCI 205
  - ECON 206, 207
  - MGMT 271
  - MATH 157
- Core Courses (36 credits):
  - ECON 309
  - DSCI 305, MIS 320, FIN 341, MKTG 380
  - MGMT 311, 482, 492 or 495; OPS 360
- Concentration Electives (27-28 credits):
  - Students may select one of the faculty recommended concentrations listed below, or they may choose to have no concentration and complete 27 to 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
- One communications focus course and one writing proficiency course, both within the College of Business and Economics; these courses can be taken as part of the above requirements or electives.

#### Concentrations

*Finance*

- FIN 440, 441, 444

- Two courses from FIN 442, 443, 446, 447, 448, 449
- Two courses from ACCT 331, 341, 375, ECON 306, 307, 310, 411, FIN 345, 346, 456, 460 or other 44x course

#### Marketing

- MKTG 381, 382, 489
- Three courses from MKTG 471, 480, 481, 482, 483, 484, 486, 487, 488
- One course from MGMT 313, MKTG 471, 480, 481, 482, 483, 484, 486, 487, 488, 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

#### Major — Financial Economics

94-96 credits

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.

- ECON 206, 207, 303, 306, 307, 375, 411
- MATH 124 or MATH 157 or equivalent
- 12 credits of economics electives under departmental advisement; a minimum of 8 of economics credits must be at the 400 level; ECON 311 may not be counted toward this major
- FIN 341, 440, 441, 444 (financial economics majors only may substitute ECON 375 for DSCI 305 as the prerequisite for FIN 441)
- 12 credits of upper-division finance electives under departmental advisement; a minimum of 8 of these credits must be at the 400 level
- ACCT 240, 245, 341, 342
- CSCI 101 or MIS 220
- DSCI 205 or equivalent
- One communications focus course and one Writing Proficiency course, both within CBE; these courses can be taken as part of the above requirements or electives

#### Minor — Business Administration

40 credits

- ACCT 240, 245
- DSCI 205
- ECON 206, 207
- FIN 341
- MGMT 271, 311
- MKTG 380
- MATH 157

### COURSES IN FINANCE AND MARKETING

*Note: Not all courses are offered every year. Many elective courses are offered only once each year. See the **Timetable of Classes** for current offerings. Consult department for answers to specific questions.*

#### Finance (FIN)

##### 215 PERSONAL FINANCE (3)

(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.

**216 PERSONAL INVESTMENTS (3)**

(Not intended for students who plan to be finance 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.

**341 PRINCIPLES OF FINANCE (4)**

Prereq: ACCT 245, DSCI 205, MIS 220 or equivalent. Structure and operation of financial management; problems of internal financial analysis, planning and control, capital structure and investment decisions, valuation, dividend policy, mergers, acquisitions.

**345 REAL ESTATE (4)**

Prereq: MGMT 271, FIN 341. Real estate law; government regulation of real estate use; development, marketing and financing of commercial and residential real estate.

**346 RISK AND INSURANCE (3)**

Personal and organizational risk and the means by which such risk may be minimized, transferred or otherwise managed to avoid serious financial loss.

**440 INVESTMENTS (4)**

Prereq: FIN 341. Operation of securities markets and investment risk and return. Analysis of security characteristics and the issues of portfolio selection and management.

**441 INTERMEDIATE FINANCIAL MANAGEMENT (4)**

Prereq: DSCI 305 or ECON 375, FIN 341. An integrated approach to financial management including study of intermediate-level financial theory and its application to financial decision making under uncertainty.

**442 MULTINATIONAL CORPORATE FINANCE (4)**

Prereq: FIN 341; FIN 440 or MGMT 370. 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 environmental financial issues.

**443 TOPICS IN FINANCE (4)**

Prereq: FIN 341, 440. 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.

**444 FINANCIAL INSTITUTIONS AND MARKETS (4)**

Prereq: FIN 341. 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.

**446 OPTIONS AND FUTURES MARKETS (4)**

Prereq: DSCI 305 or ECON 375, FIN 440. 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.

**447 COMMERCIAL BANK MANAGEMENT (4)**

Prereq: FIN 444. Management of commercial banks and similar depository institutions, emphasizing the measurement and control of risk in asset and liability management. Issues in contemporary banking.

**448 INVESTMENT ANALYSIS AND MANAGEMENT (4)**

Prereq: DSCI 305 or ECON 375, FIN 440, 444. 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.

**449 CASES IN FINANCIAL MANAGEMENT (4)**

Prereq: FIN 441; knowledge of spreadsheets. 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.

**456 COMMERCIAL REAL ESTATE INVESTMENT (4)**

Prereq: FIN 345. Investment strategy, selection, financing, appraisal of income properties such as rentals, apartments condos, office buildings, shopping centers and other secure purpose real estate.

**460 FINANCE APPRENTICESHIP (4)**

Finance-related employment, plus research and/or special project experience. Emphasis on applying finance principles in an academically guided setting. Minimum requirements include a written proposal, daily/weekly journal 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.

**490 INTERNSHIP IN FINANCE (1-4)**

Prereq: business administration majors only, permission of instructor. 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.

**Marketing (MKTG)****380 PRINCIPLES OF MARKETING (4)**

Prereq: MIS 220 or equivalent, ECON 206, MGMT 271, ACCT 240. 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.

**381 FUNDAMENTALS OF MARKETING RESEARCH (4)**

Prereq: DSCI 205, MKTG 380. 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.

**382 BUYING BEHAVIOR AND ANALYSIS (4)**

Prereq: MKTG 380. 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.

**471 SPORTS MARKETING (4)**

Prereq: MKTG 381, 382. Application of marketing principles and concepts in the sports industry. Includes sponsorships, branding, promotions, public relations, licensing, and sports consumer research and behavior.

**480 MARKETING INTERNSHIP (4)**

Prereq: MKTG 381, 382, permission of instructor. 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. Personal selling activities are acceptable only under special circumstances. Repeatable to a maximum of 12 credits, only four of which may be applied to the marketing concentration.

**481 ADVANCED MARKETING RESEARCH AND ANALYSIS (4)**

Prereq: DSCI 305, MKTG 381, 382. 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.

**482 PERSONAL SELLING AND SALES MANAGEMENT (4)**

Prereq: MKTG 382. Planning and implementation of personal selling activities. Management of the sales force — objectives, recruiting, selection, training, motivation, compensation, evaluation and control. Emphasis on industrial selling.

**483 ADVERTISING AND PROMOTION MANAGEMENT (4)**

Prereq: MKTG 381, 382. Management of nonpersonal promotional activities within the marketing program: advertising, sales promotion, public relations, direct marketing. Promotional objectives, budgets and strategies; organization of the advertising function; media selection and evaluation; advertising research and message, computer modeling.

**484 RETAIL MANAGEMENT (4)**

Prereq: MKTG 381, 382, ACCT 245. 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.

## FINANCE AND MARKETING

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### **486 INTERNATIONAL MARKETING MANAGEMENT (4)**

Prereq: MKTG 380. 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.

### **487 NONPROFIT MARKETING (4)**

Prereq: MKTG 381, 382. Marketing strategies for all types of nonprofit organizations. Includes marketing mix as well as fundraising, volunteer management, nonprofit branding, and the use of public media.

### **488 TOPICS IN MARKETING (4)**

Prereq: MKTG 381, 382. 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.

### **489 MARKETING MANAGEMENT AND STRATEGY (4)**

Prereq: DSCI 305, MKTG 381, 382, and two 400-level marketing courses (excluding MKTG 480 and 490). 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.

### **490 INTERNSHIP IN MARKETING (1-4)**

Prereq: business administration majors only, permission of instructor. 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 credits, only four of which may be applied to the marketing concentration. Cannot be applied to the concentration along with MKTG 480.



# MANAGEMENT

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.

## DEPARTMENTAL MISSION

The mission of the Department of Management is to advance the understanding and appreciation of the human and systems dimension in organizations through quality and innovative management *education, scholarship and service.*

In furtherance of the *education* component of the mission, faculty:

- Offer concentrations in human resource management, international business, and management
- Enhance the managerial skills and human resource management knowledge of business students
- Provide students in business administration and accounting with a common background and knowledge of management and organizational behavior, ethical and social issues
- Offer students opportunities for improving communication skills and learning related to a diverse work force and small business
- Provide students opportunities to develop critical thinking and an appreciation of intellectual inquiry

In furtherance of the *scholarship* component of the mission, faculty:

- Link teaching and scholarship through pedagogical research activities
- Advance knowledge in respective areas through applied and integrative research
- Maintain professional development through presentations at regional and national professional meetings
- Disseminate the results of intellectual endeavors

In furtherance of the *service* component of the mission, faculty:

- Develop and maintain student professional organizations
- Participate in College and University governance
- Participate in academic and professional organizations
- Interact with business and community organizations in the exchange of knowledge and experiences

## 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 (ΣΙΕ)

The Department of Management sponsors a chapter of the National Management Honorary, ΣΙΕ. 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 nonroutine 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.

## MANAGEMENT FACULTY

**MATTHEW LIAO-TROTH** (2002) Chair and Associate Professor. BA, University of California at Santa Cruz; MBA, San Diego State University; MS, PhD, University of Arizona.

**BRIAN K. BURTON** (1995) 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) Professor. 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) Assistant Professor. BBA, MBA, Yonsei University; PhD, University of Illinois.

**THOMAS W. ROEHL** (1999) Associate Professor. BA, Valparaiso University; MA, University of Oregon; PhD, University of Washington.

## MANAGEMENT

**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.

**BRUCED. WONDER** (1981) Associate Professor. BS, University of California; MS, San Francisco State University; PhD, University of Washington.

### DECLARATION OF MAJOR

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.

### BACHELOR OF ARTS

#### Major — Business Administration (Management)\*

92 credits

##### Foundation Courses (28 credits)

- ACCT 240, 245
- ECON 206, 207
- DSCI 205
- MGMT 271
- MATH 157

##### Core Courses (36 credits)

- ECON 309
- DSCI 305
- FIN 341
- MGMT 311, 482
- MIS 320
- MKTG 380
- OPS 360
- MGMT 492 or 495

##### Elective Courses (28 credits)

- To complete the major, students are required to take a minimum of 28 credits of approved upper-division elective courses; in meeting this requirement, students may select one of the faculty recommended concentrations below, or may choose to design their own course of study (see *General* below)

**\*Please note:** All business administration majors are required to take one communication focus and one writing proficiency course, both within the College of Business and Economics, prior to graduation. Consult the Timetable of Classes for the specific course sections that fulfill the CF and WP requirements.

### Concentrations

#### Human Resource Management

- MGMT 313, 322
- Three courses from MGMT 423, 424, 425, 426, 427
- One course from MGMT 401, 481, ECON 325
- One course under advisement

#### International Business

- MGMT 370 and 470
- Two courses from ECON 343, 365, 385, 388 and 389 (this pair counts as one course), 462, 463, INTL 305, EGEO 312 or other 300-level Social Science course approved by advisor

- One course from MGMT 337, 473, 474, 481, MKTG 486, FIN 443, ACCT 451, OPS 466
- Two courses under advisement (at least one course from CBE)
- Complete at least one of the following: 1) an approved foreign education experience; 2) a second-year college-level language study; 3) a qualified global internship
- An International Business student completing a double major may satisfy the writing proficiency requirement in either major

#### Management Concentration

- MGMT 313, 322, 413, 414, OPS 461
- Two courses from MGMT 370, 401, 424, 425, 481, 483, 490, 491; MIS 321

#### General

- In lieu of completing one of the preceding concentrations, 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: MGMT 313, MGMT 322 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

#### Minor — Business Administration

40 credits

- ACCT 240, 245
- ECON 206, 207
- DSCI 205
- FIN 341
- MGMT 271, 311
- MKTG 380
- MATH 157

### 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.

### COURSES IN MANAGEMENT (MGMT)

*Courses numbered x37; X97; 300, 400; 417, 445 are described on page 34 of this catalog.*

#### 201 INTRODUCTION TO BUSINESS (4)

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.

#### 271 LAW AND THE BUSINESS ENVIRONMENT (4)

Historical development of legal institutions, the judicial process, and impact of the law upon individual and business decision making.

#### 311 INTRODUCTION TO MANAGEMENT AND ORGANIZATIONAL BEHAVIOR (4)

Introduction to organization theory, behavior and interpersonal communi-

cation; concepts of power, authority and influence; the role of philosophy and values in organizations.

### 313 TEAMWORK BASICS (4)

Prereq: MGMT 311. An introduction to teamwork concepts and skills. Covers structural and process attributes of teams with the objective of enhancing team leader or member effectiveness.

### 322 HUMAN RESOURCE MANAGEMENT (4)

Prereq: MGMT 271, 311. Recruitment, selection, utilization and development of human resources, with emphasis on employee-management relations and relevant behavioral research.

### 337 MANAGEMENT STUDY ABROAD (4)

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.

### 370 INTRODUCTION TO INTERNATIONAL BUSINESS (4)

Prereq: ECON 206. 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.

### 380 BUSINESS HISTORY OF THE UNITED STATES (4)

Prereq: ECON 206. 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.

### 401 MANAGING ORGANIZATIONAL COMPLEXITY (4)

Prereq: MGMT 313. Problem-based learning of advanced concepts in organizational behavior, organizational development, and organizational theory. Emphasis on integration through management simulation.

### 413 TEAMWORK PRACTICUM (4)

Prereq: MGMT 313. Teamwork with applied learning projects. Development and integration of team interaction, facilitation, decision making, and development of skills plus project management skills.

### 414 LEADERSHIP PRACTICUM (4)

Prereq: MGMT 413; OPS 461. A problem-based leadership course with emphasis on leading teams, leading organizational change, and self-leadership.

### 423 STAFFING (4)

Prereq: MGMT 322. Recruiting and selection as related to organizational objectives. Legal requirements, selection models, validation and topical issues of importance.

### 424 TRAINING AND DEVELOPMENT (4)

Prereq: MGMT 322. Training as related to organizational objectives. Emphasis on training models, learning theory, evaluation methodologies, instructional techniques and topics of special interest.

### 425 NEGOTIATIONS AND LABOR RELATIONS (4)

Prereq: MGMT 322. 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.

### 426 CURRENT ISSUES IN HUMAN RESOURCE MANAGEMENT (4)

Prereq: MGMT 322. Current problems in human resource policy and practice.

### 427 COMPENSATION ADMINISTRATION (4)

Prereq: MGMT 322. 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.

### 470 INTERNATIONAL BUSINESS OPERATIONS (4)

Prereq: MGMT 370 or another international course in the College of Business and Economics. 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.

### 473 INTERNATIONAL TRADE OPERATIONS (4)

Prereq: MGMT 370 or MKTG 486. 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.

### 474 TOPICS IN INTERNATIONAL BUSINESS (4)

Prereq: MGMT 370 or equivalent or permission of instructor. 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. Repeatable with various topics to a maximum of 8 credits.

### 481 MANAGING CULTURAL DIVERSITY (4)

Prereq: MGMT 311. 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.

### 482 BUSINESS AND ITS ENVIRONMENT (4)

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.

### 483 ETHICS IN BUSINESS DECISIONS (4)

Prereq: MGMT 482. 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.

### 490 INTERNSHIP IN BUSINESS ADMINISTRATION (1-4)

Prereq: business administration majors only. 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.

### 491 SMALL BUSINESS ENTREPRENEURSHIP (4)

Prereq: MGMT 311, FIN 341, MKTG 380, OPS 360, and MIS 320 or ACCT 321. 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.

### 492 ENTREPRENEURIAL PROBLEMS (4)

Prereq: MGMT 491. 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.

### 495 STRATEGIC MANAGEMENT (4)

Prereq: MGMT 311, FIN 341, MKTG 380, OPS 360, and MIS 320 or ACCT 321. 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.

# MASTER OF BUSINESS ADMINISTRATION

## PROGRAM PURPOSE

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 both the active manager and technical supervisor as well as those looking for new opportunities at the midmanagement 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.

## 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
- 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
- The Evening Part-Time MBA Program* serves students who have significant managerial or professional experience

## ADMISSION

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 540 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.

For the accelerated, full-time MBA option, candidates must also demonstrate either high achievement in attaining a recent bachelor's degree in a business-related field from an AACSB-accredited school or a significant level of management or other qualifying professional experience.

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.)

## STUDENT ADVISING

For answers to routine questions concerning preparation and progress through the program, students should consult this catalog and the program Web site. Nonroutine questions should be directed to the program director or program coordinator.

## MBA GRADUATE FACULTY

DEEPINDER BAJWA (1999) PhD, management information systems.  
EARL D. BENSON (1980) PhD, finance.  
BRIAN K. BURTON (1995) PhD, business environment.  
CRAIG DUNN (2005) PhD, business environment.  
BRANDON DUPONT (2006), PhD, economic history, labor economics.  
HARLAN ETHERIDGE (2007), PhD, accounting.  
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.  
KATHY H.Y. HSU (2007) PhD, accounting.  
STELLA HUA (2002) PhD, operations management and quantitative methods.  
MARGUERITE R. HUTTON (1989) PhD, taxation.  
VINIT JAGDISH (2005), PhD, microeconomics, managerial economics.  
EUGENE KIM (2004) PhD, Marketing.  
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, human resources/organizational behavior.  
JULIE A. LOCKHART (1982) MS/CPA/CMA, managerial accounting.  
SANDRA MOTTNER (2001) PhD, marketing.  
DENNIS R. MURPHY (1979) PhD, managerial decisions/international finance.  
DAVID M. NELSON (1977) PhD, macroeconomics/money markets.  
BO BERNHARD NIELSEN (2003) PhD, international business.  
THOMAS J. OLNEY (1986) PhD, marketing.  
E. LEROY PLUMLEE (1976) DBA, business environment.  
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.  
 FARROKH SAFAVI (1969) DBA, marketing.  
 WILLIAM M. SAILORS (1974) MS/CPA, accounting systems.  
 GEORGE D. SANDERS (1995) PhD, financial/governmental accounting.  
 J. CHRISTOPHER SANDVIG (2001) PhD, management information systems.  
 MARY SASS (2005) PhD, organizational behavior and development.  
 WILLIAM R. SINGLETON (1976) PhD, taxation.  
 STEVEN SMITH (2001) PhD, managerial accounting.  
 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.  
 TERRELL G. WILLIAMS (1990) PhD, marketing.  
 BRUCE D. WONDER (1981) PhD, human resource management.  
 NICHOLAS WONDER (2002) PhD, corporate finance.  
 ZHE GEORGE ZHANG (2000) PhD, statistics.

## PROGRAM REQUIREMENTS

- 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.
- Regular Full-Time MBA (84 credits)
  - MBA 510a,b,c (48 credits)
  - MBA 524 (4 credits)
  - MBA 532 (4 credits)
  - MBA 541 (4 credits)
  - MBA 574 (4 credits)
  - MBA 591 (4 credits)
  - Electives (16 credits)
- Accelerated Full-Time MBA (52 credits)
  - MBA 510c (16 credits)
  - MBA 524 (4 credits)
  - MBA 532 (4 credits)
  - MBA 541 (4 credits)
  - MBA 574 (4 credits)
  - MBA 591 (4 credits)
  - Electives (16 credits)
- Evening Part-Time MBA (56-68 credits)
  - MBA 501-509\*, 511\*, 524, 532, 541, 551, 591, 594, 595

\*Up to three 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.

## MBA COURSES (MBA)

Admission to Graduate School or special permission required. See the Graduate School section of this catalog.

### 501 FINANCIAL ACCOUNTING AND REPORTING CONCEPTS (4)

Prereq: admission to the MBA program. 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.

### 502 MICROECONOMICS (4)

Prereq: admission to the MBA program. 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.

### 503 MACROECONOMICS (4)

Prereq: admission to the MBA program. 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.

### 504 STATISTICAL METHODS (4)

Prereq: admission to the MBA program. 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.

### 505 BUSINESS FINANCE (4)

Prereq: admission to the MBA program. 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.

### 506 CORPORATE INFORMATION SYSTEMS MANAGEMENT (4)

Prereq: admission to the MBA program. 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.

### 507 ORGANIZATIONAL BEHAVIOR (4)

Prereq: admission to the MBA program. Techniques for the management of individual, group and intergroup behavior in organizations. Includes con-

## MASTER OF BUSINESS ADMINISTRATION

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cepts and techniques for change, conflict resolutions and organizational development.

### **508 OPERATIONS MANAGEMENT (4)**

Prereq: admission to the MBA program. 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.

### **509 MARKETING MANAGEMENT (4)**

Prereq: admission to the MBA program. 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.

### **510a MANAGERIAL FOUNDATIONS (16)**

Prereq: admission to the MBA program. Introduction to professional management and foundation coverage of managerial skills, microeconomics, global competition, financial reporting, and business statistics.

### **510b INTERNAL AND EXTERNAL FORCES IMPACTING THE MANAGER (16)**

Prereq: MBA 510a. 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.

### **510c MANAGERIAL DECISIONS (16)**

Prereq: MBA 510b or admission to the accelerated full-time MBA program. 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.

### **511 MANAGERIAL ACCOUNTING (4)**

Prereq: admission to the MBA program. 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 informations, budgeting and various quantitative techniques available.

### **523 NEGOTIATIONS AND LABOR RELATIONS (4)**

Prereq: MBA 510c. Analysis, explanation, and evaluation of negotiation in organizations. Application of negotiations to labor relations in unionized and non-unionized work places. Issues include pre-employment discussions, collective bargaining, arbitration, mediation, agency, renegotiating contracts, and multiparty discussions.

### **524 MANAGERIAL SKILLS (4)**

Prereq: admission to the MBA program. Interpersonal skill building in critical management areas including stress management, delegation, communication, power and influence, meetings and conflict management.

### **525 SEMINAR IN MANAGEMENT (4)**

Prereq: MBA 510c. Intensive examination of selected topics in management. Repeatable to a maximum of 8 credits.

### **527 ETHICS IN BUSINESS DECISIONS (4)**

Prereq: MBA 510c. 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.

### **528 DIVERSITY IN ORGANIZATIONS (4)**

Prereq: MBA 510c. An examination of how diversity in organizations places increasingly complex demands and creates new opportunities for organizations in managing human capital.

### **529 INFLUENCE, POWER AND POLITICS IN ORGANIZATIONS (4)**

Prereq: MBA 510c. 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.

### **532 MARKETING STRATEGY (4)**

Prereq: admission to the MBA program. 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.

### **534 SEMINAR IN MARKETING (4)**

Prereq: MBA 510c. Focuses on selected traditional and contemporary topics in marketing theory, planning, strategy, management and practice. Repeatable to a maximum of 8 credits.

### **535 SEMINAR IN BUYER AND CONSUMER BEHAVIOR (4)**

Prereq: MBA 510c. 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.

### **539 SEMINAR IN INTERNATIONAL BUSINESS (4)**

Prereq: MBA 510c. Intensive examination of selected topics in international business. Repeatable to a maximum of 8 credits.

### **541 MANAGERIAL FINANCE (4)**

Prereq: MBA 505 or MBA 510c. Theory and policy implications of financial decision making. Emphasis on valuation, long-term financing and investment/merger decisions.

### **542 EQUITY MARKETS AND PORTFOLIO ANALYSIS (4)**

Prereq: MBA 510c. 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.

### **543 FINANCIAL MARKETS, DERIVATIVE INSTRUMENTS AND RISK MANAGEMENT (4)**

Prereq: MBA 510c. 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.

### **544 SEMINAR IN FINANCE (4)**

Prereq: MBA 510c. Intensive examination of selected topics in finance. Repeatable to a maximum of 8 credits.

### **551 MANAGERIAL ECONOMICS (4)**

Prereq: MBA 502, 503, 504 or MBA 510c. 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.

### **555 SEMINAR IN ECONOMICS (4)**

Prereq: MBA 510c. Intensive examination of topics in economics. Repeatable to a maximum of 8 credits.

### **561 SEMINAR IN PROFESSIONAL AUDITING (4)**

Prereq: MBA 510c and ACCT 461 or equivalent. 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.

### **562 SEMINAR IN TAXATION (4)**

Prereq: MBA 510c. 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.

### **565 SEMINAR IN ACCOUNTING (4)**

Prereq: MBA 10c. Intensive examination of selected topics in accounting. Repeatable to a maximum of 8 credits.

### **566 SEMINAR IN MANAGERIAL ACCOUNTING AND CONTROL (4)**

Prereq: MBA 510c. Seminar/case study course. Focus on managerial accounting topics such as responsibility centers and transfer pricing; budget-

ing; and analysis of performance. Examines managerial accounting in international, service and not-for-profit entities.

**567 FINANCIAL STATEMENT PRESENTATION AND ANALYSIS (4)**

Prereq: MBA 510c. 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.

**572 INFORMATION SYSTEMS FOR MANAGEMENT DECISION MAKING (4)**

Prereq: MBA 510c. 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.

**574 ENTERPRISE RESOURCE PLANNING (4)**

Prereq: MBA 510c. Introduction 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 re-

sources components of ERP as well. Students also will gain experience with SAP R/3 and a small-market ERP package.

**575 SEMINAR IN DECISION SCIENCES (4)**

Prereq: MBA 510c. Intensive examination of selected topics in decision science. Repeatable to a maximum of 8 credits.

**591 BUSINESS POLICY (4)**

Prereq: admission to the MBA program. 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.

**594 INTRODUCTION TO PROFESSIONAL MANAGEMENT (4)**

Prereq: admission to the MBA program. 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.

**595 COMPETING IN A GLOBAL ENVIRONMENT (4)**

Prereq: admission to the MBA program. Explores the effect of various aspects of globalization on markets, managers, and business strategy, with emphasis on both corporate and functional-level issues.

# FAIRHAVEN COLLEGE OF INTERDISCIPLINARY STUDIES

*Dr. Roger W. Gilman, Dean*

## A COLLEGE WITHIN THE UNIVERSITY

Founded in 1966, 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. The college offers training in writing and research, critical thought and creative expression, independent judgment and scholarship, self evaluation and a narrative assessment.

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 and practical skills: discipline, resourcefulness, initiative, flexibility and adaptability. 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 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, through the Fairhaven Distinguished Teaching Colleague program and through exchange or guest teaching opportunities. Through the same programs, Fairhaven provides the opportunity for faculty from other colleges to develop courses with an interdisciplinary approach or experiment with new styles of pedagogy.

## A Structure for Learning

A close working relationship between the teacher and the student is a continuing commitment at Fairhaven College. Classes are small, and the emphasis is on open discussion and the exchange of ideas. In any given quarter, students may select classes offered across the University and/or design study projects in consultation with faculty. Students are encouraged to formulate and carry out independent study projects. Faculty sponsor these projects and help students to develop the resources necessary to complete them. Field work, practica

and internships can also form an important part of a college education, and faculty and staff help students locate and arrange a wide variety of experiential learning opportunities.

Collaborative learning is often used together with independent research. Narrative assessments, including a student self-evaluation and written responses from faculty, replace letter grades, encouraging students to take risks and explore new ideas.

Fairhaven College, in conjunction with Western Washington University, offers the following undergraduate degrees: Bachelor of Arts; Bachelor of Arts in Education; Bachelor of Fine Arts; Bachelor of Music; Bachelor of Science. Students completing the Fairhaven Interdisciplinary Concentration earn the Bachelor of Arts or Bachelor of Arts in Education.

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 Law and Diversity Program, 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 writing proficiency requirements (FAIR 201a, and 305a substitute for this requirement)
- 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.

## THE CORE PROGRAM: THREE CURRICULAR STAGES

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.

Seven elements of this core contribute to its unique character:

- Courses are conducted in a collaborative seminar format
- Class sizes seldom exceed 20 students
- Where scheduling permits, students learn as a member of a cohort and Fairhaven community-based group
- 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, 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.



**Stage 1: Exploratory Studies**

- 101a An Introduction to Interdisciplinary Study at Fairhaven
- 201a Critical and Reflective Inquiry
- 202a Humanities and the Expressive Arts I
- 203a Social Relationships and Responsibility: Theories and Critique
- 206a Science and Our Place on the Planet I
- 305a Writing Portfolio 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
  - Science and Our Place on the Planet

**Stage 2: Concentrated Studies**

Complete one of the following options:

**Option A: “Fairhaven Interdisciplinary Concentration”** — the individually designed major.

- 303a Concentration Seminar
- Components of concentration: proposal of study; completion of course of study; senior project; student summary and evaluation; committee review and approval

**Option B:** A major in one of the departments of Western Washington University. (See departmental requirements.)

**NOTE:** Fairhaven students may not complete the General Studies major.

**Option C:** Upside Down BA Degree Program.

**Stage 3: Advanced Studies**

- 401a Senior Project (Option A students only)
- 403a Advanced Seminar (all options)

**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, maybe found in the *Student Guide to Fairhaven College*.

**SPECIAL PROGRAMS**

**The Law and Diversity Concentration.** In 1991 Fairhaven College developed the Law and Diversity Program for students who were interested in law, diversity and access to the legal system for under-represented groups. The program welcomed students who desired to affect change and who had the potential to act as leaders and role models in their communities using legal knowledge and process.

Graduates from the Law and Diversity Program have obtained positions as attorneys for private and public firms, in city government and legal services, and at the U.S. Department of Education and the Environmental Protection Agency. Graduates have also pursued careers in the justice system as juvenile probation officers, human services case workers, prisoner rights activists, law enforcement personnel, and as union negotiators. Some have gone on to faculty positions at other universities, where they teach on a variety of law, diversity, and justice issues.

To better keep pace with Fairhaven’s core mission of social justice, the program has expanded into a regular plan of study at Fairhaven under the Law, Diversity and Justice concentration. The concentration is open to *all* students enrolled at Fairhaven College and endeavors to increase the number of people from under-represented groups or who want to help under-represented groups, and who are seeking careers in law and social justice. Fairhaven College has also created the Center for Law, Diversity and Justice to support the work of students, faculty and community members around these issues.

**Thematic and Intensive Studies.** The College offers several classes in a single quarter which focus on a particular topic, issue or theme.

Independent field studies abroad or community internships might consume a full quarter’s registration. The Adventure Learning Program (ALP) 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, ALP grant recipients have lived and conducted research in Madagascar, Ethiopia, Kenya, Uganda, South Africa, India, Korea, Thailand, Brazil, and Lebanon.

Information on these special programs can be accessed on the Fairhaven College Web site or is available at the main Fairhaven office.

**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.

**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

## FAIRHAVEN COLLEGE OF INTERDISCIPLINARY STUDIES

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reviewed on an individual basis. Students are urged to contact Fairhaven College early in the admissions process.

### Advisement and Foundations

Careful advisement is stressed at Fairhaven and is always available from members of the faculty and staff. The college schedules its own advisement sessions for entering students.

### GRADING AND 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. Fairhaven College follows the *Student Records Policy* of Western Washington University found elsewhere in this catalog.

### 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: Office of Student Financial Resources, Western Washington University, Bellingham, WA 98225-9006.

Fairhaven offers scholarships to selected students. Write separately to Fairhaven College or check the college's Web site for information.

### Applying for Admission, Visiting Fairhaven

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 360-650-3680.

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 COLLEGE FACULTY

**ROGER W. GILMAN** (2006) Dean and Professor, BA, Fairhaven College, Western Washington University; MA, PhD, University of Chicago.

**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) Diversity Fellow. 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.

**JUNGSIK KIM** (2002) Assistant Professor. BA, Korean University; MA, PhD, University of Hawaii, Manoa.

**DANIEL M. LARNER** (1968) Professor. AB, Harvard College; MS, PhD, University of Wisconsin, Madison.

**TERI MCMURTRY-CHUBB** (2003) Assistant Professor. BA, Spelman College; MA, JD, University of Iowa.

**RAQUEL MONTOYA-LEWIS** (2003) Assistant 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.

**Faculty specialties.** Areas of faculty study and interest include African American and Asian American history, American literature, anthropology, art and art history, bioacoustics, 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.

### THE REGISTRATION PROCESS

**University Registration.** Registration for Fairhaven College offerings occurs during scheduled University registration. Class schedules (timetables) are mailed to all students by the University. Registration for Fairhaven College variable credit classes and independent studies is via a faculty-signed *Independent Study Permit Card*.

**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 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 or in print. 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.

## FAIRHAVEN COLLEGE COURSES AND STUDIES (FAIR)

**Fairhaven's 2007-2009 Curriculum.** The courses and studies listed in this catalog will be offered during the 2007-2009 academic years. Additional classes will be announced and described in the *Fairhaven College Quarterly Class Description* booklet, available at Fairhaven and the Office of the Registrar.

At Fairhaven, new courses are constantly being developed by faculty and account for about one-half of the course offerings.

### CORE STUDIES, 101a-409a

#### 101a AN INTRODUCTION TO INTERDISCIPLINARY STUDY AT FAIRHAVEN COLLEGE (1)

Prereq: admission to Fairhaven College; required of all new students in the first quarter of enrollment at Fairhaven. Provides a framework for Fairhaven College's interdisciplinary philosophy and practices. Introduces students to the Fairhaven community, mission, educational philosophies, and their complementary processes leading toward graduation.

#### 201a CRITICAL AND REFLECTIVE INQUIRY (5)

Prereq: admission to Fairhaven College; required of all new students in the first quarter of enrollment at Fairhaven. 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 the Fairhaven education. Exploration of these processes will be rooted in a topical and methodological approach of the professor's choosing.

#### 202a CORE: HUMANITIES AND THE EXPRESSIVE ARTS I (5)

Explores the assumptions and practices which inform human inquiry and creativity in literature, philosophy and the arts.

#### 203a SOCIAL RELATIONSHIPS AND RESPONSIBILITY: THEORIES AND CRITIQUES (5)

Prereq: admission to Fairhaven College; required of all new students in the first or second quarter of enrollment at Fairhaven. 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.

#### 206a CORE: SCIENCE AND OUR PLACE ON THE PLANET I (5)

Science and technology are systematic, self-critical, intellectual activities by which a culture seeks to understand and benefit from the physical phenomena of the natural world. Addresses science in Western culture — its social and philosophical implications, its technological applications, its potential and its limitations.

#### 303a CORE: INTERDISCIPLINARY CONCENTRATION SEMINAR (5)

Prereq: FAIR 101a, 201a, 203a and 305a. Required of students undertaking an Interdisciplinary Concentration. Application of procedures and as-

sistance in ordering one's course of study into an effective concentration proposal. Credit awarded upon filing the proposal.

#### 305a CORE: WRITING AND TRANSITION CONFERENCE (3)

Prereq: completion of FAIR 101a and 201a. 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.

#### 401a CORE: SENIOR PROJECT (1-18)

Independent study required of students undertaking an Interdisciplinary Concentration. See the *Fairhaven College Guidelines for Concentrations* for more information. Repeatable to a maximum of 18 credits.

#### 403a CORE: ADVANCED SEMINAR (4)

Prereq: senior status. 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.

#### *Law, Diversity and Justice Concentration Focus*

See Page 121 for a description of the Law, Diversity and Justice concentration.

The following courses are recommended for concentrations with a Law, Diversity and Justice emphasis. These courses, combined with other courses selected through the Fairhaven concentration process and faculty advisement, provide the basis for varied paths of study exploring the issues of law, diversity, and justice in our society.

#### 211b THE AMERICAN LEGAL SYSTEM (5)

#### 393b RIGHTS, LIBERTIES AND JUSTICE IN AMERICA (4)

#### 412e ADVANCED TOPICS IN LAW (2-5)

#### 422k ADVANCED LEGAL WRITING AND ANALYSIS (4)

## CONCENTRATED STUDIES

#### 211b THE AMERICAN LEGAL SYSTEM (5)

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.

#### 212c INTRODUCTION TO POLITICAL ECONOMY (5)

Study of the American macroeconomic system from two perspectives: orthodox and critical; application of both theoretical frameworks to problems in modern society.

#### 212e COAST TO COAST ON A PIECE OF TOAST: HOBOISM IN AMERICA (3)

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.

#### 213b TOPICS IN POPULAR CULTURE (2-5)

Prereq: FAIR 201a or concurrent. Introduction to critical interpretations of popular cultural 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.

#### 213d SLAVE NARRATIVES AND OTHER TESTIMONIES OF THE OLD SOUTH (3)

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.

#### 214b INTERDISCIPLINARY TOPICS IN AMERICAN EXPERIENCE (3-4)

Significant events, movements, art genres, history or other phenomena in American society. Uses multiple approaches, not limited to traditional disciplines, to interpret course material. Topics may include a particular art form, the Ku Klux Klan, et cetera. Repeatable with different topics.

**214e HISTORIAN AS DETECTIVE (5)**

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.

**215f THE ASIAN-AMERICAN EXPERIENCE (3)**

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.

**216b TESTIMONIES OF THE NEW SOUTH (3)**

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 213.

**218c THE HISPANO/A-AMERICAN EXPERIENCE (3)**

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.

**219d THE AFRICAN-AMERICAN EXPERIENCE (3)**

An overview of African-American history from an interdisciplinary perspective. Emphasis 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.

**221g GRAPHIC NOVELS (3)**

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.

**221j COLLEGE WRITING (4)**

Directed toward the student who wishes to improve expository writing skills. Theory, practice and criticism of student work.

**222 IMAGINATIVE WRITING (4) G = Poetry; H = Fiction**

Workshop to develop and discuss student manuscripts. Repeatable to a maximum of 12 credits with different genres.

**223g ELEMENTS OF STYLE (1)**

Examines the rules and principles of English composition, including grammar, punctuation, word usage, sentence construction, and strategies for proofreading and revision. Repeatable to a maximum of 3 credits.

**223k COLLECTING PERSONAL NARRATIVES: THE ART OF THE INTERVIEW (4)**

Introduction to skills in listening, questioning, and critical approaches to critiquing interviews.

**224m WRITING ARGUMENTS (4)**

Examination of how to construct a logical argument in written form.

**225g PRESENTATIONAL SPEAKING (3)**

An opportunity to develop strategies for effective presentation in a variety of contexts.

**226h WORDS (4)**

An etymological exploration of words: their origins, roots, history, evolution, connotations, and usage.

**227j WALKING (4)**

A literary and experiential examination of walking.

**228k COMICS AND DIVERSITY (3)**

Prereq: FAIR 202a or 200-level English class. 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.

**231n INTRODUCTION TO APPLIED HUMAN ECOLOGY: SUSTAINABLE SYSTEMS (3 ea)**

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. Repeatable to 9 credits.

**232p USER-FRIENDLY STATISTICS (4)**

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.

**242r THE ART OF PLAY: RECLAIMING IMAGINATION AND SPONTANEITY FOR THE ADULT (4)**

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.

**243t AWARENESS THROUGH THE BODY (4)**

An experiential introduction to the discipline of somatics and sacred traditions of somatic practice, reclaiming the natural intelligence of sensory awareness.

**252v INTRODUCTION TO DRAWING (4)**

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.

**254x INTRODUCTION TO RELIEF PRINTING (4)**

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.

**255y FOLK MUSIC PERFORMANCE (1)**

Prereq: permission of instructor. 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.

**257v MUSICAL/DRAMATIC PRODUCTION (1-5)**

Prereq: permission of instructor. Rehearse, stage and perform a musical/dramatic theatre production. Repeatable with various topics.

**258w INTRODUCTION TO ACRYLIC PAINTING (4)**

Prereq: art history familiarity recommended. Acrylic painting techniques and elements of form, composition and color using still life, photographs and live models.

**261e RACE IN/TO THE MOVIES I: RACE RELATIONS ON FILM 1900-1950 (4)**

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.

**262f SWIMMING WITH THE SHARKS: THE LIFE OF A LAWYER (2)**

Explores, through guest speakers, what it means to become an attorney: education options, career choices, and possible roles of lawyers in society.

**263b THE NATIVE AMERICAN EXPERIENCE (3)**

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.

**310d PEACE CORPS EXPERIENCE (4)**

Prereq: FAIR 203a or permission of instructor. Examines the Peace Corps program and its volunteers, including motives, duty to society, and conflicting values of race, gender, sexual orientation, religion, and wealth.

**310n AMERICAN INDIANS IN THE CINEMA (4)**

Prereq: previous course in Native American studies or permission of instructor. Explores portrayal of Native Americans in the cinema, and examines the effects of racist images and perpetuated stereotypes on Native identity, self-esteem, and cultural survival.



**311c ALTERNATIVES IN EDUCATION (4)**

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.

**312d ISSUES IN INTERNATIONAL STUDIES (3-6)**

Prereq: FAIR 203a or permission of instructor. 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.

**313e GAY, LESBIAN, BISEXUAL AND TRANSGENDERED ISSUES IN EDUCATION (4)**

Prereq: FAIR 219e or AMST 242. 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.

**314b ADVANCED INTERDISCIPLINARY TOPICS IN AMERICAN EXPERIENCE (4)**

Prereq: FAIR 203a. A study of events, movements, art genres, or other phenomena in America. Employs interdisciplinary approaches and social theory to deeply explore topics, which include the art deco movement, nativist movements, or war. Repeatable with different topics.

**314e STUDYING KOREA: MODERN HISTORY, CULTURE AND PEOPLE (4)**

Prereq: FAIR 203a or equivalent 200-level course in social science. An interdisciplinary exploration of World War I. Uses multimedia resources to present the music, literature, art, and history of the war and to assess its global significance.

**315f WORK (4)**

Prereq: studies in the social sciences or humanities. An interdisciplinary study which examines the meaning, value, history and changing nature of our work.

**316b CRIMINAL LAW (4)**

Prereq: admission to the Law and Diversity program or permission of instructor. Study of substantive criminal law using a law school case book. Topics include the elements of crimes, intent, and defenses such as insanity, self-defense, and entrapment.

**318c DEMOCRACY (4)**

Prereq: a course in literature, history, philosophy or political science, or permission of instructor. Explores the ideas, theories, practices, problems and the future of democracy, through literature, history and other writings.

**319b CURRENT ISSUES IN LAW (2-5)**

Prereq: FAIR 201a, 203b, 211b. A look at one or two current legal issues being addressed by U.S. courts (including federal, state and/or tribal) today. Study of the cases surrounding the legal issue, popular opinion about the issues, and current cases testing the legal issue. Topics may include abortion, immigration issues, criminal law and procedure. Repeatable with different topics.

**319d THE DEATH PENALTY AND CRIMINAL SENTENCING IN HISTORICAL AND LEGAL PERSPECTIVE (4)**

Prereq: FAIR 203a or permission of instructor. Explores the legal and historical roots of disproportionate criminal sentencing and death penalty convictions for poor and minority groups.

**319e ADVANCED TOPICS IN POPULAR CULTURE (2-5)**

Prereq: FAIR 201a and 203a. Study of major popular culture theorists, with application of their theories to the study of popular culture from an interdisciplinary perspective. Repeatable with different topics.

**322k PUBLICATION: FROM PROSPECTUS TO PRESS (4)**

Prereq: FAIR 201a and one additional course in writing. A practical examination of how to write a book, from creating a prospectus to editing drafts to delivering a final product to press.

**322m MEMOIRS AND MEMORY: CHILDHOOD IN AMERICA (4)**

Prereq: FAIR 203a or equivalent or permission of instructor. 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.

**323g IMAGINATIVE WRITING II (4)**

Prereq: FAIR 222g or 222h, a course in creative writing, or permission of instructor. 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.

**324h POETRY AND LYRIC (4)**

Prereq: FAIR 202a or equivalent or poetry. 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.

**325j STUDIES IN MYTH AND MYTHOLOGY (4)**

Prereq: background in humanities or cultural history. Literary and artistic archetypes, world mythology, comparative cosmology, symbols and the unconscious. Repeatable with various topics.

**326k STUDIES IN FILM (2-5)**

Prereq: film class. 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.

**328m AMERICAN LIVES (4)**

Prereq: FAIR 202a or permission of instructor. 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.

**330n FRONTIERS: NEW PERSPECTIVES IN SCIENCE (4-5)**

Prereq: FAIR 206a or equivalent or permission of instructor. Investigates new ideas, concepts, discoveries, paradigms, insights, theories, models, controversies, unsolved questions and mysteries occurring at the frontiers of science. Intended to open minds and inspire imagination and creativity of students in any field. Includes critical consideration of technological and social implications. Repeatable with different topics.

**331q THE MAGIC OF CHAOS: A MULTIDISCIPLINARY APPROACH (4)**

Prereq: FAIR 206a or equivalent or permission. Examines chaos from multiple perspectives beginning with mythological and cultural roots, moving into the historical and present-day development of scientific chaos theory, and developing philosophical, social, psychological, and aesthetic implications and applications — through reading, discussion, and student projects.

**332n CURRENT ENVIRONMENTAL TOPICS (2-5)**

Prereq: FAIR 206a or permission of instructor. 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.

**333p FEMINIST PERSPECTIVES IN SCIENCE (4)**

Prereq: FAIR 206a or one course in the sciences or permission of instructor. Studies a variety of feminist perspectives as applied to the sciences, examining patterns of exclusion of women historically and in the present, challenging principles of value neutrality and objectivity, examining gender and cultural biases in the teaching and practice of science and in our technologies.

**334n TOPICS IN EVOLUTIONARY BIOLOGY (4-8)**

Prereq: FAIR 206a. Explores evolutionary theory, the history of evolutionary thought, and the relevance of biological evolution to the modern human condition. Repeatable with different topics.

**334p FIELD STUDIES IN SCIENCE (3-8)**

Prereq: FAIR 206a or equivalent or permission of instructor. Systematic studies of quantitative natural history, employing field techniques from biology, chemistry, physics, and interdisciplinary science. Repeatable to a maximum of 20 credits.

**334q THE SCIENCE AND MUSIC OF NATURAL SOUNDS (5)**

Prereq: FAIR 206a or permission. 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.

**335n VISIONING SUSTAINABLE FUTURES (4-5)**

Prereq: FAIR 201a or ENG 101 and prior course work or experience in sociopolitical issues or environmental issues from a sociopolitical perspective. 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.

**335p QUANTITATIVE METHODS, CRITICAL THINKING IN THE NATURAL AND SOCIAL SCIENCES (4-5)**

Prereq: FAIR 206a or equivalent or permission of instructor. Examination and application of quantitative methods while extending critical thinking skills essential to effective experiential 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.

**338p CULTURAL AND BIOLOGICAL PERSPECTIVES ON PREGNANCY AND CHILDBIRTH (4)**

Prereq: FAIR 203a and 206a or permission of instructor. 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.

**339n ENVIRONMENTAL ISSUES OF INDIGENOUS PEOPLES OF NORTH AMERICA (5)**

Prereq: FAIR 206a or permission. 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.

**339p SCIENCE AND SOCIAL POLICY (4-5)**

Prereq: FAIR 203a and 206a. Varied current topics and controversies (such as global warming, genetic engineering, stem cell research, "peak oil") are chosen to illuminate such questions as: How does science contribute to the public and political discourse essential to the shaping of social policy? How can we distinguish good science, bad science, junk science, pseudoscience, and nonsense without cultural bias — or can we? Repeatable with different topics.

**341t AWARENESS THROUGH THE BODY II (4)**

Prereq: FAIR 243r or permission of instructor. A continuation of 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.

**342u THE BODY SPEAKS: CULTURE AND EATING DISORDERS (4)**

Prereq: previous courses in psychology or permission of instructor. Examines eating disorders in the United States and developing countries from cultural and gender perspectives, as well as controversies regarding origins and treatments.

**343r DEATH AND DYING (5)**

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.

**344u CROSS-CULTURAL PSYCHOLOGY (4)**

Prereq: any course in psychology. Introduces non-Western perspective of human behaviors. Culture's influence on human thinking, feeling, and action. Learning diversity in understanding societies and human beings. Repeatable with different topics.

**346e PSYCHOLOGICAL THEORIES OF MORAL DEVELOPMENT (4)**

Prereq: FAIR 201a and 203a. Use of psychological theories of moral development to examine autobiographical narratives from widely differing perspectives guided by the question, "what really matters" in peoples' lives, and why?

**346t CULTURE, PERSONALITY, AND SELF: ASIAN AND WESTERN PERSPECTIVES (3)**

Prereq: FAIR 203a or permission of instructor. Interdisciplinary study of the relationships between culture, personality,, and the self. Includes several approaches in psychology and anthropology to explore how culture influences personality and how self concept is developed.

**347u PSYCHOLOGY OF WOMEN (5)**

Prereq: previous courses in psychology or women studies. Major theories of psychology of women.

**349t SOCIAL PSYCHOLOGY THROUGH FILM (3)**

Prereq: 200-level psychology class. Learning social psychological theories through films (e.g., conformity, intergroup conflicts, aggression, et cetera) and the application of social psychological theories to actual social situations. The psychological influence of media.

**351w PRINTMAKING NARRATIVES (4)**

Prereq: FAIR 254x or two design or two studio art classes. 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.

**352y VISUAL ART WORKSHOP (2-5)**

Prereq: concurrent registration in a visual arts independent study project. Biweekly critiques, field trips to museums, galleries and local artists' studios, study of a contemporary artist, and participation in a group exhibition.

**353x NEW MEDIA AND CONTEMPORARY ART (4)**

Prereq: FAIR 202a, some experience in studio art, or permission of instructor; an open mind and creative curiosity is also required. 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.

**353y SONGWRITING WORKSHOP (4)**

Examination of the elements of songwriting; discusses techniques, strategies, and blocks; the roles and interrelationships of melody, rhythm, and lyric; and song forms and styles. Through a series of exercises, development of a portfolio of songs.

**354v SCRIPTWRITING WORKSHOP I (4)**

Prereq: previous course work or experience with creative writing, or permission of the instructor. 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.

**355w INSTALLATION ART (3-5)**

Prereq: 200 level or higher studio art class. Contemporary subjects will be addressed in three-dimensional spaces using combined mediums, such as video, audio, paintings and found objects. Repeatable to 15 credits.

**355y ART AND SOCIAL ACTIVISM (4)**

Prereq: FAIR 202a or equivalent or permission of instructor. Explores the work of numerous contemporary artists who address social and political concerns with their art. Looks at how artists engage community and engage 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.

**356v EXPLORING DREAMS THROUGH PAINTING AND DRAWING (4)**

Prereq: Introduction to drawing or equivalent; familiarity with art history preferred. Investigates personal dreams and explores symbolism and context through art. Mixed media approach to art projects and study of artists who address and explore dream symbolism.

**356x DREAMS, IMAGINATION AND CREATIVITY (4)**

Prereq: FAIR 203a or 243r or permission of instructor. 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.

**357y THEATRE/FILM PRODUCTION (4)**

Prereq: previous work in theatre or film production or permission of instructor. An opportunity to work with intensive instruction on production of student-written dramas or films. Repeatable to a maximum of 8 credits.

**358v ART IN THE ENVIRONMENT (4)**

Prereq: three studio art courses or permission of instructor; ART 190 recommended. 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 to a maximum of 12 credits.

**358w ADVANCED ACRYLIC PAINTING (4)**

Prereq: FAIR 258w or permission of instructor. Expands on techniques and skills and ideas with a focus on development and repetition of themes within the work.

**359v ART AND POPULAR CULTURE (4)**

Prereq: FAIR 202a or equivalent or permission of instructor. Examines the role of art in popular culture, including Pop artists and their ideas, how art is perceived by our society, and how and why artists' images are used to sell products to consumers. Students will create artworks that respond to pop cultural values, myths and images.

**359w PERFORMANCE ART (4)**

Prereq: FAIR 202a and performing arts experience. Working in collaboration with others, each student will design, develop and perform a conceptual work of art. Background study of diverse traditions in performance art. Repeatable to a maximum of 8 credits.

**361e RACE IN/TO THE MOVIES II: RACE RELATIONS ON FILM: 1950-1980 (4)**

Prereq: FAIR 261e or other film studies class. 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.

**362f WE'RE NOT FOR SALE: HISTORY OF ASIAN WOMEN IN AMERICA (4)**

Prereq: FAIR 215f or AMST 205 or course in history of American women. Explores the history and experiences of Asian women in America from the mid-19th century to the present.

**363b SUZIE WONG TO MISS SAIGON: ASIAN PRESENCE IN HOLLYWOOD (4)**

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.

**364c EL MOVIMIENTO CHICANO (4)**

Prereq: FAIR 203a or FAIR 218c or AMST 203 or HIST 463. 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.

**365d ISSUES IN CONTEMPORARY MEXICAN SOCIETY (4)**

Prereq: FAIR 218c or AMST 203 or course in Mexican history or culture recommended. 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.

**366e COMPARATIVE CULTURAL STUDIES (4)**

Prereq: introductory-level course in history, sociology, anthropology or equivalent. 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.

**367b ISSUES IN POLITICAL ECONOMY (3-6)**

Prereq: FAIR 203a or permission of instructor. Upper-division seminar in political economy. 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.

**367f RADICAL POLITICS AND THE LAW (5)**

Prereq: FAIR 211b or permission of instructor. Explores the relationship between political and economic theories and systems on the development of the law and legal systems.

**369c VIETNAM WAR REDUX (4)**

Prereq: previous course in Native American studies or permission of instructor. 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. Repeatable with different topics.

**371e NATIONALISM AND ETHNIC CONFLICT (5)**

Prereq: FAIR 203a or permission of instructor. Surveys the development of the national identity since the late 18th 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.

**372e CULTURE, ACTIVISM AND INTROSPECTION: AFRICAN AMERICAN AND CARIBBEAN WOMEN'S "FEMINISM" (4)**

Prereq: WMNS 211 or equivalent or FAIR 203a or permission of instructor. Explores how African-American and Caribbean women have constructed their identities and fought for basic human rights within the context of minority cultures. Examines how racism, sexism, and classism have intersected in these women's lives and the "feminist" ideologies that emerged as a result.

**373f THE R-EVOLUTION OF HIP-HOP (4)**

Prereq: FAIR 202 or 203a or equivalent or permission of instructor. Explores the historical evolution of hip-hop culture through rap music — its contradictions, its cultural traditions, and its social context, and its revolutionary effect on contemporary American culture.

**374b THE CULTURAL CREATION OF IDENTITY (5)**

Prereq: FAIR 203a or permission of instructor. How ethnic, racial, and cultural identity is created by society. Includes a study of the social construction of identity from a scholarly perspective, but also requires the student to examine his or her own personal identity.

**376g GENDER AND THE LAW (4)**

Prereq: FAIR 211b or PLSC 250 or permission of instructor. Explores effects of gender on rights and status in the legal system and limitations imposed through judicial interpretation of the 14th and First amendments to the Constitution.

**377d WHATCOM CIVIL RIGHTS PROJECT (3)**

Prereq: permission of instructor. Working in conjunction with the Whatcom Human Rights Task Force, the Whatcom Civil Rights Project (SCRIP) provides pro bono legal assistance and advocacy to victims of discrimination. Gain the skills necessary to participate in WCRP by learning interview skills, how to write organized summaries of fact and law, and how to present cases orally. Covers major civil rights laws such as the Americans with Disability Act and Title VII of the Civil Rights Act of 1964.

**378e WHATCOM CIVIL RIGHTS PROJECT PRACTICUM (2-5)**

Prereq: FAIR 377d or concurrent. Staff a weekly shift of intake 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.

**381g TOPICS IN LITERATURE (3-5)**

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.

**384j WRITING NATURE (4)**

Prereq: background in sciences or writing or permission. Workshop on creative nonfiction writing focusing on natural history, nature, wildness, environment, conservation, science, medicine, landscape or place.

**387k GRANT WRITING WORKSHOP (4)**

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.

**388m ORAL HISTORY (4)**

Prereq: FAIR 223k or permission. Study in methods for conducting, editing, and interpreting oral interviews.

**389g COMMUNICATION AND GENDER (4)**

Prereq: communication course. Survey and analysis of gender differences in communication behavior with a discussion of implications for personal and social change.

**391e AMERICAN INDIAN RESISTANCES AND ACTIVISM (4)**

Prereq: FAIR 263b or 399b or AMST 202 or 315 or other course in Native American studies or permission of instructor. Examines Native American resistances to European colonization including historical background of military efforts and pan-Indian revitalization and messianic movements.

**392f WOMEN OF THE WEST (4)**

Prereq: FAIR 203a or 304, or HIST 103 or 104, or equivalent. A historical study of the West as contested terrain for changing roles of women and men and for relations among women of different cultural origins.

**393b RIGHTS, LIBERTIES AND JUSTICE IN AMERICA (4)**

Prereq: upper-division courses in social science or history recommended. 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.

**395c COMMERCIAL RELATIONSHIPS (4)**

Prereq: admission to the Law and Diversity program or permission. The world of commercial relationships including corporations, regulatory agencies, employment practices, and financial institutions with an emphasis on terminology and fundamental concepts.

**399b CONTEMPORARY NATIVE AMERICAN ISSUES (4)**

Prereq: AMST 202 or FAIR 263 or HIST 275. 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.

**411c POLITICAL IDEAS (4)**

Prereq: course in political theory or philosophy and permission of instructor. Explore ideas, concept and philosophies of selected political theorists or schools of thought, historical and current. Topics may include anarchism, hegemony, critical theory. Repeatable with various topics.

**412d PRE-COLOMBIAN MESOAMERICA SOCIETIES (4)**

Prereq: AMST 203 or FAIR 218c or 364c or 365d. Examines the spiritual, political, and social contexts of pre-Columbian meso-American 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.

**413e CURERS, CLIENTS AND CULTURE: CROSS-CULTURAL PERSPECTIVES ON HEALTH AND ILLNESS (5)**

Prereq: cross-cultural studies or permission of instructor. 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 United States.

**414b VIETNAM WAR ON FILM (3)**

Prereq: FAIR 369c or HIST 104 or evidence of familiarity with the Vietnam War or permission of instructor. Explores 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.

**418e WOMEN, IDEAS AND CHANGE: A HISTORY OF FEMINIST THOUGHTS AND ACTIONS (4)**

Prereq: WMNS 211 or FAIR 203a or permission of instructor. A study of selected feminist thinkers and movements, the context from which they arose, the arguments and counter arguments they inspired, and the legacies they left for subsequent generations.

**419f CROSS-CULTURAL SHAMANISM (5)**

Prereq: FAIR 203a or ANTH 201; FAIR 413 or ANTH 424 recommended. 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.

**421h ADVANCED TOPICS IN LITERATURE (3-5)**

Prereq: successful 300-level work 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.

**422j ART OF THE ESSAY (4)**

Prereq: FAIR 201a and 202a and a 300-level writing class. An advanced course in the art of writing essays. Repeatable to 12 credits.

**422k ADVANCED LEGAL WRITING AND ANALYSIS (4)**

Prereq: FAIR 201a. Explores persuasive legal writing, researching and writing an appellate brief for a current legal issue.

**433p ADVANCED STUDIES IN EVOLUTIONARY BIOLOGY (4-8)**

Prereq: FAIR 206a and a 300-level course in evolution. 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.

**434p ADVANCED STUDIES IN FIELD SCIENCE (5-8)**

Prereq: FAIR 206a or equivalent, or permission of instructor. 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.

**435q ADVANCED MARINE BIRD POPULATION ECOLOGY (2-15)**

Prereq: FAIR 434p or permission of instructor. 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.

**441 THE RELATIONAL SELF: THEORIES AND RESEARCH (4)**

Prereq: previous courses in psychology or permission of instructor. Study of new paradigms of the self, including revisions of familiar concepts of identity, self-knowledge and self-esteem.

**442t CULTURE AND EMOTION (4)**

Prereq: at least two 200-level courses in psychology, sociology, or anthropology. 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.

**444u DEPRESSION: CAUSES, CULTURES, AND TREATMENTS (4)**

Prereq: previous psychology courses or permission of instructor. 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.

**446t CULTURE AND SELF (4)**

Prereq: at least two 200-level courses in psychology (social psychology preferred). 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.

**447r HUMAN AGGRESSION (4)**

Prereq: previous courses in psychology and women studies. Examines the issue of aggression in humans through the consideration of psychological theory (classical and current), biology and cross-cultural studies. If women are the less aggressive gender, what does this teach us about socialization practices, power, economics and human nature? Readings from the relational feminists will offer new perspectives.

**448t RISK AND RESILIENCE IN ADOLESCENT GIRLS: DEVELOPMENT, CULTURE AND IDENTITY (5)**

Prereq: previous course in psychology or women studies. A consideration of latest literature on female adolescent development, including diversity.



**449r POLITICAL PSYCHOLOGY (4)**

Prereq: at least two social science courses. Explores 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.

**451x RESISTANCE ART OF THE INDIGENA (4)**

Prereq: FAIR 218c or AMST 202 and FAIR 399 or AMST 315 and studio classes or experience above the 200 level. 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.

**452w THEMATIC LIFE DRAWING (4)**

Prereq: intermediate drawing class such as ART 203, 301 or 304; Art history and FAIR 351w recommended. Explores advanced drawing techniques and development of personal themes based on understanding of current art trends and philosophies.

**453v NEW MEDIA WORKSHOP (4)**

Prereq: FAIR 359v, 355w or 355y or permission of instructor. Use of software, video, sound recording, et cetera, to create art projects. Discussion of issues and ideas related to new media and study of artists.

**454y SCRIPTWRITING WORKSHOP II (4)**

Prereq: FAIR 354v, previous 300-level work in scriptwriting in any medium, or permission of instructor. 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 12 credits.

**455v ADVANCED PRINTMAKING (4)**

Prereq: FAIR 254x and 351w. Advanced printmaking techniques illustrating various themes developed by students in consultation with instructor, with an emphasis on technique and aesthetics.

**457w ADVANCED THEATRE/FILM PRODUCTION (4)**

Prereq: permission of instructor. An opportunity to hone advanced production skills in theatre/film in an intense and supportive learning environment.

**463c FEDERAL INDIAN LAW (4)**

Prereq: FAIR 203a or equivalent recommended. Examination of how the legal system has interacted with Native Americans to help define their identity, status and well-being; study of tribal-federal relationships, tribal sovereignty, jurisdiction over Indian lands, self-government, individual rights and rights to resources.

**464d ADVANCED TOPICS IN AMERICAN INDIAN STUDIES (3-5)**

Interdisciplinary examination of major topics in Indian/white relations such as gaming, treaty rights, sovereignty, or education. Repeatable with different topics.

**COOPERATIVE, INDEPENDENT AND SPECIAL STUDIES**

**200/300/400 Independent Study (variable)**

Prereq: Fairhaven College independent study permit card required for registration. By arrangement: fall, winter and spring. To enable students to study independently under faculty sponsorship. Repeatable.

**275/375/475 a-z Cooperative Special Interest Studies (1-6)**

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.

**280 PRACTICUM (Variable)**

Prereq: approval by two or more Fairhaven faculty members via independent study procedures. 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.

**297/397/497a-z Experimental Courses (1-15)**

Courses which give flexibility to the curriculum by allowing faculty to offer unusual or timely classes. Repeatable with various topics. Topics will be listed in the Fairhaven College Quarterly Class Description booklet as they are offered.

**480 INTERNSHIP (Variable)**

Prereq: approval by two or more Fairhaven faculty members via independent study procedures. By arrangement: fall, winter and spring. Fairhaven College independent study permit card required for registration. Internship in an area related to one's course of study; addresses specific roles or responsibilities. Repeatable.

**499a-z SPECIAL PROBLEMS IN INTERDISCIPLINARY STUDIES (1-15)**

Prereq: upper-division status or permission of instructor. 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.

# COLLEGE OF FINE AND PERFORMING ARTS

## Dean, Vacant

The College of Fine and Performing Arts, consisting of the departments of art, music, theatre arts, and the dance program, provides an educational environment for enhancing the creation, development, performance and teaching of the fine and performing arts. The College has a strong physical presence on campus through its multi-building facilities which are found adjacent to the two major plazas of the campus. The Concert Hall, the Mainstage Theatre, two experimental theatre performance spaces, an intimate theatre, rehearsal spaces, classrooms, art studios and the Western Gallery are housed in these facilities. The College also is responsible for public art throughout the campus in the form of the internationally known Outdoor Sculpture Collection, much of which is site-specific. The College also sponsors the Performing Arts Center Series, bringing world-class events to the University.

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 aims to maintain a viable connection with the liberal arts tradition of the University; to equip students with the creative and intellectual tools necessary for success in the arts; to enable students to value, understand, and challenge traditional concepts; to maintain an environment that supports diversity, reflection, and dedication to creative pursuits; to promote critical thinking, innovative ideas and active arts leadership; to provide world class and multicultural experiences in the arts for both students and members of the community; and to prepare students for a dynamic, lifelong relationship with the arts.

## Academic Programs Leading to Undergraduate and Graduate Degrees

Art ..... BA, BA/Ed, BFA  
 Dance ..... BA, BFA  
 Music ..... BA, B/Mus, M/Mus, BA/Ed  
 Theatre ..... BA, MA

## 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 one of four areas 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 art degree requiring study beyond the normal four years.

## 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.

## Department Chairs

Carol Janson ..... Art  
 David Feingold ..... Music  
 Gregory Pulver ..... Theatre Arts

## Artistic Director

Nolan Dennett ..... Dance

## 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

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 yet 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, inter and mixed media, 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.

## 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.

## ART FACULTY

**CAROL JANSON** (1989) Chair and Professor. BA, MA, PhD, University of Minnesota.

**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.

**SEIKO ATSUTA PURDUE** (2002) Assistant Professor. BFA, Kyoto Seika University; MA, Montclair University; MFA, the School of the Art Institute of Chicago.

**EDMOND BEREAL** (1993) Associate Professor. Alternative Education. Professional artist.

**CRISTINA de ALMEIDA** (1997) Professor. BFA, Escola Superior de Desenho Industrial, Rio de Janeiro, Brasil; MFA, University of Massachusetts.

**ELSI VASSDAL ELLIS** (1977) Professor. BS, MEd, Western Washington State College; PhD, University of Washington.

**MADGE GLEESON** (1983) Professor. BA, MAT, Brown University; MFA, Washington State University.

**GAYE LEIGH GREEN** (1996) Professor. BA, California State University; MA, Stanford University; PhD, Pennsylvania State University.

**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.

**JULIA SAPIN** (2003) Assistant Professor. BA, University of Texas; MA, PhD, University of Washington.

**LINDA E. SMEINS** (1981) Professor. BFA, University of Denver; MA, California State University-Long Beach; PhD, University of British Columbia.

**KENTON D. SMITH** (1993) Associate Professor. BFA, MA, Fort Hays State University; MFA, Kent State University.

**ROBERT A. URSO** (1969) Professor. BA, MA, University of Notre Dame.

## 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.

## ADMISSIONS

At the time of application to Western Washington University, a formal application to the Department of Art is required. For students in art studio, design, or art education, application 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. Students with an interest in art history as a major must submit a writing sample instead of a portfolio. Admission deadline for the Department of Art, through a portfolio review, is March 1 of each year. There will be an additional portfolio review for Art Studio majors, Art History majors, and Art Education majors November 1 of each year. **There will be no second portfolio review for Design majors. Portfolio must be received in the Department of Art on March 1 and November 1, not postmarked March 1 or November 1.**

Design and Studio majors must complete a plan of study with a department advisor before enrolling in any 200-level course.

## PORTFOLIO REQUIREMENTS

### Art Studio, Design, and Art Education

Incoming freshmen and transfer students must submit a portfolio of 12 slides (35 mm). It is recommended that the portfolio include only recent pieces. Artwork can be in any media and must specifically demonstrate the following criteria:

- Understanding of formal issues
- Technical skills
- Ability to use visual language to communicate ideas
- Originality and risk taking

An accompanying slide list should briefly describe the rationale

behind each piece. Slides are recommended as the primary format for portfolio submission. Macintosh-compatible CD-ROMs and online portfolios are acceptable alternatives. Digital portfolios must be presented in an easily accessible format. It is the applicant's responsibility to ensure proper functioning of the presentation.

### Art History Requirements

Incoming art history applicants must submit a 500-word writing sample that addresses their interest in art history and visual culture. Contact the Department of Art for specifics.

## 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 History, Art Studio
- ART 110: Required for all art department majors
- ART 120: Required for all art department majors
- ART 130: Required for Art Studio, Art Education, Art History

## BACHELOR OF ARTS

The Department of Art has four areas of study: art studio, design, art history, and art education. Students must choose one of these areas and meet with an area advisor. See individual areas for advising information.

The art history survey series (A/HI 220 or 221, 230 or 231, and 240 or 241) and two upper-division (300 or 400 level) art history classes are also part of the graduation requirements for Department of Art majors. Students are strongly encouraged to complete the art history survey series early in their program. Western Washington University requires successful completion of one writing proficiency class as a degree requirement.

### Major — Art — Studio

70 credits

Art Studio includes ceramics, drawing, fiber/fabrics, inter and 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.

- 100-level courses (12 credits)
  - ART 109, 110, 120, 130 or 140
  - Students must meet with an advisor before taking 200-level courses
- 200-level courses (21 credits)
  - A/HI 220 or 221, 230 or 231, 240 or 241 (9 credits)

- 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
- 300/400-level courses (37 credits)
  - 15 credits of 300- or 400-level art studio courses in area of selected concentration
  - 9 credits of 300- or 400-level art studio or design electives
  - 5 credits of ART 495
  - 8 credits of 300- or 400-level art history

### Major — Design

80 credits

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 portfolio review is held each spring; the portfolio is based on a selection of work from 300-level design classes. After successful completion of the portfolio review, students are cleared to enroll in 400-level design classes with emphasis in design production, graphic design and new media. All students enroll in Professional Practices in Design (DSGN 479).

- 100-level courses (6 credits)
  - ART 110 and ART 120
  - Students must meet with an advisor before taking 200-level courses
- 200-level courses (24 credits)
  - A/HI 220 or 221, 230 or 231, 240 or 241 (9 credits)
  - DSGN 211 (3 credits)
  - DSGN 251, 252, 270 (12 credits)
  - 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
- 300- or 400-level courses (50 credits)
  - DSGN 352, 371, 372, 373
  - 12 credits selected from DSGN 354, 374, 377, 379
  - A design student must successfully complete a portfolio review at the end of the junior year for admission to 400-level classes
  - 400-level senior sequence with emphasis in graphic design, design production, or new media (15 credits)
  - Professional Practices: Design (3 credits)
  - 8 credits of 300- or 400-level art history, including A/HI 312

### Major — Art History

72 credits

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. Students declare their major after completing the 200-level art history classes (A/HI 220 or 221, 230 or 231, 240 or 241, 270 or 271). 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. Students must complete A/HI 275, 375 and 475 in sequence.

- 100-level courses (6 credits)
- 200-level courses (18 credits)
  - **12 credits:** Students must select one course from each of the groups: A/HI 220 or 221, 230 or 231, 240 or 241, 270 or 271
  - **6 credits:** Students must take an additional two classes from the above 200-level groups
- A/HI 275, 375, 475 (these courses must be taken in sequence)
- 300- or 400-level courses (36 credits, with a minimum of 12 credits at the 400 level)
  - **8 credits:** Modern and contemporary emphasis — A/HI 301, 308, 312, 313, 358, 401, 411, 415, 490
  - **8 credits:** Europe and United States emphasis — A/HI 315, 316, 330, 360, 420, 429, 440
  - **8 credits:** Comparative and multicultural emphasis — A/HI 310, 368, 370, 371, 416, 431, 438, 450
  - **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

#### Minor — Art History

24 credits

- A/HI 220 or 221, 230 or 231, 240 or 241, 270 or 271
- Three additional art history courses (12 credits) at the 300 or 400 level

### BACHELOR OF ARTS IN EDUCATION

This major must be accompanied by the professional preparation program in secondary education.

Programs in art education lead to becoming either an elementary classroom teacher or an art specialist who teaches art only. Elementary classroom teachers, who teach all subjects, must specialize in one area by completing the 50-credit program in addition to those courses specified in the elementary education section of this catalog. Students who want to teach art only at any grade level take the 71-credit program. Courses required for a state teaching endorsement must be completed with a grade of C (2.0) or better.

A formal course plan must be developed with the area coordinator by the time a student completes 12 art credits. Transfer students with more than 18 credits of art should do this prior to completion of their second quarter at the University. Once developed, the course plan is placed on file in the art office. Students are strongly encouraged to complete the studio and art history requirements prior to completing the art education series.

#### Major — Art — P-12 Specialist

71 credits

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.

- ART 109, 110, 120 and 130 (12 credits)

- A selection of six courses from the following (24 credits): ART 220, 230, 240, 260, 290, 310; DSGN 251, 270
- Studio specialization (10 credits)
- Art History (18 credits): A/HI 220, 221, 230, 231, 240, 241
- Art Education (7 credits): ART 381, 382

#### Major — Art — Elementary

49 credits

This major 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.

- 100-level and Art Studio courses (24 credits): ART 109, 110, 120, 130, 220, 240 plus one studio elective
- Art History (18 credits): A/HI 220, 221, 230, 231, 240, 241
- Art Education (7 credits): ART 381, 382

### BACHELOR OF FINE ARTS

#### Major — Art Studio and Design

115 credits

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:

- Completion of the Bachelor of Arts course study
- 10 credits of ART 494 and 495, or ART 479 and 7 credits of internship
- 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

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.

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.

## 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.

## COURSES IN ART (ART)

*Courses numbered X37; X97; 300, 400; 417, 445 are described on Page 34 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.

### 109 VISUAL DIALOGUE (3)

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.

### 110 FORM AND CONTENT I: DRAWING (3)

Prereq: art pre-major status or Industrial Design and Fairhaven majors. Recommended to be taken concurrently with ART 109. 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.

### 120 FORM AND CONTENT II: 2-D/COLOR (3)

Prereq: ART 109 (art studio majors), Industrial Design and Fairhaven majors. Problem-solving through visual and critical thinking by incorporating the design elements of line, shape, space, texture, color, plus the design principles. Emphasis on color theory and color application.

### 130 FORM AND CONTENT III: 3-D (3)

Prereq: ART 109 (art studio majors only), 110; ART 120 (or concurrent); art pre-major status or Industrial Design and Fairhaven majors. 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.

### 140 FORM AND CONTENT IV: SPECIAL TOPICS (4)

Prereq: ART 109, 110, 120. A studio-based course that addresses ideas and methods in art-making through a variety of possible approaches.

### 202 COLOR THEORY (4)

Prereq: ART 109 or ART 312, ART 110, 120. The complex study of color is achieved by reviewing the historic theories of the nature of color, the development of subtractive colorants, understanding human physiology related to vision, examining the complexities of additive colors and investigating the importance of cultural based meanings associated with color usage. Lecture/lab.

### 203 CONTEMPORARY STUDIO DRAWING (4)

Prereq: ART 109, 110, 120, 130 or 140. 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.

### 210 INTRODUCTION TO PRINTMAKING (4)

Prereq: ART 109, 110, 120, 130 or 140. A lecture/lab course covering history, methods, and practice of print concepts. Introduction to monotype, relief and intaglio process.

### 220 PAINTING (4)

Prereq: ART 109, 110, 120, 130 or 140. Introduction to contemporary painting.

### 230 BEGINNING SCULPTURE (4)

Prereq: ART 109, 110, 120, 130 or 140. Emphasis on methods, ideas and materials relating to recent developments in contemporary sculpture and object art. Introduction to the idea of sculptural form as a repository for content. Repeatable to a maximum of 8 credits.

### 240 CERAMICS (4)

Prereq: ART 109, 110, 120, 130 or 140. Introduction to ceramics. Pottery and sculptural forms are hand-built using coil, slab and molded techniques. Introduction to glaze formulation, kiln loading and firing.

### 260 FIBERS/FABRICS I (4)

Prereq: ART 109, 110, 120, 130 or 140. 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.

### 290 PHOTOGRAPHY (4)

Prereq: ART 109, 110, 120, 130 or 140. Fundamentals of film developing, enlarging, print finishing. This introduction course is structural to establish a solid grounding in photographic art practices, including theory, techniques and history.

### 303 INTERMEDIATE STUDIO DRAWING (5)

Prereq: completion of 100-level requirements and 12 credits of 200-level studio practice including ART 203. 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. Examines 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.

### 304 FIGURE DRAWING AND ISSUES OF THE BODY (5)

Prereq: completion of 100-level requirements and 12 credits of 200-level studio practice, including ART 203 or 250. 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.

### 305 EXPERIMENTAL DRAWING (5)

Prereq: completion of 100-level requirements and 12 credits of 200-level studio practice. Explores key issues, such as chance operation, exterior influences, the use of nontraditional materials and tools, bringing drawing into a third dimension, and drawing as a means to, or part of, a larger whole. 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.

### 310 PRINT RELIEF (5)

Prereq: ART 203 or 250. Introduces and explores surface/relief printmaking processes for the expressive artist. Uses conventional and experimental methods on a variety of materials to create matrices for woodblock and lino-cuts. Lecture/lab. Repeatable to a maximum of 15 credits.

### 311 PRINT — LITHOGRAPHY (5)

Prereq: ART 203 or 250. A lecture/lab course covering history, methods, criticism, and practice of planographic processes with emphasis on stone lithography. Repeatable to a maximum of 15 credits.

### 312 PRINT — INTAGLIO (5)

Prereq: ART 203 or 250. Course covers history, methods, criticism and practice of the intaglio print processes: drypoint, engraving and mezzotint, soft-ground etching and aquatint. Lecture/lab. Repeatable to a maximum of 15 credits.

### 313 PRINT — COLOR (5)

Prereq: ART 203 or 250. A lecture/lab course covering history, methods and practice of color printmaking processes: surface relief, lithography or intaglio processes. Repeatable to a maximum of 15 credits.

### 321 PAINTING WORKSHOP (5)

Prereq: completion of 100-level requirements and 12 credits of 200-level studio practice, including ART 203 and 220. Intermediate problems in painting. Development of individual direction in form and expression. Repeatable to a maximum of 15 credits.

### 322 PAINTING WORKSHOP II (5)

Prereq: ART 321. Selected topics. Explores methods, materials and approaches in contemporary painting. Repeatable to a maximum of 15 credits.

### 331 SCULPTURE — WOOD AS A RESOURCE (5)

Prereq: completion of 100-level requirements and 12 credits of 200-level studio practice, including ART 230. Examines a variety of techniques and wood-based materials with development of concepts in relation to forms and materials. Repeatable to a maximum of 10 credits.

### 332 SCULPTURE — METALS (5)

Prereq: completion of 100-level requirements and 12 credits of 200-level studio practice, including ART 230. 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.

### 333 SCULPTURE — MIXED MEDIA (5)

Prereq: completion of 100-level requirements and 12 credits of 200-level studio practice, including ART 230. Emphasis on contemporary object-making within an expanding field of alternative practices. Examines the use of disparate media and techniques. The studio environment will be open to non-two-dimensional and duration arts. Repeatable to a maximum of 10 credits.

### 334 INSTALLATION ART (5)

Prereq: completion of 100-level requirements and 12 credits of 200-level studio practice, including ART 230. Explores distinctions between private and public art, the "white cube," and the site-specific installations. Additional emphasis on effective documentation of site-specific work. Collaboration and performance will be offered as possible areas of work. Repeatable to a maximum of 10 credits.

### 341 CERAMICS II (5)

Prereq: completion of 100-level requirements and 12 credits of 200-level studio practice, including ART 240. Introduction to the potter's wheel as a tool; hand building, glaze formulation and kiln firing. Repeatable to a maximum of 15 credits.

### 342 CERAMICS WORKSHOP (5)

Prereq: completion of 100-level requirements and 12 credits of 200-level studio practice, including ART 240 and 341. 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.

### 343 SUMMER INTENSIVE CERAMICS (5)

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.

### 361 SURFACE DESIGN (5)

Prereq: completion of 100-level requirements and 12 credits of 200-level studio practice, including ART 260. Explores the marking and manipulation of two- and three-dimensional textiles. Explores direct application of natural and synthetic dyes, embellishment, and image transfer, including silk screen. Traditional and nontraditional fiber processes, forms, and media will be presented, discussed and investigated. Lecture/lab. Repeatable to a maximum of 15 credits.

### 362 PAPERMAKING/MIXED MEDIA (5)

Prereq: completion of 100-level requirements and 12 credits of 200-level studio practice, including ART 260 or ART 230. 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.

### 363 MULTIDIMENSIONAL FORMS IN FIBER (5)

Prereq: completion of 100-level requirements and 12 credits of 200-level studio practice, including ART 260 or ART 230. Explores structural and nonstructural processes for developing multidimensional forms in fiber. Traditional basketry and garment forms and processes will be explored as technical information and historic precedents. Presentations of contemporary work provide a context for class activities. Lecture/lab. Repeatable to a maximum of 15 credits.

### 367 WOVEN STRUCTURES (5)

Prereq: completion of 100-level requirements and 12 credits of 200-level studio practice, including ART 260. Focus on loom woven structure including ikat, tapestry and double weaving. Technical explorations will be complemented by discussions of historical and contemporary precedents with the goal of fusing woven structures with personal expression. Lecture/lab. Repeatable to a maximum of 15 credits.

### 380 ART EDUCATING THE CHILD (3)

Prereq: education major only. Not for art majors. Strategies and techniques in production of art and critical inquiry by elementary school children.

### 381 THEORIES AND TEACHING STRATEGIES IN ART EDUCATION (4)

Prereq: admission to Woodring College of Education; ART 109, 110, 120 and 130. 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.

### 382 PROFESSIONAL PRACTICES IN ART EDUCATION (3)

Prereq: admission to Woodring College of Education; ART 109, 110, 120 and 130. Introduction to professional practices in the field of art education.

### 383 PUBLIC GENRE ART EDUCATION (4)

Prereq: admission to Woodring College of Education; ART 109, 110, 120 and 130. Opportunity to engage the community with art projects that foster diversity and public collaboration in conjunction with the study of the sociopolitical understanding of the site, population and audience.

### 390 PHOTOGRAPHY II (5)

Prereq: completion of 100-level requirements and 12 credits of 200-level studio practice, including ART 290; DSGN 251 or equivalent highly recommended as part of the concentration with photography. An intermediate course which offers students an opportunity to develop their knowledge, skills, and concepts through seminars, readings, exhibitions and professional practices. Stresses the development of personal style through concentrated studies in specialized materials and processes. Repeatable to a maximum of 15 credits.

### 391 COLOR PHOTOGRAPHY (5)

Prereq: completion of 100-level requirements and 12 credits of 200-level studio practice, including ART 290 and 390. Fundamentals of color theory; techniques of producing color prints. Repeatable to a maximum of 15 credits.

### 394 ART WORKSHOP: ITALY (7)

Prereq: ART 110 or other beginning drawing courses. 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 studio format. Repeatable.

## ART

### 401 ADVANCED DRAWING WORKSHOP (5)

Prereq: 15 credits of 300-level studio practice, including 10 credits of ART 301. 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.

### 402 ADVANCED LIFE DRAWING (5)

Prereq: 15 credits of 300-level studio practice, including 10 credits of ART 302. A course covering history, methods, processes, criticism and the practice of drawing from the model. Lecture/lab. Repeatable to a maximum of 15 credits.

### 411 ADVANCED PRINT WORKSHOP (5)

Prereq: 10 credits of 300-level print courses. 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.

### 421 ADVANCED PAINTING WORKSHOP (5)

Prereq: 15 credits of ART 321. Continuation of individually motivated search and research into form and expression with emphasis on current issues within the field of painting as related to the making of art. Repeatable to a maximum of 15 credits.

### 431 ADVANCED SCULPTURE (5)

Prereq: 15 credits of 300-level sculpture or permission of instructor. Increased student autonomy in defining project parameters and goals. Working closely with instructor, students will concentrate on artistic production as a mode of personal inquiry. Students will examine the relationship of their studio practices to conceptual development. Repeatable to a maximum of 10 credits.

### 441 ADVANCED CERAMIC WORKSHOP (5)

Prereq: ART 342. Problems in advanced ceramics; self-directed projects and weekly seminars. Repeatable to a maximum of 15 credits.

### 460 ADVANCED FIBERS/FABRICS (5)

Prereq: 5 credits of 300-level fiber courses or permission of instructor. 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.

### 482 ART EDUCATION WORKSHOP (1-5)

Prereq: teaching experience. 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.

### 490 ADVANCED PHOTOGRAPHY WORKSHOP (5)

Prereq: ART 390 or 391 or permission of instructor. Application of advanced photographic concepts and techniques. Studio seminar format courses often consist of self-directed projects that afford students time to produce a substantial body of research-driven work which reflects their individual interests. Repeatable to a maximum of 15 credits.

### 494 ADVANCED STUDIO SEMINAR (5)

Prereq: senior status, BFA status or permission of instructor. 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.

### 495 PROFESSIONAL PRACTICES FOR STUDIO ARTIST (5)

Prereq: senior status, BFA status or permission of instructor. 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. Repeatable to a maximum of 15 credits.

## Graduate Courses

*Courses numbered 500; 517; 545; 597 are described on Page 34 of this catalog. Admission to Graduate School or special permission required. See the Graduate School section of this catalog.*

**NOTE:** The Department of Art is not currently accepting applications to the graduate program. This may affect the offering of these courses.

### 580 CURRENT CHALLENGES IN ART EDUCATION (2-4)

Prereq: teaching experience and 27 credits in art. Special problems in art

education as listed in the *Timetable of Classes*. Repeatable to a maximum of 12 credits.

### 582 CURRICULUM PLANNING (4)

Prereq: teaching experience and 27 credits in art. Planning, development, implementation and evaluation of art as related to the total curriculum.

### 590a-g GRADUATE STUDIO (5 ea)

Prereq: graduate status with BA or BFA in art and permission of instructor. Repeatable to a maximum of 20 credits each.

590a DRAWING/PRINT

590b PAINTING

590c SCULPTURE

590d CERAMICS

590e PHOTOGRAPHY

590f FIBER/FABRIC

590g GRAPHIC DESIGN

### 690 THESIS (1-6)

Prereq: advancement to candidacy. Repeatable to a maximum of 6 credits.

## COURSES IN DESIGN (DSGN)

### 211 FOUNDATIONS OF VISUAL COMMUNICATION (3)

Issues and topics related to the development of visual communication/graphic design with an emphasis on the development of typographic and print culture.

### 251 COMPUTERS IN VISUAL PROBLEM-SOLVING (4)

Prereq: ART 110, 120. 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.

### 252 DRAWING AND VISUALIZATION (4)

Prereq: ART 110 or equivalent. 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.

### 270 GRAPHIC DESIGN I (4)

Prereq: ART 110, 120. Introductory lecture studio class in layout and design with an emphasis on typography.

### 352 ILLUSTRATION (4)

Prereq: DSGN 252 or equivalent. Concepts and techniques of illustration; idea development, problem solving and printing considerations. Lecture studio format.

### 354 DIGITAL IMAGING (4)

Prereq: DSGN 251 or equivalent. Concepts and techniques of imaging in the digital environment. Preparation of static, dynamic, and interactive assets for the Web. Lecture studio format.

### 371 GRAPHIC DESIGN II (4)

Prereq: DSGN 251, 252, 270 or equivalent. Intermediate lecture studio class in layout and design with an emphasis on conceptual issues.

### 372 DESIGN PRODUCTION PROCESSES (2)

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. Was DSGN 372a in previous catalog.

### 373 DESIGN PRODUCTION APPLICATION (2)

Prereq: DSGN 251 or equivalent and concurrent enrollment in DSGN 372 (for design majors only). 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.

### 374 PUBLICATION DESIGN (4)

Prereq: DSGN 251 and DSGN 270 or equivalent. Publication design including editorial, newsletter and product catalogs, with emphasis on using the computer as a design tool. Lecture studio format.



**375 SUMMER DESIGN ABROAD (7)**

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.

**377 BOOK ARTS PRODUCTION (4)**

Prereq: DSGN 371 or equivalent. A 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 off-set printing techniques. Students produce a collaborative book project. Lecture/lab. Repeatable to a maximum of 12 credits.

**379 TYPOGRAPHY (4)**

Prereq: DSGN 371 or equivalent. Focus on the use of type as an informative and expressive visual/verbal element in graphic design. Intermediate problems in typographic communications. Lecture studio format.

**451 DIGITAL VIDEO (5)**

Prereq: DSGN 354 or equivalent and successful junior portfolio review. Concepts and techniques of digital video for artists and designers.

**456 DESIGN FOR THE INTERNET (5)**

Prereq: DSGN 354 or equivalent and successful junior portfolio review. Concepts and techniques of design for the Internet. Information design, prototyping, navigational structure, and asset creation for designers and artists. Repeatable to a maximum of 15 credits.

**457 INTERACTIVE DESIGN (5)**

Prereq: DSGN 456. Concepts and techniques of interactive design—motion graphics, user interface design, animation, information architecture for the Web using Flash. Lecture studio format. Repeatable to a maximum of 15 credits.

**459 SENIOR PROJECTS IN NEW MEDIA (5)**

Prereq: DSGN 457 or equivalent. Directed projects in new media aimed at preparing a professional portfolio.

**470 ADVANCED GRAPHIC DESIGN (5)**

Prereq: DSGN 379 or equivalent and successful junior portfolio review. Advanced projects in logo design and graphic identity systems. Lecture studio format.

**471 THREE-DIMENSIONAL GRAPHIC DESIGN (5)**

Prereq: DSGN 470 or equivalent. Concepts and techniques of three-dimensional graphic design — packaging, point-of-purchase, signage, environmental graphic design, sequential graphic design. Lecture studio format.

**473 ADVANCED DESIGN PRODUCTION (5)**

Prereq: DSGN 372b or equivalent and successful junior portfolio review. Advanced projects relating to current trends in graphic arts production.

**476 SENIOR PROJECTS IN GRAPHIC DESIGN (5)**

Prereq: DSGN 471 or equivalent. Directed work in graphic design aimed at preparing pieces for a graphic design portfolio.

**477 SENIOR PROJECTS IN DESIGN PRODUCTION (5)**

Prereq: DSGN 473 or equivalent. Directed work in graphic reproduction aimed at preparing pieces for a graphic reproduction portfolio.

**479 PROFESSIONAL PRACTICES IN GRAPHIC DESIGN, NEW MEDIA AND DESIGN PRODUCTION (3)**

Prereq: DSGN 354, 372b, 379 or equivalent and successful junior portfolio review. Current trends, professional issues and practices. Preparation of a professional portfolio. Repeatable to a maximum of 6 credits.

**COURSES IN ART HISTORY (A/HI)**

*Courses numbered X37; X97; 300, 400; 417, 445 are described on Page 34 of this catalog.*

**220 VISUAL CULTURE IN ANCIENT GREECE AND ROME (3)**

Art and visual culture from 900 B.C.E. to 600 C.E. in ancient Greece and Rome, including intersection with North Africa and the Middle East. Was A/HI 220a in previous catalog.

**221 VISUAL CULTURE IN MEDIEVAL EUROPE (3)**

Art and visual culture from the sixth to 14th centuries in Europe. Was A/HI 220b in previous catalog.

**230 VISUAL CULTURE IN WESTERN EUROPE FROM 1400-1550 (3)**

Issues and topics in art, 1400-1550. Was A/HI 230a in previous catalog.

**231 VISUAL CULTURE IN WESTERN EUROPE 1550-1700 (3)**

Art and visual culture in Western Europe, 1550-1700. Was A/HI 230b in previous catalog.

**240 VISUAL CULTURE IN WESTERN EUROPE IN THE 19TH CENTURY (3)**

Issues and topics in art, 19th century. Was A/HI 240a in previous catalog.

**241 VISUAL CULTURE IN WESTERN EUROPE AND AMERICA IN THE 20TH CENTURY (3)**

Issues and topics in art, 20th century. Was A/HI 240b in previous catalog.

**270 VISUAL CULTURE IN SOUTH AND SOUTHEAST ASIA (3)**

Issues and topics in South and Southeast Asian art and visual culture, from ancient to contemporary. Was A/HI 270a in previous catalog.

**271 VISUAL CULTURE IN EAST ASIA (3)**

Issues and topics in Chinese, Korean, and Japanese visual culture, from ancient to contemporary. Was A/HI 270b in previous catalog.

**275 INTRODUCTION TO WRITING AND CRITICAL THINKING (4)**

Prereq: ENG 101. A preparatory course to develop skills in writing and analysis for art history majors. A/HI 275, 375 and 475 must be taken in order because they sequentially develop visual analysis skills.

**301 MODERN ART AND MODERNISM (4)**

Prereq: art history majors: A/HI 275; nonmajors: 3 credits in art history. Survey and critical analysis of modernist, theory and criticism.

**305 GALLERY WORKSHOP (1-3)**

Prereq: 6 credits of art and/or art history and permission of instructor. Special problems in gallery operations.

**306 ARTS INTERN (3)**

Prereq: 24 credits of art history and written permission of instructor. Internship at museum, educational or public arts organization under the direction of a designated faculty member with a staff member of the host institution; project designed in consultation with them. Repeatable to a maximum of 9 credits.

**308 VISUAL ARTS IN THE COMMUNITY (4)**

Prereq: art history majors: A/HI 275; nonmajors: 3 credits in art history. A hands-on class designed to give students a practical experience in promotion of visual culture in the community.

**310 INDIGENOUS ARTS OF THE PACIFIC NORTHWEST (4)**

Prereq: art history majors: A/HI 275; nonmajors: 3 credits in art history. Selected topics in the arts of the Pacific Northwest.

**312 GRAPHIC DESIGN IN THE 20TH CENTURY (4)**

Prereq: DSGN 211 and A/HI 240 or 241. History of modern graphic design and illustration.

**313 INTERSECTIONS: ART AND TECHNOLOGY (4)**

Prereq: art history majors: A/HI 275; nonmajors: 3 credits in art history. Studies in photography, film, video, computer-generated art and electronic media. Issues in the relationships between technological change and artistic production.

**315 CIVIC IDENTITY IN 15TH- AND 16TH-CENTURY EUROPE (4)**

Prereq: art history majors: A/HI 275; nonmajors: 3 credits in art history. Civic identity explored through ritual structures, urban society, and lay cultures.

**316 LAND AND LANDSCAPE (4)**

Prereq: art history majors: A/HI 275; nonmajors: 3 credits in art history. Studies of landscape and ideology in painting and garden design; issues of environment in the production of visual culture; relationships of land and architecture.

**330 ART AND TEXTS OF THE SACRED (4)**

Prereq: art history majors: A/HI 275; nonmajors: 3 credits in art history.

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.

#### **358 POSTWAR, MASS MEDIA AND POPULAR CULTURE (4)**

Prereq: art history majors: A/HI 275; nonmajors: 3 credits in art history. Examines the postwar years from 1950 to 1970. Looks at the relationships between the art and architectural movement, popular media and social tensions of that era. Topics include art movements from abstract expressionism, minimalism, pop art and conceptual art, as well as theme park entertainment, the space role and the Vietnam War debate.

#### **360 NATIONALISM AND CULTURAL IDENTITY, 19TH AND 20TH CENTURIES (4)**

Prereq: art history majors: A/HI 275; nonmajors: 3 credits in art history. Studies in the relationship between ideas of nation and the formation of cultural identity.

#### **368 CULTURAL CONTACTS: PACIFIC ART (4)**

Prereq: art history majors: A/HI 275; nonmajors: 3 credits in art history. Art of Melanesia, Polynesia, Micronesia. Includes study of contemporary Pacific arts.

#### **370 CULTURAL CONTACTS: MIDDLE EAST AND ASIA (4)**

Prereq: art history majors: A/HI 275; nonmajors: 3 credits in art history. Topics addressing the visual cultures in the Middle East and Asia.

#### **371 TRADITION AND TRANSFORMATION: ART AND VISUAL CULTURE IN JAPAN (4)**

Prereq: art history majors: A/HI 271, 275; nonmajors: A/HI 271. Studies in visual cultures of Japan from 5000 BCE to present. Focus on alternating waves of cultural influx and assimilation to explore the development of Japanese visual expression.

#### **375 METHODS IN ART HISTORY (4)**

Prereq: A/HI 275, art history majors only. Contemporary methods in art history and criticism with practical application in student research projects. A/HI 275, 375 and 475 must be taken in order because they sequentially develop visual analysis skills.

#### **401 CONTEMPORARY ISSUES AND POST-MODERN CRITIQUES (4)**

Prereq: art history majors: A/HI 375; nonmajors: 9 credits in art history or permission of instructor. Studies of recent issues in art production and criticism.

#### **411 CONTEMPORARY JAPANESE VISUAL CULTURE (4)**

Prereq: art history majors: A/HI 271 and 375; nonmajors: 9 credits in art history or permission of instructor. 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, shojo, manga, Harajuku fashion and art movements such as Gutai and Superflat.

#### **415 SPACE AND THE URBAN ENVIRONMENT (4)**

Prereq: art history majors: A/HI 375; nonmajors: 9 credits in art history or permission of instructor. Topics in urban organization, urban/rural dynamics, regionalism, spaces and social production in the built environment and the arts.

#### **416 BORDERS AND TERRAINS (4)**

Prereq: art history majors: A/HI 375; nonmajors: 9 credits in art history or permission of instructor. Mapping artistic domains; implications of geographic borders; defining places and margins in cultural production.

#### **420 BUILDING 17TH AND 18TH CENTURY EUROPE (4)**

Prereq: art history majors: A/HI 375; nonmajors: 9 credits in art history or permission of instructor. Studies of architecture, spatial organization and vi-

sual 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.

#### **429 PATRONAGE AND POWER (4)**

Prereq: art history majors: A/HI 375; nonmajors: 9 credits in art history or permission of instructor. The relationship of artist and public to the mechanisms of patronage and the art market.

#### **431 POPULAR CULTURE, TOURISM AND LEISURE (4)**

Prereq: art history majors: A/HI 375; nonmajors: 9 credits in art history or permission of instructor. Studies in topics such as collecting, pilgrimage, touring and acquisition of the authentic.

#### **438 ART AND FEMINISM (4)**

Prereq: art history majors: A/HI 375; nonmajors: 9 credits in art history or permission of instructor. Studies of women artists, their past and present visual practices, and how they engage with cultural representations of gender, sexuality and class.

#### **440 CULTURE POLITICS OF DESIRE (4)**

Prereq: art history majors: A/HI 375; nonmajors: 9 credits in art history or permission of instructor. Theoretical approaches to the study of subjectivity and desire. Possible topics include modern, post-modernism, and post-humanism.

#### **450 COLONIZATION AND CROSS-CULTURAL ENCOUNTERS (4)**

Prereq: art history majors: A/HI 375; nonmajors: 9 credits in art history or permission of instructor. Theoretical analysis of colonization, neocolonization, and multiculturalism, and their political, economic, and cultural effects on representational practices. Possible areas of concentration may include the Americas, Africa, India, and Japan, and a spectrum of visual representations may concern visual art, film, video and or anime.

#### **475 SENIOR PROJECTS/PRACTICUM (4)**

Prereq: A/HI 375; art history majors only. 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. A/HI 275, 375 and 475 must be taken in order because they sequentially develop visual analysis skills.

#### **490 SEMINAR: EXHIBITION THEORY AND PRACTICE (4)**

Prereq: art history majors: A/HI 375; nonmajors: 9 credits in art history or permission of instructor. 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.

### **Graduate Courses**

*Courses numbered 500; 517; 545; 597 are described on Page 34 of this catalog.*

*Admission to Graduate School or special permission required. See the Graduate School section of this catalog.*

#### **501 GRADUATE ART THEORY AND CRITICISM (4)**

Prereq: graduate status, undergraduate art major or equivalent, art history minor or equivalent, permission of instructor. Repeatable to a maximum of 12 credits.

#### **590 DIRECTED STUDIES IN ART HISTORY (1-4)**

Prereq: art major or minor status, senior or graduate status; 12 credits in art history with at least one field concentration. 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.

# DANCE

The College of Fine and Performing Arts offers a Bachelor of Arts and a Bachelor of Fine Arts as well as a dance minor and a teaching endorsement.

For information and advisement contact Nolan Dennett, Dance Program artistic director, Carver Gym 28, phone 360-650-3129.

Entry into the BA/BFA is by audition. Completion of the program is dependent upon successful progress through the curriculum and by recommendation of faculty members.

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. Candidates of the BA will not be required to reach the advanced level of ballet or modern technique or present a senior project in choreography or performance. BA candidates will focus on pedagogical and historic aspects of dance art and more generally on the performance/generative components. BA candidates will be encouraged to demonstrate proficiency in pedagogy. To achieve this goal, the teaching endorsement is a central component of the BA in dance. Receipt of the teaching endorsement depends upon completion of additional courses through Woodring College of Education.

The BFA in dance is a professionally oriented degree, which presumes that students are seriously interested in the process of performing or choreographing and wish to make it their career. The BFA degree will be a highly selective program which trains exceptionally committed, disciplined, and talented students to the level at which they might gain entry to a leading graduate, conservatory, or MFA program, or directly enter one of the areas of the dancing profession.

The BFA program in dance will essentially be geared toward training concert performers, and will expose students to a wide range of styles and techniques. This will be accomplished with resident faculty, guest artists at the cutting edge of the field and exposure to professional companies in residence. In order to develop into the most versatile performers possible, students will be saturated in improvisation, contemporary partnering, children's movement theatre, experimental choreography, as well as musical and theatrical collaborations. Students will be given frequent opportunities to consolidate their training in the yearly departmental repertory of productions — on campus and off.

Students accepted into the BFA program will be individually prepared, by the professionally experienced teaching faculty, to enter national auditions for placement in major graduate (MFA) programs, and to work with professional companies.

The degree offerings of the department will be so designed that students who enter but do not complete the BFA program in dance could still graduate with a BA degree in the four-year undergraduate period.

Over the course of their studies students will be assessed in their ability to function in a variety of artistic roles: to perform in public as dancers, to develop visual and aural perceptions, to become familiar with and develop proficiency in modern and competency in ballet techniques. Students also have the opportunity to advance their choreographic potential in studies that include traditional and/or experimental approaches. It is our aim to familiarize students with the historical and cultural dimensions of dance, including the works and philosophies of leading dancers and choreographers both in the past and present. We teach our students to understand and evaluate contemporary thinking about dance and related arts and to make informed assessments regarding quality works of dance.

Our goal is to teach a physical and intellectual understanding of the language of movement art.

The outcomes of these studies are measured by successful audition and performance in faculty-directed dance events. To facilitate performance technique and help prevent injury, students cast in any departmental dance concert must be registered for a technique class during all rehearsal and performance quarters. Such performances involve a critical evaluation of the student's work by the tenure-track dance faculty. For students who complete the supporting endorsement in dance, teaching potential is critically measured in a student teaching practicum. In addition to these formal methods, students of the dance program have quarterly evaluations with each instructor. As such, students are also given regular and ongoing examinations in regard to their anatomical awareness, technical proficiency, and creative development.

Courses required for the BA, BFA and Dance minor must be completed with a grade of B or better.

## DANCE FACULTY

**NOLAN DENNETT** (1989) Artistic Director and Associate Professor. BA, Brigham Young University; MA, Western Washington University.

**MIKE BAJUK** (2004) Lecturer and Musical Director. BA, Western Washington University.

**CHER CARNELL** (1996) Lecturer and Assistant Director. BA, University of Wisconsin.

**SUSAN HAINES** (2005) Lecturer. BA, Radford University; MFA, University of North Carolina-Greensboro.

**PENNY HUTCHINSON** (2005) Assistant Professor. BA, Vermont College; MFA, Mills College.

**PAM KUNTZ** (1999) Lecturer. BFA, University of Montana; MFA, Boston Conservatory.

**RICK MERRILL** (2005) Visiting Assistant Professor.

**BRANDY SHELTON** (2005) Lecturer. BS, University of Georgia; MFA, Mills College.

## Major — BA in Dance

80-81 credits

- DNC 111, 112, 113, 121, 122, 123, 211, 212, 213, 221, 222, 223, 231, 232, 242, 257, 321, 322, 323, 334, 339, 340, 342, 357, 431, 433, 434, THTR 210
- Select two from the following: DNC 254, 255, 256
- Select one from the following: THTR 213, 216, 314

## Major — BFA in Dance

106-109 credits

- DNC 111, 112, 113, 121, 122, 123, 211, 212, 213, 221, 222, 223, 231, 232, 242, 257, 311, 312, 313, 321, 322, 323, 334, 339, 340, 342, 345, 357, 421, 422, 423, 431, 433, 434, 442, THTR 210
- Select two from the following: DNC 254, 255, 256
- Select one from the following: THTR 213, 216, 314
- Concentration selected from one of the following areas under faculty advisement:
  - Capstone project in Performance: DNC 401
  - Capstone Project in Choreography: DNC 402
  - Capstone Project in Performance and Choreography: DNC 401, 402

## Minor — Dance

36-38 credits

- Required courses: DNC 121, 122, 123, 211, 212, 213, 221, 222, 223, 231, 339, 242, 257, 321
- One course selected from DNC 254, 255, 256
- One course selected from DNC 232, 311, 312, 313, 340, 342,

## DANCE

434, 442; THTR 210, 216; or electives under advisement

### Teaching Endorsement

The BA and BFA dance majors noted above 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 1) a part of the undergraduate baccalaureate degree, or as 2) a post-baccalaureate program, or as 3) a part of the Master in Teaching program. See the *Secondary Education* section of this catalog for program admission, completion, and teacher certification requirements.

### Additional Teaching Endorsement

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* section of this catalog for more information on teacher certification programs and approved majors.

33-45 credits

- 111, 112, 113, 121, 122, 123, 221, 222, 223, 231, 232, 242, 257, 334, 339, 433, 434 (DNC 121, 122, 123 and/or DNC 111, 112, 113 may be waived by permission of instructor based on an audition or other evidence of dance skills or competencies associated with these courses)
- Select two from the following: DNC 254, 255, 256

Dance courses required for a state teaching endorsement must be completed with a grade of C (2.0) or better.

## COURSES IN DANCE (DNC)

### 100 MOD-HOP I (2)

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.

### 101 OPEN BALLET (2)

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.

### 102 OPEN MODERN DANCE (2)

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-majors. Repeatable to a maximum of 6 credits. S/U grading.

### 111 BALLET I — LEVEL I (2)

Prereq: permission of instructor. 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 in previous catalog.

### 112 BALLET I — LEVEL II (2)

Prereq: DNC 111 and permission of instructor. Builds on principles introduced in DNC 111, 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 138b in previous catalog.

### 113 BALLET I — LEVEL III (2)

Prereq: DNC 112 and permission of instructor. 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 in previous catalog.

### 121 MODERN DANCE — LEVEL I (2)

Prereq: permission of instructor. 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. Open to non-majors. Repeatable to a maximum of 4 credits. Was DNC 135a in previous catalog.

### 122 MODERN DANCE — LEVEL II (2)

Prereq: DNC 121 and permission of instructor. Continues with 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. Open to non-majors. Repeatable to a maximum of 4 credits. Was DNC 135b in previous catalog.

### 123 MODERN DANCE — LEVEL III (2)

Prereq: DNC 122 and permission of instructor. Continues with 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. Open to non-majors. Repeatable to a maximum of 4 credits. Was DNC 135c in previous catalog.

### 200 MOD-HOP II (2)

Prereq: DNC 100 or permission of instructor. 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 in previous catalog.

### 211 BALLET II — LEVEL I (2)

Prereq: permission by audition, DNC 111, 112, 113. Further development in principles of ballet. Increased difficulty and terminology. Preparation for advanced levels. Repeatable to a maximum of 4 credits. Was DNC 238a in previous catalog.

### 212 BALLET II — LEVEL II (2)

Prereq: permission by audition, DNC 211. Further development in principles of ballet. Increased difficulty and terminology. Preparation for advanced levels. Repeatable to a maximum of 4 credits. Was DNC 238b in previous catalog.

### 213 BALLET II — LEVEL III (2)

Prereq: permission by audition, DNC 212. Further development in principles of ballet. Increased difficulty and terminology. Preparation for advanced levels. Repeatable to a maximum of 4 credits. Was DNC 238c.

### 221 MODERN II — LEVEL I (2)

Prereq: permission by audition, DNC 121, 122, 123. Further development of movement principles established in Modern Dance I. Repeatable to a maximum of 4 credits. Was DNC 235a in previous catalog.

### 222 MODERN II — LEVEL II (2)

Prereq: permission by audition, DNC 221. Continues with further development of movement principles established in Modern Dance I. Repeatable to a maximum of 4 credits. Was DNC 235b in previous catalog.

### 223 MODERN II — LEVEL III (2)

Prereq: permission by audition, DNC 222. Continues with further development of movement principles established in Modern Dance I. Repeatable to a maximum of 4 credits. Was DNC 235c in previous catalog.

### 230 MAKING MOVEMENT ART (3)

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 the other departments of the College of Fine and Performing Arts.

### 231 INTRODUCTION TO DANCE IN WESTERN CULTURES (3)

Prereq: ENG 101 and 30 credits. An historical and cultural overview, from the primitive to the contemporary, of the development of dance as an art form in Western civilization.



**232 MOVEMENT AND CULTURE (3)**

An investigation of movement and dance as a vehicle for understanding culture through movement labs, readings, films and discussion.

**242 CHOREOGRAPHY I (3)**

Prereq: concurrent enrollment in DNC 221 or permission of instructor. 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.

**243 DANCE AND TECHNOLOGY I (2)**

Prereq: DNC 242. Introduction to sound and video editing software and filming/framing techniques for use in the creation of Dances for the Camera and other time-based art. Repeatable to a maximum of 6 credits.

**254 DANCE PRODUCTION — COSTUMING (2)**

For dance minors and majors. Practical experience in technical theatre, with a focus on costumes and makeup. Repeatable to a maximum of 6 credits. S/U grading.

**255 DANCE PRODUCTION — LIGHTING (2)**

For dance minors and majors. Practical experience in technical theatre, with a focus on lighting design. Repeatable to a maximum of 6 credits. S/U grading.

**256 DANCE PRODUCTION — STAGE MANAGEMENT (2)**

For dance minors and majors. Practical experience in technical theatre, with a focus on stage management. Repeatable to a maximum of 6 credits. S/U grading.

**257 PERFORMANCE (2)**

Prereq: being cast in a faculty-directed production. Direct instruction and experience in performance work. Repeatable to a maximum of 6 credits.

**311 BALLET III — LEVEL I (2)**

Prereq: permission by audition, DNC 211, 212, 213. 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 6 credits. Was DNC 338a in previous catalog.

**312 BALLET III — LEVEL II (2)**

Prereq: permission by audition, DNC 311. 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 6 credits. Was DNC 338b in previous catalog.

**313 BALLET III — LEVEL III (2)**

Prereq: permission by audition, DNC 312. 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 6 credits. Was DNC 338c in previous catalog.

**321 MODERN DANCE III — LEVEL I (3)**

Prereq: permission by audition, DNC 221, 222, 223, 339. Advanced studies of movement principles established in Modern Dance II. Repeatable to a maximum of 9 credits. Was DNC 335a in previous catalog.

**322 MODERN DANCE III — LEVEL II (3)**

Prereq: permission by audition, DNC 321, 339. Advanced studies of movement principles established in Modern Dance II. Repeatable to a maximum of 9 credits. Was DNC 335b in previous catalog.

**323 MODERN DANCE III — LEVEL III (3)**

Prereq: permission by audition, DNC 322, 339. Advanced studies of movement principles established in Modern Dance II. Repeatable to a maximum of 9 credits. Was DNC 335c in previous catalog.

**334 MUSIC AND MOVEMENT (2)**

Prereq: DNC 221, 222, 223 or formal music instruction at the 100 level or permission of instructor. 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.

**339 FUNCTIONAL ALIGNMENT (3)**

Prereq: DNC 121, 122, 123 or permission of instructor. An internal exploration of functional alignment and its practical application toward 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. Repeatable to a maximum of 6 credits. Was DNC 237 in previous catalog.

**340 ANATOMY FOR DANCERS (4)**

Prereq: DNC 339 or permission of instructor. An investigation of the human body and how it works. Through lectures, readings, and laboratory experiences, students will analyze skeletal and muscular systems, individual differences, common dance injuries, and proper conditioning for dancers. Was DNC 236 in previous catalog.

**342 CHOREOGRAPHY II (4)**

Prereq: DNC 242. Further study of principles of choreography. Explores experimentation with theme and development use of music, and construction/deconstruction/reconstruction of choreographic forms and content. Repeatable to a maximum of 8 credits.

**343 DANCE AND TECHNOLOGY II (2)**

Prereq: DNC 223, 243, 342. Builds on skills learned in DNC 243 and applies an artistic process to the use of editing software and video equipment; combines 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.

**345 FUNDAMENTALS OF CONTEMPORARY PARTNERING (2)**

Prereq: DNC 221, 222, 223 or permission of instructor. 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 warmup includes exercises to enhance kinesthetic awareness and to facilitate ease and comfort in lifting and being lifted. Repeatable to a maximum of 6 credits.

**357 REPERTORY (2-6)**

Prereq: permission by audition. 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.

**401 CAPSTONE PROJECT IN PERFORMANCE (2)**

Prereq: admission to BFA program. A BFA student-designed project based on performance.

**402 CAPSTONE PROJECT IN CHOREOGRAPHY (2)**

Prereq: admission to BFA program. A BFA student-designed project focused on choreography.

**421 MODERN DANCE IV — LEVEL I (4)**

Prereq: permission by audition, DNC 321, 322, 323. 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 in previous catalog.

**422 MODERN DANCE IV — LEVEL II (4)**

Prereq: permission by audition, DNC 421. 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 in previous catalog.

**423 MODERN DANCE IV — LEVEL III (4)**

Prereq: permission by audition, DNC 422. 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 in previous catalog.

**431 HISTORY OF WESTERN DANCE SINCE 1450 (4)**

Prereq: DNC 231. Ballet and modern dance forms of Western cultures from the Renaissance into the era of contemporary movement art. Includes reviews of live performances and study of leading dance artists and their historical significance.

## DANCE

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### **433 CREATIVE MOVEMENT FOR EDUCATORS (4)**

Prereq: DNC 334 or permission of instructor. 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. Includes lab.

### **434 DANCE ARTS IN EDUCATION (3)**

Prereq: DNC 339; demonstrated competency at the advanced level of technique. Materials for the methodology of teaching the formal dance tech-

niques of modern dance and ballet for students of the dance minor. Observation and teaching opportunities included.

### **442 CHOREOGRAPHY III (4)**

Prereq: DNC 342 or permission of instructor. 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.

# MUSIC

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 Web site, [www.wwu.edu/music](http://www.wwu.edu/music).

The department is a full member of the National Association of Schools of Music.

## MUSIC FACULTY

**DAVID FEINGOLD** (1980) Chair and Associate Professor. BA, Sarah Lawrence College; MA, Western Washington University.

**SUZANNE BANISTER** (2000) Associate Professor. BMus, Western Kentucky University; MMus, University of Akron; PhD, Kent State 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.

**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, Julliard; DMA, University of Southern California.

**JEFFREY GILLIAM** (1992) Associate 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.

**CHUCK ISRAELS** (1986) Associate Professor. BA, Brandeis University.

**MILICA JELACA JOVANOVIĆ** (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.

**LESLEY SOMMER** (1997) Associate Professor. BM, MM, DM, Indiana 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

**LAUREN ANDERSON**, Trumpet

**AMBER BONE**, Voice

**EDWARD COOK**, Voice

**GREGORY COX**, Trombone

**TIMOTHY FITZPATRICK**, choir

**VINCE GREEN**, Trumpet

**SELINA GRESO**, Oboe

**PATRICIA HODGINS**, Voice

**ERIC KEAN**, Viola

**LISA McCARTHY**, Flute

**BEN MUSA**, Double Bass

**FRANCINE PETERSON**, Bassoon

**RICHARD REED**, Horn

**JAY ROOZENDAAL**, Voice

**MATTHEW SMITH**, Saxophone

**DAVID STEEGE**, Keyboard Technician

**ROB TUCKER**, Percussion

**JUDITH WIDRIG**, Piano

**JILL WHITMAN**, Harp

**KEITH WINKLE**, Low Brass

## 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, organists 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.

Organists and 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 at 360-650-3130 for details. However, at

the entrance audition, the entering music student may play or sing musical selections other than those listed below.

**Organ** — Ability to play, at the piano, literature of the difficulty of Bach, "Two-Part Inventions," "Short Preludes;" Beethoven, "Sonatina;" a movement from a "Sonata" of Haydn or Mozart. Two pieces should be prepared. Memorization is not required. Ability to sight read hymns at the piano.

**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-Saens, Tchaikovsky, et al, or a virtuoso work such as Havanaise — Introduction and Rondo — Capriccioso of Saint-Saens, 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** — Completion of the Lee, "Method" Book 1 or Dotzauer "Studies" Book 1 or Grutzmacher "Studies" Book 1; short pieces or a sonata of the difficulty of Vivaldi or Marcelllo. Scales through the fourth position.

**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. 1, 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-Saens *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, 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.

## ADMISSION TO PROGRAM

Due to the sequential nature of the music curriculum, mid-year 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.

## 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

## MUSIC

further information, please call the music office, PAC 273, at 360-650-3130 or refer to [www.wvu.edu/music](http://www.wvu.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.

### 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.

#### Major — Music Education — P-12\*

112-116 credits

- Concert attendance: MUS 099. Required for every quarter in residence. Minimum 8 concert programs or ticket stubs required.
- 116 credits (plus SEC 410, 425, 432, 495; EDUC 301, 302, 310; SPED 363; and issues of abuse competency). 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. Courses required for a state teaching endorsement must be completed with a grade of C (2.0) or better.

\*Music education majors should consult Teacher Education Admissions, Miller Hall 206, for information concerning the College of Education professional courses and admission to the Secondary Education program.

#### Core Requirements

102-103 credits (common to all music education major emphases)

- Theory/Aural Skills: MUS 121, 122, 123, 124, 125, 126, 221, 222, 223, 224, 225, 226
- Advanced Theory: MUS 328a
- Music History: MUS 341, 342, 343
- Conducting: MUS 352 and 353 plus either MUS 354a or 354b
- Music Education Methods: MUS 268, 362, 469
- Pedagogy: 8-9 credits from MUS 164, 264 and 265 selected under strict advisement
- Major performing ensemble each quarter in residence (minimum 22 credits)\*\*
- Applied music on major instrument or voice — minimum of 3 credits in courses numbered 311-316 or 411-416 — each quarter in residence, except when student teaching (minimum 11 credits)

\*\*Pianists will take six quarters of major performing ensemble and six quarters of MUS 276 and/or 476 (piano accompanying).

#### P-12 General Music Emphasis

7 credits

- This emphasis leads to an endorsement in general music.
- MUS 271

- MUS 461
- Electives: 2 credits selected under advisement. Piano majors will take Music 466

#### P-12 Choral Music Emphasis

7 credits

This emphasis leads to an endorsement in choral music.

- MUS 166a (fall quarter)
- MUS 463
- Electives: 4 credits selected under advisement. Piano majors will take 4 credits of MUS 466

#### P-12 Instrumental Music Emphasis

12 credits

This emphasis leads to an endorsement in instrumental music.

- MUS 271
- MUS 365
- MUS 464
- Electives: 4 credits selected under advisement. Piano majors will take 4 credits of MUS 466

#### Professional Major

120-122 credits

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.

#### Core Requirements

61-65 credits (common to all professional music major concentrations)

- Concert attendance: MUS 099. Required for every quarter in residence. Minimum 8 concert programs or ticket stubs required
- Theory/Aural Skills: MUS 121, 122, 123, 124, 125, 126, 221, 222, 223, 224, 225, 226
- Advanced Theory: 2 of the following — MUS 322, 324, 326, 328b, 422
- Music History: MUS 341, 342, 343, plus one course from 441, 442, 443 or 444; voice majors must take 443b or 443c
- Applied instruction each quarter in residence: see individual concentration for details.
- Major performing ensemble each quarter in residence (minimum 24 credits)\*\*\*

\*\*\*Pianists 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.

#### Performance Concentration

61 credits

- Entrance by performance audition — student must expect to achieve upper-division applied instruction by the sophomore year
- Applied music on major instrument or voice (minimum 30 credits); at least three credits in courses numbered MUS 411-416
- Chamber Music: minimum 4 quarters selected from MUS 275, 278, 280, 281, 283, 284, 475, 478, 480, 481, 483, 484, 485
- Conducting: MUS 351, 352

- Minimum of 4 credits in MUS 466
- Senior Recital: MUS 499
- Electives selected under advisement. Piano majors must take at least 6 credits in MUS 467 and voice majors will take 5 credits in MUS 166a,b and 6 credits in MUS 366

#### Composition Concentration

57 credits

- Entrance by compositional accomplishment and interview — student must qualify for upper-division composition courses by junior year
- Applied music on major instrument or voice (minimum 12 credits); at least three credits in courses numbered MUS 311-316 or 411-416
- Chamber Music: minimum 3 quarters selected from MUS 275, 278, 280, 281, 283, 284, 475, 478, 480, 481, 483, 484, 485
- Conducting: MUS 351, 352, 353, 354a or 354b
- Composition: minimum 21 credits from MUS 231, 331, 431
- Senior Recital: MUS 499
- Electives: 5 credits selected under advisement

#### History and Literature Concentration

57 credits

- Entrance by interview and distinguished accomplishment in musicianship
- Applied music on major instrument or voice (minimum 12 credits); at least three credits in courses numbered MUS 311-316 or 411-416
- Chamber Music: minimum 4 quarters selected from MUS 275, 278, 280, 281, 283, 475, 478, 480 (minimum 4 credits), 483, 484, 485
- Conducting: MUS 351, 352
- Notation: MUS 441
- Advanced History: minimum 12 credits from MUS 442, 443
- Thesis: MUS 490
- Electives: 14 credits selected under advisement
- Students in music history and literature must pass a reading examination in French or German

## BACHELOR OF ARTS

### Major — Music

60 credits

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.

- Concert attendance: 0 credits. MUS 099. Required for every quarter in residence. Minimum 8 concert programs or ticket stubs required.
- Theory/Aural Skills: 24 credits — MUS 121, 122, 123, 124, 125, 126, 221, 222, 223, 224, 225, 226
- Music History: 9 credits — MUS 341, 342, 343
- Theory/Music History electives: 9 credits selected from MUS 105, 205, 231, 322, 324, 326, 328, 331, 334, 335, 336, 422, 431, 434, 435, 436, 442, 443
- 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).

### Minor— Music

30 credits

- Theory/Aural Skills: 12 credits — MUS 121, 122, 123, 124, 125, 126
- Music History and Literature: 6 credits — MUS 104 or 105, 202 or 205
- Music electives: 12 credits selected under advisement

## BACHELOR OF ARTS IN EDUCATION

### Major — Music — Elementary

44 credits (plus performance requirement)\*\*\*\*

This major 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.

- Theory/Aural Skills: MUS 121, 122, 123, 124, 125, 126, 221, 222, 223, 224, 225, 226
- Music History: select two courses from MUS 341, 342, 343
- Musical Survey: MUS 105, 205
- Pedagogy: MUS 164
- Music Education: MUS 268, 362, 461
- Applied music on major performing instrument or voice (jazz guitar and electric bass not applicable); minimum 6 quarters

This results in an elementary endorsement, but does not result in a music endorsement.

\*\*\*\*Pianists will take three quarters of MUS 276 and/or 476 (piano accompanying) and remaining quarters in major performing ensemble.

## GRADUATE STUDY

For concentrations leading to the Master of Music, see the *Graduate School* section of this catalog.

## COURSES IN MUSIC (MUS)

Courses numbered X37; X97; 300, 400; 417, 445 are described on page 34 of this catalog.

### 099 CONCERT ATTENDANCE (0)

All music pre-majors and majors are required to attend a minimum of 8 approved concerts and/or recitals each quarter in residence.

### 100 MARROWSTONE MUSIC FESTIVAL (1)

Prereq: concurrent participation/enrollment in the 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.

### 101 FUNDAMENTALS OF MUSIC (3)

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.

### 102, 103 INTRODUCTION TO MUSIC THEORY AND EAR TRAINING (3 ea)

Prereq: MUS 101 or permission of instructor; each course prerequisite to the next. 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.

## MUSIC

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### 104 THE ART OF LISTENING TO MUSIC (3)

Open to all students. Nontechnical basis for enjoyable listening to music; performance practices relating to symphony orchestras, instrumental ensembles, opera, choral groups and solo performance.

### 105 MUSIC IN THE WESTERN WORLD (3)

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.

### 121, 123, 125 AURAL AND KEYBOARD SKILLS I (1 ea)

Prereq: MUS 121 or equivalent, music major status or approval of music theory area coordinator; each course prerequisite to the next. 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.

### 122, 124, 126 THEORETICAL AND ANALYTICAL SKILLS I (3 ea)

Prereq: MUS 101 or equivalent; music major status; each course prerequisite to the next. Study of and practical experience in using the basic materials of musical construction including notation, melody, harmony, rhythm and form.

### 160 PREPARATORY CLASS PIANO (1)

Prereq: music major status. Designed for students with no keyboard experience. Basic reading skills and technique.

### 163 CLASS VOICE (2)

Study of basic vocal production skills and repertoire preparation.

### 164 CLASS VOICE AND PEDAGOGY (2)

Prereq: music major status. Tone production, song repertoire interpretation and pedagogy for non-voice majors.

### 166a INTRODUCTION TO VOICE STUDIES A (3)

Prereq: admission to music program as a voice pre-major; for voice pre-major students in the BM degree path only. Prepares the student for success in solo and choral voice performance at the university level. Exposes students 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.

### 166b INTRODUCTION TO VOICE STUDIES B (2)

Prereq: admission to music program as a voice pre-major and successful completion of MUS 166a. A continuation of MUS 166a, with added emphasis on skills necessary for success as a vocal soloist. Exposes the student to more in-depth linguistic and musical resources, such as recital preparation, performance anxiety, and a general survey of the solo vocal repertoire.

### 168 EXPLORING THE WORLD OF TEACHING MUSIC (1)

Prereq: concurrent participation/enrollment in the Marrowstone Music Festival. Overview of strategies for effective teaching, rehearsal techniques and strategies, motivational tools, appropriate body language, assertive classroom management.

### 173 MARROWSTONE ORCHESTRA (1)

Prereq: concurrent participation/enrollment in the Marrowstone Music Festival. Study, rehearsal and performance of orchestra literature appropriate to students participating in the Marrowstone Music Festival.

### 181 MARROWSTONE CHAMBER MUSIC (1)

Prereq: concurrent participation/enrollment in the Marrowstone Music Festival. Study, rehearsal and performance of chamber music appropriate to students participating in the Marrowstone Music Festival.

### 202 JAZZ: GENESIS AND EVOLUTION (3)

Open to all students. Personalities, styles and social/cultural influences on jazz from its beginning to the present day.

### 205 SURVEY OF NON-WESTERN MUSICAL CULTURES (3)

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.

### 211-217 APPLIED INSTRUCTION (1-4)

Prereq: music major status; minimum applied performance audition. Repeatable for credit.

212 PIANO

213 STRINGS

214 WINDS AND PERCUSSION

215 VOICE

216 CLASSICAL GUITAR

217 JAZZ GUITAR

### 221, 223, 225 AURAL AND KEYBOARD SKILLS II (1 ea)

Prereq: MUS 125; music major status; each course prerequisite to the next. 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.

### 222, 224, 226 THEORETICAL AND ANALYTICAL SKILLS II (3 ea)

Prereq: MUS 126; music major status; each course prerequisite to the next. 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.

### 230 INTRODUCTION TO ELECTROACOUSTIC MUSIC (2)

Prereq: MUS 105. Instruction in editing and mixing audio with computer software; analog synthesis with vintage synthesizers; history of electro-acoustic music.

### 231 ELEMENTARY COMPOSITION (1-2)

Prereq: permission of instructor. Elementary craft of melody, counterpoint, harmony, instrumentation, texture, rhythm, and notation. Participation in weekly composition seminars. Repeatable for credit under advisement.

### 232 COMPUTER MUSIC SEMINAR (2)

Prereq: music major status; MUS 225. Instruction in musical programming with CSound or SuperCollider. Topics include sound synthesis, signal processing, and algorithmic composition.

### 260 REMEDIAL CLASS PIANO (1)

Prereq: music major status; successful completion of at least four items of the Keyboard Competency Exam. Concentration on specific areas of the Keyboard Competency Exam based on individual needs. Repeatable for credit.

### 261 INTERMEDIATE CLASS PIANO (1)

Prereq: music major status; MUS 225. Intermediate piano repertoire, sight-reading skills, technique and accompanying. Repeatable to a maximum of 6 credits.

### 264a-k INSTRUMENTAL LAB FOR SECONDARY INSTRUMENTS (1-2)

Prereq: music major status. Pedagogy of and performance on secondary instruments, conducting, developing teaching strategies with goals and objectives.

264a FLUTE/SINGLE REEDS

264b DOUBLE REEDS

264g HIGH BRASS

264h LOW BRASS

264k PERCUSSION

### 265a,b STRING TECHNIQUES AND PEDAGOGY LAB (1-2 ea)

Prereq: music major status. Principles and techniques of playing and teaching string instruments.

265a VIOLIN/VIOLA

265b CELLO/BASS

### 268 SURVEY OF MUSIC EDUCATION (2)

Prereq: music major status. History and philosophy of music education, basic teaching methods, curriculum design and implementation. Examination of relevant journals. Observation of public school music programs.



**269 MUSIC TEACHING PRACTICUM I (2)**

Prereq: permission of instructor. Observation, assisting and/or micro-teaching experience in K-12 music classroom environments. Repeatable for credit.

**271 UNIVERSITY CHOIR (2)**

Prereq: permission of instructor. 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.

**272 SYMPHONIC BAND (2)**

Prereq: permission of instructor. Preparation and performance of major band works. Open to all students with band experience. Repeatable for credit.

**274 JAZZ ENSEMBLES (2)**

Prereq: by audition. Performance and interpretation of contemporary jazz in a large ensemble situation. Repeatable for credit.

**275 CHAMBER JAZZ ENSEMBLES (2)**

Prereq: by audition; MUS 224 and 334 strongly recommended. 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.

**276 PIANO ACCOMPANYING (2)**

Prereq: permission of piano area coordinator. 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.

**278 OPERA WORKSHOP (1-2)**

Prereq: by audition. Preparation of opera scenes or a major music production to include a public performance each quarter. Repeatable for credit.

**280 COLLEGIUM MUSICUM (1-2)**

Prereq: by audition. Music literature studies from an analytical and performance viewpoint from early to classic music, culminating in a public performance each quarter. Repeatable for credit.

**281a-n APPLIED CHAMBER MUSIC (1-2)**

Prereq: by audition; permission of chamber music coordinator. Open to piano, string, wind, brass and percussion performers. Repeatable.

- A. FLUTE
- B. DOUBLE REED
- C. SINGLE REED
- F. HIGH BRASS
- H. LOW BRASS
- K. PERCUSSION
- L. STRINGS
- M. PIANO
- N. GUITAR

**283 CHAMBER VOCAL ENSEMBLES (2)**

Prereq: by audition. Repeatable for credit.

**284 VOCAL JAZZ ENSEMBLE (2)**

Prereq: by audition. 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.

**285 FUNDAMENTALS OF MUSICAL THEATRE (3)**

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.

**305 MUSICS OF THE PACIFIC RIM (3)**

Prereq: MUS 205. 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.

**311-317 APPLIED INSTRUCTION (1-4)**

Prereq: music major status; upper-division examination. Repeatable for credit.

- 312 PIANO
- 313 STRINGS
- 314 WINDS AND PERCUSSION
- 315 VOICE
- 316 CLASSICAL GUITAR
- 317 JAZZ GUITAR

**321, 323, 325 AURAL AND KEYBOARD SKILLS III (1 ea)**

Prereq: MUS 225 or permission of instructor; music major status; each course prerequisite to the next. 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.

**322 FORM AND ANALYSIS: MUSIC TO 1900 (3)**

Prereq: MUS 225, 226. Formal and stylistic analysis of works from the major historical periods up to 1900.

**324a MODAL COUNTERPOINT/324b TONAL COUNTERPOINT (3)**

Prereq: MUS 225, 226. Counterpoint in species and free style. Composition and analysis of pieces in two and three parts.

**326 ORCHESTRATION/ARRANGING (3)**

Prereq: MUS 225, 226. Orchestration and arranging with special reference to the needs of the instrumental conductor and composer. Repeatable for credit.

**328a MIDI NOTATION AND SEQUENCING FOR MUSIC EDUCATION (3)**

Prereq: MUS 225, 226, IT 344 or portfolio of basic instructional technology skills, music education major status. 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.

**328b MIDI NOTATION AND SEQUENCING FOR COMPOSITION (3)**

Prereq: MUS 225, 226. Computer-based notation and recording of music through MIDI keyboard systems.

**331 COMPOSITION (3)**

Prereq: MUS 226 and successful completion of upper-division competency examination in composition. Intermediate-level projects in melody, counterpoint, harmony, instrumentation, texture, rhythm, and notation. Participation in weekly composition seminars. Repeatable for credit under advisement.

**334 JAZZ IMPROVISATION I (3)**

Prereq: open to all accepted jazz majors or MUS 224 or permission of instructor. Study of basic chord changes, scales and patterns with improvisation based on these principles. Analysis of transcribed solos and study of jazz repertoire.

**335 JAZZ IMPROVISATION II (3)**

Prereq: MUS 334. Study of altered chords, scales and patterns with improvisation based on the principles. Analysis of transcribed solos, study of jazz repertoire and ear training.

**336 JAZZ IMPROVISATION III (3)**

Prereq: MUS 335. Study of bitonal chords, atonality and patterns with improvisation based on these principles. Analysis of transcribed solos, study of jazz repertoire and ear training.

**341 HISTORY OF MUSIC TO 1600 (3)**

Prereq: MUS 225, 226; music major status. Main styles, forms, terminology and composers up to 1600. Individual research projects.

**342 HISTORY OF MUSIC 1600-1830 (3)**

Prereq: MUS 341; music major status. Main styles, forms, terminology and composers from 1600 to 1830. Individual research projects.

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### 343 HISTORY OF MUSIC 1830-PRESENT (3)

Prereq: MUS 342; music major status. Main styles, forms, terminology and composers from 1830-present. Individual research projects.

### 351 BASIC CONDUCTING (2)

Prereq: MUS 225, 226; music major status. Basic conducting techniques, score reading and interpretive analysis.

### 352 INSTRUMENTAL CONDUCTING (3)

Prereq: MUS 225, 226; music major status. Instrumental techniques, score reading, interpretive analysis and rehearsal techniques.

### 353 CHORAL CONDUCTING (3)

Prereq: MUS 225, 226; music major status. Choral techniques, score reading, interpretive analysis and rehearsal techniques.

### 354 ADVANCED CONDUCTING (3)

Prereq: MUS 252, 353, music major status. Hands-on practical experience in developing advanced conducting skills. Ensemble conducting experience.

354a CHORAL CONDUCTING

354b INSTRUMENTAL CONDUCTING

### 361 MUSIC FOR ELEMENTARY TEACHERS (3)

For elementary teachers, not music majors. The skills of singing, reading, writing, playing and hearing music; techniques and materials used in the elementary grades.

### 362 ELEMENTARY MUSIC EDUCATION (3)

Prereq: MUS 126; music major status. Teaching techniques, materials and organization of the elementary music program. Introduction to Orff, Kodaly and MMCP methodology. Observations.

### 364 ELEMENTARY STRING EDUCATION (2)

Prereq: MUS 265a and b, music major status. Instruction in elementary-level 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.

### 365 MARCHING AND JAZZ BAND TECHNIQUES (2)

Prereq: MUS 328, 352, music major status. Planning, organization and administration of secondary school marching and jazz band programs. Selection of appropriate repertoire and computer-assisted marching band chart preparation.

### 366 VOCAL DICTION (1 ea)

Prereq: music major status or permission of instructor. Must be taken concurrently with applied voice instruction. 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.

366a ITALIAN

366b GERMAN

366c FRENCH

### 367 FRETBOARD HARMONY (1)

Prereq: MUS 124, three quarters of MUS 216. Diatonic harmony applied to the fretboard. Hands-on application of scales and chords as well as basic arranging chord-melody for the guitarist.

### 411-417 APPLIED INSTRUCTION (1-4)

Prereq: music major status; upper-division examination. Repeatable for credit.

412 PIANO

413 STRINGS

414 WINDS AND PERCUSSION

415 VOICE

416 CLASSICAL GUITAR

417 JAZZ GUITAR

### 422 ANALYTICAL TECHNIQUES: 20TH-CENTURY MUSIC (3)

Prereq: MUS 225, 226. Formal and stylistic analysis of representative 20th century works.

### 431 COMPOSITION (3)

Prereq: minimum of 6 credits in MUS 331. Advanced projects in melody, counterpoint, harmony, instrumentation, texture, rhythm, and notation. Participation in weekly composition seminars. Repeatable for credit under advisement.

### 432 ELECTROACOUSTIC MUSIC (2)

Prereq: two courses from MUS 230, 232 and 328. 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.

### 434 JAZZ ARRANGING I (3)

Prereq: MUS 226 or 334. Writing and arranging for small jazz ensembles. Analysis of small jazz ensemble styles.

### 435 JAZZ ARRANGING II (3)

Prereq: MUS 434. Writing and arranging for a variety of instrumental combinations. Analysis of jazz ensemble styles.

### 436 JAZZ ARRANGING III (3)

Prereq: MUS 435. Writing and arranging for large jazz ensemble. Analysis of large jazz ensemble styles.

### 441 NOTATION (3)

Prereq: MUS 226, 341, 343; permission of instructor. Reading and interpreting early, contemporary or other extant systems.

### 442 SEMINAR IN MUSIC HISTORY (4)

Prereq: MUS 342, 343; music major status. The student, in consultation with the instructor, selects one or more given musical developments for individual research. Ongoing results of this research is shared with other members of the seminar. Focus of varies from quarter to quarter. Repeatable for credit.

### 443 HISTORY OF MUSICAL GENRES (3 ea)

Prereq: MUS 343; music major status. Development and literature of important musical genres from their origin to the present.

443a CHORAL MUSIC

443b SOLO SONG

443c OPERA

443d KEYBOARD MUSIC

443e CHAMBER MUSIC

443f SYMPHONIC MUSIC

443g CONCERTO

443h SYMPHONIC MUSIC IN THE 20TH CENTURY

### 444 SHAKESPEARE AND MUSIC (3)

Prereq: MUS 343. History and literature of musicians' responses to works of Shakespeare — music for stage and film, orchestral music, opera and song settings.

### 451 CONDUCTING PRACTICUM (1-3)

Prereq: MUS 351; 352 or 353 or permission of instructor. Advanced conducting techniques to include direction of student ensembles under faculty supervision. Repeatable for credit.

### 455 BAND MUSIC WORKSHOP (2)

Offered summers only. Repeatable for credit.

### 456 STRING MUSIC WORKSHOP (2)

Offered summers only. Repeatable for credit.

### 461 ELEMENTARY MUSIC EDUCATION METHODS II (3)

Prereq: MUS 361 or 362. 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.

### 463 SECONDARY CHORAL MUSIC EDUCATION (3)

Prereq: MUS 354, music education major status, and admission to Woodring College of 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.

**464 INSTRUMENTAL MUSIC EDUCATION (4)**

Prereq: MUS 354, music education major status, and admission to Woodring College of Education. Instruction in elementary, middle and high school instrumental repertoire, teaching strategies, rehearsal techniques, classroom management, curriculum design. Peer-teaching and micro-teaching assignments in public schools.

**466 APPLIED MUSIC PEDAGOGY (1-3)**

Prereq: upper-division level in applied instruction; music major status; permission of instructor. 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.

**467 APPLIED MUSIC LITERATURE (1-3)**

Prereq: music major status; permission of instructor. A stylistic and historical survey of literature for instruments or voice. Repeatable for credit.

**467a,b INTRODUCTION TO GUITAR REPERTORY (2 ea)**

Prereq: MUS 367; co-req: MUS 216. A survey of guitar literature and history from Renaissance to present.

**469 MUSIC TEACHING PRACTICUM II (2)**

Prereq: permission of instructor, and admission to Woodring College of Education. Observation, assisting and intense field experience in music classroom environments. Repeatable for credit.

**471 CONCERT CHOIR (2)**

Prereq: by audition. Selected group experience, vocal ability, reading skill, musicianship and interest in serious choral music considered for membership. Repeatable for credit.

**472 WIND SYMPHONY (2)**

Prereq: by audition. Repeatable for credit.

**473 UNIVERSITY SYMPHONY ORCHESTRA (2)**

Prereq: by audition; open to students who qualify. Repeatable for credit.

**474 JAZZ ENSEMBLES (2)**

Prereq: by audition. 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.

**475 CHAMBER JAZZ ENSEMBLE (2)**

Prereq: by audition; MUS 334 or 434 strongly recommended. 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.

**476 ADVANCED PIANO ACCOMPANYING (2)**

Prereq: completion of major performance ensemble requirement or permission of instructor. Advanced instruction in accompanying skills. Repeatable for credit.

**478 ADVANCED OPERA PRODUCTION (1-2)**

Prereq: by audition. Preparation of opera scenes or a major musical production to include a public performance each quarter. Repeatable for credit.

**480 ADVANCED COLLEGIUM MUSICUM (1-2)**

Prereq: permission of instructor. Music literature studies from an analytical and performance viewpoint from early to classic music, culminating in a public performance each quarter. Repeatable for credit.

**481 ADVANCED APPLIED CHAMBER MUSIC (2)**

Prereq: permission of chamber music coordinator. Open to piano, string, wind, brass and percussion performers. Repeatable for credit.

**483 ADVANCED CHAMBER VOCAL ENSEMBLES (2)**

Prereq: permission of instructor. Repeatable for credit.

**484 ADVANCED VOCAL JAZZ ENSEMBLE (2)**

Prereq: by audition; MUS 101, 102, 103 recommended. 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.

**485 NEW MUSIC ENSEMBLE (1-2)**

Prereq: by audition. Performance of 20th-century music literature. Repeatable for credit.

**486 CHAMBER ORCHESTRA (1)**

Prereq: permission of instructor. Rehearsal and performance of chamber orchestra literature. Repeatable for credit.

**490 SENIOR THESIS (3)**

Prereq: admission to music history and literature program; permission of instructor. S/U grading.

**499 SENIOR RECITAL (3)**

Prereq: permission of instructor. A full-length, public recital approved by the student's Recital Committee. S/U grading.

**Graduate Courses**

*Courses numbered 500; 517; 545; 597 are described on Page 34 of this catalog. Admission to Graduate School or special permission required. See the Graduate School section of this catalog.*

**501 INSTRUMENTAL CONDUCTING AND REHEARSAL TECHNIQUES (3)**

Advanced work in conducting band and orchestra music; baton technique, interpretation, score preparation and rehearsal techniques. Repeatable for credit.

**502 CHORAL CONDUCTING AND LITERATURE (3)**

Successful techniques in developing and conducting choral groups, score analysis of outstanding choral works; laboratory experience in conducting. Repeatable for credit.

**503 INTRODUCTION TO GRADUATE STUDY OF MUSIC (4)**

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.

**511 INDIVIDUAL INSTRUCTION — ADVANCED ORGAN (3-4)**

Prereq: permission of the department. 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.

**512 INDIVIDUAL INSTRUCTION — ADVANCED PIANO (3-4)**

Prereq: permission of the department. In addition to regularly scheduled private lessons, a public performance is expected each quarter. Repeatable for credit.

**513 INDIVIDUAL INSTRUCTION — ADVANCED STRINGS (3-4)**

Prereq: permission of the department. 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.

**514 INDIVIDUAL INSTRUCTION — ADVANCED ORCHESTRAL WINDS AND PERCUSSION (3-4)**

Prereq: permission of the department. 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.

**515 INDIVIDUAL INSTRUCTION — ADVANCED VOICE (3-4)**

Prereq: permission of the department. In addition to regularly scheduled private lessons, a public performance is expected each quarter. Repeatable for credit.

**518 INDIVIDUAL INSTRUCTION — APPLIED JAZZ (3-4)**

Prereq: admission to MMus degree program and permission of instructor. Individual instruction in jazz performance styles and techniques. Repeatable to a maximum of 12 credits.

**519 INDIVIDUAL INSTRUCTION — ADVANCED APPLIED CONDUCTING (1-3)**

Prereq: admission to MMus degree program, MUS 501 or 502 and permission of instructor. Individual instruction in conducting techniques and repertoire. Repeatable to a maximum of 6 credits.

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**525 BRASS AND PERCUSSION TECHNIQUES AND MATERIALS (3)**  
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.

**531 ARRANGING (3)**  
Practical techniques in arranging and composing for large and small ensembles. Summer only.

**532 ANALYTICAL TECHNIQUES: 20TH-CENTURY MUSICAL PRACTICES (3)**  
Analysis of works by various composers who have generated the major trends of 20th-century music.

**533 ANALYTICAL TECHNIQUES: 19TH-CENTURY MUSICAL STYLES AND PRACTICES (3)**  
Analysis of works by various composers who generated the major trends of 19th-century music.

**534 COMPOSITION (4)**  
Prereq: MUS 431. Composition, rehearsal and public performance of original works. Repeatable for credit.

**540 ADVANCED COLLEGIUM MUSICUM (2)**  
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.

**541-543 HISTORY/ANALYSIS (4 ea)**  
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 for credit for a maximum of 1 quarter.

541 MUSIC TO 1600

542 MUSIC FROM 1600-1830

543 MUSIC FROM 1830-PRESENT

**550 SEMINAR IN THE HISTORY OF MUSIC (3)**  
Prereq: permission of instructor. 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.

**555 ADVANCED BAND MUSIC WORKSHOP (2)**  
Course not applicable to MMus degree. Offered summers only. Repeatable for credit.

**556 ADVANCED STRING ORCHESTRA MUSIC WORKSHOP (2)**  
Course not applicable to MMus degree. Offered summers only. Repeatable for credit.

**571 CONCERT CHOIR (2)**  
Prereq: admission to MMus degree program and permission of instructor. Rehearsal and public performance of representative choral works. Repeatable to a maximum of 12 credits.

**572 WIND SYMPHONY (2)**  
Prereq: admission to MMus degree program and permission of instructor.

Rehearsal and public performance of works for wind ensemble. Repeatable to a maximum of 12 credits.

**573 UNIVERSITY SYMPHONY ORCHESTRA (2)**  
Prereq: admission to MMus degree program and permission of instructor. Rehearsal and public performance of works for symphony orchestra. Repeatable to a maximum of 12 credits.

**574 JAZZ ENSEMBLES (2)**  
Prereq: admission to MMus degree program and permission of instructor. 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.

**575 CHAMBER JAZZ ENSEMBLES (2)**  
Prereq: admission to MMus degree program and permission of instructor. 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.

**576 ACCOMPANYING (2-3)**  
Graduate-level instruction in accompanying skills. Pianists will accompany singers and instrumentalists under the supervision and regular coaching of the instructor. Repeatable for credit.

**578 OPERA PRODUCTION (1-2)**  
Prereq: admission to MMus degree program and permission of instructor. Preparation of opera scenes or a major musical production to include a public performance each quarter. Repeatable to a maximum of 12 credits.

**581 APPLIED CHAMBER MUSIC (2)**  
Prereq: admission to MMus degree program and permission of instructor. 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.

**583 CHAMBER VOCAL ENSEMBLES (2)**  
Prereq: admission to MMus degree program and permission of instructor. Rehearsal and public performance of chamber vocal works. Repeatable to a maximum of 12 credits.

**585 NEW MUSIC ENSEMBLE (2)**  
Prereq: admission to MMus degree program and permission of instructor. Rehearsal and performance of 20th century music literature. Repeatable to a maximum of 12 credits.

**586 CHAMBER ORCHESTRA (1)**  
Prereq: admission to MMus degree program and permission of instructor. Rehearsal and performance of chamber orchestra literature. Repeatable to a maximum of 6 credits.

**690 THESIS (1-6)**  
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.



# THEATRE ARTS

## MISSION STATEMENT

The faculty and staff of the theatre department are committed to a liberal arts approach to theatre education while maintaining a balance of both academic and practical approaches to the art of theatre. We believe strongly in the value of academic rigor, which in turn supports and maintains productions of the highest standards. We promote a global, diverse and collaborative view of theatre education, and strive to train artistic leaders in their chosen theatrical disciplines who will further contribute to the craft.

## PROGRAM DESCRIPTION

The Department of Theatre Arts offers a Bachelor of Arts and a Master of Arts in Theatre 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 transferrable 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 following skills:

- 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.

## THEATRE ARTS FACULTY

**GREGORY LAWRENCE PULVER** (2000) Chair and Assistant Professor. BA, MFA, Humboldt State University.

**RICH BROWN** (2006) Assistant Professor. BA, MA, Central Missouri State University; PhD, University of Oregon.

**DEBORAH CURRIER** (2003) Assistant Professor. BA, California State University; MA, PhD, University of Oregon.

**ROGER GERMAIN** (1970) Associate Professor. BA, Western Washington State 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.

**KYLE MATTHEWS** (2006) Assistant Professor. BA, MFA, Michigan State University.

**MAUREEN E. O'REILLY** (1983) Professor. BA, Whitman College; MA, University of Washington; MFA, University of Cincinnati.

## BACHELOR OF ARTS

### *Major — Theatre*

69 credits

- Core requirements (51 credits): THTR 101, 160 or 260, 212, 213, 216, 228, 255, 355, 370, 380, 381, 382, 384 and 496; and two topics selected from THTR 428 plus 3 credits of dramatic literature
- Concentration selected from one of the following areas:
  - Acting: THTR 260, 261, 264, 360, 361, 364; plus 2 credits under advisement. Dance and voice lessons suggested
  - Directing: THTR 210, 314, 470 plus 9 credits under advisement
  - Dramatic Writing: THTR 385, 485, 486, 487 plus 3 credits under advisement
  - Educational Theatre: THTR 350, 351, 450, 452, plus 6 credits under advisement
  - Technical Theatre: THTR 210, 211, 310, 312, 313 or 314, 412 plus 3 credits under advisement
  - Theatre Management: THTR 211, 314, 414, ACCT 240 plus 5 credits under advisement
  - Design
    - Costume Design: THTR 210, 211, 215, 313, 316, 383, 416
    - Lighting Design: THTR 210, 211, 311, 313, 316, 413 plus 3 credits under advisement
    - Scenic Design: THTR 210, 211, 310, 311, 313, 411 plus 3 credits under advisement
- Electives under advisement

### *Minor — Theatre*

30 credits

- THTR 101, 160, 212, 228, 370
- One course selected from THTR 380, 381, 382, 428
- One course selected from THTR 213, 216, 260, 314, 384
- Electives under advisement

Completion of the above courses leads to a supporting endorsement in drama/theatre arts. Courses required for a state teaching endorsement must be completed with a grade of C (2.0) or better.

## BACHELOR OF ARTS IN EDUCATION

### *Major — Theatre Arts — P-12*

52 credits

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.

- THTR 101, 160, 210, 211, 212, 213, 216
- THTR 228, 255, 314, 350, 351, 355, 370, 384
- THTR 428, 452, 496

Completion of the above courses leads to an endorsement in

## THEATRE ARTS

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theatre arts. Courses required for a state teaching endorsement must be completed with a grade of C (2.0) or better.

### *Additional Endorsement — Theatre Arts — P-12* 29-30 credits

- THTR 101, 160, 211, 212, 228, 255, 314, 351, 370, and 350 (elementary-29 credits) or 452 (secondary-30 credits)

Completion of the above 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. Courses required for a state teaching endorsement must be completed with a grade of C (2.0) or higher.

## GRADUATE STUDY

For a concentration leading to the Master of Arts degree, see the *Graduate School* section of this catalog.

## COURSES IN THEATRE ARTS (THTR)

*Courses numbered X37; X97; 300, 400; 417, 445 are described on Page 34 of this catalog.*

### 101 INTRODUCTION TO THE ART OF THE THEATRE (3)

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.

### 160 INTRODUCTION TO ACTING (2)

Prereq: written permission of instructor. THTR 101 recommended. Fundamentals of acting with emphasis on basic techniques and tools used by the actor. Includes improvisation; résumé writing; auditioning; and vocal, physical and emotional awareness. Open to majors and nonmajors.

### 168 INTRODUCTION TO FILM: ACTING AND PRODUCTION (3)

Prereq: THTR 101, 160. Introduction to rudimentary acting and production techniques, including professional conduct, script analysis and audition process.

### 201 INTRODUCTION TO THE CINEMA (3)

Training eye and ear to appreciate the work of the filmmaker. Analysis of the basic conventions of technique with an emphasis on critical exposition.

### 210 INTRODUCTION TO DESIGN COMMUNICATION (3)

Introduction to theatre design communication concepts and techniques. Computer applications; drawing and drafting for costume; and scenic and lighting designers and technicians.

### 211 FOUNDATIONS IN DESIGN (3)

Introduction to design elements and principles, and their use in criticism and communication for the theatre.

### 212 INTRODUCTION TO STAGECRAFT (4)

Basic theory of planning, drafting, construction and rigging of scenery. Practical lab experiences in scenery construction; painting; and handling and rigging of scenery. One production crew assignment, with one scheduled lab assignment.

### 213 INTRODUCTION TO LIGHTING (4)

Prereq: THTR 212 or permission of instructor. Basic theory in planning, drafting, handling and rigging of lighting and special effects; one scheduled lab assignment per week.

### 215 STAGE MAKE-UP (1)

Theory and practice of applying make-up for the stage with emphasis on character development, facial anatomy and aging.

### 216 INTRODUCTION TO COSTUMING (3)

Prereq: THTR 101 recommended. Costume design and execution with specific emphasis on basic sewing; costume materials and crafts; basic costume history; costume plots; and theatrical wardrobe. Required 8-hour lab.

### 228 UNDERSTANDING PLAYS (3)

Prereq: THTR 101 or permission of instructor. Reading a playscript with an eye to theatrical production. Introduction to primary dramatic forms (tragedy, comedy). Practice in speaking and writing intelligently about plays.

### 255 PRODUCTION: CREW (1)

Prereq: permission of instructor. For theatre majors (before 50 hours in major) and nonmajors: practical experience in rehearsal and performance with light, sound, costume, scenery, makeup, etc. Repeatable. S/U grading.

### 256 REHEARSAL AND PERFORMANCE (2)

Prereq: permission of instructor. For theatre majors (before 50 hours in major) and nonmajors: practical experience in rehearsal and performance. S/U grading.

### 257 THEATRE PRODUCTION: PERFORMANCE (2)

Prereq: permission of instructor. For theatre majors and nonmajors: direct instruction and experience in performance work. S/U grading.

### 260 ACTING STUDIO I: THEORY (3)

Prereq: audition and permission of instructor. Explores 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.

### 261 ACTING STUDIO I: SCENE STUDY (3)

Prereq: written permission of instructor. 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.

### 263 MOVEMENT FOR ACTORS (2)

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.

### 264 MOVEMENT STUDIO I: GROTOWSKI (4)

Prereq: THTR 260. Introduction to Jerzy Grotowski's approach to acting, resulting in scene work based on emotional need discovered through movement.

### 266 MUSICAL THEATRE I: FUNDAMENTALS (3)

Prereq: THTR 160, 260 and permission of instructor. Practical application of singing and acting to performance-related work from American musical theatre through solo application.

### 267 MUSICAL THEATRE II: FUNDAMENTALS (3)

Prereq: THTR 266 or permission of instructor. Practical application of singing, acting and movement to performance-related work from American musical theatre through solo, duet and group exploration.

### 310 SCENE PAINTING (3)

Prereq: THTR 211 and 212. A survey of traditional scene painting with emphasis on color, technique, materials, tools and formulas.

### 311 BEGINNING SCENE DESIGN (3)

Prereq: THTR 210, 211 and 212. Theory and practical experience in communicating technical and artistic information through drafting and color-rendering.

### 312 INTERMEDIATE STAGECRAFT (3)

Prereq: THTR 212. In-depth exploration of technical theatre practices.

### 313 BEGINNING LIGHTING DESIGN (3)

Prereq: THTR 213 and 311. Technical and artistic study of light and color as they affect other theatre arts and contribute to artistic design; laboratory work in production.

### 314 STAGE MANAGEMENT (3)

Prereq: 2 credits of acting and THTR 212. An in-depth study of the stage manager's role and responsibilities before, during and after production. Assignment to one major production.

**316 BEGINNING COSTUME DESIGN (3)**

Prereq: THTR 211 or permission of instructor. Theory and practical experience in the design and rendering of costumes for the stage.

**318 PUPPETRY (3)**

Design, construction and manipulation of puppets with focus on the history of puppets and puppet making.

**319 MILLINERY (2)**

Prereq: THTR 216. History, design and construction of hats for the theatre.

**320 COMPUTER DRAFTING AND DESIGN FOR THE THEATRE (3)**

Prereq: THTR 101, 210, 211, 212, 213 or permission of instructor. Practical working knowledge of drafting and design software.

**328 WRITING FOR THEATRE (3)**

Prereq: ENG 101, THTR 228. Writing for theatre discipline, including review and critique, technical writing and methods of research and citation.

**350 THEATRE FOR YOUTH (3)**

Explores the history, philosophy, literature and techniques for creating theatre for young audiences.

**351 CREATIVITY ACROSS THE CURRICULUM (4)**

Instructional methods in theatre arts for grades K-12; design, analysis and practical application of theatre arts techniques and pedagogy across the curriculum.

**353 TOURING THEATRE I (3)**

Prereq: permission of instructor. 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 to a maximum of 6 credits.

**354 TOURING THEATRE II (3)**

Prereq: THTR 353 and permission of instructor. 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 to a maximum of 6 credits.

**355 PRODUCTION: SUPERVISION (2)**

Prereq: THTR 255 and permission of instructor. Directly supervised practice in theatre crafts prior to performance. Students work as team members in scenic, lighting studios on special project(s). Repeatable. S/U grading.

**356 REHEARSAL AND PERFORMANCE II (2)**

Prereq: THTR 256 and permission. For theatre majors (after 50 hours in major) and nonmajors: practical experience in rehearsal and performance. S/U grading.

**360 ACTING STUDIO II: PHYSICAL INTERPRETATION OF A ROLE (3)**

Prereq: written permission of instructor. 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.

**361 ACTING STUDIO II: VOCAL INTERPRETATION OF A ROLE (3)**

Prereq: written permission of instructor. 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.

**363 VOICE AND DICTION (3)**

Sequence of exercises and drills challenging improvement in resonation, breath support, articulation, relaxation, placement and vocal work ranging from good stage speech (mid-Atlantic) to dialect.

**364 MOVEMENT II: SUZUKI/VIEWPOINTS (3)**

Prereq: THTR 263, 360. An introductory exploration of the Suzuki and Viewpoints actor training movement systems.

**365 SUMMERSTOCK (1-15)**

Prereq for performers: THTR 260, 261 or equivalent experience; for technicians: THTR 212, 213, 311 or equivalent experience; written permission of director of summer stock. Offered summer quarter only. Contact director of theatre for details.

**366 MUSICAL THEATRE III: PRACTICUM (3)**

Prereq: THTR 267. Practical application of advanced skills to a class project; creating, rehearsing and performing a musical theatre performance.

**368 ACTING FOR THE CAMERA (3)**

Prereq: THTR 260, 261 and acceptance into 360. An exploration and application of techniques and approaches for actors reflected currently in the film and television industry.

**370 PLAY DIRECTION (3)**

Prereq: THTR 160, 212, 213, 222 and/or permission of instructor. Theory and practice of stage direction including selection of play, casting and blocking. Production of a scene for public performance is required.

**380 THEATRE HISTORY I (4)**

Prereq: THTR 101, 222. Development of theatre to the Renaissance.

**381 THEATRE HISTORY II (4)**

Prereq: THTR 101, 222; 380 recommended. Development of theatre from the Renaissance to the beginning of realism.

**382 THEATRE HISTORY III (4)**

Prereq: THTR 101, 222; 380, 381 recommended. Development of theatre from the beginnings of realism to contemporary theatre.

**383 COSTUME HISTORY (4)**

Evolution of costume from ancient Greece through present-day fashion with reference to theatrical production.

**384 INTRODUCTION TO DRAMATIC WRITING (4)**

Prereq: written permission of instructor. Beginning exercise in dramatic writing, with emphasis on primary forms and conventions.

**385 INTERMEDIATE DRAMATIC WRITING WORKSHOP (4)**

Prereq: written permission of instructor. Practice in primary forms and conventions of drama. Introduction to mixed forms and contemporary styles. Required for directors and playwrights.

**411 ADVANCED SCENIC DESIGN (3)**

Prereq: THTR 312 and 313 or permission of instructor. Design for the modern theatre; emphasis on interpretation of the play through design; practical designs and techniques.

**412 ADVANCED STAGECRAFT (3)**

Prereq: THTR 212 and 312. Technical analysis of scripts, special effects, computers and properties. Laboratory work on productions.

**413 ADVANCED LIGHTING DESIGN (3)**

Prereq: THTR 313. Concepts and techniques of drafting and computer-assisted drafting, text work sheets, and application programs related to lighting design.

**414 THEATRE BUSINESS PRACTICES (3)**

Prereq: THTR 314; THTR 101 recommended. 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.

**415 ADVANCED SEMINAR IN DESIGN (4)**

Prereq: one course from THTR 411, 412, 413 or 416 or permission of instructor. Script analysis, technical solutions, budgeting, research, design and rendering/model building. Emphasis on collaboration, innovative solutions and new approaches to theatre design.

**416 ADVANCED COSTUME DESIGN AND RENDERING TECHNIQUES (3)**

Prereq: THTR 316, 382 and 383. Exploration and execution of complete designs of costumes for the modern theatre with emphasis on the development of the design concept and interpretation. Focus on drawing and rendering techniques.

**428 MAJOR DRAMATISTS (3)**

Prereq: THTR 222. 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.

## THEATRE ARTS

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### 450 THEATRE FOR YOUTH II (3)

Prereq: THTR 350. Advanced techniques in youth theatre. Each student selects and prepares a script for performance for and/or by youth.

### 451 CREATIVITY ACROSS THE CURRICULUM II (3)

Prereq: THTR 351. Advanced techniques; supervised laboratory work with young people.

### 452 SECONDARY THEATRE TECHNIQUES (4)

Prereq: THTR 351; acting and directing courses strongly encouraged. Explores 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.

### 455 PRODUCTION: ADVANCED PROJECTS (3)

Prereq: THTR 355 and written permission of instructor. 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.

### 460 ACTING STUDIO III: STYLE — SHAKESPEARE (4)

Prereq: permission of instructor. Continued refinement of skills and techniques presented in Acting Studio II, adding the physical, vocal and emotional styles of performing Shakespeare plays.

### 461 ACTING STUDIO III: PERSONAL PERFORMANCE (4)

Prereq: written permission of instructor. Continued refinement of skills and techniques introduced in previous studios, with special emphasis on individual acting problems.

### 463 AUDITION PREPARATION (2)

Prereq: THTR 460 and/or permission of instructor. 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.

### 464 MOVEMENT STUDIO III: ADVANCED SUZUKI/VIEWPOINTS (2)

Prereq: THTR 364. Advanced exploration of the Suzuki and Viewpoints actor training movement systems.

### 465 ADVANCED WORKSHOP IN SUMMER STOCK (1-15)

Prereq: written permission of director of summer stock. Offered only summer quarter. Contact director of theatre for details. Repeatable once.

### 470 PLAY DIRECTION II (4)

Prereq: THTR 314, 370, permission of instructor and 30 hours in the major. Producing and directing a one-act play for public performance; special emphasis on working with the actor.

### 485, 486, 487 DRAMATIC WRITING WORKSHOP (4 ea)

Prereq: THTR 384 or 385 and written permission of instructor. 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.

### 495 INTERNSHIP (1-12)

Prereq: junior status or above and permission of the chair. 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.

### 496 SENIOR PROJECT (1)

Prereq: permission of instructor. Capstone course demonstrating accomplishment in the departmental concentration. S/U grading.

## Graduate Courses

Courses numbered 500; 517; 545; 597 are described on Page 34 of this catalog.

Admission to Graduate School or special permission required. See the Graduate School section of this catalog.

### 501 INTRODUCTION TO RESEARCH IN THEATRE (4)

Interpretation and evaluation of research outcomes; purposes and design of various methods with particular emphasis on historical and descriptive methods.

### 511 SEMINAR IN SCENIC DESIGN (4)

Prereq: permission of instructor. Topics in the practice and principles of the scenic arts with individual projects in design.

### 512 SEMINAR IN STAGECRAFT (4)

Prereq: permission of instructor. Advanced topics in the practice and principles of the scenic arts with individual projects in design.

### 513 SEMINAR IN LIGHTING DESIGN (4)

Prereq: permission of instructor. Topics in the practice of light design for the stage with focus on individual projects.

### 514 SEMINAR IN THEATRE BUSINESS PRACTICES (4)

Prereq: permission of instructor. Study of approaches, procedures and practices employed by managers and producers in for-profit as well as non-profit theatres.

### 516 SEMINAR IN COSTUME DESIGN (4)

Prereq: Instructor approval. Topics in the practice and principles of costume design with individual projects in design.

### 522 SEMINAR IN DRAMATIC THEORY AND CRITICISM (4)

Prereq: undergraduate major in theatre or permission of instructor. Dominant concepts and issues of dramaturgical thought. Principles and practices of dramatic criticism.

### 528 SEMINAR IN DRAMATIC LITERATURE (3)

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.

### 550 THEATRE IN EDUCATION I (4)

Prereq: Undergraduate major in theatre or permission of instructor. Critical review and research in creative of theory and theatre for youth. Individual artistic or research projects.

### 551 THEATRE IN EDUCATION II (4)

Prereq: permission of instructor. Advanced individual projects in creative pedagogy.

### 552 THEATRE IN EDUCATION III (4)

Prereq: Instructor approval. Implementation of strategies and techniques for theatre production in the public schools.

### 555 GRADUATE PRODUCTION PROJECT (3)

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.

### 560 ACTING (4)

Prereq: permission of instructor. Training for the actor with an emphasis on the historical; stage mechanics; self awareness, character action and development, styles, and script analysis.

### 561 ADVANCED ACTING (4)

Prereq: THTR 560. A continuation of THTR 560 with emphasis on contemporary approaches and application in production.

### 562 SUMMER STOCK (1-15)

Prereq: Summer Stock director's approval. Advance workshop in Summer Stock. Only 8 credits can be applied to the graduate degree program. Repeatable.

### 570 DIRECTING THEORY (4)

Explores a wide range of directorial aesthetics and practices.

### 571 SEMINAR IN PLAY DIRECTION (4)

Prereq: THTR 570. Topics in the principles and practices of the art of play direction with individual student projects.

### 572 ADVANCED SEMINAR IN PLAY DIRECTION (4)

Prereq: THTR 571. Advanced principles and practices of play direction with individual student projects.

### 585 PLAYWRITING SEMINAR (5)

Individual projects in dramatic writing are submitted for group discussion.



**586 ADVANCED PLAYWRITING SEMINAR (5)**

Prereq: THTR 585 or permission of instructor. Individual projects in playwriting.

**594 PRACTICUM IN TEACHING (2-5)**

Prereq: THTR 501 and permission of instructor. Supervised teaching for MA candidates. Repeatable to a maximum of 5 credits. S/U grading.

**595 FINAL PROJECT (1-6)**

(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.

**690 THESIS (1-9)**

Repeatable to a maximum of 9 credits.

**691 RESEARCH PAPER (1-3)**

Planning and execution of a publishable scholarly paper. Repeatable to a maximum of 3 credits.

# COLLEGE OF HUMANITIES AND SOCIAL SCIENCES

Ronald Kleinknecht, 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 post-graduate 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, BS, MA
Anthropology/Biology .....	BA
Anthropology/Social Studies .....	BA
Archaeology Concentration .....	BA
Archives and Records Management .....	MA
Biology/Anthropology .....	BS
Communication.....	BA, BA/Ed
Communication Sciences & Disorders .....	BA, MA
Community Health .....	BS
East Asian Studies .....	BA

English.....	BA/Ed, MA
English/Creative Writing Emphasis .....	BA
English/Literature Emphasis .....	BA
Environmental Studies/Journalism .....	BA
Exercise and Sport Science.....	BS, MS
History.....	BA, BA/Ed, MA
History/Social Studies .....	BA
Humanities .....	BA
Journalism .....	BA
Linguistics.....	BA
Modern and Classical Languages (French, German, Spanish).....	BA, BA/Ed
Double Language Major (French, German, Spanish).....	BA
Philosophy.....	BA
Physical Education and Health .....	BA/Ed
Political Science .....	BA, MA
Political Science/Economics .....	BA
Political Science/Social Studies.....	BA
Politics/Philosophy/Economics .....	BA
Psychology .....	BA, BA/Ed, MS
Recreation .....	BA
School Counseling.....	M/Ed
Sociology.....	BA, BA/Ed, BS, MA
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.

## 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. Roger Thompson .....History  
 Shearlean Duke.....Journalism  
 Dr. David Curley .....Liberal Studies  
 Dr. Brent Carbajal .....Modern & Classical  
 Languages  
 Dr. Hud Hudson.....Philosophy

Dr. LeaAnn Martin ..... Physical Education, Health &  
 Recreation  
 Dr. Sara Weir..... Political Science  
 Dr. Dale Dinnel ..... Psychology  
 Dr. Jay Teachman.....Sociology

**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.

# ANTHROPOLOGY

The discipline of anthropology studies humankind in all the cultures of the world, both past and present. This study includes humankind's physical development and the wide diversity of lifestyles people have created.

Anthropology has three main goals: first, providing a deep understanding of humankind, 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 applicabilities 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.

## 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 ethnohistorical projects, providing a wide diversity of research opportunities. Library holdings include resources for those pursuing cross-cultural and culture-area research. Linguistic specializations available include Mongolian, Chinese and Japanese.

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 archaeology 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, 210, 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.

- CHEM 121, 122, 123 (or CHEM 125, 126, 225)
- BIOL 204, 205, 206
- ANTH 201, 210, 215
- Physics and calculus

## ANTHROPOLOGY 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) Associate Professor. BA, Indiana University; MA, PhD, University of Washington.

**MICHAEL GRIMES** (2001) Associate Professor. BS, PhD, University of Pittsburgh.

**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.

**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 OF MAJOR

Students are advised to declare their major early in their academic career. Transfer students should declare in their first quarter at Western, other students before the end of their sophomore year. Some upper-division courses are restricted to declared majors during the initial phase of registration; and some courses may be available to majors only. Students always have the option of changing majors; students who declare their major early are best able to take full advantage of all academic opportunities which are available to them at Western. Those transfer students not restricted by their AA degree curriculum in community college, or those transferring without attaining the AA degree, or those entering as 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. (Students are advised to take human anatomy and physiology if it is offered.)



**BACHELOR OF ARTS****Major — Anthropology**

65 credits

**Core Component**

- ANTH 201
- 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)
- ANTH 301
- ANTH 303
- ANTH 335, or another basic statistics course under advisement
- ANTH 490 or other culminating project under advisement
- ANTH 496

**Methods Component**

- At least one course from the following: ANTH 410, 420, 428, 448, 470, 471, 472, 473, 480, 495 (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, 338, 350, 351, 353, 382, 424, 429, 431, 453, 475, 481, 484

**Culture Region Component**

- At least one course from the following: ANTH 361, 362, 364, 365, 460, 462, 463, 464, 465

**Electives**

- 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

**Major — Anthropology — Archaeology Concentration**

80 credits

This concentration is intended for students who plan to do professional work or enroll in a graduate program in archaeology.

- Anthropology major requirements as noted under Core Component, Topical Component and Culture Region Component
- Two from the following courses: ANTH 308, 310, 314, 431
- Two from the following courses: ANTH 406, 410, 411, 428
- ANTH 312 or equivalent field experience recommended
- Two from the following courses: ANTH 382, 420, 422, 470
- Elective credits in anthropology
- 12 credits of supporting courses in sciences, history or mathematics selected under advisement. Strongly recommended courses include: GEOL 310, 316, 413, 415, 442 or 447; EGEO 330, 351, 352, 432, 433 or 452

**Major — Anthropology — Biocultural Concentration**

95-98 credits

- Anthropology core components as listed under Anthropology major
- CHEM 121, 122, 123 (or CHEM 125, 126, 225)
- CHEM 251 (or CHEM 351, 352, 353)
- BIOL 204, 205, 206, 348, 349
- ANTH 350, 424
- Two from the following: ANTH 382, 422, 423, 457, 466

or any course from Culture Region Component under Anthropology major

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 and Michael Grimes.

**Combined Major — Anthropology/Social Studies**

86-88 credits

**Anthropology Courses (45 Credits)**

- ANTH 201, 210, 215
- ANTH 481 or 484
- Electives under departmental advisement — at least one course from each of the following groups:
  - Cultural area courses: ANTH 361, 362, 364, 365, 460, 462, 463, 464, 465
- Topical cultural anthropology courses: ANTH 247, 330, 348, 351, 353, 424, 429, 453, 475, 480

**Social Studies Courses (41-43 credits)**

- ECON 206 or 446 [preferred]
- ECON 207 or 447 [preferred]
- EGEO 201 and EGEO 250 or 2 additional geography credits
- HIST 103, 104, 391 plus 12 credits in history, including one course in World or Western or Pacific Rim or Civilization
- PLSC 250
- 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. Courses required for a state teaching endorsement must be completed with a grade of C (2.0) or better.

**Combined Major — Anthropology/Biology**

89 credits including 23 in supporting courses; Biology Phase II status required for admission into 300- and 400-level biology courses for biology majors.

- CHEM 121, 122, 123 (or CHEM 125, 126, 225)
- CHEM 251 (or 351, 352, 353)
- PHYS 101 or 114 (PHYS 115 recommended)
- BIOL 204, 205, 206, 321, 348, 349
- ANTH 335 or BIOL 340 or MATH 240
- ANTH 201, 210, 215
- 10 credits in anthropology under advisement
- 8 credits of biology under advisement
- ANTH 496

Program advisers: R. Anderson, Biology, and J. Stevenson or Michael Grimes, Anthropology.

**Minor — Anthropology**

25 credits

- ANTH 201 and either 102 or 210 or 215
- Electives in anthropology under departmental advisement. Student selection of a complementary minor under advisement is strongly recommended

## ANTHROPOLOGY

### BACHELOR OF SCIENCE

#### *Combined Major — Biology/Anthropology* 101-104 credits

Basic requirements: supporting courses 34-37 credits; Biology Phase II status required for admission into 300- and 400-level biology courses for biology majors.

- CHEM 121, 122, 123 (or CHEM 125, 126, 225)
- CHEM 351 and 352 (or 251 only with approval of adviser); CHEM 353 and 354 recommended
- PHYS 114, 115; 116 recommended (or PHYS 121, 122, 123, 131, 132, 133)
- MATH 124

Basic requirements: Biology 14 credits

- BIOL 204, 205, 206

Basic requirements: Anthropology 15 credits

- ANTH 201, 210, 215

Breadth requirements: 16-19 credits

- BIOL 321, 325 or ANTH 350, BIOL 340 or ANTH 335, BIOL 432 or ANTH 423

Depth requirements: 12-15 credits

- BIOL 348, BIOL 349 or 467
- BIOL 432 or ANTH 423
- One of the following: ANTH 308, 422, 424 or BIOL 410
- Electives: BIOL 323, 322 or 324, 345, 382, 410, 465, 467, 478, ANTH 308, 422, 424, 466; other electives under advisement

Completion requirement: 1 credit

- ANTH 496

Program Advisers: R. Anderson, Biology, and J. Stevenson, Michael Grimes, Anthropology

### BACHELOR OF ARTS IN EDUCATION

#### *Major — Anthropology — Elementary* 45 credits

This major 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.

- ANTH 201, 210 and 215
- ANTH 481 or 484
- Electives under departmental advisement. Select one course from each of the following groups:
  - Cultural area courses: ANTH 361, 362, 364, 365, 460, 462, 463, 464, 465
  - Topical cultural anthropology courses: ANTH 247, 330, 348, 351, 353, 424, 429, 453, 475, 480

### GRADUATE STUDY

For a concentration leading to the Master of Arts degree, see the *Graduate School* section of this catalog.

### COURSES IN ANTHROPOLOGY (ANTH)

*Courses numbered X37; X97; 300, 400; 417, 445 are described on page 34 of this catalog.*

#### **102 INTRODUCTION TO HUMAN ORIGINS (5)**

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.

#### **104 AMERICAN MOSAIC: THE CULTURES OF THE UNITED STATES (4)**

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.

#### **201 INTRODUCTION TO CULTURAL ANTHROPOLOGY (5)**

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.

#### **210 INTRODUCTION TO ARCHAEOLOGY (5)**

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.

#### **215 INTRODUCTORY BIOLOGICAL ANTHROPOLOGY (5)**

The biological side of anthropology; human osteology, primate paleontology, human variation, human evolution and primate behavior.

#### **247 LANGUAGE IN CULTURE AND SOCIETY (5)**

Prereq: ANTH 201. Analysis of situational varieties of language level and vocabulary; social processes of language change; semantics and world view; speech communities; and linguistic geography.

#### **301 ANTHROPOLOGICAL THEORY (5)**

Prereq: ANTH 201. The development of anthropological thought from the late 1800s to the present. Emphasis is placed on the major theoretical developments in the discipline.

#### **303 QUALITATIVE METHODS IN ANTHROPOLOGY (5)**

Prereq: ANTH 201. Familiarizes students with the perspectives, methods, and techniques of qualitative research in anthropology. Covers the theoretical background of qualitative research, major research traditions, methods of data collection, analysis of textual data and the writeup of findings.

#### **308 HUNTER-GATHERER SOCIETIES IN WORLD PREHISTORY (4)**

Prereq: ANTH 102, 201 or 210. 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.

#### **310 THE RISE OF CIVILIZATIONS (4)**

Prereq: ANTH 102, 201, or 210. 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.

#### **312 FIELD COURSE IN ARCHAEOLOGY (12)**

Prereq: ANTH 102, 201, or 210 or equivalent and permission of instructor. On-site training in methods and techniques of archaeological survey and excavation.

#### **314 ARCHAEOLOGY OF NORTH AMERICA (5)**

Prereq: ANTH 102, 201, or 210. Origins of Paleolindians 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.

#### **330 RELIGION AND CULTURE (5)**

Prereq: ANTH 201. Comparative study of religious thought, belief and behavior; relationship of religious experience and institutions to other aspects of culture and society.

#### **335 QUANTITATIVE METHODS IN ANTHROPOLOGY (5)**

Prereq: ANTH 201 and 10 additional credits in anthropology. Mathematics and statistics as applied to anthropological problems.

#### **338 ECONOMIC ANTHROPOLOGY (5)**

Prereq: ANTH 201 or permission of instructor. 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.

**348 ANTHROPOLOGICAL LINGUISTICS (5)**

Prereq: ANTH 201. Language and other forms of communication. Traditions of spoken and written languages. Introduction to phonology, morphology and syntax. The role of language in anthropological field work.

**350 THE ECOLOGY OF HUMAN VARIATION (5)**

Prereq: ANTH 201, 210 or 215. 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.

**351 FAMILY AND KINSHIP ORGANIZATION (5)**

Prereq: ANTH 201. Cross-cultural study of family types and the definition of social roles through kinship organization.

**353 SEX AND GENDER IN CULTURE (5)**

Prereq: ANTH 201 and one other 200- or 300-level anthropology course. Cross-cultural study of gender stereotypes, gender and language, gender and work roles, gender and religion. Also offered as WMNS 353.

**361 NATIVE PEOPLES OF NORTH AMERICA (5)**

Prereq: ANTH 201. Ethnographic survey of the peoples and cultures.

**362 PEOPLES OF ASIA (5)**

Prereq: ANTH 201. Ethnographic survey of the peoples and cultures.

**364 PEOPLES OF THE PACIFIC (5)**

Prereq: ANTH 201. Ethnographic survey of the peoples and cultures.

**365 PEOPLES OF LATIN AMERICA (5)**

Prereq: ANTH 201. Ethnographic survey of the peoples and cultures.

**382 SOCIOBIOLOGY (4)**

Prereq: junior standing in behavioral or biological sciences, and one of the following: BIOL 101, 201, or ANTH 215; or permission of instructor. Neo-Darwinian approaches for understanding the ultimate causes of behaviors in animals and humans will be reviewed. Topics include resource competition and optimization models, mate choice and reproductive strategies, parental investment, conflict and cooperation, evolution of cognition and morality.

**406 ARCHAEOLOGICAL METHOD AND THEORY (5)**

Prereq: ANTH 210 or 301 and 5 additional credits in archaeology. 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.

**410 ARCHAEOLOGICAL ANALYSIS AND INTERPRETATION (5)**

Prereq: ANTH 102, 201, or 210 and 10 credits in anthropology at the 300 level. Archaeological laboratory methods; artifact identification, classification, measurement; map reproduction, soil and feature profiles; use of photographs and other graphic methods.

**411 ARCHAEOLOGY OF NORTHWESTERN NORTH AMERICA (5)**

Prereq: 14 or 15 credits in anthropology including ANTH 210, 310 or 314, and 361. The prehistoric archaeology of the Northwest coast and plateaus; current explorations and interpretations in a context of paleoenvironmental and ethnohistorical evidence.

**415 ARCHAEOLOGICAL SPATIAL ANALYSIS (3)**

Prereq: ANTH 210 and 335 or equivalent. 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.

**420 HUMAN OSTEOLOGY AND FORENSIC ANTHROPOLOGY (5)**

Prereq: ANTH 210 and 215 and one of: ANTH 312, 335 or 410, or junior standing in biology, or permission of instructor. 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, et cetera) and how to aid the crime investigator.

**422 NUTRITIONAL ANTHROPOLOGY (5)**

Prereq: ANTH 201, 215, BIOL 349, or junior status in biology, or permission of instructor. 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.

**423 HUMAN EVOLUTION (5)**

Prereq: ANTH 210 and 215 and one of ANTH 308, 410, 420 or junior standing in biology, environmental science or geology. Detailed exploration of the fossil record leading to modern humans.

**424 MEDICAL ANTHROPOLOGY (5)**

Prereq: ANTH 201 and junior standing in a behavioral science or biology. 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.

**428 CULTURAL RESOURCE MANAGEMENT (4)**

Prereq: at least 10 credits from the 300-level course offerings in anthropology, history and/or environmental studies. 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.

**429 POLITICAL ANTHROPOLOGY (3)**

Prereq: ANTH 301 or two comparable upper-division anthropology, political science or sociology courses. Political anthropology examines how collective action is possible in societies without centralized authority. It considers problems of order, action and representation in non-state societies, and the question of the origins and spread of state societies.

**431 ANTHROPOLOGICAL ASPECTS OF ARCHAEOASTRONOMY (3)**

Prereq: 15 credits in anthropology and junior standing in anthropology or physics and astronomy, or permission of instructor. An overview of astronomy as an important aspect of non-Western cultures and of pre-modern Western cultures. Emphasis on the integration of archaeological and ethnographical data in order to understand the embedment of non-Western and pre-modern astronomies in the larger social context of their respective cultures.

**440 CYBORG ANTHROPOLOGY (4)**

Prereq: ANTH 201 or permission of instructor. 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.

**448 INTERMEDIATE ANTHROPOLOGICAL LINGUISTICS (5)**

Prereq: ANTH 348 and junior standing in anthropology or LING 201, 202, 203 or permission of instructor. Detailed examination of further topics in anthropological linguistics, including language universals, language acquisition, world language and script patterns, and ethno-semantics.

**453 WOMEN OF THE GLOBAL SOUTH (5)**

Prereq: 15 credits at the 300 level in anthropology or related discipline (WMNS 211, ANTH 353 highly recommended) or permission of instructor. 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.

**454 PARTICIPATORY ACTION RESEARCH METHODS (5)**

Prereq: ANTH 471 or permission of instructor. Participatory Action Research (PAR) 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 great familiarity through participant-observation field work methods in ANTH 471) to work on a PAR project.

**456 ANTHROPOLOGY OF WAR AND HUMAN RIGHTS (4)**

Prereq: 15 credits in anthropology. 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

## ANTHROPOLOGY

war and definitions of human rights are fundamental to an understanding of what it means to be human.

### **457 THE ANTHROPOLOGY OF DEATH AND DYING (5)**

Prereq: 15 credits in anthropology. 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.

### **460 CULTURE AND SOCIETY OF JAPAN (4)**

Prereq: two classes from ANTH 201, 362, EAST 201 or 202. 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.

### **462 NATIVE PEOPLES OF THE NORTHWEST (3)**

Prereq: ANTH 201 and 361. Tribal distributions, social organization and ecological adaptation and social change with emphasis on the Native peoples of Washington state.

### **463 PEOPLES OF SOUTH AND SOUTHEAST ASIA (3)**

Prereq: 15 credits in anthropology or a related field and junior standing or permission of instructor. A survey of cultures on the Indian subcontinent, mainland and insular Southeast Asia. Emphasis on special topics, including ecology, prehistory and selected cultural groups. Readings focus on original monographs.

### **464 PEOPLES OF EAST ASIA (3)**

Prereq: 15 credits in anthropology or a related field and junior standing or permission of instructor. Ethnographic in-depth study of the national and minority peoples of China, Taiwan, Korea and Japan with emphasis on their distinctive cultures and societal structure.

### **465 PEOPLES OF MEXICO AND CENTRAL AMERICA (5)**

Prereq: ANTH 201. 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.

### **466 REPRODUCTIVE ECOLOGY (5)**

Prereq: ANTH 201, 215, BIOL 349, or junior status in biology or permission of instructor. 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.

### **470 MUSEOLOGY STUDIES (3-5)**

Prereq: 40 credits in anthropology and permission of faculty liaison. 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.

### **471 FIELD WORK METHODS IN CULTURAL ANTHROPOLOGY (7)**

Prereq: 15 credits in anthropology at 300 level or permission of instructor. 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.

### **472 VISUAL ANTHROPOLOGY (5)**

Prereq: ANTH 301 and 10 credits in anthropology at the 300 level. 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.

### **473 FIELD COURSE IN ETHNOGRAPHY (5-12)**

Prereq: 10 credits in upper-division anthropology courses and permission of instructor. Course is partly classroom-based and partly field-based research through participation in on-site projects. Actual projects vary by quarter and instructor.

### **475 GLOBAL MIGRATION (5)**

Prereq: ANTH 201 and upper-division status. 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.

### **476 BORDERLANDS (4)**

Prereq: ANTH 201. 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 U.S.-Canada borderlands.

### **480 APPLIED ANTHROPOLOGY (4)**

Prereq: 15 credits in anthropology at the 300 level. Use of anthropology to solve human problems; examines ethics, interventions and policy applications regarding contemporary social issues.

### **481 CHILDHOOD AND CULTURE (4)**

Prereq: ANTH 201 and upper-division status. The process of socialization or enculturation viewed from a cross-cultural perspective.

### **484 CROSS-CULTURAL EDUCATION (4)**

Prereq: ANTH 201 and upper-division status or permission of instructor. Comparative and anthropological study of educational issues. Examines learning in other cultures, home-school linkages, minority student achievement and multi-cultural curricula.

### **490 SENIOR SEMINAR IN ANTHROPOLOGY (5)**

Prereq: senior status in anthropology and 30 credits in anthropology courses. 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 their findings. Repeatable once with different instructors.

### **495 TEACHING-LEARNING PROCESSES IN ANTHROPOLOGY (3)**

Prereq: 25 credits in anthropology and permission of instructor. Practicum as discussion leaders in anthropology courses. May be repeated once for departmental credit if taken from a different instructor.

### **496 PORTFOLIO ASSEMBLY (1)**

Prereq: graduation quarter. 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.

## Graduate Courses

*Courses numbered 500; 517; 545; 597 are described on Page 34 of this catalog.*

*Admission to Graduate School or special permission required. See the Graduate School section of this catalog.*

### **501 HISTORY OF ANTHROPOLOGY (5)**

Prereq: graduate status in the anthropology program or permission of instructor. Development of principal theoretical orientations and methods in the cultural and historical setting; development of anthropology as a discipline.

### **502 THEORY IN ANTHROPOLOGICAL RESEARCH (5)**

Prereq: graduate status in the anthropology program or permission of instructor. Issues relating to use of theory in contemporary anthropological research; examination of major writings and their implications.

### **503 RESEARCH DESIGN AND METHOD (5)**

Prereq: graduate status in the anthropology program or permission of instructor. Analysis of major theoretical approaches; research methods and procedures; relationship of theory and method in formulating research problems.

### **506 ARCHAEOLOGICAL METHOD AND THEORY (5)**

Prereq: graduate status in the anthropology program or permission of instructor. 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.

### **510 APPLIED ARCHAEOLOGICAL ANALYSIS AND INTERPRETATION (5)**

Prereq: graduate status in the anthropology program or permission of in-



structor. Advanced design and implementation of archaeological laboratory methods to a specific research project.

#### **511 CURRENT ARCHAEOLOGICAL RESEARCH IN NORTHWESTERN NORTH AMERICA (5)**

Prereq: graduate status in the anthropology program or permission of instructor. Advanced survey of current literature in Pacific Northwest archaeology in seminar format with preparation of a major research paper.

#### **515 PRACTICUM IN ARCHAEOLOGICAL SPATIAL ANALYSIS (5)**

Prereq: graduate status in the anthropology program or permission of instructor. Application of advanced quantitative spatial analysis techniques to specific archaeological contexts and projects. Students will complete a major research project and paper.

#### **520 HUMAN OSTEOLOGY (5)**

Prereq: graduate status in the anthropology program or permission of instructor. Advanced study of human osteology. The latest methods in reconstruction of the individual.

#### **522 NUTRITIONAL ANTHROPOLOGY (5)**

Prereq: graduate students in good standing in the anthropology department and other programs with approval of their program adviser. 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.

#### **524 APPLIED MEDICAL ANTHROPOLOGY (5)**

Prereq: graduate status in anthropology program or permission of instructor. 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.

#### **525 PRIMATE EVOLUTION (5)**

Prereq: graduate status in the anthropology program or permission of instructor. Advanced study of primate paleontology. Each student is expected to become expert on some aspect of the fossil record.

#### **528 APPLIED CULTURAL RESOURCE MANAGEMENT (5)**

Prereq: graduate status in the anthropology program or permission of instructor. Application of cultural resource management methods to specific management problems. Students will prepare a professional quality cultural resource management plan or nomination form.

#### **531 ARCHAEOASTRONOMY (3)**

Prereq: graduate status in the anthropology program or permission of instructor. Advanced study of archaeoastronomy. Students will work in the primary literature and attain expertise upon selected key topics in the field.

#### **540 ANTHROPOLOGICAL LINGUISTICS (5)**

Prereq: graduate status in the anthropology program or permission of instructor. Language and ethnography; the differential relationships existing between the lexicon and the grammar of languages and their speakers' respective cultures, societies and world view.

#### **553 WOMEN OF THE GLOBAL SOUTH (5)**

Prereq: graduate status in the anthropology program or permission of instructor. 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.

#### **554 PARTICIPATORY ACTION RESEARCH METHODS (5)**

Prereq: ANTH 571 or permission of instructor. Participatory Action Research (PAR) 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. Students will work with an identified community group (in most cases, one which the student already has great familiarity with through participant-observation fieldwork methods in ANTH 571) to work on a PAR project.

#### **563 PEOPLES OF SOUTH AND SOUTHEAST ASIA (3)**

Prereq: graduate status in the anthropology program or permission of instructor. Advanced study of selected important topics regarding the peoples and cultures of South and 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.

#### **564 PEOPLES OF EAST ASIA (3)**

Prereq: graduate status in the anthropology program or permission of instructor. Advanced study of selected important topics regarding the peoples and cultures of East 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.

#### **565 PEOPLES OF MEXICO AND CENTRAL AMERICA (5)**

Prereq: graduate status in the anthropology program or permission of instructor. 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.

#### **566 REPRODUCTIVE ECOLOGY (5)**

Prereq: permission of instructor. Advanced study of human reproduction from an anthropological perspective in a seminar format. Covers 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 and presentation.

#### **571 FIELDWORK METHODS IN CULTURAL ANTHROPOLOGY (7)**

Prereq: graduate status in the anthropology program or permission of instructor. 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.

#### **572 VISUAL ANTHROPOLOGY (5)**

Prereq: graduate status. Examination of photographic/digital image representation of people by anthropologists, ethnographic filmmakers, indigenous people, media and other groups. Emphasizes analytical skills and applications and explores theoretical perspectives. Requires two projects with accompanying presentations.

#### **576 BORDERLANDS (5)**

Prereq: graduate status in the anthropology program or permission of instructor. Advanced comparative examination of separating and integrating functions of borders, border regions as transition zones, and policy implications, with emphasis on the U.S. borders with Mexico and Canada.

#### **580 APPLIED ANTHROPOLOGY (5)**

Prereq: graduate status in the anthropology program or permission of instructor. Advanced investigation of the use of anthropology to solve human problems; ethics, interventions and policy applications regarding contemporary social issues.

#### **581 CHILDHOOD AND CULTURE (4)**

Prereq: graduate status in the anthropology program or permission of instructor. Advanced cultural analysis of the process of socialization, child welfare and policy relating to children.

#### **690 THESIS (1-12)**

Prereq: formal advancement to candidacy for the MA in anthropology. S/U grading. Repeatable to a maximum of 12 credits.

# CANADIAN-AMERICAN STUDIES

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 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**, Canadian-American Studies Director. 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.  
**RICHARD BULCROFT**, Sociology. Canadian society.  
**SARAH CAMPBELL**, Anthropology. Pre-history of the Northwest coast.  
**SARAH CLARK-LANGAGER**, Western Gallery Director.  
**CECILIA DANYSK**, History. Canadian history.  
**JAMES DEAN**, Ross Distinguished Professorship of Canada/U.S. Business and Economic Relations.  
**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.  
**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.  
**FALLOU NGOM**, French. French linguistics.  
**EDWARD OUSSÉLIN**, French. French cultural studies and film studies.  
**DONNA PACKER**, Wilson Library. Information resources.  
**NANCY PUGH**, English. Canadian literature.  
**KRISTEN PARRIS**, Political science. East Asia-Canada immigration.  
**JOHN PURDY**, English. Canadian literature.  
**DAVID ROSSITER**, Geography. Canadian geography, environmental history and natural resource management.  
**DEBRA SALAZAR**, Political science. Forest 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.  
**LINDA SMEINS**, Art. History of architecture, visual culture.  
**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)

## BACHELOR OF ARTS

### Major — Canadian-American Studies

Track 1 (50 credits)

Canadian-American studies with French language

- Core Courses: C/AM 200, 401, 402; ENG 415 (under advisement); FREN 201, 202, 203 (or equivalent); EGEO 328 or 421; HIST 277; PLSC 406
- Select additional credits from the following to complete the major: ANTH 361, 411, 462, 476; A/HI 490; C/AM 400, 410; ECON 364, 365; ESTU 465, 469; FREN 332, 401, 450q; HIST 376, 378, 479, 499 (under advisement); JOUR 460; PLSC 301, 468; SOC 390

Track 2 (50 credits)

Canadian-American studies with area of concentration

- Core Courses: C/AM 200, 401, 402; ENG 415 (under advisement); EGEO 328 or 421; HIST 277; PLSC 406; plus 2 upper-division courses in an area of specialization (in consultation with Canadian-American Studies advisor)
- Select additional credits from the following to complete the major: ANTH 361, 411, 462, 476; A/HI 490; C/AM 400, 410; ECON 364, 365; ESTU 465, 469; FREN 101, 102, 103 (or equivalent), 201, 202, 203 (or equivalent); 332, 401, 450q; HIST 376, 378, 479, 499 (under advisement); JOUR 460; PLSC 301, 468; SOC 390

### Minor — Canadian American Studies

30 credits

- C/AM 200; EGEO 328 or 421; HIST 277; PLSC 406
- 12 additional credits under advisement from ANTH 361, 411, 462, 476; A/HI 490; C/AM 400, 401, 402, 410; ECON 364, 365; ENG 415; ESTU 465, 469; FREN 101, 102, 103 (or equivalent), 201, 202, 203 (or equivalent); 332, 401, 450q; HIST 376, 378, 479, 499 (under advisement); JOUR 460; PLSC 301, 468; SOC 390

## COURSES IN CANADIAN-AMERICAN STUDIES (C/AM)

Courses numbered X37; X97; 300, 400; 417, 445 are described on page 34 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.

Courses listed under Canadian-American Studies are:

### 200 INTRODUCTION TO CANADIAN STUDIES (5)

A basic interdisciplinary course of studies covering the major physical, historical and sociopolitical aspects of Canada.

### 401 RESEARCH PROBLEM IDENTIFICATION AND DEVELOPMENT (3)

Prereq: C/AM 200, 15 credits of core courses. Directed research on a problem or in an area of interest.

### 402 RESEARCH ANALYSIS AND WRITING (3)

Prereq: C/AM 401. Analysis and writing of the research findings in C/AM 401. A writing proficiency course.

### 410 STUDY CANADA SUMMER INSTITUTE (3)

Intensive survey course featuring expert instruction from WWU faculty and distinguished speakers from Canada and the U.S. Topics include Canadian history, geography, government, culture, free trade and environmental issues, First Nations, and Canada-U.S. 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.

## COURSES IN CANADIAN-AMERICAN STUDIES OFFERED IN OTHER DEPARTMENTS

Most courses that are part of the Canadian-American Studies major and minor are offered in other departments. Required and elective courses for the Canadian-American Studies major and minor are listed below.

### Anthropology

- ANTH 361 Native Peoples of North America
- ANTH 411 Archaeology of Northwestern North America
- ANTH 462 Native Peoples of the Northwest
- ANTH 475 International Migrations
- ANTH 476 Borderlands

### Art History

- A/HI 310 Indigenous Cultures
- A/HI 476 Borders and Terrains

### Economics

- ECON 365 The Canadian Economy
- ECON 383 Environmental Economics
- ECON 462 International Trade

### English

- ENG 235 Introduction to Native American Literature
- ENG 415 Special Topics: 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 101-103 Elementary French
- FREN 201-203 Intermediate French
- FREN 301 Grammar Review
- FREN 302 Written Exposition
- FREN 332 Civilisation et Culture du Québec
- FREN 385 Culture and Conversation
- FREN 401 Elements de Stylistique
- FREN 402 French for Business
- FREN 410 Ecriture Feminine Francophone
- FREN 420 History de la Langue Française

### Geography

- EGEO 328 Canadian Geography
- EGEO 421 Borderlands
- EGEO 462 Transportation Systems and Planning
- EGEO 497 Natural Resource Management: Canada

### History

- HIST 277 Canada: A Historical Survey
- HIST 376 French Colonial Canada 1534-1763
- HIST 378 Canada: Nation of Immigrants
- HIST 391 History of the Pacific Northwest
- HIST 440 Britain: 1688 to the Present
- HIST 499 Canada
- HIST 499 Pacific Northwest History

### Management

- MGMT 473 International Trade Operations

### Political Science

- PLSC 291 Introduction to Comparative Politics
- PLSC 301 British Parliamentary System
- PLSC 406 Canadian Government and Politics
- PLSC 420 Environmental Politics
- PLSC 436 Managing Environmental Commons

### Sociology

- Sociology 440 Globalization

## STUDY ABROAD

The Center for Canadian-American Studies encourages students to spend up to one year 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](mailto:Chuck.Hart@wwu.edu).

# COMMUNICATION

Communities thrive on the effective exchange of ideas and information. In order to promote lively, ethical, educational exchanges, the Department of Communication has these objectives: 1) to teach effective communication that nurtures inclusive civil discourse and encourage cooperative solutions in our diverse society, 2) to build a firm liberal arts foundation, and 3) to enhance communication skills the students will use in business, education, government and professional careers.

The department offers a Bachelor of Arts in communication. Departmental courses in interpersonal/organizational, public/mass communication, rhetoric, persuasion, debate and intercultural communication represent the major interests in the communication discipline.

## COMMUNICATION

The entire communication field is growing rapidly with increased diversification of employment opportunities.

Students in communication enhance their research and writing skills to prepare for entry-level positions in organizational training and development, public relations, public information, marketing, and electronic media. Some program graduates apply their academic skills to advanced degrees in law, business, and the human services professions.

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 and supervised internships. Qualified students are selected to develop teaching skills in the Fundamentals of Speech program.

## COMMUNICATION EDUCATION

Education students may choose a communication major designed for the elementary level.

## COMMUNICATION FACULTY

**ANNA EBLEN** (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** (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.

## 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 235 **and** COMM 220 (with a B- or better in both courses)
- One of the following: COMM 235; HIST 398; LBR 125, 201; PSY 301 (with a C or better grade)
- Two or more 200-level communication courses that are open to all undergraduates
- Substantial progress in General University Requirements (GURs)
- COMM 398 should be taken by the student as soon as possible once a student is accepted into the department.

## DECLARATION OF 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 2.7 or above. Students must submit a portfolio to the department (see below) in order to be admitted.

Admission to the Department of Communication will, in part, be determined by the number of applicants and their qualifications. Usually, the department cannot admit all students who apply. Cumulative grade point average (GPA) will be one of the major criteria for admission. The average GPA reported in portfolios approved fall quarter, 2006, was 3.18. Other aspects considered by faculty when selecting communication majors are work experience with diverse populations, service learning experience, seniority at WWU.

- Complete COMM 101 or 235 and 220 with a B- or better in both courses.

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.

## PORTFOLIO REVIEW

The department has established the following policy for declaring a communication major. On or before Monday of the fourth week of fall, winter and spring quarters, students will submit a portfolio of their work. The faculty will review 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 examples of the student's collegiate writing assignments including best research paper or class project
- Three letters of recommendation from employers, associates, teachers and supervisors
- A proposed program of study which includes a statement indicating the chosen minor or a self-designed minor. A self-designed minor is comprised of at least 25 credits and includes a written statement prepared by the student indicating the rationale for the courses selected

## WRITING PROFICIENCY COURSE GUIDELINES

The communication department has a multitiered system for writing proficiency courses. Courses are assigned writing



proficiency (WP) points based on the percentage of the course grade that is determined by writing assignments that go through revision, as follows:

Greater than or equal to 30 percent of grade = 1 WP point

Greater than or equal to 50 percent of grade = 2 WP points

Greater than or equal to 75 percent of grade = 3 WP points

COMM 400 (Independent Study) can also be designated a writing proficiency course. In order to earn WP points, COMM 400 must be taken for at least 2 credits, meet the conditions above, and be approved as an "Alternative Writing Proficiency Course" by a designee of the Academic Coordinating Commission. (See communication department office for "Alternative" form and guidelines.)

A total of 3 WP points in communication courses is required to satisfy the University requirement of one approved writing proficiency course at WWU (WP courses outside the Department of Communication will also satisfy the University requirement). These points can be accumulated in any combination of courses, as long as 3 WP points are earned.

## BACHELOR OF ARTS

### Major — Communication

50 credits (plus minor)

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.

- Satisfy departmental requirements for declaration of major (stated above)
- Complete the following: COMM 398, 498
- Complete a course that emphasizes library research strategies and skills. The following are approved courses: COMM 235; HIST 398; LBR 125, 201; PSY 301
- 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, 300, 339, 400, 436, 450, 451, 459

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 minor, 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.

### Minor — Communication

25 credits (minimum)

- COMM 101 or 235
- COMM 220
- Plus additional courses totaling a minimum of 16 credits and including one upper-division course from the following: COMM 224, 230, 235, 244 (or JOUR 190), COMM 325, 327, 331 or other upper-division COMM courses when space is available
- The minor may include no more than 3 credits from the

following: COMM 236, 300, 339, 400, 436, 450, 451, 459. Students may petition the minor advisor for an additional 3 credits from this series of courses; approval of petition is required well before the graduation evaluation deadline

### Minor — Internet Resource Creation and Management

The Department of Communication participates in offering an interdisciplinary minor listed under the Department of Computer Science. Please see Minors in Computer Science for a complete description.

## BACHELOR OF ARTS IN EDUCATION

### Declaration of Major

Students must be accepted into the Woodring College elementary education program before applying for the Communication-Elementary major. After admission to the education program, please follow the *Declaration of Major* guidelines above. This procedure includes course work and submission of an application portfolio.

### Major — Communication — Elementary

50 credits

This major 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.

- Maintain a GPA of 2.75 for all college work
- Satisfy departmental requirements for declaration of major
- Complete the following:
  - COMM 224, 327 and a forensics/debate component (COMM 235, unless used to satisfy departmental major requirement, or COMM 236, or COMM 456a, b, or c)
  - COMM 454
  - 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, 300, 339, 400, 436, 450, 451, 459

## 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 COMM 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.

## COURSES IN COMMUNICATION (COMM)

*Courses numbered X37; X97; 300, 400; 417, 445 are described on Page 34 of this catalog.*

### 101 FUNDAMENTALS OF SPEECH (4)

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 speak-

## COMMUNICATION

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ing experience are advised to take COMM 235 to satisfy GUR requirements or communication major application requirements.

### 144 GLOBAL MEDIA ENVIRONMENT (4)

Introduction to mass media issues and impacts within a global context. Topics include citizenship and democracy, consumerism and the environment, diversity and representation, peace and conflict.

### 220 COMMUNICATION THEORY (5)

Survey of human communication focuses on communication theories, concepts and principles ranging from intrapersonal to interpersonal, group, organizational, rhetorical, intercultural, international and mass communication.

### 224 SMALL GROUP PROCESSES (4)

Explores the dynamics of human interaction in small group settings. Group tasks include the development of problem-solving skills, utilizing topics of current interest.

### 225 COMMUNICATION, DIVERSITY AND CONTROVERSY (4)

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.

### 230 INTRODUCTION TO RHETORICAL THEORY AND CRITICISM (5)

Survey of major rhetorical scholarship from ancient Greek through the present. Introduces students to both rhetorical theories and modes of criticism that guide the field. Emphasis on the important role rhetoric plays in contemporary public discourse and democratic citizenship.

### 235 EXPOSITION AND ARGUMENTATION (4)

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.

### 236 INTERCOLLEGIATE FORENSICS (2)

Debate, extemporaneous and impromptu speaking, and interpretive reading and other phases of forensics. Repeatable to a maximum of 6 credits. S/U grading.

### 238 HIGH SCHOOL FORENSIC INSTITUTE: EXPOSITION AND ARGUMENTATION (1-4)

Intensive study in perfecting forensic skills through seminars on argumentation theory, debate strategy, individual events classes and practice rounds. Limited to participants in the High School Forensic Institute.

### 244 ADVOCACY THROUGH MEDIA (4)

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.

### 318 PROFESSIONAL COMMUNICATION (5)

Prereq: junior status. 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 work in collaboration with organizations on or off campus.

### 322 CIVIL DISCOURSE AS LEARNING INTERACTION (4)

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. 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.

### 325 INTRODUCTION TO INTERCULTURAL COMMUNICATION (5)

Prereq: four credits from Comparative Gender and Multicultural Studies block of the GUR or COMM 220. 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.

### 327 INTERPERSONAL COMMUNICATION (5)

Prereq: junior status. 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.

### 331 ADVANCED PUBLIC SPEAKING (3)

Prereq: COMM 101 or 235. Theory and practice in the art of public discourse.

### 339 PRACTICUM IN APPLIED COMMUNICATION (1-3)

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. S/U grading. Repeatable to a maximum of 12 credits.

### 350 EMERGING COMMUNICATION TECHNOLOGIES (5)

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.

### 398 RESEARCH METHODS IN COMMUNICATION (5)

Prereq: departmental majors only. Course should be taken as soon as possible after admission to the major as it is a prerequisite for most 400-level communication courses. Survey of qualitative and quantitative research methods utilized in the field of communication.

### 416 TOPICS IN COMMUNICATION (3-5)

Prereq: senior status; COMM 398 or permission of instructor. 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.

### 420 ADVANCED COMMUNICATION THEORY (5)

Prereq: COMM 398 or permission of instructor. In-depth examination of advanced theories in human communication. Emphasis on theory development.

### 425 ISSUES IN INTERCULTURAL COMMUNICATION (4)

Prereq: COMM 325 and 398 or permission of instructor. 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.

### 427 ISSUES OF INTERPERSONAL COMMUNICATION (4)

Prereq: COMM 327 and 398 or permission of instructor; junior status; departmental majors only. In-depth examination of theory and practice in interpersonal communication. Normally offered alternate years.

### 428 ORGANIZATIONAL COMMUNICATION (5)

Prereq: COMM 398 or permission of instructor. 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.

### 430 VISUAL RHETORIC (5)

Prereq: COMM 230, 398, 444 or JOUR 305, or permission of instructor. This course aims to interrogate the relationship between rhetoric and the image. By devoting attention to theories that explore the symbolic and performative dimensions of visual culture, 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.

### 435 PRINCIPLES OF PERSUASION (4)

Prereq: COMM 235 and 398 or permission of instructor. Study of principles that influence attitudes and opinions in persuasive situations. Normally offered alternate years.

### 436 ADVANCED FORENSICS AND DEBATE (2)

Prereq: 6 credits in COMM 235 and/or 236. 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.

#### 442 VIDEO WORKSHOP (2)

Prereq: written permission of instructor. Recommended prior to registration: JOUR 190, COMM 350 or have previous video experience. 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.

#### 444 MEDIA LITERACY (5)

Prereq: JOUR 190 or permission of instructor. 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.

#### 450 COMMUNICATION PEDAGOGY I (3)

Prereq: recommendation; written permission of instructor. 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.

#### 451 COMMUNICATION PEDAGOGY II (3)

Prereq: COMM 450; recommendation; written permission of instructor. Help supervise teams of undergraduate tutors. Develop leadership, organizational and pedagogical skills. S/U grading.

#### 454 INSTRUCTIONAL COMMUNICATION (5)

Prereq: COMM 398 or permission of the instructor. 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.

#### 456a,b,c HIGH SCHOOL DEBATE COACH WORKSHOPS (1-2 ea)

Prereq: one year of teaching experience, graduate student status or admission to education program. Intensive lecture and seminar workshops related to teaching argumentation/forensics and using various computer applications for online research. Purpose is improvement of instruction. Summer only.

#### 459a,b,c,d FIELD INTERNSHIP IN COMMUNICATION (3, 6, 9, 12)

Prereq: senior status; written permission of advisor; departmental majors only. 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 12 credits. A maximum of 6 credits may be applied to the communication major. S/U grading.

#### 492 SENIOR THESIS (5)

Prereq: departmental majors only; admission to departmental honors; 24 completed credits in communication including COMM 398; permission of instructor. Supervised independent research on an advanced topic, leading to a substantial research paper.

#### 498 COMMUNICATION: ETHICS (4)

Prereq: COMM 398 or permission of instructor. Examines in detail several ethical perspectives of communication and many criteria which may be used to evaluate the ethicality of communication contexts ranging from interpersonal to international.



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# COMMUNICATION SCIENCES AND DISORDERS

## 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 nongraduate 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, 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. This program is designed to prepare such students for graduate-level study in speech-language pathology or audiology. The 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.

## 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.

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 audiologic 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.

## COMMUNICATION SCIENCES AND DISORDERS 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) Assistant 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) Assistant Professor. BA, Trinity College; MA, PhD, University of Connecticut. Undergraduate advisor; director, aural rehabilitation clinics (audiology).

**MICHAEL T. SEILO** (1970) Chair and Professor. BS, Northern Michigan University; MA, University of Arizona; PhD, Ohio University. (audiology).

**LINA ZEINE** (1983) Associate Professor. BA, American University of Beirut-Lebanon; MA, University of Colorado; PhD, University of Kansas. Coordinator, graduate studies (speech-language pathology).

## COMMUNICATION SCIENCES AND DISORDERS

### Clinical Educators

**ANNA CHAMBERLIN** (1998) BA, MA, Western Washington University (audiology).

**JULIA GARBER** (2001) BA, MA, University of Central Florida (audiology).

**JILL K. HUNT-THOMPSON** (1977) BA, MA, Western Washington University (speech-language pathology).

**GEORGETTA 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).

**JANICE A. SMITH** (1989) BS, University of Washington; MS, Idaho State University.

### DECLARATION OF MAJOR

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 **nongraduate 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 must also obtain the advisor's signature in the *Degree Planning Guide*, thereby documenting that the student has been approved for enrollment in graduate-track courses. Nongraduate-track majors do not take CSD 458, 459, 462, 464, 468, 486, and 488. The nongraduate-track student will need to substitute 18 credits of advisor-approved upper-division courses for these "graduate-track only" CSD 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.

### WRITING PROFICIENCY COURSE GUIDELINES

Majors in Communication Sciences and Disorders meet writing proficiency requirements by completing CSD 457 and any two of the writing labs associated with CSD 450, 451, 468, 486 and 487. Students must meet with an undergraduate advisor no later than spring quarter of the junior year to file a *plan of study*. The plan of study will include signing up for specific writing proficiency courses.

### BACHELOR OF ARTS

*Major — Communication Sciences and Disorders*  
69 credits

- CSD 251, 352, 353, 354, 356, 361, 371, 372, 373

- CSD 450, 451, 454, 457, 458, 459, 462, 463, 464, 468, 486, 488, LIBR 402
- Electives under departmental advisement
- Required minor

*Minor — Communication Sciences and Disorders*  
25 credits minimum

- CSD 251, 352, 354, 356, 371
- Electives from CSD 253, 353, 361, 372, 373, 451, 463

*Minor — Audiology*

25 credits

- CSD 381, 464, 468, 482, 483, 485, 487, 491
- Electives from CSD 400, 499a, 499b

Meeting with CSD advisor required before registering for audiology minor.

### GRADUATE STUDY

For a concentration leading to the Master of Arts degree, see the *Graduate School* section of this catalog.

### COURSES IN COMMUNICATION SCIENCES AND DISORDERS (CSD)

*Courses numbered X37; X97; 300, 400; 417, 445 are described on Page 34 of this catalog.*

#### 251 INTRODUCTION TO COMMUNICATION DISORDERS (3)

An introduction to the disciplines of speech-language pathology and audiology; survey of speech, language and hearing processes and disorders.

#### 253 SPEECH AND HEARING SCIENCES FOR THE LIBERAL ARTS (4)

Basic concepts of speech production, speech acoustics, hearing and speech perception.

#### 352 ANATOMY AND PHYSIOLOGY OF SPEECH MECHANISMS (5)

Structure and function of organs concerned with audition, respiration, phonation, resonance, articulation.

#### 353 SPEECH SCIENCE (5)

Prereq: junior status, CSD 352, 356, 371. Acoustic and articulatory characteristics of the speech signal and their relation to speech production and perception. Lab required.

#### 354 SPEECH AND LANGUAGE DEVELOPMENT IN CHILDREN (3)

Typical speech and language acquisition; origins and growth of symbolic processes, developmental norms; factors influencing learning of language and speech.

#### 356 PHONETICS (3)

Training in recognition and production of sounds of spoken English through use of the International Phonetic Alphabet. Lab required.

#### 361 LANGUAGE DISORDERS I (3)

Prereq: CSD 354. Etiologies of language learning disabilities in children from birth to five years; diagnosis and treatment procedures.

#### 371 HEARING SCIENCE (3)

Prereq: CSD 352. Introduction to the nature of sound and its measurement. The structure and function of the auditory mechanism.

#### 372 HEARING DISORDERS (3)

Prereq: CSD 352, 371. The nature, cause and treatment of hearing impairment.

#### 373 INTRODUCTION TO PHONOLOGY (3)

Prereq: CSD 251, 352, 356. Phonological development, symptomatology, etiology and therapy for articulation disorders.

**381 PHYSIOLOGY AND PSYCHOLOGICAL BASES OF HEARING (3)**

Prereq: CSD 353, 371 or permission of instructor. Study of structure and function of the auditory system. Analysis of significant theories in speech acoustics, and perception. Examination of the effects of hearing impairment on speech perception.

**450 NEUROANATOMY FOR SPEECH PATHOLOGY AND AUDIOLOGY (4)**

Prereq: CSD 352 or equivalent and senior/graduate status or permission of instructor. 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.

**451 LANGUAGE DISORDERS II (3)**

Prereq: CSD 354, 361. Diagnosis and treatment procedures for school-age children with language-learning impairments.

**457 CLINICAL PROCESSES (5)**

Prereq: CSD 354, 361, 373, 451. Current principles, methods and materials used in the assessment and treatment of a variety of communication disorders. Directed observation. Writing proficiency course.

**458 BEGINNING CLINICAL PRACTICE IN SPEECH-LANGUAGE THERAPY (3)**

Prereq: CSD 457, graduate track, written permission of instructor. Clinical administrative procedures in diagnostic and therapy planning and implementation; and professional writing.

**459 LAB: BEGINNING CLINICAL PRACTICE IN SPEECH-LANGUAGE THERAPY (1)**

Prereq: CSD 458, written permission of instructor and a minimum of 25 hours of documented speech-language pathology, audiology and/or aural rehabilitation observation; may enroll in CSD 458 and 459 concurrently with written permission of instructor and if prerequisites are met. Assistant clinician experience. Lab required. S/U grading.

**462 AUDIOMETRIC TESTING (4)**

Prereq: CSD 371 or permission of instructor (graduate track only). Introduction to the theory and application of pure tone, immittance and speech audiometry to the assessment of hearing function; implications for rehabilitation.

**463 AURAL REHABILITATION (4)**

Prereq: CSD 371. Listening training, speech reading, orientation to amplification devices, and coping skills for the aurally handicapped.

**464 CLINICAL PRACTICE IN AURAL REHABILITATION (2 ea)**

Prereq: CSD 458, 459, 463, and permission of instructor and a minimum of 25 hours of documented speech-language pathology/audiology/aural rehabilitation observations. Supervised clinical practice in the rehabilitation of the hard of hearing.

**466 MEDICAL AUDIOLOGY (3)**

Prereq: CSD 371, 462. Pathologies of the hearing mechanism and their auditory manifestations. Discussion with physicians regarding diagnosis, referrals and report writing.

**468 CLINICAL PRACTICUM IN AUDIOLOGY (2)**

Prereq: CSD 371, 462, and a minimum of 25 hours of documented speech-language pathology/audiology/aural rehabilitation observations and permission of instructor. Supervised clinical practice in audiological evaluation. Repeatable to a maximum of 6 credits.

**482 CLINICAL HEARING TECHNOLOGY (3)**

Prereq: CSD 462 or permission of instructor. Study of history, development, and use of emerging technologies and special clinical instrumentation for the evaluation of hearing, auditory function and balance.

**483 AMPLIFICATION AND SENSORY SYSTEMS (3)**

Prereq: CSD 462 or permission of instructor. History, development, and use of amplification and other sensory devices for the treatment of hearing loss and auditory processing deficits.

**485 CHILDREN WITH HEARING LOSS IN THE SCHOOLS (3)**

Introduces the student to the needs of the hearing impaired child in the public school environment, the public laws affecting the placement of such children, and the types of remediation that occur in this setting.

**486 INFANTS AND CHILDREN WITH HEARING LOSS (3)**

Prereq: CSD 371, 462. Developmental milestones of auditory function, implications of childhood hearing loss, and supervised testing of pediatric patients utilizing current evaluation techniques.

**487 FUNDAMENTALS OF HEARING CONSERVATION (3)**

Prereq: CSD 371, 462. Noise as a public health hazard. The effects of noise on hearing. Noise abatement, control and protection. Federal and state noise regulations and compensation for noise-induced hearing loss (NIHL).

**488 HEARING LOSS IN ADULTHOOD (3)**

Prereq: CSD 462 or permission of instructor. Study of the nature and implications of hearing loss across the adult age spectrum. Anatomical and physiological influences of aging on the auditory system and how these changes influence overall auditory function and communication will be highlighted.

**491 SENIOR RESEARCH PROJECT (2)**

Prereq: satisfactory completion of CSD major courses or permission of advisor. Research-based writing or field project under direction of faculty advisor.

**499a,b FIELD PLACEMENT/OBSERVATION IN SPEECH-LANGUAGE PATHOLOGY OR AUDIOLOGY (1-6)**

Prereq: completion of the undergraduate major requirements and permission of instructor. Off-campus field experience in an approved setting designed to introduce students to the management of communication disorders. Subject to availability of suitable site. S/U grading.

**Graduate Courses**

*Courses numbered 500; 517; 545; 597 are described on Page 34 of this catalog. Admission to Graduate School or special permission required. See the Graduate School section of this catalog.*

**502 RESEARCH METHODS IN COMMUNICATION SCIENCES AND DISORDERS (4)**

Topics include research strategies and designs, measurement issues, evaluation criteria, treatment efficacy research, and organization and analysis of data. Introduction to group and single-subject research designs and qualitative research. Engages students in completing a research project.

**510 ORGANIC DISORDERS (3)**

Prereq: CSD 352, 450, 459 or equivalent, or permission of instructor. A review of the etiologies and nature of cleft palate and cerebral palsy; related communication disorders; diagnostic and intervention approaches.

**515 SEMINAR: PHONOLOGY (4)**

Prereq: CSD 373 and graduate status. 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.

**548 BEGINNING GRADUATE CLINICAL PRACTICE IN SPEECH-LANGUAGE PATHOLOGY (1)**

Prereq: CSD graduate status, permission of the instructor and a minimum of 25 hours of documented speech-language pathology/audiology observations. Initial graduate experience in supervised clinical practicum. Must be completed with satisfaction (final grade of S) before enrollment in CSD 558. Repeatable to a maximum of 2 credits. S/U grading.

**550 VOICE DISORDERS AND THERAPY (4)**

Prereq: CSD 351, 352, 450 or their equivalent or permission of instructor. 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.

**551 SURVEY OF SPEECH PATHOLOGY AND AUDIOLOGY (1)**

Examination of relevant issues and recent concepts, techniques and methods in speech-language pathology and audiology. S/U grading.

**552 DIAGNOSTIC PROCESSES IN SPEECH-LANGUAGE PATHOLOGY (1)**

Prereq: CSD 558 and written permission of instructor. Discussion of the diagnostic process and current diagnostic literature.

## COMMUNICATION SCIENCES AND DISORDERS

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### **552a PRACTICUM IN DIAGNOSTIC METHODS IN SPEECH-LANGUAGE PATHOLOGY (2)**

Prereq: CSD 558 and permission of instructor; should be taken concurrently with CSD 552. On-campus practicum using specialized methods, tests and instruments used in the assessment and evaluation of a variety of communication disorders.

### **552b PRACTICUM IN DIAGNOSTIC METHODS IN SPEECH-LANGUAGE PATHOLOGY (2)**

Prereq: CSD 558 and permission of instructor. Off-campus practicum using specialized methods, tests and instruments used in the assessment and evaluation of a variety of communication disorders.

### **553 SEMINAR: PRESCHOOL LANGUAGE DEVELOPMENT AND DISORDERS (4)**

Prereq: CSD 354, 361, 515. 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.

### **554 STUTTERING (4)**

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.

### **555 SEMINAR: SCHOOL-AGE LANGUAGE-LEARNING AND DISORDERS (3)**

Prereq: CSD 451, 553. 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.

### **556 APHASIA (3)**

Prereq: CSD 450 or equivalent. Descriptions, classifications and theoretical issues related to multimodality language-impaired adults following neurogenic brain dysfunction. Some discussion of diagnostic methods.

### **557 ADVANCED SPEECH PATHOLOGY (3)**

Diagnosis and treatment of laryngectomees and traumatic brain injury. Discussion of issues relating to communication and aging.

### **558 GRADUATE CLINICAL PRACTICE IN SPEECH-LANGUAGE PATHOLOGY (1-3)**

Prereq: satisfactory completion of CSD 548 and permission of instructor. Supervised clinical practicum. Must be completed with a grade of B or better. Repeatable to a maximum of 9 credits.

### **558a GRADUATE CLINICAL PRACTICE IN SPEECH-LANGUAGE PATHOLOGY (1-2)**

Prereq: satisfactory completion of CSD 548 and permission of instructor. Supervised clinical practicum. S/U grading. Offered summer only. Repeatable to 4 credits.

### **559 SPEECH-LANGUAGE PATHOLOGY PRACTICUM (2)**

Prereq: permission of instructor. Must be completed with a grade of B or better. This is the required full-time internship.

### **560 SPEECH-LANGUAGE PATHOLOGY PRACTICUM (2)**

Prereq: permission of instructor. Must be completed with a grade of B or better.

### **561 ADVANCED AUDIOLOGY I (3)**

Prereq: CSD 371, 462 and permission of instructor. Study of basic auditory correlates and advanced diagnostic audiometric procedures.

### **562 ADVANCED AUDIOLOGY II (3)**

Prereq: CSD 561. Theory and application of advanced diagnostic audiometric procedures.

### **563 SEMINAR: AURAL REHABILITATION (3)**

Prereq: CSD 463 or permission of instructor. Issues related to the hearing-impaired population.

### **564 ADVANCED CLINICAL PRACTICE IN AURAL REHABILITATION (2)**

Prereq: CSD 458, 459, 463, permission of instructor, and a minimum of 25 hours of documented speech-language pathology/audiology and rehabilitation observations. 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.

### **564u ADVANCED CLINICAL PRACTICE IN AURAL REHABILITATION (2)**

Prereq: satisfactory completion of CSD 458, 459, 463, and permission of instructor. Supervised clinical practicum. S/U grading. Offered summer only. Repeatable to 4 credits.

### **565 PSYCHOACOUSTICS (3)**

Prereq: CSD 561 or permission of instructor. Application of standard psychophysical techniques and theory of signal detection to audiologic research.

### **566 AUDITORY NEUROPHYSIOLOGY (3)**

Prereq: CSD 561 and permission of instructor. The ear as a transducer and analyzer; electrophysiological and mechanical properties of the ear.

### **567 SEMINAR: HEARING CONSERVATION (3)**

Prereq: CSD 562. Noise as a public health hazard; the effects of noise on hearing; noise abatement, control and protection; federal and state noise regulations and compensation.

### **568 ADVANCED CLINICAL PRACTICUM IN AUDIOLOGY (2 ea)**

Prereq: CSD 371, 462 or permission of instructor; 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.

### **568u ADVANCED CLINICAL PRACTICUM IN AUDIOLOGY (2)**

Prereq: satisfactory completion of CSD 371, 462, 568 and permission of instructor. Supervised clinical practicum. S/U grading. Offered summer only. Repeatable to 4 credits.

### **570 MEDICAL AUDIOLOGY (3)**

Prereq: CSD 371, 462, 561. Pathologies of the hearing mechanism and their auditory manifestations. Discussion with physicians regarding diagnosis, referrals and report writing.

### **571 HEARING AIDS I (3)**

Prereq: CSD 462 or permission of instructor. History, development and description of hearing aids and other amplification devices. Research into the electro-acoustic characteristics of hearing aids.

### **572 HEARING AIDS II (3)**

Prereq: CSD 571. Evaluation procedures and fitting techniques for dispensing hearing aids and other amplification devices. Auditory training and counseling techniques covered as well as special instrumentation.

### **573 SEMINAR: SPEECH ACOUSTICS (3)**

Prereq: CSD 353 or permission of instructor. 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.

### **574 SEMINAR: SPEECH PERCEPTION (3)**

Prereq: CSD 353, 573 or permission of instructor. Critical analysis of current issues in speech perception. Examination of the effects of communication disabilities on speech perception.

### **575 COUNSELING IN COMMUNICATION DISORDERS (3)**

Prereq: graduate status. Contemporary theories and techniques of counseling individuals with communication disorders and their families.

### **577 PEDIATRIC AUDIOLOGY (3)**

Prereq: CSD 371, 462, 568 and permission of instructor. Developmental milestones of auditory function, implications of childhood hearing loss and supervised testing of pediatric patients utilizing basic and advanced testing techniques.

### **578 SEMINAR: ELECTROPHYSIOLOGICAL TESTING (3)**

Prereq: CSD 561, 568 or permission of instructor. Current topics and issues in specialized areas of averaged electro-encephalic audiometry and otoacoustic emissions; research trends and problems. Lab required.

### **579 AGING AND THE EAR (3)**

Prereq: CSD 561, 562. Anatomical and physiological influences of aging on



the auditory mechanism and how these changes influence overall auditory function and communication.

**580 COMMUNICATION DISORDERS IN THE PUBLIC SCHOOLS (3)**  
Prereq: second-year graduate status or permission of the instructor. 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.

**581 INFANCY: DEVELOPMENT, DISORDERS AND INTERVENTION (2)**  
Prereq: graduate status and/or permission of instructor. 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.

**582 MEDICAL SPEECH PATHOLOGY (2)**  
Prereq: second-year graduate status or permission of the instructor. Current topics and issues related to the practice of speech pathology in a medical/clinical setting.

**585 NEUROMOTOR SPEECH DISORDERS (4)**  
Prereq: CSD 450, 556 or equivalent. Current literature review and discussion of the nature of neurologically based speech disorders (dysarthrias and apraxia). Examination and practice of clinical intervention methods.

**586 DIAGNOSIS AND TREATMENT OF ADULT LANGUAGE NEUROGENIC DISORDERS (3)**  
Prereq: graduate status, CSD 450 and 556 or equivalent. Differential diagnosis assessment tools and theories of diagnostic methods. Treatment approaches for adult neurogenic disorders.

**587 SEMINAR: DYSPHAGIA (1)**  
Prereq: CSD 352, 450, 556, 585. Pathology and evaluation of swallowing disorders, diagnostic evaluations, and management/rehabilitative techniques.

**588 SEMINAR IN AUGMENTATIVE AND ALTERNATIVE COMMUNICATION (2)**  
Prereq: CSD 552a, 553, 555, 558 or permission of instructor. Focus on evaluation and intervention for children, adolescence and adults with moderate to se-

vere congenital or acquired disorders in speech and language who require augmentative and alternative modes for oral or written communication.

**589 LIBRARY RESEARCH FOR CSD (1)**  
Instruction in finding, examining scholarly database information. Ethical, social aspects of information, organization and techniques of research process. Use of Internet sources in obtaining and evaluating medical information. S/U grading.

**598a,b INTERNSHIP IN SPEECH-LANGUAGE PATHOLOGY OR AUDIOLOGY (1-4 ea)**  
Prereq: second-year graduate status; completion of plan of study; permission of department; B or better in last clinic and minimum of 225 clinical clock hours which may include 25 observation hours. Additionally, students should be enrolled in a clinic the quarter prior to internship and have all administrative and clinical records current. Supervised, part-time experience providing opportunities to develop and demonstrate clinical competence in an approved setting. An elective part-time internship experience (A- in a public school; B- in a clinic or hospital). Placement is dependent on a suitable site. S/U grading.

**599a,b INTERNSHIP IN SPEECH-LANGUAGE PATHOLOGY OR AUDIOLOGY (8)**  
Prereq: completion of the graduate major course requirements, including graduate plan of study; permission of department; demonstrated proficiency in clinical skills; B or better in last clinic in area of concentration; and minimum of 225 clinical clock hours which may include 25 observation hours. In addition, students should be enrolled in a clinic the quarter prior to internship and have all administrative and clinical records current. See respective advisor or clinic director. Supervised off-campus experience providing opportunities to develop and demonstrate clinical competence in an approved setting. Placement is dependent upon availability of suitable site. (Only 3 credits of the 8 for either a or b are applicable toward the MA degree see *Requirements in Specialization.*) S/U grading.

**690 THESIS (1-9)**  
Repeatable to a maximum of 9 credits.

**691 NON-THESIS OPTION (3)**  
Writing based on research or clinical projects. This report to be used to help satisfy the non-thesis requirement.

# EAST ASIAN STUDIES

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.wvu.edu.

## PARTICIPATING 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.

**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**, Director. 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.

## BACHELOR OF ARTS

60 credits

- Two years of Chinese or Japanese language (Mongolian or Korean by special arrangement)
- EAST 201, 202 and 302
- Either EAST 367 or 368
- 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

## Minor East Asian Studies

30 credits

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.

- EAST 201 and 202
- Either EAST 367 or 368
- 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

## COURSES IN EAST ASIAN STUDIES (EAST)

*Courses numbered X37; X97; 300,400; 417,445 are described on page 34 of this catalog.*

### 201 INTRODUCTION TO EAST ASIAN CIVILIZATIONS (5)

The origins and evolution of the political, economic, cultural and social aspects of East Asian civilization through the early-modern period. Also taught as HIST 280.

### 202 EAST ASIAN HISTORY IN THE EARLY-MODERN AND MODERN ERAS (5)

Examines political, cultural and social aspects of East Asian civilizations with attention to the early-modern and modern periods. Also taught as HIST 281.

### 210 NOMADS OF EURASIA (5)

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. Also taught as EUS 210.

### 230 MODERN CHINESE LANGUAGE AND SOCIETY (3)

Survey of the characteristics of the Chinese language. Study of the relationships among Chinese culture, contemporary society and language variation.

### 302 METHODS AND MATERIALS IN EAST ASIAN STUDIES (3)

Prereq: EAST 201, 202 and one year of Chinese or Japanese. 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.

### 313 EARLY INNER ASIA (4)

Prereq: EAST 201 or 202 or 210 or HIST 280 or 281 or permission of instructor. 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.

### 314 THE MONGOLS (4)

Prereq: EAST 201 or 202 or 210 or HIST 280 or 281 or permission of instructor.

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.

### 315 HISTORY AND CULTURE OF TIBET (3)

Prereq: EAST 201 or 202 or 210 or ANTH 362 or permission of instructor. An examination of the sociopolitical and cultural history of both pre-modern and modern Tibet.

### 367 CHINESE LITERATURE IN TRANSLATION (5)

Prereq: EAST 201 or 202 or CHIN 103 or LBRL 272 or 277 or permission of instructor. Selected readings in Chinese literary masterpieces from earliest to modern times.

### 368 JAPANESE LITERATURE IN TRANSLATION (5)

Prereq: EAST 201 or 202 or LBRL 272 or 275 or permission of instructor. Selected readings in Japanese literary masterpieces from early modern times to the present.

### 400 DIRECTED INDEPENDENT STUDY (1-5)

### 417t TRADITIONAL CHINESE MEDICINE (4)

Survey of traditional Chinese medicine from ancient times to the present, with reference to the social, political, philosophical and religious context within which traditional Chinese medicine has been practiced. Online course only.

### 465 PEOPLES OF INNER ASIA (3)

Prereq: EAST 210 or ANTH 201 or equivalent or permission of instructor. Ethnographic in-depth study of the present and past peoples and cultures of Inner Asia. Emphasis on special topics including ecology, economics, language, religion and society.

## 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 A.D.
- HIST 371: Chinese History, 600 to 1800
- HIST 372: Chinese History, 1800 to Present
- HIST 374: History of Pre-modern Japan
- HIST 375: History of Modern Japan
- 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

LBRL 370: Major Asian and African Traditions: The Traditional Order

LBRL 371: Major Asian and African Traditions: Their Modern Fate

A/HI 270b: Visual Culture in East Asia

A/HI 370: Cultural Contacts: Middle East and Asia

#### 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 330a: Japanese Culture through Film, Modern

JAPN 330b: Japanese Culture through Film, Classical

JAPN 330c: Japanese Culture through Film, Literature

JAPN 401 Advanced Japanese

ENG 236: Introduction to Asian-American Literatures

LANG 217e: Mongolian Language I (available through Extended Education and Summer Programs only)

#### Anthropology, Politics and Geography

AMST 205: The Asian-American Experience

ANTH 362: Peoples of Asia

ANTH 364: Peoples of the Pacific

ANTH 460: Culture and Society of Japan

ANTH 464: Peoples of East Asia

EGEO 324: East Asia

EGEO 423: Pacific Rim

PLSC 307: East Asia

PLSC 430: Modern Chinese Politics

PLSC 431: Modern Japanese Politics

MGMT 370 Introduction to International Business

MGMT 474 Topics in International Business

## 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.

# ENGLISH

The English major engages students in reflective reading, creative inquiry, critical analysis, and effective expression. The study of literature, linguistics, and writing prepares graduates to pursue a variety of careers, including law, business, government, publishing, and education. These studies also prepare students for graduate study.

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, literary theory, and composition and rhetoric. English: Creative Writing Emphasis focuses on writing in fiction, drama, poetry, and in nonfiction prose, and is complemented by courses in language and literature.

Two programs lead to a Bachelor of Arts in Education: English Elementary and English Language Arts-Secondary. Students are urged to augment their required courses in these majors with additional course work in areas such as theatre, linguistics, communication, journalism, history and computer science.

English faculty have earned numerous awards for excellence in teaching, research, and writing; they are nationally recognized in creative and critical fields. Students have amassed an enviable record of placement in graduate programs and professional positions.

The Department of English provides a dynamic intellectual environment and learning community. Faculty introduce new genres, fields 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

**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) Assistant Professor. BS, BA, Salve Regina University; MA, Carnegie Mellon University; PhD, Purdue University.

**OLIVER DE LA PAZ** (2005) Assistant 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.

**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) Associate 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) Associate 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), Assistant Professor. AB, Ohio State University; MA, 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 OF MAJOR

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. Due to overcrowding and limited funding, acceptance into the major may be delayed and immediate access to specific courses during a specific quarter cannot be guaranteed.

## 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 either ENG 202 or ENG 203

## BACHELOR OF ARTS

*Major — English — Literature Emphasis*  
60 credits

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.

- Four courses from ENG 307, 308, 309, 310, 311
- One course from ENG 301, 302, 350, 401
- ENG 313, 370, 418
- Electives: 20 credits. 15 credits must be at the 400 level, 5 credits at either the 300 or 400 level

### Major — English — Creative Writing Emphasis

58-60 credits

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.

- 25 credits in literature (which may include literary/cultural theory and film studies) at the 300- or 400-level, including a writing proficiency course
- Two of the following: ENG 351, 353, 354, THTR 384, FAIR 354
- Four of the following: ENG \*451, \*453, \*454, 455, 456, 457, 458, 459, 460, THTR 485, 486, 487, 499, FAIR 454. Creative writing courses offered by Canadian-American Studies may also be counted with approval of the English department advisor
- ENG 370

\*One of these courses is repeatable with a different instructor to a maximum of 10 credits.

### Minors

Courses taken for credit in minor programs may not be counted toward English majors.

### English

25 credits

- 25 credits of English at the 200 level or above, with a minimum of 15 credits at the 300 or 400 level

### Creative Writing

25 credits

- Four creative writing courses including work in at least two genres
- An elective under advisement from the 300 and 400 level courses

### Film Studies

23-25 credits

- ENG \*312, 364, \*464
- 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, 361

\*May be repeated once with a different topic.

### Women's Literature

25 credits

- 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

## BACHELOR OF ARTS IN EDUCATION

### Major — English Language Arts — Secondary

60 credits

Secondary English education allows students to combine a major in English with the undergraduate teacher certification program provided by the Woodring College of Education. Courses in young adult literature, creative writing and English methods prepare students for teaching in public high schools and middle schools. In addition, majors complete core requirements in "Literature and Culture," critical and cultural theory, and the history and theory of language and writing.

This major must be accompanied by the professional preparation program in education and leads to an endorsement in English: Language Arts. See the Secondary Education section of this catalog for program admission, completion, and certification requirements.

- ENG 370, 436, 443, 444
- One of the following: ENG 347 or 441
- ENG 313
- Four of the following: ENG 307, 308, 309, 310, 311
- ENG 350
- One of the following: ENG 301, 302, 371 or 401

### Major — English — Elementary

45 credits

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 must be accompanied by the professional preparation program in education. See the Elementary Education section of this bulletin for program admission, completion, and certification requirements.

- ENG 370, 440, 441, 446
- One of the following: ENG 436, 438, 439, 442
- Three courses in literature at the 300 or 400 level
- One of the following: ENG 301, 302, 350, 351, 353, 354, 401

### Program Standards

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.

## 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

- 270 Introduction to Language and Society
- 370 Introduction to Language
- 436 The Structure of Language
- 438 Cultural History of English
- 439 Topics in Language and Linguistics

### Rhetoric and Composition

- 100 Introduction to College Writing
- 101 Writing and Critical Inquiry
- 202 Writing About Literature
- 203 Writing in Context
- 301 Writing Studies
- 371 Studies in Rhetoric and Rhetorical Analysis
- 401 Senior Seminar in Writing and Rhetoric

### Technical and Professional Communications

- 302 Introduction to Technical and Professional Writing
- 402 Advanced Technical and Professional Writing

### Visual Literacy

- 312 Film and Culture
- 364 Introduction to Film Studies
- 408 Cultural Studies
- 464 Topics in Film Studies

## GRADUATE STUDY

For a concentration leading to the Master of Arts degree, see the *Graduate School* section of this catalog.

## COURSES IN ENGLISH (ENG)

*Courses numbered X37; X97; 300, 400; 417, 445 are described on Page 34 of this catalog.*

### General University Requirement Courses (GURs):

English courses which satisfy GUR requirements are as follows:

*Communications:* 101, 202

*Humanities:* 214, 215, 216, 238, 281, 282, 283, 336

*Comparative, Gender and Multicultural Studies:* 234, 235, 236, 335, 338

The following entries indicate courses routinely offered by the department. The lettered subheads offer examples of some but not all of the sections of these courses that will be offered during the period of this catalog. For more information about the courses and sections to be offered this year and next, please consult the *Timetable of Classes* and the English department's Web site, [www.wvu.edu/depts/english](http://www.wvu.edu/depts/english) for the English department course descriptions and information on majors and minors.

### 100 INTRODUCTION TO COLLEGE WRITING (5)

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.

### 101 WRITING AND CRITICAL INQUIRY (4)

May not be taken concurrently with ENG 100. 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.

### 202 WRITING ABOUT LITERATURE (5)

Prereq: ENG 101 and completion of 36 college credits. Focuses on the process of reading, analyzing, and writing critical responses to a variety of literary texts.

### 203 WRITING IN CONTEXT (5)

Prereq: ENG 101 and completion of 36 college credits. Emphasizes writing to learn, to analyze, and to communicate ideas about texts and topics within the discipline of English. Given opportunities for feedback and revision, students develop the ability to identify themes and issues, to summarize key concepts, and to select and synthesize evidence and strategies for exploring ideas and perspectives. Texts and topics vary with section.

### 214 INTRODUCTION TO SHAKESPEARE (5)

Analysis, interpretation and discussion of a selected number of Shakespeare's plays: histories, comedies, tragedies and romances.

### 215 INTRODUCTION TO BRITISH LITERATURE (5)

Analysis, interpretation and discussion of a range of texts in British literature with attention to cultural contexts.

### 216 INTRODUCTION TO AMERICAN LITERATURE (5)

Analysis, interpretation and discussion of a range of texts in American literature with attention to cultural contexts.

### 227 INTRODUCTION TO GAY, LESBIAN, BISEXUAL AND TRANSGENDER LITERATURE (5)

Analysis, interpretation and discussion of a range of texts by gay, lesbian, bisexual and transgendered authors.

### 234 INTRODUCTION TO AFRICAN-AMERICAN LITERATURE (5)

Analysis, interpretation and discussion of written, spoken and visual texts by African-American men and women from the 18th century to the present.

### 235 INTRODUCTION TO AMERICAN INDIAN LITERATURES (5)

Analysis, interpretation and discussion of written, spoken and visual texts in English and translation by writers and storytellers of Native American descent.

### 236 INTRODUCTION TO ASIAN-AMERICAN LITERATURES (5)

Analysis, interpretation and discussion of written and visual texts in English and translation by and about Asian-Americans.

### 238 SOCIETY THROUGH ITS LITERATURE (5)

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.

### 239 INTRODUCTION TO LATINA/O LITERATURES (5)

Analysis, interpretation and discussion of a range of texts in English and in translation by Latina/o authors.

### 270 INTRODUCTION TO LANGUAGE AND SOCIETY (5)

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.

### 281, 282, 283 INTRODUCTION TO GLOBAL LITERATURES (5 ea)

Readings from ancient, medieval and modern literatures throughout the world.

### 301 WRITING STUDIES (5)

Prereq: completion of ENG 101 and either ENG 202 or 203 or a second writing course; junior status. 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.

### 302 INTRODUCTION TO TECHNICAL AND PROFESSIONAL WRITING (5)

Prereq: completion of ENG 101; junior status. Introduction to major contemporary strategies and conventions used in written and oral communica-

tion 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.

### 304 CRITICAL INTRODUCTION TO POETRY (5)

Prereq: ENG 202 or 203. 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.

### 307 LITERATURE AND CULTURE I: PRE-16TH CENTURY (5)

Prereq: ENG 202 or 203. Analysis, interpretation and discussion of texts in English or in translation composed before the 16th century. Repeatable once as an elective with different topics.

### 308 LITERATURE AND CULTURE II: 16TH AND 17TH CENTURIES (5)

Prereq: ENG 202 or 203. 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.

### 309 LITERATURE AND CULTURE III: 18TH AND 19TH CENTURIES (5)

Prereq: ENG 202 or 203. 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.

### 310 LITERATURE AND CULTURE IV: 19TH AND 20TH CENTURIES (5)

Prereq: ENG 202 or 203. 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.

### 311 LITERATURE AND CULTURE V: 20TH AND 21ST CENTURIES (5)

Prereq: ENG 202 or 203. 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.

### 312 FILM AND CULTURE (5)

Prereq: ENG 202 or 203. Examines various topics through film as a medium of cultural representation. Repeatable once with different topics.

### 313 HISTORY OF CRITICAL AND CULTURAL THEORY (5)

Prereq: ENG 202 or 203. An introduction to critical and cultural theories in a historical context.

### 327 STUDIES IN HISTORICALLY MARGINALIZED LITERATURES (5)

Prereq: ENG 202 or 203. 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.

### 335 LITERARY AND CREATIVE EXPRESSIONS ACROSS CULTURES (5)

Prereq: ENG 101. 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.

### 336 SCRIPTURAL LITERATURES (5)

Prereq: ENG 101. Analysis of literary texts in one or more religious traditions; study of scriptural literature as a source of cultural paradigms.

### 338 WOMEN AND LITERATURE (5)

Prereq: ENG 101. Study of women's texts in various cultures, including thematic and stylistic development within cultural context.

### 339 MYTHOLOGY AND LITERATURE (5)

Prereq: ENG 202 or 203. 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.

### 340 COMPARATIVE LITERATURE (5)

Prereq: ENG 202 or 203. 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.

### 347 STUDIES IN YOUNG ADULT LITERATURE (5)

Prereq: ENG 202 or 203 or permission of instructor. 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.

### 350 INTRODUCTION TO CREATIVE WRITING (5)

Prereq: ENG 101. 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.

### 351 INTRODUCTION TO FICTION WRITING (5)

Prereq: ENG 101. 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.

### 353 INTRODUCTION TO POETRY WRITING (5)

Prereq: ENG 101. Introduction to the techniques of poetry writing, including craft, practice and modeling.

### 354 INTRODUCTION TO CREATIVE NONFICTION WRITING (5)

Prereq: ENG 101. An introductory course in writing nonfiction prose, such as personal essay, memoir, autobiography, travel writing, and other forms.

### 364 INTRODUCTION TO FILM STUDIES (5)

Prereq: ENG 202 or 203. Overview of the conventions and techniques of narrative cinema with some readings in film theory.

### 370 INTRODUCTION TO LANGUAGE (5)

Prereq: ENG 101. 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.

### 371 STUDIES IN RHETORIC AND RHETORICAL ANALYSIS (5)

Prereq: ENG 101 and a Writing II course. Selected issues in ancient and modern rhetorical theory; rhetorical analysis of a variety of texts.

### 375 SEMINAR FOR WRITING FELLOWS (3)

Prereq: selection as a Writing Fellow. Examines theories of teaching writing and provides training for undergraduates selected to work in Western's writing-across-the-curriculum program. Fellows become accomplished readers of student writing and effective tutors for students writing in all disciplines. S/U grading.

### 401 SENIOR SEMINAR IN WRITING AND RHETORIC (5)

Prereq: ENG 101 and a Writing II course; senior status. Senior writing seminar and inquiry into topics from the fields of composition and rhetoric.

### 402 ADVANCED TECHNICAL AND PROFESSIONAL WRITING (5)

Prereq: ENG 302. Writing-intensive course focusing on advanced problems of technical communications and their solutions. Students work in teams to create, draft, and deliver service learning projects. Discussion of strategies for identifying target readers and meeting their informational needs, with emphasis on the ethical and social responsibilities that surround technical communications.

### 406 TOPICS IN CRITICAL AND CULTURAL THEORY (5)

Prereq: ENG 313 and two other courses from 304-347, 364, 370, or 371. An advanced course that examines one or more critical or cultural theories.

### 408 CULTURAL STUDIES (5)

Prereq: ENG 313 and two other courses from 304-347, 364, 370, or 371. An advanced course that applies semiotic and/or textual approaches to a wide range of cultural issues.

### 410 STUDIES IN LITERARY HISTORY (5)

Prereq: ENG 202 or 203 and three courses from 304-347, 364, 370, or 371. A wide variety of studies in literary history. Repeatable once as an elective with different topics.

### 415 SPECIAL TOPICS IN NATIONAL LITERATURES (5)

Prereq: ENG 202 or 203 and three courses from 304-347, 364, 370, or 371, and possible additional prerequisite relevant to topic. 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.

## ENGLISH

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### **418 SENIOR SEMINAR (5)**

Prereq: senior status (135 university credits), ENG 313 and two other courses from 304-347, 364, 370, or 371. 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.

### **423 STUDIES IN MAJOR AUTHORS (5)**

Prereq: ENG 202 or 203 and three courses from 304-347, 364, 370, or 371, and possible additional prerequisite relevant to topic. Studies in the texts of a writer or writers in English or in translation. Repeatable once as an elective with different authors.

### **436 THE STRUCTURE OF ENGLISH (5)**

Prereq: ENG 370 or permission of instructor. Introduction to English sentence structure. Topics include clause structure, modification, complementation, and syntactic principles such as movement, coordinating and prominalization.

### **438 CULTURAL HISTORY OF ENGLISH (5)**

Prereq: ENG 370 or permission of instructor. Examines the cultural, linguistic and literary influences on the development of Old, Middle, Early Modern and present-day English.

### **439 TOPICS IN LANGUAGE AND LINGUISTICS (5)**

Prereq: ENG 370 or permission of instructor. 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.

### **440 TEACHING ENGLISH LANGUAGE ARTS IN THE ELEMENTARY SCHOOL (5)**

Prereq: ENG 202 or 203 and 370. Survey of theory and practice, resources and methods of assessment for teaching English language arts in the elementary school.

### **441 CHILDREN'S LITERATURE FOR THE ELEMENTARY AND MIDDLE SCHOOL TEACHER (5)**

Prereq: ENG 202 or 203. 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.

### **442 STUDIES IN LITERACY AND LEARNING (5)**

Prereq: ENG 370 or permission of instructor. 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.

### **443 TEACHING ENGLISH LANGUAGE ARTS IN THE SECONDARY SCHOOLS (5)**

Prereq: admission to Woodring College of Education. Survey of theory, practice, resources and methods of assessment for the teaching of English language arts.

### **444 TEACHING ENGLISH LANGUAGE ARTS IN THE SECONDARY SCHOOLS II (5)**

Prereq: ENG 443. Continuation of the survey of theory, practice, resources and methods of assessment for the teaching of English language arts.

### **446 TEACHING WRITING IN THE ELEMENTARY SCHOOL (5)**

Prereq: ENG 440 and 441 or permission of instructor. 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.

### **451 CREATIVE WRITING SEMINAR: FICTION (5)**

Prereq: ENG 351. An advanced course in the writing of fiction. Repeatable with different instructors to a maximum of 10 credits.

### **453 CREATIVE WRITING SEMINAR: POETRY (5)**

Prereq: ENG 353. An advanced course providing disciplined expression in a variety of modes of writing poetry. Repeatable with different instructors to a maximum of 10 credits.

### **454 CREATIVE WRITING SEMINAR: CREATIVE NONFICTION (5)**

Prereq: ENG 354. An advanced course in the writing of nonfiction, build-

ing on skills learned in prior courses. Repeatable with different instructors to a maximum of 10 credits.

### **455 LIVING WRITERS (5)**

Prereq: ENG 351, 353 or 354. An advanced course that combines study of the craft of writing in contemporary works of poetry, fiction, and/or non-fiction and literary expression. May include oral performances and lectures by visiting writers.

### **456 SPECIAL TOPICS IN FICTION WRITING (5)**

Prereq: ENG 351. 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.

### **457 SPECIAL TOPICS IN POETRY WRITING (5)**

Prereq: ENG 353. Intensive study of poetic texts in traditional and experimental forms. Opportunity to compose in a variety of poetic forms. Study of appropriate models.

### **458 SPECIAL TOPICS IN CREATIVE NONFICTION WRITING (5)**

Prereq: ENG 354. Intensive reading, writing and workshop in one or more specific modes of nonfiction, such as memoir, travel writing, autobiography and the personal essay.

### **459 EDITING AND PUBLISHING (5)**

Prereq: ENG 351, 353 or 354. Focuses on a variety of professional editing and publishing procedures, opportunities and venues; politics of the literary marketplace; and careers available to writers.

### **460 SPECIAL TOPICS IN CREATIVE WRITING: MULTIGENRE (5)**

Prereq: ENG 351, 353, or 354. Intensive study of topics in creative writing that cross genre boundaries, or that critique those boundaries. Opportunities to compose experimental or hybrid works.

### **461 INTERNSHIP IN ENGLISH: PROFESSIONAL IDENTITY (5)**

Prereq: senior status (135 credits) and permission of instructor. 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.

### **462 TOPICS IN TECHNICAL AND PROFESSIONAL WRITING (5)**

Prereq: ENG 302 or equivalent experience and senior status. A rhetorical examination of various specific topics confronting technical and professional writers in a rapidly changing technological world. Repeatable to a maximum of 10 credits.

### **464 TOPICS IN FILM STUDIES (5)**

Prereq: ENG 364 or permission of instructor. Examines various specific topics in film studies and theory. Repeatable once with different topics.

## **Graduate Courses**

*Courses numbered 500; 517; 545; 597 are described on Page 34 of this catalog.*

*Admission to Graduate School or special permission required. See the Graduate School section of this catalog.*

### **501 LITERARY THEORIES AND PRACTICES (5)**

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.

### **502 SEMINAR IN THE WRITING OF FICTION (5)**

Individual projects in fiction along with examination of recently published works of fiction. May be repeated under advisement.

### **504 SEMINAR IN THE WRITING OF POETRY (5)**

Individual projects in poetry along with examination of recently published volumes of poetry. May be repeated under advisement.

### **505 SEMINAR IN THE WRITING OF NONFICTION (5)**

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.



**509 INTERNSHIP IN WRITING, EDITING AND PRODUCTION (1-5)**  
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 a maximum of 5 credits. S/U grading.

**510a-z SEMINAR: TOPICS IN RHETORIC (5)**  
Rhetorical theory and composition. Topics from classical tradition and modern developments. Applications for teaching of language, literature and composition. Repeatable with different topics.

**513 SEMINAR IN TEACHING COLLEGE COMPOSITION (5)**  
Prereq: appointment as a teaching assistant or permission of instructor. Offered once a year in the fall.

**514 STUDIES IN LANGUAGE AND LINGUISTICS (5)**  
Examines various topics in language and linguistics of interest to students of literature, critical theory, creative writing and rhetoric and composition. Repeatable with different topics.

*In the following literature seminars, the specific subject matter covered will vary from year to year. Subtitles indicate subject matter most recently covered.*

**515 STUDIES IN LITERARY AND CRITICAL THEORY (5)**  
Examines major theorists or movements in literary and critical theory. Repeatable with different topics.

**520 STUDIES IN POETRY (5)**  
Examines the characteristics, history, uses and criticism of poetry. Repeatable with different topics.

**525 STUDIES IN FICTION (5)**  
Examines the characteristics, history, uses and criticism of fiction. Repeatable with different topics.

**530 STUDIES IN DRAMA (5)**  
Examines the characteristics, history, uses and criticism of drama. Repeatable with different topics.

**535 STUDIES IN NONFICTION (5)**  
Examines the characteristics, history, uses and criticism of nonfiction. Repeatable with different topics.

**540 STUDIES IN GLOBAL LITERATURES (5)**  
Examines interrelations in global literatures, involving topics such as war,

imperialism, religion, feminism, migration, and the politics of language. Repeatable with different topics.

**550 STUDIES IN AMERICAN LITERATURES (5)**  
Examines writers, periods and topics drawn from the full diversity of literature written in America. Repeatable with different topics.

**560 STUDIES IN BRITISH LITERATURE (5)**  
Examines writers, periods and topics drawn from the full diversity of British literature. Repeatable with different topics.

**565 STUDIES IN POST-COLONIAL LITERATURES (5)**  
Examines post-World War II literatures of, for example, Africa, India and the Caribbean. Repeatable with different topics.

**570 TOPICS IN CULTURAL STUDIES (5)**  
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.

**575 STUDIES IN WOMEN'S LITERATURE (5)**  
Examines writers, movements and topics in women's writing that may cut across genres and nationalities. Repeatable with different topics.

**580 STUDIES IN FILM (5)**  
Examines the codes and conventions of cinema with attention to critical theory. Repeatable with different topics.

**594 PRACTICUM IN TEACHING (2-5)**  
Prereq: ENG 501 and permission of instructor. Supervised teaching for MA candidates. Repeatable with different topics. Each topic repeatable to a maximum of 5 credits.

**598 RESEARCH IN THE TEACHING OF ENGLISH (1-5)**  
Prereq: admission to MA program or teaching experience. Various announced topics in the teaching of language, literature, composition, technical writing, and creative writing. Repeatable with different topics. Each topic repeatable to a maximum of 5 credits.

**690 THESIS WRITING (2-5)**  
Repeatable to a maximum of 5 credits.

# HISTORY

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."

## HISTORY FACULTY

**ROGER R. THOMPSON** (2003) Chair and Associate Professor. BA, Stanford University; MA, PhD, Yale University.

**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) Associate Professor. BA, Pomona College; MA, PhD, University of California-Davis.

**GEORGE MARIZ** (1970) Professor. BA, MA, PhD, University of Missouri.

**MARIE H. MIRAN** (2004) Assistant Professor. BA (Philosophy), University of Paris; BA (East African Studies), National Institute of Oriental Languages and Civilizations; MA, University of Paris; PhD, Tel Aviv University.

**JOHANN N. NEEM** (2004) Assistant Professor. BA, Brown University; MA, PhD, University of Virginia.

**HARRY R. RITTER** (1969) Professor. BA, University of Arizona; MA, PhD, University of Virginia.

**MART A. STEWART** (1992) Professor. BA, Willamette University; MA, Portland State University; PhD, Emory University.

**LOUIS W. TRUSCHEL** (1970) Associate Professor. BA, Pacific Lutheran University; MA, PhD, Northwestern University.

**NANCY E. VAN DEUSEN** (1995) Professor. BA, Kent State University; MA, Ohio State University; MLIS, University of Texas; PhD, University of Illinois, Urbana-Champaign.

**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.

## 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.

## BACHELOR OF ARTS

At least one-half the total history credits taken in fulfillment of the following programs must be in upper-division courses unless otherwise noted.

### Major — History

60 credits

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 (4 credits)
  - Electives under advisement

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.

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.

### Major — History — Social Studies

90 credits

This degree is appropriate for students who intend careers in secondary teaching with specialization in history and social studies. To receive certification, students must also complete an approved teacher certification program.

**History Courses (60 credits)**

History credits should be distributed under advisement as follows:

- Three courses in United States history
- Two courses in European history
- Two courses from one of the following four areas: East and South Asia; or Africa and Middle East; or Western Hemisphere (outside United States), or Ancient
- HIST 391, 499
- Electives under advisement

**NOTE:** At least 30 of the 60 credits must be at the upper-division level, and 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.

**Social Studies Courses (30 credits)**

- ECON 206 or 446
- ECON 207 or 447
- GEOG 201
- PLSC 101 and 250
- Additional credits in any of the above disciplines or anthropology, sociology or psychology to a total of at least 30 credits
- No course with a grade of less than C (2.0) may be counted in this portion of the major

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. Courses required for a state teaching endorsement must be completed with a grade of C (2.0) or better. Completion of this combined major leads to an endorsement in social studies.

**BACHELOR OF ARTS IN EDUCATION****Major — History — Elementary**  
45 credits

This major 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.

- 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
- Electives under advisement

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.

**Minor — History**  
25 credits

- 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

A minimum grade point average in history courses of 2.50 is required for graduation.

**Minor — Foreign Cultures**

The history department offers a minor in foreign cultures for foreign language majors and other interested students. Credits to be distributed as follows:

- Two background courses in modern European history (HIST 425, 428)
- Two courses in one of the following areas: France and the French-speaking world (HIST 277, 286, 377, 378, 441, 442, 479); Germany (HIST 431, 432); Latin America (HIST 273, 274, 471, 473, 474); Russia (HIST 333, 334, 435)
- Electives under advisement

**Minor — Area Studies**

Minor programs are available in the following fields:

- Canadian-American Studies
- East Asian Studies — see the individual program sections of this catalog
- Latin American Studies — see listing in this department

Courses taken for credit in these programs may not be counted toward the major.

**LATIN AMERICAN STUDIES**

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).

**Minor — Latin American Studies**

- 30 credits
- Two courses in Spanish above the 201 level
  - 10 credits in HIST 273, 274 or ANTH 365
  - Remainder in courses relating to Latin America from at least one other academic department other than Spanish

For further information and advisement, consult the Department of History or the Department of Anthropology.

**GRADUATE STUDY**

For concentrations leading to the Master of Arts degree and for information concerning the archival training program, see the *Graduate School* section of this catalog.

**COURSES IN HISTORY (HIST)**

*Courses numbered X37; X97; 300, 400; 417, 445 are described on Page 34 of this catalog.*

**103, 104 INTRODUCTION TO AMERICAN CIVILIZATION (4 ea)****103 AMERICAN HISTORY TO 1865**

From the prehistoric period to the end of the Civil War.

**104 AMERICAN HISTORY SINCE 1865**

From the end of the Civil War to the present.

## HISTORY

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**111, 112, 113 INTRODUCTION TO WESTERN CIVILIZATION (4 ea)**  
Need not be taken in sequence. Human development in the Western world; emphasis upon ideas, institutions, forces and movements shaping contemporary life.

**111 PREHISTORY TO 476**  
Survey of the political, social and cultural history of Western civilization from prehistory to the collapse of the Roman empire.

**112 476-1713**  
Survey of the cultural, political, social and economic history of Europe from the early Middle Ages to the signing of the Treaty of Utrecht.

**113 1713-PRESENT**  
Survey of the political, social, economic and diplomatic history of Europe from the opening of the Enlightenment to the present.

**151 COMMUNITIES OF THE ANCIENT WORLD (4)**  
Prereq: entering freshmen. Examines both the development of ideas of community in the 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. Focus on the related topics of the development of civilization in Mesopotamia and Greece and the transmission of ideas in the ancient world.

**155 THE IDEA OF UTOPIA (4)**  
Prereq: first-year students only. Introduces readers to major utopian writers in the secular and Christian traditions, then turns attention to why, in the 20th century, we have lost faith in utopia. Probes not only the history of the idea of utopia but how utopian writing can help us improve our own society.

**158 RACE AND IDENTITY IN MODERN AMERICA (4)**  
Prereq: first-year students only. 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 spans the last century and a half of American history.

**199 THINKING HISTORICALLY (4)**  
Introduces the fundamentals of historical inquiry and reasoning, and the value of knowing the past. Explores the ways the sense of the past informs the contemporary culture.

**203 WRITING ABOUT GENDER AND RACE IN THE U.S.: 1492-1877 (5)**  
Prereq: ENG 101; HIST 103 and 30 credits. Examines how early Americans understood race and gender. Explores how historians have written about this understanding.

**261 BLACK HISTORY IN THE AMERICAS (5)**  
The cultures and achievements of blacks in the Americas.

**263 AFRICAN AMERICANS SINCE 1865 (5)**  
Prereq: HIST 104. Introduces students to the experience of African American women and men since the Civil War, with special emphasis on the Civil Rights and Black Power movements.

**265 LESBIAN, GAY, BISEXUAL AND TRANSGENDER EXPERIENCES IN U.S. HISTORY (5)**  
Examines the experiences of lesbians, gay men, bisexuals, and transgendered people in U.S. history from the mid-19th century to the present, with emphasis on identity and community formation and civil rights and liberation movements.

**273 LATIN AMERICA: 1492-1824 (4)**  
Political, economic and sociocultural trends from the Spanish conquest through the independence movements.

**274 LATIN AMERICA: 1824 TO THE PRESENT (4)**  
Political, economic and sociocultural trends from the post-independence period to the 1990s.

**275 THE INDIAN IN AMERICAN HISTORY (5)**  
Prereq: sophomore status. Events and persons critical to history of North American Indians; review of interpretations of Indian cultures and history.

**277 CANADA: A HISTORICAL SURVEY (4)**  
Canadian history from aboriginal occupation to the present.

**280 INTRODUCTION TO EAST ASIAN CIVILIZATIONS (5)**  
The origins and evolution of the political, economic and social aspects of East Asian civilizations through the early-modern period. Also taught as EAST 201.

**281 EAST ASIAN HISTORY IN THE EARLY-MODERN AND MODERN ERAS (5)**  
Examines political, cultural and social aspects of East Asian civilizations in the early-modern and modern periods. Also taught as EAST 202.

**285 INTRODUCTION TO AFRICAN CIVILIZATIONS (5)**  
An introduction to the history of Africa, with emphasis on the development of African societies and civilizations from antiquity to modern times.

**286 MODERN AFRICA (5)**  
History of Africa during and after colonial rule. Emphasis is on African reactions to European rule, nationalist movements and the problems of independence.

**287 INTRODUCTION TO ISLAMIC CIVILIZATION (5)**  
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.

**310 HISTORY OF ANCIENT MESOPOTAMIA (5)**  
Prereq: HIST 111 or HIST 151 or LBRL 121 or permission of instructor. 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.

**311 HISTORY OF ANCIENT EGYPT (5)**  
Prereq: HIST 111 or HIST 151 or LBRL 121 or permission of instructor. 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.

**312 HISTORY OF ANCIENT GREECE (5)**  
Prereq: HIST 111 or HIST 151 or LBRL 121 or permission of instructor. 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.

**313 HISTORY OF ANCIENT ROME (5)**  
Prereq: HIST 111 or HIST 151 or LBRL 121 or permission of instructor. 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.

**314 THE ENLIGHTENMENT TRADITION (5)**  
Prereq: HIST 113 or HIST 151 or LBRL 123. 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.

**315 EUROPE IN THE EARLY MIDDLE AGES (300-1050) (5)**  
Prereq: HIST 112 or LBRL 122 or permission of instructor. 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.

**316 EUROPE IN THE HIGH MIDDLE AGES (1050-1450) (5)**  
Prereq: HIST 112 or LBRL 122 or permission of instructor. Western Europe from c. 1050 to the end of the Middle Ages; focus on social, economic, religious and cultural developments.

**320 WAR IN THE MIDDLE AGES (4)**  
Prereq: HIST 112 or LBRL 122 or equivalent. War and related phenomena (crusades, Peace of God, Truce of God, laws of war, et cetera) in medieval Europe, with particular emphasis on the period from 1000 to 1450.

**325 MARRIAGE AND THE FAMILY IN EUROPEAN HISTORY (4)**  
Prereq: HIST 112 or anthropology major or sociology major or LBRL 122. A study of the development of marriage patterns and family structures in medieval and early modern Europe.

**333 IMPERIAL RUSSIA, 1689-1917 (4)**  
Prereq: HIST 113 or LBRL 123 (preferred). Survey of major political, social and economic developments of Russia from Peter the Great to the fall of the Romanov dynasty.



**334 HISTORY OF SOVIET RUSSIA (4)**

Prereq: HIST 113 or LBRL 123 (preferred). Russian history from the fall of the Romanovs to the fall of the Communist Party; emphasis on continuity and change.

**336 COMPARATIVE IMPERIALISMS: SELECT CASE STUDIES (5)**

Prereq: sophomore status. Examines several imperial powers, their controls and methods, their attitudes to race questions, their influence on the colonial peoples and economies.

**348 EUROPEAN INTELLECTUAL HISTORY (5)**

Prereq: HIST 113 or LBRL 123. A study of the evolution of Western thought from the Middle Ages to the present with primary emphasis on the era since 1700.

**350 AMERICAN COLONIAL HISTORY (4)**

Prereq: HIST 103 or junior status. 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.

**360 HISTORY OF RELIGION IN EARLY AMERICA (4)**

Prereq: one of HIST 103 or HIST 112 or HIST 113 or LBRL 122 or LBRL 123 or LBRL 231. History of religious traditions, practices, ideas and movements in America from colonial era to mid-19th century.

**361 HISTORY OF RELIGION IN MODERN AMERICA (4)**

Prereq: one of HIST 104 or HIST 113 or LBRL 123 or LBRL 231. History of religious traditions, practices, ideas, and movements in America from mid-19th century to the present day.

**362 ASIAN AMERICAN HISTORY (5)**

Prereq: HIST 103 or 104 or AMST 203, 205 or 301. 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 taught as AMST 362.

**363 THE AMERICAN REVOLUTION (4)**

Prereq: HIST 103 or any 300- or 400-level course in American history. The causes and consequences of the American Revolution, as well as the experiences of Americans living through it.

**364 FILM AS HISTORY (4)**

Prereq: established by each instructor. Consult Classfinder and/or the *Timetable of Classes* before registering. Readings and related films on selected topics; subject and course content varies with instructor. Repeatable with various topics.

**366 THE EARLY AMERICAN REPUBLIC (4)**

Prereq: HIST 103 or permission of instructor. Introduces major themes concerning the development of the American republic following the Revolution until the 1840s.

**367 U.S. WOMEN TO 1865 (5)**

Prereq: HIST 103 or 104. A survey of the changing social, economic and political roles of women in the United States from settlement through the Civil War.

**368 U.S. WOMEN FROM 1865 (5)**

Prereq: HIST 103 or 104. A survey of the changing social, economic and political roles of women in the United States from the Civil War to the present.

**369 TOPICS IN U.S. WOMENS HISTORY (4)**

Prereq: HIST 103 or 104. Explores various topics in U.S. women's history. Topics will vary. See department for specific topic.

**370 CHINESE HISTORY TO 600 AD (4)**

The evolution of early civilization and the first stage of high civilization in China to the Tang dynasty.

**371 CHINESE HISTORY 600-1800 (4)**

Political, socioeconomic and intellectual trends during the eras of highest development of the imperial system.

**372 CHINESE HISTORY 1800 TO PRESENT (4)**

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.

**374 HISTORY OF PRE-MODERN JAPAN (4)**

Prereq: HIST 280 or 281 or EAST 201 or 202 or permission of instructor. 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 may 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.

**375 HISTORY OF MODERN JAPAN (4)**

Prereq: HIST 280 or 281 or EAST 201 or 202 or permission of instructor. 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 *Tennosei* Emperor System; the impact of the Occupation; and Japan's role in the New World Order.

**376 FRENCH COLONIAL CANADA 1534-1763 (4)**

Prereq: HIST 277 or permission of instructor. 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.

**378 CANADA: A NATION OF IMMIGRANTS (4)**

Prereq: HIST 277 or permission of instructor. Examination of the impact of immigration on Canadian development from the perspective of the host societies and the immigrants. Themes explored will include ethnic relations, labor, gender and politics.

**385 PRE-COLONIAL AFRICA (5)**

Prereq: sophomore status. Development of African societies and states up to the European partition.

**386 SOUTHERN AFRICA (5)**

Prereq: sophomore status. Development of African and European societies in South Africa and neighboring states, their relations and conflicts.

**387 HISTORY OF THE JEWS (5)**

Prereq: one of the following HIST 111 or 112 or 113 or 287 or LBRL 121 or 122 or 123 or any upper-division European or Middle Eastern history course, junior status or above. 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.

**388 EAST AFRICA (4)**

Prereq: sophomore status. Imperialism, African nationalism and recent conflicts in Kenya, Tanzania, Uganda, Somalia and Mozambique.

**389 ISLAM IN SUB-SAHARAN AFRICA (4)**

Prereq: HIST 285 or 286 or 287 or LBRL 276 or 278 or permission of instructor. An introduction to the varied histories of Islam and Muslims in Sub-Saharan Africa from about the 10th century to the post-colonial age. Focus is on West Africa and secondarily on the Nilotic Sudan and the Swahili coast. Both long-term processes and case studies will be examined to understand how religious, social, political and cultural forces have shaped and reshaped African Muslim communities and their traditions through time and space.

**390 TOPICS IN HISTORY (3-5)**

Prereq: junior status. 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.

**391 HISTORY OF THE PACIFIC NORTHWEST (4)**

Prereq: sophomore status. General history of the Pacific Northwest, state development, samples of local history, and state and local government. Required for certification of secondary school social studies teachers.

## HISTORY

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### **398 METHODS OF RESEARCH AND ANALYSIS (4)**

Prereq: three upper-division courses. 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.

### **408 THE SECOND WORLD WAR (4)**

Prereq: junior status. Examines the causes and conduct — political, military and economic — of World War II, 1939-1945, the great mid-20th century conflict between the Axis and Allied powers.

### **410 THE FIRST CITIES: URBANIZATION IN THE ANCIENT WORLD (4)**

Prereq: junior status and HIST 111 or 310 or 311 or 312 or 313 or LBRL 121. 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.

### **415 UNDERGRADUATE SEMINAR IN MEDIEVAL HISTORY (4)**

Prereq: upper-level course in medieval European history and permission of instructor. Focus is on selected topics in medieval European history. Repeatable to a maximum of 8 credits.

### **418 MEDIEVAL ENGLAND (4)**

Prereq: HIST 315 or 316 or any 300-level history course. 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.

### **420 THE RENAISSANCE AND THE REFORMATION (5)**

Prereq: HIST 112 or LBRL 122; open to sophomores with permission of instructor. Transition from the Medieval to the Modern: Western Europe from the eve of the Hundred Years War to the Treaty of Westphalia (1337-1648).

### **422 HISTORY OF MEDIEVAL ITALY (4)**

Prereq: HIST 112 or 315 or 316 or LBRL 122. 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.

### **428 MODERN EUROPE: 1914-1945 (5)**

Prereq: junior status. 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.

### **431 GERMANY FROM 1750 TO 1914 (5)**

Prereq: junior status. Social, economic, cultural and political development from the age of the Enlightenment and Royal Absolutism to the outbreak of World War I.

### **432 GERMANY FROM 1914 TO THE PRESENT (5)**

Prereq: junior status. The impact of World War I; the Weimar Republic, the Third Reich and the period since 1945.

### **435 WOMEN IN RUSSIA AND THE SOVIET UNION (4)**

Prereq: HIST 334 or permission of instructor. Examines women's interpretations of political developments and everyday experience in Russia and the Soviet Union 1917-1991.

### **440 BRITAIN: 1688 TO THE PRESENT (5)**

Prereq: HIST 113 or LBRL 123 or equivalent. Political, social, economic and intellectual history of Britain from the Glorious Revolution to the present; development of parliamentary, economic and social institutions.

### **441 FRANCE: 1453-1815 (5)**

Prereq: HIST 112 or 113 or LBRL 122 or equivalent. 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.

### **442 FRANCE SINCE 1815 (5)**

Prereq: HIST 113 or LBRL 123 or equivalent. 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.

### **447 HISTORY OF THE SCIENCES OF NATURE (4)**

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. Attentive to those developments that shaped the emergence of the environmental sciences.

### **449 EAST CENTRAL EUROPE AND THE BALKANS SINCE 1900 (5)**

Prereq: junior status. The place of the East European nations — Poland, the Czech Republic, Slovakia, Hungary, the Balkan states — in European and world politics.

### **452 U.S. INTELLECTUAL HISTORY 1776 TO 1900 (4)**

Prereq: at least one of the following: HIST 103 or 104 or 417 or 450 or 454 or 455 or 467 or permission of instructor. Introduction to major thinkers who shaped the development of the United States between the American Revolution and the turn of the 20th century. Students will be asked to interpret the writings of American intellectuals in relation to each other and to their historical context.

### **453 U.S. INTELLECTUAL HISTORY (4)**

Prereq: at least one of the following: HIST 104 or 368 or 457 or 458 or 459 or 467 or permission of instructor. 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.

### **454 THE CIVIL WAR AND RECONSTRUCTION (4)**

Prereq: junior status. Development of sectionalism; problems of war in North and South; efforts toward reunion; the legacy of Reconstruction.

### **459 THE UNITED STATES SINCE 1941 (5)**

Prereq: junior status. Internal and international consequences of the rise of the United States as a world power since World War II.

### **460 AMERICAN ENVIRONMENTAL HISTORY (4)**

Prereq: junior status and HIST 103 or 104. 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. Emphasizes 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 the environmental consequences of these.

### **461 U.S. URBAN HISTORY (5)**

Prereq: HIST 104 and junior status. Examines the development of cities and suburbs in the United States, primarily since the Civil War. Special attention given to the importance of race, ethnicity and gender in the shaping of urban cultures.

### **462 INDUSTRIALIZATION AND REFORM: U.S. 1865-1920 (5)**

Prereq: HIST 104 and 4 additional credits of U.S. history. Examines the emergence of the U.S. as a major industrial power in the late 19th 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.

### **463 LATINAS AND LATINOS IN THE U.S. WEST (4)**

Prereq: sophomore status and HIST 104 or AMST 203. Analyzes the experiences of Latinas and Latinos in the western United States; special attention to gender and to the development of ethnic and cultural identities.

### **464 COMPARATIVE FOREST HISTORY (4)**

Prereq: junior status and HIST 103 or 104. History of the relationship between humans and forests in selected locales and regions in different parts of the world. Compares and identifies key differences and similarities in human-forests relationships in different places.

### **465 HISTORY OF SEXUALITY IN THE UNITED STATES (4)**

Prereq: HIST 103, 104 or 8 credits U.S. history. Examines the changing definitions of sexuality from European settlement to 1988.

### **467 AMERICAN CULTURAL HISTORY, 1790-1880 (4)**

Prereq: junior status. Topics in American cultural history, late 18th to late 19th century, with attention to recent developments in methodology and scholarship in cultural history.

**471a WOMEN AND GENDER IN COLONIAL LATIN AMERICA (4)**

Prereq: HIST 273 or 274, junior status or permission of instructor. A thematic and chronological approach to gender relations in Latin America from 1500 to 1824.

**471b WOMEN AND GENDER IN LATIN AMERICA: 1825 TO PRESENT (4)**

Prereq: HIST 273 or 274 and junior status or permission of instructor. A thematic and chronological approach to gender relations in Latin America from 1825 to the present.

**472 THE LEGACY OF THE INCAS (4)**

Prereq: HIST 273 or 274 and junior status or permission of instructor. Examines the Incaic period (1400-1532) and the Inca "legacy" from the colonial period to the present from an ethnohistorical perspective.

**474 HISTORY OF MEXICO (5)**

Prereq: HIST 273 or 274 and junior status. Mexican history from pre-conquest Aztec culture to the present.

**475 TOPICS IN LATIN AMERICAN HISTORY (4)**

Explores various topics in the colonial and post-independence regions of Latin America. Topics will vary. See department for specific topic.

**477 WORLD WAR I AND CANADIAN SOCIETY (4)**

Prereq: HIST 277 or permission of instructor and junior status. An examination and interrogation of the transformative power of the first world war upon Canada's 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.

**480 MODERN CHINESE SOCIAL HISTORY (4)**

Prereq: HIST 372 or 281 or EAST 202. 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.

**481 THE CHINESE REVOLUTION (4)**

Prereq: HIST 372 or 281 or EAST 202. Explores key passages in China's long revolutionary struggle, including Sun Yat-sen's 1911 Revolution, the May 4th Movement, Chiang Kai-shek's National Revolution of 1925-27, Mao Zedong's peasant-based Communist revolution, the Cultural Revolution, and the pro-democracy movement at Tiananmen in 1989. Social, cultural, and political perspectives emerge from first-person and scholarly accounts, novels, and films that students use to explore this vast and still controversial topic.

**483 EDO SOCIAL HISTORY (5)**

Prereq: HIST 280 or 281, or EAST 201 or 202, plus a 300-level Japanese history course or permission of instructor. This course investigates the Edo period in depth by looking at Tokugawa society. Daily life, legal codes, official dogma and ideologies are examined. Topics include Tokugawa religions and politics, popular culture, Western Studies, Tokugawa social structure, education, women's political involvement, Bushido, the family, art and literature, science, and the economic sphere.

**484 WOMEN IN JAPANESE HISTORY (5)**

Prereq: HIST 280 or 281, or EAST 201 or 202, plus a 300-level Japanese history course or permission of instructor. Examines the diverse roles and fluctuating status of Japanese women from the beginnings of history to modern times. Possible topics: women and Japanese religions, women's political involvement, education and indoctrination, family roles, Japanese feminism, contributions to art and literature, and economic roles.

**485 JAPANESE MILITARY HISTORY: SAMURAI FACT AND FICTION (5)**

Prereq: HIST 280 or 281, or EAST 201 or 202, plus a 300-level Japanese history course or permission of instructor. 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, cul-

tural contributions and influences, and the relationship between Japan's religious and martial spheres.

**486 RELIGION IN JAPANESE HISTORY (5)**

Prereq: HIST 280 or 281, or EAST 201 or 202, plus a 300-level course in Japanese history or permission of the instructor. 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.

**487a THE TRADITIONAL MIDDLE EAST (5)**

Prereq: junior status. From the 6th century to 1800.

**487b MIDDLE EAST, 1800 TO THE PRESENT (5)**

Prereq: junior status.

**487c HISTORY OF ISRAELI/PALESTINIAN CONFLICT (4)**

Prereq: HIST 113 or LBRL 123, or permission of instructor and junior status. Emergence of Israeli and Palestinian national identities and competition for control of territory and state formation.

**488 MODERN EGYPT, LIBYA AND THE NILE VALLEY (5)**

Prereq: junior status. The emergence of modern states in Northeast Africa including Egypt, Libya, the Sudan, Ethiopia and Somalia in an age of imperialism and nationalism.

**491 REGIONAL AND LOCAL COMMUNITY HISTORY (4)**

Prereq: HIST 391. The detailed examinations of definitions of communities, interdisciplinary methods of analysis, and use of local source materials to understand the connections among the local, regional, national and global with a focus on, but not necessarily limited to, the Pacific Northwest and U.S. West.

**493 PUBLIC HISTORY SEMINAR (5)**

Prereq: history major or minor; anthropology major or minor; permission of instructor. Introduction to concepts and issues inherent in public history as a preparation for understanding the issues of history beyond academe and/or the K-20 classroom.

**494 PUBLIC HISTORY INTERNSHIP (3-5)**

Prereq: HIST 493 and/or permission of faculty liaison. Internship at an approved location, such as, but not limited to, a historical society, museum, archives, library, government agency, or history or related journal press. In certain instances could include the development of public history projects for corporations or individuals as well as field work in approved areas.

**498 HISTORICAL EDITING (2)**

Introduction to participation in professional conferences and publishing through the preparation and editing of conference papers for presentation and potential publication.

**499 HISTORICAL RESEARCH (4)**

Prereq: one upper-division course in field of 499 topic. 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. Requires departmental pre-registration, which occurs each spring. Writing proficiency course.

**Graduate Courses**

*Courses numbered 500; 517; 545; 597 are described on Page 34 of this catalog.*

*Admission to Graduate School or special permission required. See the Graduate School section of this catalog.*

*Graduate seminars are repeatable for credit with different topics and with the permission of the instructor. Archival courses (except HIST 539) are not repeatable. No seminar may be repeated more than once.*

**501 HISTORIOGRAPHY (4)**

A survey of the methods and concepts of historical research, analysis and writing from ancient to modern times.

## HISTORY

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### 505 CONTEMPORARY HISTORICAL METHODS (4)

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.

### 512 THE ANCIENT WORLD (4)

Prereq: one upper-level course in ancient history or permission of instructor. Selected topics in ancient history and the historiography of the ancient world. Repeatable.

### 515 MEDIEVAL HISTORY (4)

Prereq: one upper-level course in medieval history or permission of instructor. Selected studies from the Fall of Rome to the late Middle Ages. Repeatable.

### 520 RENAISSANCE AND REFORMATION (4)

Readings in the history of Europe from 1337-1848. Repeatable.

### 525 HISTORY AND PRINCIPLES OF ARCHIVES ADMINISTRATION AND RECORDS MANAGEMENT (4)

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.

### 526 SELECTION AND APPRAISAL (4)

Prereq: HIST 525. Examination of theory and methodology of archival collecting policies, selection, acquisitions, and appraisal of archival records.

### 528 REFERENCE, ACCESS AND OUTREACH (4)

Prereq: HIST 525. Examination of theory and methodology of archival access policies, reference services, outreach, and public advocacy.

### 530 ARRANGEMENT AND DESCRIPTION OF ARCHIVES (4)

Prereq: HIST 525. 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.

### 532 RECORDS AND INFORMATION MANAGEMENT (4)

Prereq: HIST 525. 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.

### 534 PRESERVATION OF ARCHIVAL MATERIALS (4)

Prereq: HIST 525. 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.

### 535 INTERNSHIP IN ARCHIVES AND RECORDS MANAGEMENT (10)

Prereq: HIST 530 or 532. Professional internship in a cooperating agency or organization. S/U grading.

### 536 INTERNSHIP IN ARCHIVES AND RECORDS MANAGEMENT (10)

Prereq: HIST 530 or 532. Professional internship in a cooperating agency or organization. S/U grading.

### 538 ADVANCED SEMINAR IN ARCHIVES AND RECORDS MANAGEMENT (4)

Prereq: HIST 536 or permission of instructor. Readings in selected aspects of archives administration and the management of current records and information systems.

### 539 PRACTICUM IN ARCHIVES/RECORD MANAGEMENT (2-6)

Prereq: HIST 530 or 532. 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.

### 540 MODERN EUROPEAN HISTORY (4)

Prereq: graduate status. Selected topics in European history and historiography since the 16th century. Repeatable with different topics.

### 546 WORLD'S FAIR AND OTHER SPECTACLES (4)

An examination into the commercial, political and cultural dimensions of mass-attended spectacles in the modern world with special focus on the relations between developed and underdeveloped peoples, both indigenous and foreign.

### 550 COLONIAL AMERICAN HISTORY (4)

Prereq: graduate status or permission of instructor. Selected topics in American colonial history through the mid-18th century. Repeatable.

### 551 EARLY AMERICAN REPUBLIC, 1783-1840 (4)

Prereq: graduate status or permission of instructor. Introduction to major readings and issues in the historiography of the Early American Republic. Repeatable.

### 553 AMERICAN ENVIRONMENTAL HISTORY (4)

Prereq: graduate status in history or permission of instructor. 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. Repeatable.

### 554 WORLD ENVIRONMENTAL HISTORY (4)

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.

### 555 U.S. WOMENS HISTORY (4)

Selected readings in U.S. womens history. Repeatable.

### 556 TOPICS IN LATIN AMERICAN HISTORY (4)

Prereq: graduate status. Selected readings in Latin American history. Repeatable.

### 557 THE AMERICAN REVOLUTION (4)

Prereq: graduate status or permission of instructor. Introduction to changing interpretations of the American Revolution. Exposes students to broader changes in the historical profession.

### 558 20th-CENTURY AMERICAN HISTORY (4)

Prereq: undergraduate preparation in American history or permission of instructor. Topics in 20th-century American history. Repeatable.

### 560 READINGS IN NORTH AMERICAN INDIAN HISTORY (4)

Prereq: graduate status. Readings on the history and historiography of Native North America. Repeatable.

### 571 CANADA (4)

Prereq: graduate status. Selected topics in Canadian social history. Repeatable.

### 582 TOPICS IN EAST ASIAN HISTORY (4)

Prereq: graduate status or permission of instructor. Selected topics in the history and historiography of China and/or Japan in the traditional and/or modern periods. Repeatable.

### 587 SEMINAR IN MIDDLE EASTERN HISTORY (4)

Prereq: undergraduate preparation in Middle Eastern history or permission of instructor. Topics in Middle Eastern history. Repeatable.

### 588 AFRICA (4)

Prereq: undergraduate preparation in African history or permission of instructor. Selected topics in the history and historiography of Africa in the pre-colonial, colonial, and/or modern eras. Repeatable.

### 590w DIRECTED HISTORICAL RESEARCH (4)

Prereq: Enrollment limited to students pursuing the non-thesis Master of Arts. Directed research in historical topics by arrangement with the instructor. Counts as a writing seminar and may be repeated once with a different topic.

### 591 SEMINAR IN AMERICAN WESTERN AND REGIONAL HISTORY (4)

Repeatable.

### 593 READINGS IN PACIFIC NORTHWEST HISTORY (4)

Prereq: graduate status. Readings on the history and interpretations of the region, its similarities to and differences from other North American regions. Repeatable.

### 690 RESEARCH AND WRITING SEMINAR: THESIS (2-12)

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.



# JOURNALISM

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 prize-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 and marketing 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.

## 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 and JOUR 307 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 300-level 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 secretary or any journalism faculty member.

## 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, 207
- ENG 101
- 100- and 200-level GURs

## JOURNALISM 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) Assistant 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.

**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.

## BACHELOR OF ARTS

### Major — Journalism

#### News-Editorial Sequence

73 credits

- JOUR 190, 207, 307, 309, 340, 350, 351, 404, 430, 450, 480
- Five quarters on publication staff: Three courses from list (a), one course from list (b) and one additional from list (a) or (b), or ENVR 480:
  - (a) JOUR 214, 314, 414, 415
  - (b) JOUR 221, 321, 421, 422
- 15 upper-division credits in another academic area under departmental advisement
- Cumulative GPA of 2.50 or higher in major
- A maximum of 73 journalism course credits may be applied toward the 180-credit minimum for graduation

#### Public Relations Sequence

78 credits

- JOUR 190, 207, 307, 309, 330, 350, 351, 404, 430, 440, 480
- MKTG 380
- COMM 428
- Three quarters on publication staff: One course from list (a), one from list (b), and one additional from (a) or (b), or ENVR 480:
  - (a) JOUR 214, 314, 414, 415
  - (b) JOUR 221, 321, 421, 422

## JOURNALISM

- 15 upper-division credits in another academic area, under departmental advisement
- Cumulative GPA of 2.50 or higher in major. A maximum of 73 journalism course credits may be applied to the 180-credit minimum for graduation

### *Visual Journalism Sequence*

78-79 credits

- JOUR 190, 207, 305, 307, 309, 346, 350, 351, 370, 430, 446, 480
- ART 109 or DSGN 211 or A/HI 312
- Four quarters on publication staff: Two courses from list (a), one from list (b), and one additional from (a) or (b), or ENVR 480:
  - (a) JOUR 214, 314, 414, 415
  - (b) JOUR 221, 321, 421, 422
- 15 upper-division credits in another academic area, under departmental advisement
- Cumulative GPA of 2.50 or higher in major. A maximum of 73 journalism course credits may be applied to the 180-credit minimum for graduation

### *Combined Major — Environmental Studies/ Journalism*

See the *Huxley College* section of this catalog.

### *Minor — Journalism*

35 credits

- JOUR 190, 207, 307, 309, 340, 350, 351
- Three quarters on student publication staff: One course from list (a), one from list (b), and one additional from (a) or (b), or ESTU 480, or equivalent professional experience
  - (a) JOUR 214, 314, 414, 415
  - (b) JOUR 221, 321, 421, 422

## COURSES IN JOURNALISM (JOUR)

*Courses numbered X37; X97; 300, 400; 417, 445 are described on Page 34 of this catalog.*

### **106 WRITING STRUCTURE (2)**

Analysis of and skill development in sentence structure, syntax, English grammar, mechanics, usage and punctuation as applied to journalistic writing.

### **190 INTRODUCTION TO MASS MEDIA (5)**

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.

### **207 NEWSWRITING (4)**

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.

### **214 NEWSPAPER STAFF (2)**

Prereq: sophomore status; JOUR 207. Participation on the staff of the University newspaper; critiques in news reporting, writing, editing and make-up; editorial writing.

### **221 PERIODICAL STAFF (2)**

Prereq: sophomore status; JOUR 207; one newspaper staff course. Workshop in periodical design, layout and production; training in the creative combination

of type, headlines, photographs and other illustrative material; text and caption writing; creative layout techniques; publication production; participation on the University periodical. Repeatable to a maximum of 4 credits.

### **305 PHOTOJOURNALISM (3)**

Prereq: JOUR 207, basic knowledge of photography and permission of instructor. Introduction to news photography; composing effective news pictures; essentials of processing for publication; picture editing and layout; professional ethics and the law.

### **307 REPORTING (5)**

Prereq: JOUR 207. 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.

### **309 EDITING (5)**

Prereq: JOUR 207, 307. News copy desk operations; editing; headline writing; dummies; page make-up and news graphics; and computerized editing.

### **314 NEWSPAPER STAFF (2)**

Prereq: junior status; JOUR 207, 307. Participation on the staff of the University newspaper; critiques in news reporting, writing, editing and make-up; editorial writing. Repeatable to a maximum of 4 credits.

### **321 PERIODICAL STAFF (2)**

Prereq: junior status; JOUR 207; one newspaper staff course. Workshop in periodical design, layout and production, training in the creative combination of type, headlines, photographs and other illustrative material, text and caption writing; creative layout techniques; publication production; participation on the University periodical. Repeatable to a maximum of 4 credits.

### **330 PRINCIPLES OF PUBLIC RELATIONS (3)**

Prereq: JOUR 207 or permission of instructor. Methods, tools and media used in planning and developing company, community and institutional public relations programs. Publicity and promotional techniques; copy preparation, case studies, news releases, publications, relations with the press.

### **340 HISTORY OF MASS MEDIA (3)**

Prereq: junior status. Historical backgrounds of journalism, tracing the rise of mass communications in the Western world with social, economic and political trends.

### **346 INTRODUCTION TO VISUAL JOURNALISM (5)**

Prereq: JOUR 207, 305, 309. 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.

### **350 MASS MEDIA LAW (4)**

Prereq: junior status. 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.

### **351 MASS MEDIA ETHICS (3)**

Prereq: JOUR 207. Introduction to ethical theories; examination of professional codes and standards; changing roles of the news 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 values in print, broadcast and online media.

### **360 STUDY OF LITERARY JOURNALISM (3)**

Prereq: junior status. Reading and critiquing texts that use literary techniques to enhance journalism. Studying the history of literary journalism and its impact on the field.

### **370 ONLINE JOURNALISM (3)**

Prereq: JOUR 307, 309 and 346. 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.

**375 DIVERSITY, MASS MEDIA AND SOCIAL CHANGE (4)**

Prereq: junior status, JOUR 190 or equivalent and permission of instructor. 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.

**390 THE NEWS PROCESS (4)**

Prereq: junior status required. Critical examination of current news issues and decision-making processes through visiting news media professionals, readings and discussion. Repeatable to 8 credits with various topics.

**404 FEATURE WRITING (4)**

Prereq: JOUR 307 and major status. 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.

**414 NEWSPAPER STAFF (2)**

Prereq: senior status, JOUR 207, 307. Participation on the staff of the University newspaper; critiques in news reporting, writing, editing and make-up; editorial writing. Repeatable to 8 credits.

**415 NEWSPAPER EDITORSHIP (3)**

Prereq: JOUR 207, 307; one newspaper staff course, and permission of instructor. 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 advisor. Repeatable to a maximum of 12 credits. This course may not be taken concurrently with a staff course.

**421 PERIODICAL STAFF (2)**

Prereq: senior status; JOUR 207, 307; one newspaper staff course. Workshop course in periodical design, layout and production; training in the creative combination of type, headlines, photographs and other illustrative material; text and caption writing; creative layout techniques; publication production; participation on the university periodical. Repeatable to 6 credits.

**422 PERIODICAL EDITORSHIP (3)**

Prereq: JOUR 207, 307; one periodical staff course, and permission of instructor. 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; learn-

ing personnel communication skills; using advanced publication software and technology; making self-evaluation and production reports for advisor. Repeatable to a maximum of 9 credits. This course may not be taken concurrently with a staff course.

**430 FIELD INTERNSHIPS (6)**

Prereq: **For the news/editorial sequence** — JOUR 207, 307, 309, 350, 351, two newspaper staff courses and major status; **for the public relations sequence** — JOUR 207, 307, 309, 330, 350, 351, one newspaper staff course and major status; **for the visual journalism sequence** — JOUR 207, 305, 307, 309, 346, 350, 351, one newspaper staff course and major status; **for the environmental journalism sequence** — JOUR 207, 307, 309, 350, one newspaper staff course and major status. Supervised field work on newspapers, magazines, radio and TV stations, public relations and advertising agencies, or other appropriate professional situations. S/U grading.

**440 PUBLIC RELATIONS RESEARCH AND CAMPAIGNS (5)**

Prereq: JOUR 330 and major status. 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.

**446 ADVANCED VISUAL JOURNALISM (5)**

Prereq: JOUR 346, 370 and major status. In-depth exploration of concepts and practices explored in JOUR 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.

**450 ADVANCED REPORTING (5)**

Prereq: JOUR 307, 350, 351 and major status. 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.

**460 SPECIAL REPORTING PROJECT (3)**

Prereq: JOUR 307, 350 or 351, two staff courses and major status. 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.

**480 SENIOR SEMINAR (4)**

Prereq: JOUR 350 and 351 and major status. Examines theories of mass communication, modern function of media in a democratic society. Research paper examines virtues and shortcomings of media, including interaction with economic, political and social environment.

# LIBERAL STUDIES

Liberal studies is an interdisciplinary humanities department. The humanities include the disciplines which study philosophy, religion, history, literature, and 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 and North America, 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: [lbirstds@cc.wvu.edu](mailto:lbirstds@cc.wvu.edu). Web access: [www.ac.wvu.edu/~lbirstds/](http://www.ac.wvu.edu/~lbirstds/)

- 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. It also offers two minors. For details, see below
- The department offers interdisciplinary minor programs in humanities and in the study of religion, and participates with other departments 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.

## 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.

## LIBERAL STUDIES 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 HOSSAIN** (2006) Assistant Professor. BA, College of William and Mary; MA, PhD, Johns Hopkins University.

**JONATHAN MIRAN** (2003) Assistant Professor. BA, MA, Institut National des Langues et Civilisations Orientales, Paris; PhD, Michigan State University.

**SEAN E. MURPHY** (2002) Assistant 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.

## BACHELOR OF ARTS

### *Major — Humanities*

63-68 credits

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 has proved to be excellent preparation for graduate study in law, library science, history, English, comparative literature, and religion.

### *Area of Concentration — History of Culture*

63-68 credits

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.

### *Core*

25 credits

- LBRL 121, 122, 123
- LBRL 302
- LBRL 400, 499

### *Concentration*

38-43 credits

- One course (3-4 credits) from PHIL 114, LBRL 231, 243
- Two courses (8-9 credits) from LBRL 271, 272, 273, 275, 276, 277, 278, 281
- One course (5 credits) from LBRL 301, ENG 304, HIST 314, 348



- Two courses (10 credits) from LBRL 417a-e
- Electives (12-15 credits) under advisement from LBRL 323, 332, 333, 335, 338, 370, 371, 372, 373, 375, 378, 475, 478; PHIL 320, 340, 350, 355, 360, 364-369, 420; upper-division history courses listed above but not taken, and HIST 315, 316, 420, 440, 441, 442; other appropriate upper-division courses

### Area of Concentration —Religion and Culture 63 credits

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.

#### Core

25 credits

- LBRL 121, 122, 123
- LBRL 302
- LBRL 400, 499

#### Concentration

38 credits

- 8 credits from LBRL 231, 271, 272, 278; PHIL 112, 113, 114
- 20 credits from LBRL 301, 332, 333, 335, 338, 375, 378, 475, 478; other appropriate upper-division courses
- One course from LBRL 417a-d
- LBRL 417e

### Important notes on the BA Humanities major for both concentrations

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 417a-e. LBRL 400 (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.

For information or advisement, contact the liberal studies office.

### Major — Humanities — Elementary 47-49 credits

This major offers the same approach and much of the subject matter of the BA in Humanities, History of Culture Concentration described above. It is designed to accompany the professional elementary education program. 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.

- LBRL 121, 122, 123
- Two courses to be chosen from two of the three following

groups (8-9 credits):

- LBRL 231, 232
- LBRL 243, 273\*
- LBRL 271, 272, 273,\* 275, 276, 277, 278, 281
- LBRL 302
- One course from LBRL 301, ENG 304, HIST 314, 348
- Two courses from LBRL 417a-e
- Electives under advisement from LBRL 323, 332, 333, 335, 338, 370, 371, 372, 373, 375, 378, 475, 478, 499 (prereq: LBRL 400) and other appropriate upper-division courses.

\*LBRL 273 may be counted in one group only

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 417a-e. Permission of the instructor is required for enrollment in LBRL 417a-e. LBRL 400 (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.

For information about teacher certification requirements and about the professional curriculum in elementary education, contact the elementary education department and see the *Elementary Education* section of this catalog for program admission and teacher certification requirements.

## MINOR PROGRAMS

### Minor — Humanities

31-33 credits

The Minor in Humanities provides interdisciplinary study of the humanities (philosophy, religion, history, literature and the arts) in Western and other civilizations.

- LBRL 121, 122, 123
- One course from LBRL 231, 232, 243
- Two courses from LBRL 271, 272, 273, 275, 276, 277, 278, 281
- One course from LBRL 301, 302, 323, 332, 335, 338, 375, 378, 475, 478 and other appropriate courses under advisement

### Minor — The Study of Religion

23-28 credits

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.

- LBRL 231
- Two courses from LBRL 271, 272, 278; PHIL 113
- Three courses (12-15 credits) from the following: ANTH 330; ENG 336; LBRL 332, 333, 335, 338, 375, 378, 475, 478; HIST 387; PLSC 480; other appropriate courses under advisement

For advisement regarding either minor, contact the Liberal Studies office.

## LIBERAL STUDIES COURSES (LBRL)

*Courses numbered X37; X97; 300, 400; 417, 445 are described on Page 34 of this catalog.*

### 121, 122, 123 HUMANITIES (5 ea)

Interdisciplinary introduction to significant cultural themes from art, music, history, philosophy, literature in the Western tradition. (All three of these

## LIBERAL STUDIES

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courses may be counted toward the GUR humanities requirement; they need not be taken in sequence.)

### 121 THE WESTERN TRADITION I: THE ANCIENT WORLD

Concepts of man in Near Eastern and Mediterranean cultures: Mesopotamia, Egypt, Greece, Palestine, Rome.

### 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.

### 123 THE WESTERN TRADITION III: MODERN WORLD

Nineteenth- and 20th-century ideologies; their philosophies of man; alienation and integration of the individual in society.

### 231 INTRODUCTION TO THE STUDY OF RELIGION (4)

Examination of religious phenomena from several scholarly perspectives; mysticism, corporate and individual religion, symbolism and ritual; theories of religion.

### 232 MYTH AND FOLKLORE (4)

Introduction to the study of myth and folklore and its cultural impact.

### 243 ART AND IDEAS (4)

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.

### 271 HUMANITIES OF INDIA (4)

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.

### 272 RELIGION AND SOCIETY IN CHINA AND JAPAN (4)

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.

### 273 ART AND SOCIETY IN CHINA AND JAPAN (4)

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.

### 275 HUMANITIES OF JAPAN (4)

Interdisciplinary introduction to Japanese civilization, both traditional and modern, with particular emphasis on religions; historical, artistic, and literary patterns; and societal and cultural ideals.

### 276 HUMANITIES OF AFRICA (5)

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.

### 277 HUMANITIES OF CHINA (4)

Interdisciplinary introduction to Chinese civilization, traditional and modern. Emphasis on religions; intellectual, artistic and literary patterns; and societal and cultural ideals.

### 278 HUMANITIES OF ISLAMIC CIVILIZATION (5)

Interdisciplinary introduction to Islamic civilizations with an emphasis on shared religious, cultural, and societal ideals and their adaptation in various historical and geographical contexts.

### 281 REPRESENTATIONS OF OTHERNESS (4)

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, language, gender and politics in the construction and deconstruction of self and others.

### 301 HISTORICAL METHODS IN THE HUMANITIES (5)

Prereq: junior status or permission of instructor; one course from LBRL 121, 122, 123 or HIST 111, 112, 113. Methods of cultural and intellectual his-

tory. Locating texts in their historical and cultural contexts by analyzing their authors, audiences and arguments.

### 302 METHODS OF INTERDISCIPLINARY STUDY (5)

Prereq: LBRL 121, 122, average grade of "B" in liberal studies courses and permission of instructor; ordinarily offered spring quarter only. 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.

### 323 THE ROMANTIC PARADOX: LOVE, LIFE, AND DEATH (4)

Prereq: junior status or permission of instructor. 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.

### 332 UNIVERSAL RELIGIONS: FOUNDERS AND DISCIPLES (4)

Prereq: junior status or permission of instructor. Beliefs and practices of major world religions; traditional images of religious founders; development of religious traditions; historical and phenomenological perspective.

### 333 RELIGION IN AMERICA (5)

Prereq: junior status or permission of instructor. Religious traditions, values and institutions in American culture; focus on character and development of American Protestantism, Roman Catholicism and Judaism; attention to contemporary issues and events; interdisciplinary perspective.

### 335 THE BIBLICAL TRADITION (5)

Prereq: junior status or permission of instructor. Introduction to the academic study of the Bible, with focus on the development of central elements of the Biblical tradition under changing historical conditions. Analysis of representative sections of the Hebrew Bible (Old Testament) and New Testament as religious expressions in cultural context.

### 338 MYSTICISM (5)

Prereq: junior status and at least one liberal studies course or permission. 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.

### 370 MAJOR ASIAN AND AFRICAN TRADITIONS: THE TRADITIONAL ORDER (4)

Prereq: junior status or permission of instructor. The basic cultural assumptions, value systems and social orders of China, Japan, India and Africa to the 19th century.

### 371 MAJOR ASIAN AND AFRICAN TRADITIONS: THEIR MODERN FATE (4)

Prereq: junior status or permission of instructor. Modern challenges to the traditional orders of China, Japan, India and Africa and their responses; issues and models in reconciling traditional and modern values, indigenous and foreign forces.

### 372 INDIVIDUAL AND SOCIETY IN RECENT AFRICAN AND ASIAN LITERATURE (4)

Prereq: junior status or permission of instructor. Effects of rapid change on individuals and resulting concern about the place of individuals in society, as expressed in novels, autobiography, poetry, and critical reflections on literature and culture from recent and contemporary Africa and Asia.

### 373 IDEOLOGY, POLICY AND EXPERIENCE IN THE CONTEMPORARY NON-EUROPEAN WORLD (4)

Prereq: junior status or permission of instructor. Case studies of 20th-century Third World political leaders (e.g., Gandhi, Mao Tse-tung, Khomeini); their writings, actions, and influence upon non-European peoples; selected contemporary country case studies.

### 375 BUDDHISM (5)

Prereq: one course from the following: LBRL 231, 271, 272, 275, 277; HIST 370. 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.

**378 RELIGION AND SOCIETY IN INDIA (4)**

Prereq: junior status or permission of instructor. 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.

**475 BUDDHIST ART (4)**

Prereq: one course from LBRL 231, 271, 272, 273, 275, 277, 332. Introduction to the foundations of Buddhism with a focus on Buddhist art and architecture. Topics include an introduction to religious activities around which Buddhist art has grown, and exploration of how these activities influenced the production of Buddhist art and architecture. Moving through chronology and geography, the course will examine Buddhism's origins in India, the changes that accompanied its move across the Asian continent, its adaptation to local customs and religions in East and Southeast Asia, and how these changes are manifested in art and architecture.

**478 RENEWAL AND REFORM IN THE ISLAMIC WORLD SINCE THE 18TH CENTURY (5)**

Prereq: one of LBRL 231, 271, 278, 332, 378, HIST 287, 487b. 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.

**499 RESEARCH IN HUMANITIES (3)**

Prereq: two courses from LBRL 417a-e, senior status, LBRL 400, permission of instructor. Research and writing of a formal paper on a topic developed by the student in consultation with a faculty advisor. LBRL 400, Readings in Humanities (2), required in the quarter prior to LBRL 499.

# LINGUISTICS

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 consult with Dr. Rudi Weiss, director of the interdisciplinary program in linguistics, Humanities 253, 360-650-3927, for advisement. Fax: 360-650-6110, e-mail Rudi.Weiss@wwu.edu. Web site: <http://linguistics.wwu.edu/>.

## LINGUISTICS FACULTY

**RUDOLF WEISS**, Director. Modern and Classical Languages. General and applied phonetics, applied linguistics, general linguistics.

**EVA BAHARAV**, Communication Sciences and Disorders. Language acquisition, language analysis, language disorders.

**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.

**SHAW N. GYNAN**, Modern and Classical Languages. Sociolinguistics, second language acquisition, syntax and phonology.

**JAMES W. HEARNE**, Computer Science. General linguistics, computational linguistics, narratology.

**ANNE LOBECK**, English. Syntactic theory, historical linguistics, sociolinguistics.

**NED MARKOSIAN**, Philosophy. Philosophy of language, metaphysics.

**DWAN SHIPLEY**, Modern and Classical Languages. 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.

**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** — Staff

**Communication Sciences and Disorders** — Eva Baharav, Lina Zeine

**Computer Sciences** — James W. Hearne

**Modern and Classical Languages** — Shaw N. Gynan, Rudi Weiss

**Philosophy** — Ned Markosian

**TESOL** — Trish Skillman

## Bachelor of Arts

### Major — Linguistics

55 credits

To declare a major in linguistics, students must have completed the introductory course (LING 201 or ENG 370 or ANTH 348 or TESOL 401) with a grade of B or better and have a minimum overall GPA of at least 2.5.

- For native speakers of Indo-European languages, one year of a non-IE language (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)
- LING 201 or ENG 370 or ANTH 348 or TESL 401; LING 204, 301, 302, 303, 314, 402 (must be taken twice)
- Additional credit concentration with at least one additional 400-level 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 201, 348 (to replace LING 201)
- One of the following under advisement: ANTH 247, 448

### Communication Sciences and Disorders option

- Selected courses (from CSD 352, 353, 354, 356, 361, 373, 451, 465) under departmental advisement

### 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 or LANG 410

### Philosophy option

- PHIL 102, 202, 403

### TESOL option

- TESL 401 (replaces LING 201)
- TESL 420, 421

A presentation or co-presentation at one of the scheduled student colloquia is a requirement for completion of the major.

### Minor — Linguistics

25 credits

- LING 201 or ENG 370 or ANTH 348 or TESL 401; LING 204, 301, 302, 303, 314

## COURSES IN LINGUISTICS (LING)

Courses numbered X37; X97; 300, 400; 417, 445 are described on page 34 of this catalog.

### 201 INTRODUCTION TO LINGUISTICS SCIENCE (5)

Survey of major subfields of linguistics, including phonetics, phonology, morphology, syntax, semantics, language acquisitions, and sociolinguistics.



**204 SOCIOLINGUISTICS (4)**

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.

**301 PHONOLOGY (4)**

Prereq: LING 201, 314. Theory, methods and problems of phonological analysis and description.

**302 MORPHOLOGY (4)**

Prereq: LING 201. Theory, methods and problems of morphological analysis and description.

**303 SYNTAX (4)**

Prereq: LING 201. Theory, methods and problems of syntactic analysis and description.

**314 PHONETICS (4)**

Prereq: LING 201 and permission of instructor. 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.

**402 TOPICS IN LINGUISTICS (3-5)**

Prereq: LING 201 and permission of instructor. Readings and/or directed research as determined by instructor. Variable topic. Repeatable.

# MODERN AND CLASSICAL LANGUAGES

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 — 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 foreign study 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 two Pacific Rim languages other than English and Spanish: 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.

## MODERN AND CLASSICAL LANGUAGES FACULTY

**BRENT J. CARBAJAL** (1997) Chair and Professor of Spanish. 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.

**PETRA S. FIERO** (1995) Associate 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.

**VICKI L. HAMBLIN** (1989) Professor of French. BS, Southwest Missouri State University; MA, Arizona State University; PhD, University of Arizona.

**CÉCILE HANANIA** (2002) Associate Professor of French. PhD, University of Maryland; Doctorat, Université Paris; Maitrise, Université de Provence.

**JOAN M. HOFFMAN** (1994) Associate Professor of Spanish. BA, University

of Washington; MA, University of North Carolina-Chapel Hill; PhD, Indiana University.

**DIANE L. JOHNSON** (2004) Assistant Professor of Classical Studies. BA, MA, University of Washington; MA, Western Washington University; PhD, University of British Columbia.

**EDWARD OUSSELIN** (2001) Associate Professor of French. MBA, University of Kentucky; PhD, Ohio State University.

**MARÍA PAREDES-MÉNDEZ** (2002) Assistant 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) Associate 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.

**JOHN H. UNDERWOOD** (1988) Professor of Spanish. BA, Arizona State University; MS, Georgetown University; PhD, University of California-Los Angeles.

**EDWARD J. VAJDA** (1987) Professor of Russian and Linguistics. BA, Indiana University; MA, PhD, University of Washington.

**RUDOLF WEISS** (1970) Professor of German and Phonetics/Linguistics. BA, BAEd, Western Washington State College; MA, PhD, University of Colorado.

**JANET Z. XING** (1999), Professor of Chinese and Linguistics. BA, Shanxi University, China; MA, Western Michigan University; PhD, University of Michigan-Ann Arbor.

**MICHIKO YUSA** (1983) Professor of Japanese and East Asian Studies. BA, International Christian University, Tokyo; MA, C Phil, PhD, University of California-Santa Barbara.

## 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.

## BACHELOR OF ARTS

### *Language Major — French*

55 credits above the 100 level; GPA of 2.50 or above in major; maximum of 15 credits at the 200 level; FREN 425 is not applicable to major.

#### *Required Courses*

- FREN 301, 302
- FREN 314
- FREN 331 or 332
- Two of FREN 340, 341, 342
- FREN 385
- FREN 401 (must be taken on campus) and one other 400-level French course

### *Language Major — German*

55 credits above the 100 level; GPA of 2.50 or above in major; maximum of 15 credits at the 200 level; GERM 425 is not applicable to major.

#### *Required Courses*

- GERM 301 and 302
- GERM 306

- GERM 314
- GERM 331 or 332
- GERM 340
- GERM 341 or 343
- GERM 401 and 402 (must be taken on campus)
- GERM 450
- GERM 397 or 432

### Language Major — Japanese

55 credits above the 100 level; GPA of 2.50 or above in major; maximum of 15 credits at the 200 level; JAPN 280 is only applicable to the major for up to two credits. While not required, study abroad in Japan is strongly encouraged.

#### Required courses

- JAPN 201, 202, 203
- JAPN 280
- JAPN 301, 302, 303
- Two of JAPN 330a, 330b, 330c
- JAPN 350
- JAPN 401, 402, 403 (must be taken on campus)

#### Electives

- HIST 484, 485, 486
- LBRL 275
- PLSC 431
- ANTH 460
- A/HI 270
- EAST 368

### Language Major — Spanish

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

#### Requirements

- 55 credits above the 100 level; GPA of 2.50 or above in major; maximum of 15 credits at the 200 level; Spanish 425 is not applicable to major

#### Required Courses

- SPAN 301 and 302
- SPAN 314
- SPAN 331 or 332
- SPAN 340
- SPAN 351 or 352
- One of SPAN 450
- SPAN 401 and 402 (must be taken on campus)

### Double Language Major — French, German, Spanish

- 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)
- GPA of 2.50 or above in both languages
- 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

### Language Minor — Chinese, French, German, Russian or Spanish

- A minimum of 24 credits at the 200 level or above, to include *three courses* at 300 or 400 level in minor language; GPA of 2.50 or above in minor language; limit of 15 credits at 200 level; 425 is not applicable to minor

#### Required Courses

- FREN 301 and 302; GERM, RUSS or SPAN 301, 302; or CHIN 301, 302, 303

### Language Minor — Japanese

- 24 credits at the 200 level or above; GPA of 2.50 or above in Japanese; limit of 12 credits at 200 level.

#### Required courses

- JAPN 301, 302, 303 or 401

### Language Minor — Latin or Greek

- 12 credits above the 100 level; GPA of 2.50 or above in minor courses

### Minor — Classical Studies

- 27 credits; GPA of 2.50 or above in minor courses.

#### Required courses

- CLST 260, 270, 350
- Select 15 credits from CLST 450; HIST 312, 313, 410; PHIL 364; A/HI 220, 221; a maximum of one course from LAT 101 or 102 or 103 or GREK 101 or 102 or 103 may be used toward the 15 credits

### Minor — Eurasian Studies

25 credits

All EUS courses are taught in English.

- EUS 201, 210, 310 and at least 11 credits from the following: EAST 313, 314; HIST 287; ANTH 362; RUSS 201; EUS 450

### Minor — Linguistics

See the *Linguistics* section of this catalog.

### Minor — Latin American Studies

See the *History* section of this catalog.

## TEACHING ENDORSEMENT

This program 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 1) a part of the undergraduate BA degree, or as 2) a post-baccalaureate program, or as 3) 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. Courses required for a state teaching endorsement must be completed with a grade of C (2.0) or better.

Regulations for teaching endorsement are subject to change. For current requirements and for admission into the teaching endorsement program, contact the foreign language endorsement advisor.

## MODERN AND CLASSICAL LANGUAGES

### Major — French, German or Spanish with a Teaching Endorsement

Complete both A and B:

#### A. Language Component

GPA of 3.00 required in the language major.

#### B. Endorsement Requirements

- LANG 410, 420 and 430 (11 credits); GPA of 3.00 or above in endorsement courses.
- Be recommended by a faculty member in the major field
- Pass the departmental foreign language oral proficiency exam given during spring quarter

Students preparing teaching endorsements in two languages may do so by completing the “Double Major in Languages,” the oral proficiency exam in both languages, and LANG 410, 420 and 430 (11 credits total that will be applied to both languages).

#### 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.

## BACHELOR OF ARTS IN EDUCATION

### Major — French, German or Spanish — Elementary 45 credits

This major 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.

- 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)

## 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.

## COURSES IN FOREIGN LANGUAGES

**NOTE:** Not all courses are offered every year. See *Timetable of Classes* for current offerings. Consult department for specific questions.

Courses numbered 109, 209 are intended for languages offered less frequently.

### General Courses (LANG)

*Courses numbered X37; X97; 300, 400; 417, 445 are described on Page 34 of this catalog.*

#### 410 SECOND LANGUAGE ACQUISITION: THEORY (3)

Prereq: 6 credits in one modern foreign language beyond the second year; LING 201 or TESOL 401 recommended. 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 a language.

#### 420 SECOND LANGUAGE ACQUISITION: PRACTICE (5)

Prereq: 6 credits in one modern foreign language beyond the second year; LANG 410. 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.



**430 TEACHING PRACTICUM AT THE ELEMENTARY LEVEL (3)**

Prereq: LANG 420 and written permission of instructor; spring pre-registration through department. Course is offered only during the fall quarter. Supervised foreign language teaching to elementary school students. One-hour weekly seminar to discuss appropriate materials and teaching strategies. S/U grading.

For courses taught in translation, see *Classical Studies and EAST 367, 368*.

**Arabic (ARAB)****101, 102, 103 ELEMENTARY ARABIC (5 ea)**

To be taken in sequence. Fundamentals of speaking, reading, writing and understanding standard Arabic.

**Chinese (CHIN)****101, 102, 103 FIRST-YEAR CHINESE (5 ea)**

To be taken in sequence. Fundamentals of the modern standard language (Mandarin): pronunciation, grammar, aural comprehension, reading and speaking.

**201, 202, 203 SECOND-YEAR CHINESE (5 ea)**

Prereq: CHIN 103 or equivalent; 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).

**280 TRADITIONAL CHINESE CHARACTERS (2)**

Prereq: CHIN 101. 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.

**301, 302, 303 THIRD-YEAR CHINESE (4 ea)**

Prereq: CHIN 203; 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).

**330 CHINESE CULTURE THROUGH FILM AND LITERATURE (3)**

Prereq: CHIN 203 or permission of instructor. 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.

**360 BUSINESS CHINESE (3)**

Prereq: CHIN 203 or permission of instructor. 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.

**390 INTRODUCTION TO CHINESE LANGUAGE AND LINGUISTICS (4)**

An introduction to the phonology, morphology, syntax, lexicon and writing system of the Chinese language. Explores the relationship between language and society.

**Classical Studies (CLST)**

(The following courses require no knowledge of Latin or Greek as prerequisites.)

**117 THE ANCIENT LEGACY (5)**

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 will 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.

**260 MASTERWORKS OF ANCIENT GREEK LITERATURE (4)**

Survey of the major Greek texts — epic, dramatic and narrative — in translation with emphasis on those works which have shaped the classical tradition.

**270 LITERATURE OF ROME AND HER EMPIRE (4)**

Survey of the major literary monuments which serve to define the Roman character and the nature of the Roman Empire at its height.

**350 GREEK MYTHOLOGY (4)**

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.

**450 TOPICS IN CLASSICAL STUDIES (3-5)**

Prereq: CLST 260 or 270 or 350 or LBRL 121 or ENG 281. 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 no maximum.

**Eurasian Studies (EUS)**

The following courses are taught in English and have no prior language requirement.

**201 INTRODUCTION TO RUSSIAN CIVILIZATION (5)**

Survey of the history and culture of the Russian people from the earliest times to the present.

**210 NOMADS OF EURASIA (2)**

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.

**310 THE ORIGINS OF EUROPE (4)**

Prereq: EUS 201 or 210. 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.

**450 TOPICS IN EURASIAN STUDIES (3)**

Prereq: EUS 201 or 210 or permission of instructor. Variable topics in Eurasian studies, including folklore, linguistics, area studies. Repeatable to a maximum of 9 credits.

**French (FREN)****101, 102, 103 ELEMENTARY FRENCH (5 ea)**

To be taken in sequence. Fundamentals of speaking, reading, writing and understanding French.

**104 REVIEW OF ELEMENTARY FRENCH (5)**

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.

**201, 202, 203 INTERMEDIATE FRENCH (5 ea)**

Prereq: FREN 103 or 104 or equivalent; to be taken in sequence. Continuation of skill development begun in elementary French, with additional work in vocabulary acquisition and grammar.

**301 GRAMMAR REVIEW (4)**

Prereq: FREN 203 or equivalent. Study of language and structure, vocabulary building, use of reference tools and writing styles.

**302 WRITTEN EXPOSITION (3)**

Prereq: FREN 301. Practice in written expression of various kinds: résumés, analyses de texte, personal and formal correspondence as well as fiction.

**314 PHONETICS (4)**

Prereq: FREN 203 or equivalent. Emphasizes improvement of pronunciation, contrasts English and French pronunciations and teaches phonetic transcription.

**331 CIVILISATION ET CULTURE FRANÇAISES (4)**

Prereq: FREN 203 or equivalent. An introduction to the culture and civilization of France from historical and modern perspectives. Readings, discussions, films, oral and written assignments in French.

**332 CIVILISATION ET CULTURE DU QUÉBEC (3)**

Prereq: FREN 203 or equivalent. An introduction to Québec culture and civilization from historical and modern perspectives. Readings, discussions, films, oral and written assignments in French.

## MODERN AND CLASSICAL LANGUAGES

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### 340 INTRODUCTION TO FRENCH LITERATURE I (4)

Prereq: FREN 301 or equivalent. 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.

### 341 INTRODUCTION TO FRENCH LITERATURE II (4)

Prereq: FREN 301 (FREN 340 recommended). An introduction to literary analysis, *explication de texte* involving poetry, prose and drama from works of major authors of the 17th and 18th centuries.

### 342 INTRODUCTION TO FRENCH LITERATURE III (4)

Prereq: FREN 301 or equivalent. Introduction to literary analysis, *explication de texte* involving poetry, prose and drama from works of major authors of the 19th and 20th centuries.

### 385 CULTURE AND CONVERSATION (4)

Prereq: FREN 301 or equivalent. 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.

### 401 ELEMENTS DE STYLISTIQUE (3)

Prereq: FREN 302, 314. Extensive practice in writing and in analyzing grammatical, stylistic and textual forms.

### 402 FRENCH FOR BUSINESS (4)

Prereq: FREN 301 and two other 300-level courses. 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.

### 410 ECRITURE FÉMININE FRANCOPHONE (3)

Prereq: FREN 401 and one of the three literature courses (FREN 340, 341, 342). 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.

### 420 HISTOIRE DE LA LANGUE FRANÇAISE (3)

Prereq: FREN 401 and one of the three literature courses (FREN 340, 341, 342). A cultural and linguistic survey of the development of the French language from its origins to the present.

### 425 TEACHING-LEARNING PROCESSES IN ELEMENTARY FRENCH (2)

Prereq: written permission of department and two courses in upper-division French. Practicum in course preparation, classroom and language laboratory procedures, materials, evaluation and counseling. Repeatable. S/U grading.

### 440 ÉTUDE SOCIOLINGUISTIQUE (3)

Prereq: FREN 314, 401 and one of three literature survey courses. Discusses the historical and current developments of French. 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.

### 450 SEMINAR IN FRENCH STUDIES (3-5)

Prereq: FREN 401. Authors, genres, movements and period studies. Repeatable with different topics.

### 460 FRENCH CINEMA I AND II (4 ea)

Prereq: FREN 401 and one of the three literature courses (FREN 340, 341, 342). Part I: Historical overview of French cinema from 1895 to 1945. Part II: Historical overview of French cinema from 1945 to present.

## German (GERM)

### 101, 102, 103 ELEMENTARY GERMAN (5 ea)

To be taken in sequence. Fundamentals of the language: pronunciation, grammar, aural comprehension, reading and speaking.

### 104 REVIEW OF ELEMENTARY GERMAN (5)

Designed for students with two years of high school German or equivalent to prepare them for the intermediate level through review and de-

velopment of basic structure and vocabulary. Also for students needing a review of the first year.

### 201, 202, 203 INTERMEDIATE GERMAN (4 ea)

Prereq: GERM 103 or 104 or equivalent; to be taken in sequence. Review of the fundamentals, reading and conversation.

### 301, 302 GRAMMAR REVIEW AND COMPOSITION (4 ea)

Prereq: GERM 203 or equivalent; to be taken in sequence. Written and oral composition and grammar, and vocabulary building.

### 306 THIRD-YEAR CONVERSATION (3)

Prereq: GERM 302 or equivalent. Development of speaking skills in communicative situations. S/U grading.

### 314 PHONETICS (4)

Prereq: GERM 203. 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.

### 331 CIVILIZATION OF GERMANY THROUGH THE NINETEENTH CENTURY (4)

Prereq: GERM 301 or equivalent. Significant elements of German civilization presented through German texts.

### 332 GERMAN CIVILIZATION TODAY (4)

Prereq: GERM 301 or equivalent. Significant elements of German civilization. Repeatable under advisement to a maximum of 8 credits.

### 340 INTRODUCTION TO GERMAN LITERATURE (4)

Prereq: GERM 301. Selected works of major German authors, with emphasis on reading improvement and methods of textual interpretation.

### 341 NINETEENTH-CENTURY GERMAN LITERATURE (4)

Prereq: GERM 340. Emphasis on either Romanticism or Realism. Repeatable with different topics with no maximum.

### 343 EIGHTEENTH-CENTURY GERMAN LITERATURE (4)

Prereq: GERM 340. Classical period of German literature as reflected in a major work of Lessing, Goethe and Schiller.

### 401 ADVANCED GRAMMAR (4)

Prereq: GERM 302 or equivalent. Analysis of syntactical, semantic and stylistic problems in German.

### 402 ADVANCED GRAMMAR AND COMPOSITION (4)

Prereq: GERM 302 or equivalent. It is recommended to take 401 before 402. Analysis of syntactical, semantic and stylistic problems in German. Extensive practice in composition.

### 406 FLUENCY THROUGH DRAMATIZATION (4)

Prereq: GERM 302. 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.

### 425 TEACHING-LEARNING PROCESS IN ELEMENTARY GERMAN (2)

Prereq: written permission of department and 6 credits in upper-division German. Practicum in preparation, implementation and evaluation of instructional materials. Repeatable with no maximum. S/U grading.

### 432 CONTEMPORARY GERMAN CULTURE (4)

Prereq: GERM 340 and departmental advisement. Analysis of important trends and current events in the German-speaking countries presented through various texts and media.

### 450 STUDIES IN GERMAN LITERATURE (4)

Prereq: GERM 302 and 340. Major authors and movements. Repeatable with different topics with no maximum.

## Greek (GREK)

### 101, 102, 103 ELEMENTARY GREEK (5 ea)

Each course prerequisite to the next. Fundamentals of ancient Greek gram-

mar designed primarily to provide an elementary reading knowledge; selected readings from various Greek writers.

### 201, 202 INTERMEDIATE GREEK (4 ea)

Prereq: GREK 103 or equivalent; 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.

### 350 ADVANCED READINGS (4)

Prereq: GREK 202. 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.

### 401 GREEK EPIC (4)

Prereq: GREK 202. Selected readings in Homer's *Iliad* and Hesiod's *Works and Days*. Repeatable to a maximum of 8 credits.

## Italian (ITAL)

### 101 FIRST-YEAR ITALIAN (5)

Fundamentals of the language: pronunciation, grammar, aural comprehension, reading and speaking.

## Japanese (JAPN)

### 101, 102, 103 FIRST-YEAR JAPANESE (5 ea)

To be taken in sequence. 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.

### 104 REVIEW OF ELEMENTARY JAPANESE (5)

Prereq: two years of high school Japanese; proficiency in hiragana, katakana, and 150 basic Kanji. Designed for students with two years of 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.

### 201, 202, 203 SECOND-YEAR JAPANESE (4 ea)

Prereq: JAPN 103 or equivalent; to be taken in sequence. 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.

### 280 KANJI (2)

Acquisition of 50 kanji per week by way of associative method. Repeatable to 10 credits. S/U grading; not applicable to the minor.

### 301, 302, 303 THIRD-YEAR JAPANESE (4 ea)

Prereq: JAPN 203 or equivalent; to be taken in sequence. 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.

### 330a JAPANESE CULTURE THROUGH FILM, MODERN (2)

Prereq: JAPN 203 or written permission of instructor. Discussion of Japanese culture seen through Japanese films. Topics of discussion involve Japanese psychology, mentality, customs, society and history.

### 330b JAPANESE CULTURE THROUGH FILM, CLASSIC (2)

Prereq: JAPN 203 or written permission of instructor. Discussion of Japanese culture seen through classical Japanese films. Topics of discussion involve Japanese psychology, mentality, customs, society, religion and history.

### 330c JAPANESE CULTURE THROUGH FILM, LITERATURE (2)

Prereq: JAPN 203 or written permission of instructor. Discussion of Japanese culture seen through films based on literature. Topics of discussion involve Japanese psychology, mentality, customs, society, religion and history.

### 350 JAPANESE CULTURE, HISTORY AND SOCIETY (3)

Prereq: JAPN 203; required for majors, others may enroll with permission of instructor if space permits. Survey course covering 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. Course content varies with instructor.

### 401 ADVANCED JAPANESE (4)

Prereq: JAPN 303. Emphasis on well-rounded development of reading, writing, listening and speaking abilities; target the advanced materials.

### 402 TOPICS IN JAPANESE LITERATURE (4)

Prereq: JAPN 401 or equivalent; required for majors. Introduces advanced reading materials in Japanese literature, according to the class discussion schedule. Seminar topics vary with instructor. Repeatable to a maximum of 8 credits.

### 403 TOPICS IN JAPANESE THOUGHT (4)

Prereq: JAPN 402 or equivalent; required for majors. Introduces students to advanced materials in Japanese thought, according to the class discussion schedule. Seminar topics vary with instructor. Repeatable to a maximum of 8 credits.

### 425 TEACHING-LEARNING PROCESS IN ELEMENTARY JAPANESE (2)

Prereq: written permission of department; JAPN 303 with B or better. Practicum in course preparation, classroom materials, evaluation and counseling. Repeatable. S/U grading.

## Latin (LAT)

### 101,102, 103 ELEMENTARY LATIN (5 ea)

Each course prerequisite to the next course. Fundamentals of grammar to provide a reading knowledge; selected readings from various Roman writers.

### 201, 202 INTERMEDIATE LATIN (4 ea)

Prereq: LAT 103 or two years high school Latin; to be taken in sequence. Review of fundamentals; selected readings from various Roman writers; introduction to Latin civilization.

### 350 ADVANCED READINGS (4)

Prereq: LAT 202. Selected readings from Latin authors with an emphasis on honing grammatical skills and deepening one's understanding of Roman literary and cultural achievements. Repeatable with different topics.

### 401 VERGIL (4)

Prereq: LAT 202. Selected readings in Vergil's *Aeneid* and *Bucolics*. Repeatable to a maximum of 8 credits.

## Portuguese (PORT)

### 105 INTENSIVE PORTUGUESE FOR SPEAKERS OF SPANISH (5)

An accelerated course for students with one year of college-level Spanish or equivalent, designed to introduce them to the fundamentals of the language: pronunciation, grammar, aural comprehension, reading and speaking.

## Russian (RUSS)

### 101, 102, 103 ELEMENTARY RUSSIAN (4 ea)

To be taken in sequence. Fundamentals of the language: pronunciation, grammar, aural comprehension, reading and speaking.

### 201, 202, 203 INTERMEDIATE RUSSIAN (4 ea)

Prereq: RUSS 103 or equivalent; to be taken in sequence. Review of fundamentals: speaking, reading, writing and understanding.

### 214 RUSSIAN PHONETICS (2)

Prereq: RUSS 101. Systematic practical and theoretical introduction to the Russian sound system.

### 301 THIRD-YEAR COMPOSITION (3)

Prereq: RUSS 203 or equivalent. Written and oral expression, advanced grammar, and vocabulary building.

### 302 THIRD-YEAR COMPOSITION (3)

Prereq: RUSS 301 or equivalent. Written and oral expression, advanced grammar and vocabulary building.

### 314 RUSSIAN SYNTAX (2)

Prereq: RUSS 201. Systematic survey of Russian declension, conjugation and sentence structure.

## MODERN AND CLASSICAL LANGUAGES

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### 330 CIVILIZATION OF RUSSIA (3)

Prereq: RUSS 201, 202 and 203; or equivalent. Significant elements of Russian civilization presented through Russian texts.

## Spanish (SPAN)

### 101, 102, 103 ELEMENTARY SPANISH (5 ea)

To be taken in sequence. Fundamentals of the language: pronunciation, grammar, aural comprehension, reading and speaking.

### 104 REVIEW OF ELEMENTARY SPANISH (5)

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.

### 201, 202, 203 INTERMEDIATE SPANISH (5 ea)

Prereq: SPAN 103 or 104 or equivalent; to be taken in sequence. Review of fundamentals: understanding, speaking, reading and writing.

### 301, 302 GRAMMAR REVIEW AND COMPOSITION (4 ea)

Prereq: SPAN 203 or equivalent; to be taken in sequence. Language development, including written composition, vocabulary building, analysis of grammatical problems and discussion of selected Spanish texts.

### 305 THIRD-YEAR CONVERSATION (3)

Prereq: SPAN 203 or equivalent. Development of speaking skills in communicative situations. S/U grading.

### 314 PHONETICS (4)

Prereq: SPAN 301 or equivalent. Improvement of student pronunciation, familiarization with phonetic transcription and description of Spanish sounds.

### 331 CULTURE OF SPAIN (3)

Prereq: SPAN 301 or equivalent. Survey of Spanish culture.

### 332 CULTURE OF LATIN AMERICA (3)

Prereq: SPAN 301 or equivalent. Survey of Latin American culture.

### 333 SPANISH FOR BUSINESS (4)

Provides students with the *practical and cultural knowledge* necessary for work in the Spanish-speaking business world. Emphasis on business customs and practice, with considerable vocabulary exposure.

### 340 INTRODUCTION TO HISPANIC LITERATURE (3)

Prereq: SPAN 302 or equivalent. Selected works of major Hispanic authors, with emphasis on reading improvement and methods of textual interpretation.

### 351 SURVEY OF THE LITERATURE OF SPAIN (4)

Prereq: SPAN 340. Historical survey of ten centuries of Spanish (Peninsular) literature.

### 352 SURVEY OF THE LITERATURE OF LATIN AMERICA (4)

Prereq: SPAN 340. Historical survey of Latin American literature from the pre-Hispanic period until the present.

### 401 ADVANCED GRAMMAR (4)

Prereq: SPAN 302 or equivalent. Analysis of special problems in Spanish syntax.

### 402 ADVANCED COMPOSITION (4)

Prereq: SPAN 401 or equivalent. Composition and stylistics; analysis of textual examples of style and organization.

### 405 FOURTH-YEAR CONVERSATION (3)

Prereq: SPAN 302 or equivalent. Advanced speaking practice in communicative situations. S/U grading.

### 425 TEACHING-LEARNING PROCESSES IN ELEMENTARY SPANISH (2)

Prereq: written permission of department and two courses in upper-division Spanish. Practicum in teaching Spanish. Repeatable. S/U grading.

### 440 STUDIES IN HISPANIC LINGUISTICS (3-5)

Prereq: SPAN 314 or LING 201. 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.

### 450 STUDIES IN HISPANIC LITERATURE (3-5)

Prereq: SPAN 351 or 352. Major authors and movements. Repeatable with various topics with no maximum.



# PHILOSOPHY

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.

## PHILOSOPHY 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) Assistant Professor. BA, PhD, Rutgers University.

**DENNIS WHITCOMB** (2007) Assistant Professor. BS, Kansas State University; PhD, Rutgers University.

## BACHELOR OF ARTS

### Major — Philosophy

58 credits

- PHIL 102, 112, 114, 202, 310, 320, 330, 364, 366, 367, 410, 417, 420, 430

- Three courses from PHIL 335, 340, 355, 368, 403, 425
- Electives under departmental advisement

### Combined Major — Politics/Philosophy/Economics 83-84 credits

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.

- ECON 206, 207, 303, 310
- 12 additional upper-division economics credits
- PLSC 250, 261
- One course from each group:
  - PLSC 291 or 271
  - PLSC 427
  - PLSC 345 or 346 or 347
  - PLSC 462 or 463 or 469
- PHIL 102, 112, 114, 310, 320, 350, 360, 364, 420
- One communications focus course must be taken

### Minor — Philosophy

24 credits

- PHIL 102, 112, 114
- One course from PHIL 364, 366, 367, 368
- Two courses from PHIL 310, 320, 330
- Electives under departmental advisement

## COURSES IN PHILOSOPHY (PHIL)

*Courses numbered X37; X97; 300, 400; 417, 445 are described on page 34 of this catalog.*

### 102 INTRODUCTION TO LOGIC (3)

The development of a formal system of propositional and predicate logic for the evaluation of reasoning.

### 107 LOGICAL THINKING (3)

An aid to 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.

*The following three courses are all introductory philosophy courses. They are not sequential and none of them presupposes any of the others.*

### 112 INTRODUCTION TO PHILOSOPHY: MORAL ISSUES (3)

Introduction to philosophical thinking about moral problems. Seeks to understand central moral concepts such as good, right, duty, et cetera, in the context of contemporary issues.

### 113 INTRODUCTION TO PHILOSOPHY: PHILOSOPHY OF RELIGION (3)

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, et cetera.

### 114 INTRODUCTION TO PHILOSOPHY: KNOWLEDGE AND REALITY (3)

Emphasis is given to the nature and possibility of knowledge, to related concepts such as truth, belief and evidence, and to selected metaphysical problems.

### 202 INTERMEDIATE LOGIC (4)

Prereq: PHIL 102. 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.

### 310 THEORY OF KNOWLEDGE I (3)

Prereq: PHIL 102, 114. The attempt to understand the possibility, nature, origins and limits of knowledge; problems and concepts.

## PHILOSOPHY

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### 320 ETHICAL THEORY I (3)

Prereq: PHIL 112 or permission of instructor. 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.

### 330 METAPHYSICS I (3)

Prereq: PHIL 102 and either 113 or 114. 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.

### 335 PHILOSOPHY OF RELIGION (3)

Prereq: PHIL 102, 113. 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.

### 340 PHILOSOPHY OF SCIENCE (3)

Prereq: PHIL 102 and 114 or permission of instructor. 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.

### 350 POLITICAL PHILOSOPHY (3)

Prereq: one course in 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.

### 355 AESTHETICS AND THE PHILOSOPHY OF ART (3)

Prereq: one course in philosophy. 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.

### 360 SOCIETY, LAW AND MORALITY (3)

Prereq: one course in philosophy. Concepts and principles involved in analysis and appraisal of social institutions with attention to freedom, rights, justice, and the relation between laws and morality.

### 364 HISTORY OF PHILOSOPHY: ANCIENT PHILOSOPHY (3)

Prereq: one course in philosophy. Great philosophical thinkers from the pre-Socratic philosophers to the Hellenistic period; special attention to Plato and Aristotle.

### 366 HISTORY OF PHILOSOPHY: THE RATIONALISTS (3)

Prereq: PHIL 114. Great philosophical thinkers in the rationalist tradition, their problems and their methods: Descartes, Spinoza, Leibniz, et al.

### 367 HISTORY OF PHILOSOPHY: THE EMPIRICISTS (3)

Prereq: PHIL 114. Great philosophical thinkers in the empiricist tradition, their problems and their methods: Locke, Berkeley, Hume, et al.

### 368 HISTORY OF PHILOSOPHY: KANT AND POST-KANTIAN PHILOSOPHY (3)

Prereq: PHIL 114. Kant and post-Kantian philosophers, their problems and their methods: Kant, Fichte, Hegel, Schopenhauer, Nietzsche. Normally offered in odd-numbered academic years.

### 403 PHILOSOPHY OF LANGUAGE (3)

Prereq: PHIL 202. 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.

### 410 THEORY OF KNOWLEDGE II (3)

Prereq: PHIL 310. An intensive examination of selected topics and methods in epistemology. Normally offered in even-numbered academic years.

### 417 SEMINAR IN PHILOSOPHY (3)

Prereq: Three upper-division philosophy courses. Examination of a special topic, a particular philosophical issue or the writings of a specific philosopher. Repeatable for credit, but not as a substitute for PHIL 303 or 425.

### 420 ETHICAL THEORY II (3)

Prereq: PHIL 320. An intensive examination of selected topics and methods in ethical theory. Normally offered in odd-numbered academic years.

### 425 PHILOSOPHY OF MIND (3)

Prereq: PHIL 102 and one upper-division philosophy course. 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.

### 430 METAPHYSICS II (3)

Prereq: PHIL 330. 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 in an odd- or even-numbered calendar year.

# PHYSICAL EDUCATION, HEALTH AND RECREATION

The Department of Physical Education, Health and Recreation offers degree programs for students interested in professions related to exercise and sport science, 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 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, the exercise sciences, 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

### *Physical Education*

The major programs are varied and include undergraduate and graduate student preparation for careers as professional physical and health educators, exercise science specialists, 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
- Exercise and Sport Science
  - Fitness Science
  - Health and Fitness Specialist
  - Pre-Healthcare Professions
  - Pre-Physical Therapy
  - Sport Psychology

### PHYSICAL EDUCATION MID-PROGRAM CHECKPOINT

Students seeking to complete a BA degree in teacher education P-12 physical education and health or a BS in exercise and sport science 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 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 exercise and sport science 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. Kathleen Knutzen, Dr. Gordon Chalmers, or Dr. Brandi Row (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 to fulfill the requirements of the American College of Sports Medicine (ACSM) University Connection program. The ACSM University Connection Endorsement Program is 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.

### *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

## PHYSICAL EDUCATION, HEALTH AND RECREATION

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 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) during their sophomore year 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, 151, 152, 330 or 345, 350
- BIOL 348, 349
- CHEM 115 and 251

### 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.

## FACULTY

**LEANN MARTIN** (1991) Chair and Professor. BS, Southwest Missouri State University; MS, University of Arizona; PhD, University of Texas.

**RANDALL T. BURTZ** (2003) Assistant Professor. BA, MA, Washington State University; PhD, Colorado State University.

**LORRAINE BRILLA** (1985) Professor. BS, Pennsylvania State University; MS, Pennsylvania State University; PhD, University of Oregon.

**DENNIS CAINE** (1992) Professor. BPE, BEd, University of Manitoba; MEd, University of British Columbia; Graduate Certificate in Gerontology, PhD, University of Oregon.

**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) Lecturer. 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.

**KATHLEEN KNUTZEN** (1977) Professor. BA, MA, Western Washington State College; PhD, University of Oregon.

**DERRICK MEARS** (2005) Assistant Professor. BS, MS, Central Missouri State University; PhD, University of Arkansas.

**JAMES E. MOORE** (1977) Associate Professor. BA, University of Oregon; MA, Antioch University; MEd, PhD, Oregon State University.

**BRANDI ROW** (2006) Assistant Professor. BA, Willamette University; MS, University of Oregon; PhD, Pennsylvania State University.

**CHARLES D. SYLVESTER** (1984) Professor. BS, MA, University of Maryland; 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.

**MARY HAWK** (1990) Health Education. BS, University of Alberta; MEd, Western Washington University.

**DEBORAH HENRICH** (2000) Lecturer. BA, MS, Western Washington University.

**BRAD JACKSON** (1985) Head Coach, Men's Basketball. BA, Washington State University; MA, Seattle Pacific University.

**JENNIFER LEITA** (2003) Lecturer. BS, MS, Western Washington University.

**MARTIN MULHOLLAND** (1993) Lecturer. Student Teacher Supervisor. BEd, Exeter University; MSc, University of Oregon.

**ROBIN ROSS** (2006) Head Coach, Football. BS, Washington State University.

**REBECCA SCHINDLER** (2001) Instructor. BS, Northern Illinois University; MEd, Western Washington University.

## PHYSICAL EDUCATION

### BACHELOR OF SCIENCE

#### *Major — Exercise and Sport Science*

86-106 credits

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 and human growth and motor development. Supporting courses from biology, chemistry, computer science, 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.

#### *Major Requirements*

52-61 credits

- Core Foundation Courses: 12 credits
  - PE 301, BIOL 348, PE 422
- Professional Activities: 8 credits
  - PE 101 or 102, 103, 113, 302
  - Select PE 109 (2) or 110 (2), or two courses from 104, 120, 122, 123, 132, 134, 136, 139, 154, 157, 165, 167, 168, 169, 170, 175, 177
- Exercise Science Foundations: 23 credits
  - PE 306, 308 or 309, 311, 312, 410, 413



- Behavioral and Cultural Foundations: 3 credits
  - Select 3 credits from PE 320, 321, 323
- Field Experience: (PE 490, 491 or 492; 6 credits)  
or
- Field Experience (PE 490, 491 or 492; 3 credits) and Sport Science Research (PE 493; 3 credits)  
or
- Field Experience (PE 490, 491 or 492; 3 credits) and Exercise Instructional Assistant (PE 494, 3 credits)  
or
- Internship I and II (PE 471, 3 credits; and PE 472, 12 credits)

#### Specializations (select one)

##### A. Fitness Science

35 credits

The fitness science 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.)

- Select from the following: BIOL 349; CHEM 115, 121, 122, 123, 251, 375; PHYS 114, 115, 116; CSCI 101, 140; HLED 345, 350, 435; PE 304, PE 307 or MATH 240; PE 308 or 309, 414 and 415

##### B. Pre-Physical Therapy

45-53 credits

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.

- BIOL 204, 205, 206, 297a, 349; CHEM 121, 122, 123, 251; CSCI 101, 140; ENG 302; HLED 345, 435; PE 307 or MATH 240; PE 414 or HLED 350; PHYS 114, 115, 116; PSY 101, 230, 250

##### C. Health and Fitness Specialist

35 credits

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, commercial or community settings where their clients participate in health promotion and fitness-related activities.

**Required courses** (14 credits for option, 21 elective credits)

- PE 304, 309, 414, 415 [14 credits]
- PE 109, 308, 320 (must be taken in the core course set) [8 credits]
- Elective courses: Select 21 credits from the Fitness Science option (see advisor for selection of courses)

##### D. Sport Psychology

34-36 credits

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. PE 320, 321, and 410 are required and must be taken as part of the core requirements in the major.

#### Requirements — Core Courses

- PE 320, 321, 410, 420; PSY 101, 210, 230, 240, 250

#### Electives

- Select one course under advisement from PSY 119, 220, 332, 370

##### E. Pre-Healthcare Professions (OT, PA, Nursing, Chiropractic)

45-53 credits

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, biomechanics, or exercise physiology. Students should select 53 credits or 45 credits if they complete the internship option.

- ANTH 201, 215; BIOL 204, 205, 206, 297a, 349; CHEM 115, 121, 122, 123, 251, 351, 352, 353, 354, 355, 375; CSCI 101; ENG 302; HLED 345, 435; PE 307 or MATH 240; PE 414 or HLED 350, PHYS 101, 114, 115, 116; PSY 101, 230, 250

#### Minor — Sport Psychology

30 credits

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.

#### Requirements

- PE 320, 321, 420; PSY 101

#### Electives

- Select 16 credits under advisement from PSY 119, 210, 220, 230, 240, 250, 332

Physical education majors cannot use PE 320 and 321 for both major and minor requirements and must select replacement courses from psychology electives.

Psychology majors cannot use PSY 210-250 for both major and minor requirements.

## BACHELOR OF ARTS IN EDUCATION

### Major — Physical Education and Health — P-12

138 credits including courses in secondary education, educational foundations, instructional technology, educational psychology, and student teaching internship.

This major must be accompanied by the professional preparation program in secondary education and leads to an endorsement in health and fitness. See the *Secondary Education*

## PHYSICAL EDUCATION, HEALTH AND RECREATION

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section of this catalog for program admission, completion, and teacher certification requirements.

This major provides concentrated study of physical education and health. Completion of the requirements leads to teacher certification in P-12 physical education and health (fitness and health). Courses required for a state teaching endorsement must be completed with a grade of C (2.0) or higher. 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 developing teaching techniques while working with children and young people in educational settings. Ongoing video analysis of teaching effectiveness is incorporated throughout the blocks. The health component of the program includes 17 required credits that can be taken either during the academic year or summer session.

*The program is popular, and the number of students admitted into the program is limited.*

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 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 PE 301, 308, 340 and BIOL 348 fall quarter. **NOTE:** PE 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 no later than the third Monday of fall quarter. 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 the main office of the PEHR department and should be read *very* carefully).
- Successful completion (grade C or better) of BIOL 348, PE 301, 308, 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 judged accordingly. Criteria may include an oral presentation and interview.

### Program of Study

#### Health Education Courses

17 credits

- HLED 150, 151, 152, 345, 455; PE 414 or HLED 350

#### Core Foundation Courses

(12 credits):

- PE 301, 422; BIOL 348

Pedagogy (34 credits):

- PE 340, 341, 341p, 440, 440p, 441, 441p, 442p, 443

Exercise and Sport Science (20 credits):

- PE 308, 311, 312, 410, 413

Behavioral and Cultural Foundations (6 credits):

- PE 320 and one of the following: PE 321, 323

Education and Psychology Courses (54 credits):

- SEC 410, 411, 425, 432, 495; IT 344, 444
- EDUC 301, 302, 310

#### Recommended First Year of Study

- Fall:* PE 301, BIOL 348, PE 340 (Block I: Elementary PE), PE 308
- Accepted into the PE and health program
- Winter:* PE 341 (Block II: Elementary PE), PE 312, SEC 410, 425, EDUC 301/302
- Spring:* PE 341 p (Elementary Practicum), PE 443 and 413, EDUC 310, IT 344

For a suggested sequence of courses for the second and third year of the program, please contact the assigned advisor. Students who have all their prerequisites and are accepted into the program can expect to finish the program and their student teaching within three years.

Students add health classes to their schedule as they see fit and/or may need to attend summer session to fulfill this component.

Courses required for a state teaching endorsement must be completed with a grade of C (2.0) or better.

## HEALTH EDUCATION

### BACHELOR OF SCIENCE

#### Major — Community Health

101 credits

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 OF MAJOR

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; completion of one of the following courses: HLED 150, 151, 152; 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

## PHYSICAL EDUCATION, HEALTH AND RECREATION

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.

### Program of Study

#### Health Education Core

66 credits

- HLED 150, 151, 152
- HLED 330 or 345, 350
- HLED 407, 410, 420, 432, 447, 450, 460, 465, 471 and 472, or 473 (internship)

#### Supporting Required Courses

25 credits

- CHEM 115 and 251
- BIOL 348 and 349
- PE 413

#### 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, 333, 338, 340, 380
- ANTH 353, 424
- COMM 224
- HLED 435
- JOUR 330
- PSY 230, 240
- PE 414, 415
- ENG 302

Substitutions may be made with approval of the student's advisor.

**NOTE:** Program prepares students for the Certified Health Education Specialist (CHES) exam.

#### Exit Requirement

- Standard First Aid/CPR certification

### Minor — Health Promotion

28 credits

Students interested in the Health Promotion minor must complete BIOL 348 before applying. Minors follow the same guidelines as majors when applying and will be accepted on a space available basis, depending on the number of majors enrolled in senior-level classes. Students are advised to check prerequisites for the courses listed below.

- HLED 345, 350, 407, 410, 447; BIOL 348 and 349

## RECREATION

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 schedule below.

	Fall	Winter	Spring	Summer
Fresh				
Soph			I	
Junior		II	III	or III
Senior	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.

The recreation program emphasizes preparation in the broad areas of outdoor recreation, community recreation, therapeutic recreation, and tourism. Community and outdoor recreation graduates have been successful in finding 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.

The deadline for completing all aspects of the application process is fall quarter, *the Friday before Thanksgiving*. 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. The program is popular and the number of majors admitted is limited. A minor in recreation is not offered presently.

## BACHELOR OF ARTS

### Major — Recreation

66 credits

- Prereq: RECR 201
- Phase I: RECR 271, 272, 274, 275, 276
- Phase II: RECR 372, 373, 378 plus 1 of 4: RECR 370, 376, 379, 385
- Phase III: RECR 471 and 472, or 473
- Phase IV: RECR 444, 450, 480 plus 1 of 5: RECR 421, 470, 475, 476, 479

RECR 380 is required for the therapeutic recreation option and is offered fall quarter each year.

#### Support Area

Recreation majors must develop a 25-credit support area. Support areas may range from traditional minors (in 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.

## GRADUATE STUDY

For a concentration leading to the Master of Science degree, see the *Graduate School* section of this catalog.

## PHYSICAL EDUCATION, HEALTH AND RECREATION

### COURSES IN PHYSICAL EDUCATION (PE)

Courses numbered X37; X97; 300, 400; 417, 445 are described on page 31 of this catalog.

#### Developmental 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. Any student who fails to attend the first meeting may be required to drop the class if another student previously unable to register due to enrollment limitations seeks admission. For courses numbered 169 or below, a \$13.58 fee is required upon registration, unless otherwise noted.

Beginning courses, or equivalent, are prerequisite to intermediate courses, which are in turn prerequisite to advanced courses in any given activity.

#### 101-110 DEVELOPMENTAL (1 ea unless otherwise noted)

101 BEGINNING CONDITIONING

102 BEGINNING GROUP FITNESS

103 BEGINNING JOGGING

104 BEGINNING HATHA YOGA

Fee: \$23.58.

105 CHALLENGE FACILITATION I (2)

An overview of the theory and application of adventure-based programming. Introduces students to safety practices, goal setting, framing and debriefing both group and individual challenge activities. Students will practice leading others in challenge learning activities. Fee: \$65.

108 BEGINNING WEIGHT TRAINING

109 GROUP FITNESS INSTRUCTOR TRAINING (2)

Prereq: PE major status. Instruction leading to qualification for the American Council on Exercise (ACE) Group Fitness Instructor Certification Exam. Fee: \$63.58.

110 100-LEVEL PHYSICAL ACTIVITY INSTRUCTOR TRAINING (2)

Prereq: Exercise and Sport Science major. Develop and refine planning, organization, management and assessment skills by teaching in the 100-level physical activity program. Can be applied only once toward PE "professional" activities requirements.

111-119 AQUATICS (1 ea unless otherwise noted)

112 BEGINNING SWIMMING (for nonswimmers)

113 INTERMEDIATE SWIMMING

114 ADVANCED SWIMMING

Prereq: PE 113.

116 LIFEGUARD TRAINING — NEW METHOD (2)

Prereq: advanced swimming test first day of class. Instruction leading to qualification for the American Red Cross Lifeguard Training Certification. Fee: \$73.58.

120-129 DANCE (1 ea)

(See *Dance Program* for additional dance offerings.)

120 BEGINNING SOCIAL DANCE

122 BEGINNING FOLK AND COUNTRY DANCE

123 BEGINNING SCOTTISH COUNTRY DANCING

124 INTERMEDIATE SCOTTISH COUNTRY DANCE

Prereq: PE 123.

#### 130-139 DUAL SPORTS (1 ea)

132 BEGINNING BADMINTON

133 INTERMEDIATE BADMINTON

Prereq: PE 132.

134 BEGINNING PICKLEBALL

136 BEGINNING TENNIS

137 INTERMEDIATE TENNIS

Prereq: PE 136

139 BEGINNING RACQUETBALL

The student furnishes some equipment for PE 132, 133, 136, 137, 139, 148.

#### 140-149 TEAM SPORTS (1 ea)

142m BEGINNING MEN'S BASKETBALL

142w BEGINNING WOMEN'S BASKETBALL

144 BEGINNING SOCCER

145 BEGINNING VOLLEYBALL

148 BEGINNING LACROSSE

The student furnishes some safety equipment for PE 148.

149 BEGINNING ULTIMATE FRISBEE

#### 150-179 INDIVIDUAL SPORTS (1 ea unless otherwise noted)

154 BEGINNING GOLF

Does not include transportation. Fee: \$65.03.

157 BEGINNING SKIING

Fee: \$191.33.

158 INTERMEDIATE SKIING

Fee: \$191.33.

159 ADVANCED SKIING

Fee: \$191.33.

165 BEGINNING HANDBALL (four-wall handball)

166 INTERMEDIATE HANDBALL (four-wall handball)

Prereq: PE 165.

167 BEGINNING MOUNTAIN BICYCLING

168 BEGINNING MARTIAL ARTS

Fee: \$23.58.

169 BEGINNING SELF-DEFENSE

Fee: \$23.58.

170 SAILING

Prereq: swim test first day. Fee: \$44.33.

171 SAILBOAT RACING I

Prereq: basic skippering skills. Fee: \$44.33.

172 SAILBOAT RACING II

Prereq: PE 171 or one year racing experience skippering. Fee: \$44.33.

173 SAILING INSTRUCTOR TRAINING (3)

Prereq: basic skippering skills. Successful completion of the course and additional fees required for Level 1 U.S. Sailing Association instructor certification. Fee: \$44.33.

174 SAILBOAT RACING INSTRUCTOR TRAINING (2)

Prereq: PE 173 or written permission of instructor. Successful completion of the course and additional fees required for Level 2 U.S. Sailing Association instructor certification. Fee: \$44.33.

175 WINDSURFING

Prereq: swim test first day. Fee: \$44.33.

176 WINDSURFING INSTRUCTOR TRAINING (3)

Prereq: basic windsurfing skills. Successful completion of the course and additional fees required for U.S. Sailing Association windsurfing instructor certification. Fee: \$44.33.

177 KAYAK TOURING

Prereq: swim test first day. Fee: \$44.33.

178 BEGINNING SALTWATER KEEL BOAT SAILING



Prereq: basic skipping skills. Fee: \$122.99.

179 INTERMEDIATE SAILING

Prereq: basic skipping skills. Fee: \$44.33.

The student enrolling in 157, 158, 159, 170, 171, 172, 173, 174, 175, 176, 177 and 178 pays cost of transportation and individual instruction. Students in 154, 157, 158, 159, 165, 166 and 167 also furnish own equipment.

### 180-194 INTERCOLLEGIATE SPORTS (2 ea)

Courses below repeatable to a maximum of 10 credits.

180 INTERCOLLEGIATE FOOTBALL

181 INTERCOLLEGIATE BASKETBALL

183 INTERCOLLEGIATE TRACK AND FIELD

185 INTERCOLLEGIATE GOLF

186 INTERCOLLEGIATE TENNIS

189 INTERCOLLEGIATE CROSS COUNTRY

190 WOMEN'S INTERCOLLEGIATE ROWING

192 INTERCOLLEGIATE VOLLEYBALL

193 INTERCOLLEGIATE SOCCER

194 INTERCOLLEGIATE SOFTBALL

## Professional Courses

### 201 PERSPECTIVES OF HUMAN LIFESTYLE AND WELLNESS (3)

Prereq: sophomore status or permission of instructor. Overview and analysis of the role and place lifestyle and wellness play in society (past, present and future). Issues in health, fitness and leisure.

### 280 COACHING PRACTICUM — BASKETBALL (2)

Prereq: permission of instructor. 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.

### 281 COACHING PRACTICUM — VOLLEYBALL (2)

Prereq: permission of instructor. 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.

### 282 COACHING PRACTICUM — FOOTBALL (2)

Prereq: permission of instructor. 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.

### 301 SURVEY OF PHYSICAL EDUCATION AND HEALTH (3)

Pre- or co-req: BIOL 348 or permission of instructor. Must be taken first two quarters in the program. Library research methods, career orientation, professional readiness, historical perspectives, and current issues in physical education and health.

### 302 PRINCIPLES OF CONDITIONING AND STRENGTH TRAINING (3)

Prereq: PE 301, BIOL 348; or DNC 236. Theoretical and practical background regarding strength training and aerobic/anaerobic activities.

### 304 PREVENTION AND CARE OF ATHLETIC INJURIES (3)

Prereq: PE 301, BIOL 348; or DNC 236. Overview of current information on the care and prevention, and immediate care, of common sports injuries.

### 306 MEASUREMENT AND EVALUATION IN PHYSICAL EDUCATION (3)

Pre- or co-req: PE 301. Application of the theory of measurement, evaluation and appropriate statistical processes to physical education programs; practical experiences involving test selection, administration and evaluation and interpretation of results in public school or fitness settings.

### 307 STATISTICS IN EXERCISE AND SPORT SCIENCE (3)

Prereq: PE 301, 306 or permission of instructor. Statistical techniques utilized in the exercise and sport science fields.

### 308 HUMAN GROWTH AND MOTOR DEVELOPMENT (3)

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.

### 309 PHYSICAL DIMENSIONS OF AGING (3)

Pre- or co-req: PE 301 or permission of instructor. 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.

### 311 BIOMECHANICS (4)

Pre- or co-req: PE 301; completion of math GURs. Application of basic mechanical principles to movement. Motion fundamentals, kinetics, kinematics, aerodynamics, hydrodynamics, equilibrium and external forces, rebound and ospin, two-dimensional analysis, and the body as a machine; lab work is included.

### 312 KINESIOLOGY (5)

Prereq: PE 301 and BIOL 348. Important muscles of the body; origin, insertion and action; principles of human movement; performance analysis of basic locomotor movements, daily living activities and sports skills; lab work included.

### 320 PSYCHOLOGY OF SPORT (3)

Prereq: PE 301 or permission of instructor. Psychological principles and states which are present in sporting activities, both at recreational and highly competitive levels.

### 321 SOCIOLOGY OF SPORT (3)

Prereq: PE 301 or permission of instructor. Sociological implications of sport in contemporary American society.

### 323 OLYMPISM AND THE MODERN OLYMPIC GAMES (3)

Prereq: PE 301 or permission of instructor. 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.

### 340 BLOCK I: ELEMENTARY PHYSICAL EDUCATION (5)

Pre- or co-req: PE 301. 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.

### 341 BLOCK II: ELEMENTARY PHYSICAL EDUCATION (5)

Prereq: PE 340, major status in P-12 PE and Health. 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.

### 341p ELEMENTARY PHYSICAL EDUCATION PRACTICUM (3)

Pre- or co-req: PE 341. Observing/assisting/teaching in an elementary school setting. Includes weekly seminar which covers academic learning time, student success rates, feedback, professional growth.

### 343 SPORTS OFFICIATING (2 ea)

Officiating techniques for individual and team sports.

343 TRACK AND FIELD

### 345 PHYSICAL EDUCATION FOR ELEMENTARY SCHOOL (3)

Prereq: admission to the Woodring College of Education and PSY 230 or EDUC 301. Physical activities in fundamental skill development, fitness, creative movement, rhythms and gymnastics for elementary age. Includes methods of teaching and developmental characteristics of children.

### 380-385 COACHING SPORTS (2-3 ea)

Practical and theoretical aspects of coaching the sport with special emphasis on advanced skill development and current methodology and resource material being utilized.

380 FOOTBALL (3)

## PHYSICAL EDUCATION, HEALTH AND RECREATION

381 BASKETBALL (3)

383 TRACK (3)

### 410 MOTOR CONTROL AND LEARNING (3)

Prereq: PE 301 and BIOL 348. Principles of motor control and skill acquisition, as it relates to human movement.

### 413 PHYSIOLOGY OF EXERCISE (5)

Prereq: PE or Community Health major status; BIOL 348; PE 306 recommended; or permission of instructor. 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.

### 414 PHYSICAL ACTIVITY AND NUTRITION (3)

Prereq: PE or Community Health major status or permission of instructor; pre- or co-req: PE 413. 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, et cetera.

### 415 PHYSICAL FITNESS ASSESSMENT AND EXERCISE PRESCRIPTION (5)

Prereq: PE 413. 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.

### 420 SEMINAR IN SPORT PSYCHOLOGY (3)

Prereq: PE 320, 321, 410; and 10 credits in psychology or permission of instructor. 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.

### 422 ADMINISTRATION OF PHYSICAL ACTIVITY PROGRAMS (4)

Prereq: PE 301; 15 credits in the major courses. Criteria, including philosophical and ethical considerations, for the selection of program activities, planning and maintenance of facilities and equipment, personnel development, evaluative procedures and techniques, administrative policies. Writing proficiency course.

### 440 BLOCK III: SECONDARY PHYSICAL EDUCATION (5)

Prereq: PE 341p. Incorporates pedagogical principles and instructional techniques based on the characteristics and needs of secondary students, particularly middle school students, with an emphasis on the following content areas: contemporary recreational activities, team sports, and individual/dual sports.

### 440p MIDDLE SCHOOL PHYSICAL EDUCATION PRACTICUM (3)

Prereq: PE 341p; co-req: PE 440. 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.

### 441 BLOCK IV: SECONDARY PHYSICAL EDUCATION (5)

Prereq: PE 440p. Incorporates pedagogical principles and instructional techniques in physical education based on the characteristics and needs of secondary students, particularly senior high students, with an emphasis on the following content areas: strength and fitness development, team and individual sports, rhythms and dance (curriculum development, analysis, and assessment of effective teaching).

### 441p SENIOR HIGH SCHOOL PHYSICAL EDUCATION PRACTICUM (3)

Prereq: PE 440p. Observing/assisting/teaching in a senior high school setting. Includes weekly seminar which covers characteristics of high school students, curriculum development, assessment, transitioning from student to student teacher.

### 442p PRACTICUM IN PHYSICAL EDUCATION (2)

Prereq: PE 341p. Individualized practicum in teaching physical education activities. S/U grading.

### 443 ADAPTED PHYSICAL ACTIVITY (3)

Prereq: PE 308 or permission of instructor. A study of the physical and motoric needs of persons with disabilities, their interrelationship with physical

activity, with application to the planning and implementation of adapted physical activity programs.

### 471 INTERNSHIP I (3)

Prereq: First Aid/CPR certification, proof of malpractice insurance, and permission of instructor. Full-time supervised professional experience emphasizing functional proficiency under joint sponsorship of University and agency personnel. S/U grading.

### 472 INTERNSHIP II (12)

Prereq: First Aid/CPR certification, proof of malpractice insurance, and permission of instructor. Full-time supervised professional experience emphasizing functional proficiency under joint sponsorship of University and agency personnel. S/U grading.

### 490 FIELD EXPERIENCE IN FITNESS AND HEALTH (3)

Prereq: First Aid/CPR certification, proof of malpractice insurance, and permission of instructor. Practical volunteer experience in agencies such as work site wellness programs, hospitals, fitness facilities, on-campus fitness programs and community sports organizations. Repeatable to a maximum of 6 credits. S/U grading.

### 491 FIELD EXPERIENCE IN PHYSICAL THERAPY (3)

Prereq: First Aid/CPR certification, proof of malpractice insurance, and permission of instructor. Practical volunteer experience, under supervision of a registered physical therapist, in agencies such as hospitals, physical therapy clinics, and retirement or convalescent centers. Repeatable to a maximum of 6 credits. S/U grading.

### 492 FIELD EXPERIENCE IN SPORTS PSYCHOLOGY AND ATHLETIC COACHING (3)

Prereq: First Aid/CPR certification, proof of malpractice insurance, and permission of instructor. Practical volunteer experience in community agencies, educational institutions or private sector businesses that oversee athletic, youth sport and exercise/fitness programs. Repeatable to a maximum of 6 credits. S/U grading.

### 493 EXERCISE AND SPORT SCIENCE RESEARCH (3)

Prereq: 15 credits completed in Exercise and Sport Science; permission of instructor. Investigation of a problem conducted independently or as part of a group under faculty supervision. S/U grading.

### 494 INSTRUCTIONAL ASSISTANT (3)

Pre-req: permission of instructor; a minimum grade of B in the course for which the student will be a teaching 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.

## Graduate Courses

*Courses numbered 500; 517; 545; 597 are described on Page 34 of this catalog.*

*Admission to Graduate School or special permission required. See the Graduate School section of this catalog.*

### 502 RESEARCH TOPICS IN HUMAN MOVEMENT AND PERFORMANCE (2-5)

Prereq: graduate status. 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.

### 506 RESEARCH DESIGN IN HUMAN MOVEMENT AND PERFORMANCE (4)

Prereq: graduate status; undergraduate statistics. 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.

### 507 MOTOR CONTROL (3)

Prereq: PE 410 or equivalent. Examination of the structure and function of the human neuromuscular system, as it pertains to the production of movement.

**510 LABORATORY TECHNIQUES IN EXERCISE SCIENCE (4)**

Prereq: PE 311 and 413 or equivalent. 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, electrogoniometry and cinematographical techniques.

**511 PHYSICAL ACTIVITY AND HYPOKINETIC DISEASES (3)**

Prereq: PE 413 or equivalent and permission of instructor. Survey of effects of physical activity on disease processes related to hypokinesia: cardiovascular disease, obesity, diabetes, osteoporosis, arthritis. Overview of needs of special populations: geriatrics, children.

**513 EXERCISE PRESCRIPTION AND PROGRAMMING (4)**

Prereq: PE 312, 413 or equivalents. Design safe, effective and enjoyable physical activities for selected populations in competitive, preventive and rehabilitative exercise programs. Medico-legal aspects and administration of exercise prescription and programming. Case studies.

**520 READINGS IN HUMAN MOVEMENT AND PERFORMANCE (3)**

Prereq: graduate status. Directed readings, analysis, discussion of current literature on human movement and performance culminating in a colloquium of a chosen topic.

**533 CARDIOVASCULAR PHYSIOLOGY (3)**

Prereq: PE 413 or BIOL 348 or equivalent. Advanced principles and concepts regarding cardiovascular dynamics. Examines various parameters of the cardiovascular system, the relationship of resting data to exercise data, and electrocardiography.

**540 APPLIED EXERCISE PHYSIOLOGY (4)**

Prereq: PE 413 or equivalent or permission of instructor. Selected topics in advanced exercise physiology: homeostasis, energy systems, metabolism, cardiorespiratory adjustments, hormonal control, neuromuscular physiology, ergogenic aids, thermoregulation, environmental responses and adaptations, by lecture and recitation.

**541 FOUNDATIONS AND ETHICS OF SPORT PSYCHOLOGY (3)**

Prereq: PE 320 or permission of instructor. 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.

**542 SEMINAR IN SPORT SOCIOLOGY (3)**

Prereq: PE 321 or permission of instructor. 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.

**543 BIOMECHANICAL ANALYSIS OF HUMAN MOVEMENT (4)**

Prereq: PE 311, 312 or permission of instructor. Kinematic and kinetic analysis of human movement with focus on practical application of mechanical laws governing human motion; laboratory and computer applications.

**544 BIOMECHANICS OF THE MUSCULOSKELETAL SYSTEM (4)**

Prereq: PE 311, 312 or equivalent and permission of instructor. 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.

**546 EPIDEMIOLOGIC ASPECTS OF EXERCISE AND PHYSICAL ACTIVITY (3)**

Prereq: graduate status. Study of the distribution and determinants of disease, injury and other non-disease health states in human populations with specific application to exercise and physical activity.

**551 APPLIED SPORT AND EXERCISE PSYCHOLOGY (4)**

Prereq: PE 541. 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.

**592 INTERNSHIP (2-6)**

Prereq: First Aid/CPR certification, proof of malpractice insurance, and permission of instructor. 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. S/U grading.

**690 THESIS (1-9)**

Prereq: problem approval and permission of instructor. Repeatable to a maximum of 9 credits.

**COURSES IN HEALTH EDUCATION (HLED)**

*Courses numbered X37; X97; 300, 400; 417, 445 are described on Page 34 of this catalog.*

**150 CONSUMER AND ENVIRONMENTAL HEALTH (4)**

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.

**151 SOCIETY AND DRUGS (2)**

Physiological and behavioral effects of legal and illegal drugs; societal substance use and abuse; alternatives to drug use.

**152 SOCIETY AND SEX (2)**

Sociological, psychological, and biological aspects of human sexuality.

**250 HEALTH OF THE COLLEGE STUDENT (4)**

Prereq: HLED 150, 151, 152 recommended; permission of instructor required. Analysis of major health risks; personal health status assessment; strategies for reducing risk behaviors and promoting healthy lifestyles among college students. S/U grading.

**330 CONTEMPORARY HEALTH ISSUES (4)**

Pre-req: community health major and junior status. Explores current community and public health issues and their impact on individuals, communities, and global relations. Topics vary.

**345 HEALTH PROMOTION/DISEASE PREVENTION (4)**

Prereq: junior status. Investigation of chronic/degenerative diseases and infectious/communicable illnesses; intentional and unintentional injuries; relationship of lifestyle choices and personal beliefs to well-being.

**350 NUTRITION (3)**

Prereq: junior status; BIOL 101 or 205 or CHEM 115 or 121. Study of functions of nutrients in the body, factors that govern nutrient requirements, and the impact of diet on health and disease.

**407 PRINCIPLES AND FOUNDATIONS OF HEALTH EDUCATION (4)**

Prereq: BIOL 348 and senior status. Historical perspective of health and health education; professional issues and ethics; credentialing; principles, practices and foundations of health education. Writing proficiency course.

**410 HEALTH COMMUNICATION AND SOCIAL MARKETING (4)**

Prereq: HLED 407 and 460. Examines the key concepts and practical skills of health communication/social marketing campaigns and their application to individual, group, and community public health initiatives.

**420 EPIDEMIOLOGY AND BIostatISTICS (5)**

Pre-req: community health major. Introduction to biostatistics and epidemiology in community health.

**432 ORGANIZATION AND ADMINISTRATION OF COMMUNITY HEALTH PROGRAMS (4)**

Pre-req: community health major and senior status. Basic principles of organization and administration of health programs; leadership skills; grant writing.

**435 WORK SITE HEALTH PROMOTION (5)**

Prereq: HLED 345; pre- or co-req HLED 350 or PE 414. Direct application of theoretical bases to worksite health promotion programs; assessment tools; cost-benefit ratio and employee-productivity; individual/organizational behavior change process.

## PHYSICAL EDUCATION, HEALTH AND RECREATION

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### 447 COMMUNITY HEALTH (4)

Prereq: BIOL 348. Concept of community health, health advocacy, and cultural competence; role of government, nonprofit and private agencies; investigation of health issues targeting Healthy People 2010; service-learning required.

### 450 METHODS AND MATERIALS IN HEALTH EDUCATION (5)

Prereq: HLED 447. Principles and application of methodology for educating about health; learning styles; development of computer-generated materials; selection, utilization, and evaluation of resources.

### 455 HEALTH EDUCATION GRADES K-8 (2)

Prereq: admission to Woodring College of Education; ELED 320 or 370 or SPED 320 or PE 340. 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.

### 456 ABUSE PREVENTION EDUCATION FOR TEACHERS (1)

Prereq: admission to Woodring College of Education. Identification of physical, emotional, sexual, and substance abuse; impact of abuse on behavior and learning; responsibilities of teachers; and methods for teaching about and preventing abuse. Meets state WAC 180-79A-206 for continuing and professional certificates for teachers.

### 460 PROGRAM PLANNING AND IMPLEMENTATION OF HEALTH PROGRAMS (5)

Prereq: HLED 407, 447. Application of processes of program development in designing health education/health promotion programs. Writing proficiency course.

### 465 PROGRAM EVALUATION AND RESEARCH DESIGN (5)

Pre-req: HLED 420 and community health major status. Basics of health education program evaluation, including formative, summative, process, impact, and outcome evaluation. Research design and applied methods in program evaluation.

### 471 INTERNSHIP I (3)

Prereq: HLED 407, 410, 420, 432, 447, 450, 460, 465 and proof of malpractice insurance. Full-time supervised professional experience emphasizing functional proficiency under joint sponsorship of University and agency personnel. S/U grading.

### 472 INTERNSHIP II (12)

Prereq: HLED 407, 410, 420, 432, 447, 450, 460, 465 and proof of malpractice insurance. Full-time supervised professional experience emphasizing functional proficiency under joint sponsorship of University and agency personnel. S/U grading.

### 473 INTERNSHIP III (15)

Prereq: HLED 407, 410, 420, 432, 447, 450, 460, 465 and proof of malpractice insurance. Full-time supervised professional experience emphasizing functional proficiency under joint sponsorship of University and agency personnel. S/U grading.

## COURSES IN RECREATION (RECR)

### 201 FOUNDATIONS OF RECREATION AND LEISURE (4)

Prereq: sophomore status or permission of instructor. Professional course dealing with the history, philosophy, present status, future goals, and challenges of leisure and the recreation service professions.

### 271 COMMUNITY RECREATION AND LEISURE SERVICES (4)

Prereq: RECR 201; majors only. Community-based recreation service agencies: philosophies, functions, services, personnel and facilities. Emphasis on the diversity and inter-relatedness of community recreation service agencies.

### 272 DYNAMICS OF OUTDOOR RECREATION (4)

Prereq: RECR 201; majors only. 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.

### 274 INTRODUCTION TO THERAPEUTIC RECREATION (4)

Prereq: RECR 201; majors only. Introduction to the principles and practices of therapeutic recreation. Includes history, philosophy, trends and issues. Also presents an overview of consumer groups associated with therapeutic recreation.

### 275 PROFESSIONAL PRACTICUM AND SEMINAR (1)

Prereq: RECR 201; majors only. Career opportunities in leisure services investigated through organized visits to recreation and leisure agencies. Includes class meetings to explore professional development. S/U grading.

### 276 PROGRAM LEADERSHIP (3)

Prereq: RECR 201; majors only. Leading and processing recreation experiences in community, outdoor and therapeutic settings that promote individual and social well being.

### 301 WORK AND LEISURE THROUGH THE AGES (4)

Prereq: any 100-level history class and one of the following: PSY 101, SOC 221, 251, 255, 260, 268, 269. An historical survey of the evolution of work and leisure from antiquity to the present, examining developments from social, cultural, political, and economic perspectives. Explores how work and leisure have affected societies throughout history.

### 370 OUTDOOR PROGRAM DEVELOPMENT (4)

Prereq: Phase I or permission of instructor. Methods and techniques in the organization, implementation and evaluation of recreation programs in outdoor settings.

### 372 MANAGEMENT OF RECREATION AND LEISURE SERVICES (4)

Prereq: Phase I or permission of instructor. Entry-level administrative skills associated with managing personnel and organizational resources within parks and recreation systems.

### 373 RECREATION PROGRAMMING (4)

Prereq: Phase I or permission of instructor. Systems approach to programming methods for individual and group program planning in all parks and recreation settings.

### 376 THERAPEUTIC RECREATION PROGRAM DESIGN (4)

Prereq: Phase I or permission of instructor. Methods and techniques in the organization, implementation and evaluation of therapeutic recreation programs for special populations: needs assessment, activity modification, adaptive equipment, physical and behavioral management and intervention techniques.

### 378a HUMAN RELATIONS: CONCEPTS AND SKILLS (4)

Prereq: Phase I or permission of instructor; recreation majors. Knowledge of human relations concepts and development of basic helping skills needed by professionals working in a variety of recreation settings. Focuses on improving public and personnel relations in professional settings and on enhancing the quality of leisure experiences for individuals.

### 378b HUMAN RELATIONS: CONCEPTS AND SKILLS (4)

Prereq: Phase I or permission of instructor; recreation majors. Knowledge of human relations concepts and development of basic helping skills needed by individuals working in therapeutic relationships in outdoor, community and institutional settings. Designed for students interested in therapeutic recreation and adventure programming.

### 379 TOURISM PLANNING AND DEVELOPMENT (4)

Prereq: Phase I or permission of instructor. 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.

### 380 THERAPEUTIC RECREATION PRINCIPLES, PRACTICES AND TECHNIQUES (5)

Prereq: Phase I or permission of instructor. 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 2 hours/week observing/shadowing in a therapeutic recreation setting.

### 385 LEISURE AND AGING (4)

Prereq: RECR 201 or permission of instructor. 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.

### 421 THERAPEUTIC RECREATION TRENDS AND ISSUES (3)

Prereq: Phase III or permission of instructor. Analysis of trends and issues affecting the profession of therapeutic recreation.



**444 RECREATION BUDGETING AND FINANCE (4)**

Prereq: Phase III. Principles and techniques of obtaining, budgeting and managing financial resources in parks and recreation agencies.

**450 RECREATION PROGRAM EVALUATION (4)**

Prereq: Phase III. Quantitative and qualitative methods of program evaluation emphasizing experiential learning, questionnaire design and survey research, interviews, observations, and consensus techniques.

**470 ADVENTURE-BASED PROGRAMMING (3)**

Prereq: Phase III or permission of instructor. Methods and techniques in the assessment, design, implementation and evaluation of adventure programs in enrichment and therapeutic recreation settings.

**471 INTERNSHIP I (3)**

Prereq: Phase II. Full-time supervised professional experience emphasizing functional proficiency under joint sponsorship of University and agency personnel. S/U grading.

**472 INTERNSHIP II (12)**

Prereq: Phase II. Full-time supervised professional experience emphasizing functional proficiency under joint sponsorship of University and agency personnel. S/U grading.

**473 INTERNSHIP III (15)**

Prereq: Phase II. Full-time supervised professional experience emphasizing functional proficiency under joint sponsorship of University and agency personnel. S/U grading.

**475 COMMUNITY DEVELOPMENT AND LEISURE SERVICES (3)**

Prereq: Phase III or permission of instructor. 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 purpose of promoting the health and well-being of communities.

**476 PARK AND FACILITY DESIGN AND OPERATIONS (3)**

Prereq: Phase III or permission of instructor. Design and operations considerations for the park and recreation administrator: program development, site analysis, concept development, master plans, functional considerations, aesthetic considerations, and plan evaluation.

**479 ECOTOURISM: PRINCIPLES AND PRACTICES (3)**

Prereq: RECR 379 or permission of instructor. 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.

**480 LEISURE AND SOCIETY (4)**

Prereq: Phase III. 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.



David Scherrer / WWU Publishing Services

# POLITICAL SCIENCE

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.

## 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

## DECLARATION OF MAJOR

Students are eligible to declare the political science major and any of the majors combined with political science if they have completed any two of the following core courses: 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 your Degree Planning Guide and an unofficial Western Washington University transcript showing the two completed courses from the list above.

For students who have transfer credits for political science course work from another institution, first make an appointment with a department transfer advisor by calling 650-3469 to have credits reviewed. Then visit the department office with the required documents as outlined above.

## POLITICAL SCIENCE FACULTY

**SARA J. WEIR** (1989) Chair. Associate Professor. BA, MA, Ball State University; PhD, University of Washington.

**AMIR ABEDI** (2003) Assistant 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) Assistant Professor. BA, Hindu College, University of New Delhi; MA, PhD, University of Maryland.

**PAUL CHEN** (2002) Assistant Professor. BA, University of California-Berkeley; JD, Southwestern University School of Law; MA, Biola University; MA, PhD, University of Southern California.

**TODD A. DONOVAN** (1991) Professor. BA, California State University, Sacramento; MA, PhD, University of California-Riverside.

**CYNTHIA HORNE** (2006) Assistant Professor. BA, Dartmouth College; MS, Georgetown University; PhD, University of Washington.

**VICKI HSUEH** (2003) Assistant 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.

## BACHELOR OF ARTS

### Major — Political Science

60 credits

- 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, 311, 313, 345, 346, 347, 353, 414, 415, 417c, 420, 421, 423, 427, 449, 450, 468

*Political Theory:* PLSC 261, 365, 417d, 460, 461, 462, 463, 464, 469, 480

*International and Comparative Politics:* PLSC 271, 291, 301, 302, 307, 308, 370, 372, 376, 380, 390, 402, 406, 411, 417a, 417b, 430, 431, 435, 436, 453, 475

PLSC 101, 366, 417e, 443, 444, 445, 447, and 491 credits apply toward the major but do not count in any field. No more than 12 credits of internship or independent study may be counted toward the major.

### Minor — Political Science

25 credits in political science courses

- At least two courses from PLSC 250, 261, 271, 291
- 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

**NOTE:** PLSC 101 does not count toward minor.

### Minor — Canadian/American Studies

30 credits

Program Advisors: Dr. Donald Alper

See the *Canadian/American Studies* program section of this catalog. A Canadian/American Studies major may be taken as a joint major with political science.

### Minor — East Asian Studies

30 credits

Program Advisor: Dr. Kathleen Tomlonovic

This may be added to the major for a major concentration.

See the *East Asian Studies* program section of this catalog.

### Combined Major — Political Science/Economics

94-95 credits

Program Advisor: To be announced.

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.

- ECON 206, 207, 303, 306, 307, 310
- DSCI 205 or equivalent
- 12 additional credits in upper-division economics courses, under departmental advisement
- One Business and Economics communications focus course must be taken
- PLSC 250; 261; 271 or 291; 372; 462
- ECON/ PLSC 491 (or approved alternative)
- MATH 124 or MATH 157 or equivalent
- 9 additional credits from the American Politics and Public Policy field and 4 additional credits from the Political

Theory field

- 8-9 additional credits in upper-division political science electives, to complete the total required 94-95 credits of this program

### Combined Major — Politics/Philosophy/Economics

83-84 credits

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.

- ECON 206, 207, 303, 310
- 12 additional upper-division economics credits
- PLSC 250, 261
- One course from each group:
  - PLSC 291 or 271
  - 9 additional credits from the American Politics and Public Policy field and 4 additional credits from the Political Theory field
  - PHIL 102, 112, 114, 310, 320, 350, 360, 364, 420
- One communications focus course must be taken

### Combined Major — Political Science/Social Studies

Program Advisor: Dr. Sara Weir

91-93 credits

*Political Science Courses (50 credits)*

- PLSC 250
- 18 additional credits in American politics and public policy
- 8 credits in each of the two following areas:
  - Political theory
  - International and comparative politics
- Balance of credits in political science electives

*Social Studies Courses (40 credits)*

- ANTH 201 or one of SOC 221, 251, 255, 260, 268
- ECON 206 or 446 (preferred)
- ECON 207 or 447 (preferred)
- EGEO 201; and EGEO 250 or 2 additional geography credits
- HIST 103, 104, 391
- Plus 12 credits in history, including one course in World or Western or Pacific Rim or Civilization

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. Courses required for a state teaching endorsement must be completed with a grade of C (2.0) or better.

## 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:

## POLITICAL SCIENCE

- 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

### 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.

### GRADUATE STUDY

For concentrations leading to the Master of Arts degree, see the *Graduate School* section of this catalog.

## COURSES IN POLITICAL SCIENCE (PLSC)

*Courses numbered X37; X97; 300, 400; 417, 445 are described on Page 34 of this catalog.*

*NOTE: Not all courses are offered every year. See the online **Timetable of Classes** for current offerings. Contact the department for specific questions.*

**101 GOVERNMENT AND POLITICS IN THE MODERN WORLD (5)**  
Introduction to concepts of politics; types of governments and political problems in the world today.

**250 THE AMERICAN POLITICAL SYSTEM (5)**  
Consideration of the system and process of American politics and government with primary focus on the national level.

**261 INTRODUCTION TO POLITICAL THEORY (5)**  
Major concepts of Western political theory — thematic or historical approach.

**271 INTRODUCTION TO INTERNATIONAL RELATIONS (5)**  
The politics of war, peace, and international economic relations.

**291 INTRODUCTION TO COMPARATIVE POLITICS (5)**  
Basic structures, functions and sociocultural environments of foreign political systems; methods of comparative study.

**301 THE BRITISH PARLIAMENTARY SYSTEM (5)**  
Prereq: PLSC 101 or 250 or 291. 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.

**302 WESTERN EUROPE (5)**  
Prereq: PLSC 101 or 291. Governments and politics of selected western European states.

**307 EAST ASIA (5)**  
Prereq: PLSC 101 or 291. Survey course covering China, Japan and Korea since the mid-19th century. Not offered every year.

**308 AFRICAN POLITICAL SYSTEMS (5)**  
Prereq: PLSC 101 or 291. 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.

**310 INTERNATIONAL RELATIONS OF EAST ASIA (5)**  
Pre-req: PLSC 271 or 291 or 307. The issues of national and human security in the East Asia region.

**311 INTRODUCTION TO LAW AND JUDICIAL PROCESS (5)**  
Prereq: PLSC 250. Origin and development of basic concepts and practices of law with emphasis upon legal reasoning and values in contemporary societies.

**313 LAW AND SOCIETY (5)**  
Prereq: PLSC 250 and 311. Introduction to how law interacts with and is applied to different social and cultural contexts. Specific topics may change quarter to quarter. Course presumes a familiarity with basic legal concepts and a rudimentary knowledge of the legal system.

**314 U.S. SUPREME COURT (5)**  
Prereq: PLSC 250 (311 recommended). Introduction to the U.S. Supreme Court as an institution within the American political system. Topics include court procedures and decision-making, constitutional history, judicial powers and doctrines, and the court's role in American society. No prior knowledge of the Supreme Court is presumed.

**345 WOMEN AND POLITICS (5)**  
Prereq: PLSC 101 or 250. 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.

**346 POLITICS OF INEQUALITY (5)**  
Prereq: PLSC 250. Survey and critique of cultural perspectives, theories and social processes supporting group subordination and inequality. Emphasizes alternative interpretations of racism, sexism and poverty.



**347 RACE, POLITICS AND PUBLIC POLICY (5)**

Prereq: PLSC 250 or equivalent. The historical and political bases of contemporary racial conflict in the United States.

**353 STATE AND LOCAL POLITICS (5)**

Prereq: PLSC 250. Politics of states, urban regions and suburbs. Inter-jurisdictional conflict over growth or development. Federal relations, direct democracy and state policy making.

**361 CLASSICAL POLITICAL THOUGHT (4)**

Prereq: HIST 111 or LBRL 121 or PLSC 261 or equivalent. Explores emerging themes in classical political thought, such as Greek, Roman, Judeo-Christian, and Islamic traditions.

**362 RENAISSANCE AND MODERN POLITICAL THOUGHT (4)**

Prereq: HIST 111 or LBRL 121 or PLSC 261 or equivalent. Explores developing 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.

**366 RESEARCH IN POLITICS (5)**

Fundamentals of research design, including basic methods for the collection and statistical analysis of political and administrative data.

**370 GLOBAL ISSUES IN INTERNATIONAL POLITICS (5)**

Prereq: PLSC 271. Problems of global dimensions (population, food, resources, environment, nuclear proliferation, terrorism) and international efforts to solve them.

**372 INTERNATIONAL POLITICAL ECONOMY (5)**

Prereq: PLSC 271 or 291. The politics of international trade, investment, lending and economic development.

**376 AMERICAN FOREIGN POLICY (5)**

Prereq: PLSC 250 or 271. Background and organization of American foreign policy; the conduct of diplomatic relations with other states; current issues and problems in foreign affairs.

**380 INTERNATIONAL ORGANIZATIONS (4)**

Prereq: PLSC 271. The role of nonstate organizations in international relations (United Nations, World Bank, Amnesty International, et cetera). Collaboration between states, intergovernmental organizations.

**390 THE POLITICS OF DEVELOPMENT (5)**

Prereq: PLSC 271 or 291. 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.

**399 THE POLITICS OF DEMOCRATIZATION (5)**

Prereq: PLSC 271 or 291. The domestic and international challenges of democratization.

**402 REGIONAL EUROPEAN SOCIETY AND POLITICS (4)**

Prereq: PLSC 101 or 291. Government and society in selected countries from the Scandinavian, Alpine, Benelux and Iberian European regions.

**406 CANADIAN GOVERNMENT AND POLITICS (4)**

Prereq: PLSC 250, 291 or permission of instructor. Canadian political institutions and process, relations with U.S., current topics including regional tensions, the environment, and First Nations.

**414 CONSTITUTIONAL LAW I: NATIONAL POWERS (5)**

Prereq: PLSC 250; and 311 or 314. Supreme Court decisions interpreting major parts of the Constitution: judicial power; separation of powers; and federalism.

**415 CONSTITUTIONAL LAW II: INDIVIDUAL RIGHTS (5)**

Prereq: PLSC 250; and 311 or 314. Supreme Court decisions interpreting major parts of the Constitution: Bill of Rights and Fourteenth Amendment.

**417a SENIOR SEMINAR IN COMPARATIVE POLITICS (3-5)**

Prereq: senior status in political science and 30 credits in political science courses. Capstone seminar in comparative politics. Topics vary but emphasis is on comparative issues and approaches. Repeatable with various topics to a maximum of 8 credits.

**417b SENIOR SEMINAR IN INTERNATIONAL POLITICS (3-5)**

Prereq: senior status in political science and 30 credits in political science courses. Capstone seminar in international relations. Topics vary but emphasis is on the interactions of state and non-state actors across international boundaries. Repeatable with various topics to a maximum of 8 credits.

**417c SENIOR SEMINAR IN AMERICAN POLITICS AND PUBLIC POLICY (3-5)**

Prereq: senior status in political science and 30 credits in political science courses. Capstone seminar in American politics and public policy. Topics vary but emphasis is on political institutions and processes and public policy. Repeatable with various topics to a maximum of 8 credits.

**417d SENIOR SEMINAR IN POLITICAL THEORY (3-5)**

Prereq: senior status in political science and 30 credits in political science courses. Capstone seminar in political theory. Involves reading and research in original sources on topics of central importance to politics. Emphasis is on critical examination and discussion of ideas. Repeatable with various topics to a maximum of 8 credits.

**417e SPECIAL TOPICS IN ENVIRONMENTAL POLITICS (3-5)**

Prereq: senior status or permission of instructor. Analysis of current topics related to environment and politics. Topics vary. Repeatable to a maximum of 8 credits.

**420 ENVIRONMENTAL POLITICS (5)**

Prereq: PLSC 101 or 250; ESTU 304. 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.

**421 LESBIAN, GAY, BISEXUAL, TRANSGENDERED POLITICS (5)**

Prereq: PLSC 250 or AMST 242 or permission. 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.

**423 THE AMERICAN PRESIDENCY (3)**

Prereq: PLSC 250. 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.

**427 POLICY-MAKING AND POLICY ANALYSIS (4)**

Prereq: PLSC 250. 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.

**430 MODERN CHINESE POLITICS (4)**

Prereq: PLSC 291 or equivalent. Introduction to politics and society in modern China: state structures, political culture, state-society relations, policy-making and foreign relations.

**431 MODERN JAPANESE POLITICS (4)**

Prereq: PLSC 291 or equivalent. An introduction to the politics and society of modern Japan: governmental structures, political culture, state-society relations, policy-making and foreign relations.

**436 MANAGING ENVIRONMENTAL COMMONS (4)**

Prereq: PLSC 271 or 291 or 372. Explores how political, economic and social institutions affect the management and sustainability of shared environments, both local and global.

**443 LEGISLATIVE INTERNSHIP (5-15)**

Prereq: permission of department. 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.

**444 ADMINISTRATIVE INTERNSHIPS (3-15)**

Prereq: completion of the core field requirements for the political science major (PLSC 250, 261, 271 or 291); completion of at least one advance course in the field of study to which the internship most closely relates and permission of department. Internships in administrative agencies and other public

## POLITICAL SCIENCE

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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 15 credits.

### **447 TEACHING INTERNSHIP (2-5)**

Assists faculty member in conduct of political science course. No more than 10 credits in internship may be counted toward the major without permission of the chair. Repeatable to a maximum of 6 credits.

### **449 POLITICS AND SOCIAL CHANGE (4)**

Prereq: PLSC 101 or 250. 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.

### **450 PARTIES, CAMPAIGNS AND ELECTIONS (4)**

Prereq: PLSC 250. Political parties, voters and voting behavior, candidate and campaign strategy, the resources of politics; workers, money, and mass media.

### **453 COMPARATIVE ELECTORAL SYSTEMS (4)**

Prereq: PLSC 101, 291 or 450. 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.

### **462 POLITICAL THEORY AND POLITICAL ECONOMY (5)**

Pre-req: PLSC 261 or HIST 113 or ECON 206 or 207 or equivalent. Examines the conceptual, ethical, and ideological underpinnings of political economy and the implications for contemporary public policy.

### **463 AMERICAN POLITICAL THOUGHT (4)**

Prereq: PLSC 261 or HIST 103 or 104 or equivalent. Major concepts in American political thought from the Colonial period to the present.

### **464 CONTEMPORARY POLITICAL THEORY (4)**

Prereq: PLSC 261 or any 400-level political theory course. Contemporary developments, with emphasis on Continental political theory. May also include other contemporary contributions, such as feminist theory and neo-pragmatism.

### **468 POLITICAL ECONOMY OF NATURAL RESOURCES (5)**

Prereq: ECON 206 or permission of instructor. The role of political/economic institutions in regulating the exploitation of natural resources; how politics define and modify property arrangements; how economies allocate natural resources within the context of property rules.

### **469 FEMINIST POLITICAL THEORY (4)**

Prereq: PLSC 261 or any 400-level political theory course. 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.

### **470 CANADIAN ENVIRONMENTAL POLICY (4)**

Prereq: ESTU 304 or permission of instructor. 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 ESTU 469.

### **480 POLITICS, GOVERNMENT AND RELIGION (4)**

Prereq: permission of instructor. How political activity and government structures relate to religious perceptions and organizations. Not offered every year.

### **491 ISSUES IN POLITICAL ECONOMY (4)**

Prereq: senior status in the political science/economics combined major or a political science major and economics minor. Discussion and analysis of

selected issues of significant political and economic content. Also offered as Econ 491. Not offered every year.

### **496 HONORS TUTORIAL (2-5)**

Repeatable to a maximum of 10 credits.

## **Graduate Courses**

*Courses numbered 500; 517; 545; 597 are described on Page 34 of this catalog. Admission to Graduate School or special permission required. See the Graduate School section of this catalog.*

### **501 POLITICAL SCIENCE AS A DISCIPLINE (5)**

Study of political science as an academic field; description and critique of subfields trends and challenges.

### **502 RESEARCH TECHNIQUES IN POLITICAL SCIENCE (5)**

Prereq: PLSC 366 or equivalent.

### **503 PUBLIC POLICY AND ADMINISTRATION (5)**

Consideration of current and emerging problems facing public organizations.

### **505 SEMINAR IN COMPARATIVE GOVERNMENT AND POLITICS (5)**

Principles of government and politics in existing and developing states.

### **506 ADVANCED TOPICS IN COMPARATIVE GOVERNMENT AND POLITICS (5)**

Prereq: permission of instructor and graduate advisor. Advanced comparative consideration of the political systems of selected nation-states. Repeatable to a maximum of 10 credits.

### **521 SEMINAR IN PUBLIC POLICY ANALYSIS (3)**

Advanced problems in public policy and analysis.

### **524 ENVIRONMENTAL POLITICS AND POLICY (3)**

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 and examining environmental political research as it has addressed issues related to race, class and gender. Also offered as ESTU 524.

### **540 SEMINAR IN THE POLITICAL PROCESS (5)**

The influence of organizations and individuals in the formation of public policy. Includes study of the role of beliefs in the political process.

### **542 PUBLIC SERVICE INTERNSHIP (1-10)**

Prereq: PLSC 501, 503 and permission of department. 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.

### **550 SEMINAR IN STATE AND LOCAL GOVERNMENT (3)**

Problems at subnational levels, both American and other, internally and in relation to national levels.

### **560 SEMINAR IN POLITICAL THEORY (5)**

Function and history of political theory; the crisis in traditional theory; emerging trends. Repeatable to a maximum of 10 credits.

### **570 SPECIAL PROBLEMS IN POLITICAL SCIENCE (1-5)**

Prereq: permission of instructor and graduate advisor. 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.

### **690 THESIS/THESIS RESEARCH (1-9)**

Repeatable to a maximum of 9 credits.

# PSYCHOLOGY

## *College of Humanities and Social Sciences*

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 24 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 general 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.

## PSYCHOLOGY FACULTY

**DALE L. DINNEL** (1986) Chair and Professor. BS, MAT, MA, PhD, University of Nebraska.

**CHRISTINA A. BYRNE** (1997) Associate Professor. BS, Virginia Commonwealth University; MS, PhD, University of Georgia.

**GEORGE T. CVETKOVICH** (1969) Professor. BA, Youngstown State University; MA, Akron State University; PhD, Kansas State University.

**JENNIFER DEVENPORT** (2003) Assistant Professor. BA, Boise State University; MS, PhD, Florida International University; MLS, 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) Assistant Professor. BA, Purdue University; MA, Pepperdine University; PhD, Texas A&M University.

**REBECCA GOODVIN** (2007) Instructor. BA, Gonzaga University; MA, PhD, University of Nebraska.

**JEFFREY W. GRIMM** (2001) Associate Professor. BA, Whitman College; MS, PhD, Washington State University.

**FREDERICK W. GROTE, JR.** (1970) Associate Professor. AB, Dartmouth College; PhD, University of North Carolina.

**DIANA GRUMAN** (2003) Assistant 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.

**JEFF KING** (2007) Associate Professor. BA, University of Oklahoma; MS, PhD, Pennsylvania State University.

**RONALD A. KLEINKNECHT** (1970) Professor and Dean of the College of Humanities and Social Sciences. BA, MS, PhD, Washington 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.

**LOUIS G. LIPPMAN** (1966) Professor. BA, Stanford University; MA, PhD, Michigan State University.

**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) Assistant 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) Assistant Professor. BS, Yale University; MA, San Francisco State University; PhD, Stanford University.

**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.

**DAVID SUE** (1985) Professor. BS, University of Oregon; MS, PhD, Washington State University.

**LAWRENCE A. SYMONS** (2000) Associate Professor. BA, MA, University of British Columbia; PhD, University of Western Ontario.

**ROBERT M. THORNDIKE** (1970) Professor. BA, Wesleyan University; PhD, University of Minnesota.

**JOSEPH E. TRIMBLE** (1978) Professor. BA, Waynesburg College; MA, University of New Hampshire; PhD, University of Oklahoma; RF, Radcliffe Institute, Harvard University.

## 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.

## DECLARATION OF MAJOR

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.

## BACHELOR OF ARTS

### Major — Psychology

65 credits

- PSY 101; PSY 210, 220 230, 240, 250; PSY 301, 302, 303
- One course from PSY 310-324
- One course from PSY 330-351
- One course from PSY 410-424
- One course from PSY 430-451
- PSY 481 or 482

### Major — Behavioral Neuroscience

109-110 credits

Advisors: Roger Anderson (biology), Janet Finlay (psychology), Jeffrey Grimm (psychology), Mike Mana (psychology)

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 proposed degree program provides an excellent platform for entry-level positions in such areas as biomedical research and the pharmaceutical industry.

#### Required Supporting Courses

24 credits

- Math 114
- CHEM 121, 122, 123; CHEM 251 or equivalent

#### Required Biology Courses

29 credits

- BIOL 204; BIOL 205, 206; BIOL 321, 323, 325; BIOL 432

#### Required Psychology Courses

33 credits

- PSY 101; PSY 220; PSY 301-303, 320, 328

#### Required Biology or Psychology Courses

4-5 credits

- BIOL 410 or PSY 324

#### Electives under advisement

19 credits

- BIOL 322, 324, 382, 403, 410, 434, 467, 468, 482
- BIOL 300 or 395 or 400 or 494 or 495
- PSY 210, 310, 321, 322, 323, 420, 421, 422, 424, 428
- PSY 300 or 400

A maximum combined total of 10 credits in PSY 300, 400 or in BIOL 300, 395, 400, 494, 495 can be applied to the major.

### Minor — Psychology

24 credits

- PSY 101
- PSY 210 or 220
- One course from PSY 230, 240 or 250
- Electives under advisement

### Minor — Sport Psychology

30 credits

Advisor: Dr. Kristi Lemm

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.

- PE 320, 321, 420
- PSY 101
- Electives: Select 13 credits under advisement from the following: PSY 119, 210, 220, 230, 240, 250, 332

**NOTE:** Physical education majors cannot use PE 320 and 321 for both major and minor requirements and must select replacement courses from psychology electives.

**NOTE:** Psychology majors cannot use PSY 210-250 for both major and minor requirements and should see the Sport Psychology advisor to discuss alternatives.

## BACHELOR OF ARTS IN EDUCATION

### Major — Psychology: Human Development — Elementary

49-54 credits

Advisor: Dr. Frederick Grote

For students combining a psychology major with the elementary education program. This major 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.

- PSY 101; PSY 210 or 220; PSY 240 or 250; PSY 230 or EDUC 301; PSY 321 or EDU 302; PSY 301
- Three courses from PSY 302, 303, 305, 310-312, 320, 322-324, 331, 340-359, 410-451
- Two courses from PSY 274, 330, 332

## GRADUATE STUDY

For concentrations leading to the Master of Education or the Master of Science degrees, see the *Graduate School* section of this catalog.

## COURSES IN PSYCHOLOGY (PSY)

*Courses numbered X37; X97; 300, 400; 417, 445 are described on Page 34 of this catalog.*

*Courses in educational psychology include PSY 230, 371, 372 and 373. Note that credit may not be earned for both PSY 321 and 371 or 230 and 372.*

### 101 INTRODUCTION TO PSYCHOLOGY (5)

Examination of basic psychological processes utilizing results of research investigations: participation in at least two experiments or equivalent activities is expected.

### 119 PSYCHOLOGY OF GENDER (4)

Basic concepts, foundations for sex roles; similarities and differences between the sexes; historical customs, personality theories, cultural, subcultural and cross-cultural perspectives.

### 210 COGNITION (5)

Prereq: PSY 101. 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. Also examines how theories and findings from cognitive psychology can help us to understand mental activities in everyday life.

### 220 INTRODUCTION TO BEHAVIORAL NEUROSCIENCE (5)

Prereq: PSY 101. An overview of the biological bases of behavior. Basic con-



cepts in neuroanatomy, neurophysiology, and neurochemistry will be used to understand the neural bases of normal and abnormal behavior.

### 230 DEVELOPMENTAL PSYCHOLOGY (5)

Prereq: PSY 101. Basic principles of development. Topics include behavior genetics, early experience, language, cognition, personality and social development. Students cannot earn credit for both PSY 230 and 372. May be substituted for PSY 372 in the teacher education program.

### 240 SOCIAL PSYCHOLOGY (5)

Prereq: PSY 101. 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.

### 250 INTRODUCTION TO PERSONALITY AND ABNORMAL PSYCHOLOGY (5)

Prereq: PSY 101. 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.

### 274 PSYCHOLOGY OF CHILD REARING (3)

Prereq: PSY 101. 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.

### 301 OVERVIEW OF RESEARCH METHODS (5)

Prereq: 15 credits in psychology, with at least 5 credits at Western Washington University. 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.

### 302 RESEARCH METHODS AND STATISTICAL ANALYSIS: CORRELATIONAL APPROACHES (5)

Prereq: PSY 301 with a C- or better and declared psychology major. 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.

### 303 RESEARCH METHODS AND STATISTICAL ANALYSIS: EXPERIMENTAL APPROACHES (5)

Prereq: PSY 302 with a C- or better. 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.

### 305 PSYCHOLOGICAL TESTS AND MEASUREMENT (5)

Prereq: PSY 101, 301 or permission. 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.

### 310 SENSATION AND PERCEPTION (5)

Prereq: PSY 210, 220 and 301. 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.

### 311 HUMAN MEMORY (5)

Prereq: PSY 210 and 301. 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.

### 312 THINKING AND IMAGINATION (5)

Prereq: PSY 210 and 301. Discussions and/or demonstrations of logical and intuitive thinking, creativity, symbolism and fantasy. Consideration of the relationships of patterns of thinking and brain activity and of the implications of differences in cognitive style.

### 319 COGNITIVE NEUROSCIENCE (5)

Prereq: PSY 210, 220, 301. 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.

### 320 TOPICS IN BEHAVIORAL NEUROSCIENCE (5)

Prereq: PSY 220; PSY 301 or comparable research course and permission of instructor. Detailed examination of key areas of physiological psychology, emphasizing the anatomical, physiological and neurochemical bases of behavior.

### 321 LEARNING (5)

Prereq: PSY 101 and 301. A survey of conditioning and learning. May be substituted for PSY 371 for teacher certification. Students cannot earn credit for both PSY 321 and 371.

### 322 MOTIVATION (5)

Prereq: PSY 220 and 301. 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.

### 323 PSYCHOPHARMACOLOGY (4)

Prereq: C- or better in PSY 220 and PSY 301 or a comparable course and permission of instructor. Introduction to behavioral pharmacology and the effects of therapeutic and recreational drugs on the function of the nervous system and behavior.

### 324 COMPARATIVE PSYCHOLOGY (5)

Prereq: PSY 210, 240 and 301. A phylogenetic comparison of animal behavior, focusing on learning, motivation and sensory processes in selected species of animals.

### 328 TECHNIQUES IN BEHAVIORAL NEUROSCIENCE (3)

Prereq: C- or better in PSY 220 and PSY 301 or a comparable research course and permission of instructor; pre- or co-req: PSY 320. Introduction to laboratory methods and techniques used in physiological psychology, including basic techniques in histology, neurophysiology, neurochemistry, or behavioral analyses. Repeatable to a maximum of 6 credits.

### 329 PSYCHOLOGY OF INDIVIDUAL DIFFERENCES (5)

Prereq: PSY 101, 301 or permission. Elements of genetics and the influence of heredity on behavior. Topics studied include elementary human genetics, correlational and behavioral-genetic research strategies, the influence of genetic and environmental variation on human personality and cognitive ability.

### 330 SOCIAL AND COGNITIVE DEVELOPMENT IN CHILDREN (5)

Prereq: PSY 230 or 372, and 301. 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.

### 331 ADULT DEVELOPMENT AND AGING (5)

Prereq: PSY 230 and 301. 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.

### 332 ADOLESCENT DEVELOPMENT (5)

Prereq: PSY 230 and 301. Examines adolescent cognitive, social, physiological and intrapsychic development from a variety of theoretical perspectives. Emphasis on current research findings in this area.

### 340 ENVIRONMENTAL PSYCHOLOGY (5)

Prereq: one course from PSY 210-250 plus PSY 301. Theoretical, methodological and empirical problems and issues relating to behavior in constructed and natural environments.

### 341 PSYCHOLOGY AND CULTURE (5)

Prereq: PSY 240 and 301. 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.

### 342 SOCIAL COGNITION (5)

Prereq: PSY 210, 240 and 301. Examination of selected topics related to cognitive processes and their relation to social judgment and behavior.

**343 SOCIAL PROCESSES (5)**

Prereq: PSY 240 and 301. Examination of selected topics related to formation and functioning of groups, as well as intergroup relations.

**344 PSYCHOLOGY AND THE LAW (5)**

Prereq: PSY 240 and 301. Introduces students to the rapidly growing field of legal psychology by exposing students to current issues in psychology and the law. Emphasizes the application of psychological theories and research to the study of law and human behavior in a legal context.

**345 EVOLUTIONARY PSYCHOLOGY (5)**

Prereq: one course from PSY 210-240; C- or better in PYS 301. The application of evolutionary theory to understanding the characteristics of human functioning, including emotion, thinking, and action.

**351 ABNORMAL PSYCHOLOGY (5)**

Prereq: PSY 250 and 301. 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 of the research relating to the treatment of psychoses and neuroses.

**359 INTRODUCTION TO SCHOOL AND COMMUNITY COUNSELING (4)**

Prereq: declared major in psychology and PSY 250, 301. 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.

**370 PSYCHOLOGY AND THE ARTS (3)**

Prereq: PSY 101. 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.

**375 HEALTH PSYCHOLOGY (5)**

Pre-req: PSY 101, 301. Examines health psychology with a focus on theory, research, and practical issues. Topics include health behavior and prevention, stress and coping, the treatment setting, and management of chronic and terminal illness.

**410 SEMINAR IN PERCEPTION (3)**

Prereq: PSY 210-250; 303 and one from PSY 310, 311, 319 or 320, all with C- or better. In-depth coverage of major issues and methods in the study of sensation, perception and thinking. Library and laboratory or field research.

**411 SEMINAR IN COGNITION (3)**

Prereq: PSY 210-250; 303; and one from PSY 310, 311, 319 or 320, all with C- or better. In-depth coverage of selected topics in memory, cognition, and higher order cognitive processing. Library and laboratory or field research.

**420 SEMINAR IN BEHAVIORAL NEUROSCIENCE (3)**

Prereq: PSY 210-250; PSY 320 or 323; PSY 303 or comparable research course and permission of instructor, all with C- or better. 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.

**421 SEMINAR IN LEARNING (3)**

Prereq: PSY 210-250; 303; and 321, all with C- or better. In-depth study of major theoretical and methodological approaches to the study of learning. Lab and field research exercises.

**422 SEMINAR IN MOTIVATION (3)**

Prereq: PSY 210-250; 303; and 322, all with C- or better. 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.

**424 SEMINAR IN COMPARATIVE PSYCHOLOGY (3)**

Prereq: PSY 210-250, 303 and 324, all with C- or better. 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. Library, field and laboratory exercises are expected with hands-on experience by the student.

**428 ADVANCED TECHNIQUES IN BEHAVIORAL NEUROSCIENCE (3)**

Prereq: PSY 328; PSY 303 or comparable research course and permission of instructor; pre- or co-req, PSY 420; all with C- or better. Lab-based study of integrated neural systems underlying behavior, based on advanced techniques in histology, neurophysiology, neurochemistry, or behavioral analyses. Live animal research. Repeatable to a maximum of 6 credits.

**430 SEMINAR IN DEVELOPMENTAL PSYCHOLOGY (3)**

Prereq: PSY 210-250; 303; and 330 or 331 or 332, all with C- or better. In-depth study of central themes of human development. Contemporary research questions addressed in professional literature and field investigations.

**431 SEMINAR IN ADULT DEVELOPMENT AND AGING (3)**

Prereq: PSY 210-250, 303, and 331, all with C- or better. In-depth study of central themes of adult development and aging. Contemporary research questions addressed in professional literature and field investigations.

**440 SEMINAR IN ENVIRONMENTAL PSYCHOLOGY (3)**

Prereq: PSY 210-250; 303; and 340, all with C- or better. 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.

**441 SEMINAR IN CROSS-CULTURAL PSYCHOLOGY (3)**

Prereq: PSY 210-250, 303 and 341, all with C- or better. 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 lab and field research.

**442 SEMINAR IN SOCIAL PSYCHOLOGY (3)**

Prereq: PSY 210-250; 303; and one from 342-345, all with C- or better. In-depth study of social psychological theory and research to explain patterns of thought and behavior.

**451 SEMINAR IN ABNORMAL PSYCHOLOGY (3)**

Prereq: PSY 210-250; 303; and 351, all with C- or better. Advanced study in major issues and research methods in abnormal psychology. Focus on research design and protocols with clinical populations.

**471 HONORS THESIS SEMINAR (2)**

Prereq: permission of instructor. 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.

**481 SEMINAR IN HISTORY AND SYSTEMS OF PSYCHOLOGY (4)**

Prereq: PSY 210-250 and 302, all with C- or better; completion of 45 credits in psychology. An historical perspective of the development of psychological systems and theories and their impact on contemporary psychology.

**482 SEMINAR IN PSYCHOLOGICAL THEORY (4)**

Prereq: PSY 210-250 and 302, all with C- or better; completion of 45 credits in psychology. A seminar examining the philosophical assumptions of science in general and psychology in particular.

**Graduate Courses**

*Courses numbered 500; 517; 545; 597 are described on Page 34 of this catalog. Graduate courses in psychology (500 level and above) are open only to graduate students in psychology. Graduate students in other departments may enroll in psychology graduate courses if they obtain the permission of the instructor and department chairman. See the Graduate School section of this catalog.*

**501 BEHAVIORAL NEUROSCIENCE (4)**

Prereq: admission to the MS or MEd in psychology program. 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.

**502 PERSONALITY AND PSYCHOPATHOLOGY (4)**

Prereq: admission to the MS or MEd in psychology program. 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.

### 503 COGNITION (4)

Prereq: admission to the MS or MEd in psychology program. Provides an overview of theories, research and applications of cognitive psychology. Topics covered range from basic perception through higher mental processes.

### 504 LIFESPAN AND PSYCHOLOGICAL DEVELOPMENT (4)

Prereq: admission to the MS or MEd in psychology or permission of the instructor. 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 as they affect the psychological development of the individual.

### 505 SOCIAL PSYCHOLOGY (4)

Prereq: admission to the MS or MEd in psychology program. 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.

### 509 PROSEMINAR (2)

Prereq: admission to the MS in experimental psychology curriculum or permission of instructor. 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.

### 511 FUNDAMENTALS OF PSYCHOLOGICAL TESTING (3)

Prereq: admission to MS program in psychology or permission of instructor. Principles of psychological measurement, including assessment of the reliability and validity of tests, methods of test construction and scale development, use of norms for interpretation, item response analysis.

### 512 CORRELATION METHODS AND DATA ANALYSIS (4)

Prereq: admission to MS program in psychology or permission of instructor. 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.

### 513 EXPERIMENTAL METHODS AND DATA ANALYSIS (4)

Prereq: PSY 512. 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.

### 515 MULTIVARIATE ANALYSIS (3)

Prereq: PSY 513. 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.

### 516 STRUCTURAL EQUATION MODELING (3)

Prereq: PSY 515 or permission of instructor. Topics in restricted latent variable analysis, including path analysis and structural equation modeling. Covers theoretical bases and computations of these procedures as well as the use of statistical software packages, with emphasis on interpreting and reporting results.

### 530 SEMINAR IN MEASUREMENT (3)

Prereq: permission of instructor.

### 532 CROSS-CULTURAL COUNSELING (3)

Prereq: admission to MS or MEd in psychology program. This seminar is a basic introduction to the cross-cultural perspective in psychology. Covers history of the modern cross-cultural movement 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 on professional applications such as counseling.

*Seminars numbered 541 and 543 through 546 are repeatable to a maximum of 9 credits with different topics, under advisement, with instructor permission.*

### 541 SEMINAR IN BEHAVIORAL NEUROSCIENCE (3)

Prereq: admission to MS experimental psychology program ; PSY 501 or permission of instructor. Detailed examination of brain-behavior relations and the neural bases of behavior. Review and discussion of current literature in a variety of areas.

### 542 DEVELOPMENTAL PSYCHOPATHOLOGY (3)

Prereq: admission to the MS or MEd in psychology program; PSY 502 or permission of instructor. 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.

### 543 SEMINAR IN COGNITION (3)

Prereq: admission to MS experimental psychology program; PSY 503 or permission of instructor. In-depth coverage of topics such as perception, memory, cognition, and higher order cognitive processing.

### 544 SEMINAR IN DEVELOPMENTAL PSYCHOLOGY (3)

Prereq: admission to MS experimental psychology program; PSY 504 or permission of instructor. In-depth study of central themes of human development. Contemporary research questions addressed in professional literature and field investigations.

### 546 SEMINAR IN SOCIAL PSYCHOLOGY (3)

Prereq: admission to MS experimental psychology program; PSY 505 or permission of instructor. In-depth study of social psychological theory and research to explain patterns of thought and behavior.

### 550 RESEARCH METHODS IN COUNSELING (1-3)

Prereq: admission to MS mental health counseling curriculum or MEd in school counseling. Covers content and research methods relevant to psychological processes in psychotherapy. Repeatable to 3 credits.

### 551 DEVELOPMENTAL SCHOOL COUNSELING (4)

Prereq: admission to MS mental health counseling curriculum or to MEd in school counseling; students in experimental psychology program with instructor permission. A comprehensive overview of professional school counseling with particular emphasis upon recent advances in counseling program development, organization, evaluation and service delivery models.

### 553 THEORIES OF COUNSELING AND PSYCHOTHERAPY (3)

Prereq: admission to MS mental health counseling curriculum or to MEd school counseling program; may be taken by students in the MS experimental curriculum with permission of instructor. 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.

### 554 STANDARDIZED TESTS (4)

Prereq: admission to MEd school counseling program, MS mental health counseling curriculum program, or instructor permission. Standardized group tests commonly used in the public schools; selection and administration of tests; interpretation of norms.

### 555 OCCUPATIONS AND CAREER DEVELOPMENT (3)

Prereq: admission to MS mental health counseling curriculum or to MEd school counseling program and PSY 553. 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.

### 556 THE ROLE OF THE SCHOOL COUNSELOR (2)

Prereq: admission to MS mental health counseling curriculum or to MEd in school counseling and PSY 551 and 555. 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.

**557 TESTING AND APPRAISAL IN COUNSELING (3)**

Prereq: admission to MS mental health counseling curriculum and PSY 511, or admission to the MEd school counseling program and PSY 554. 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.

**558 FAMILY AND COUPLE COUNSELING (3)**

Prereq: admission to MS mental health counseling curriculum or MEd school counseling program plus PSY 553 and 564. Review of major theories, techniques and research in psychological counseling with families. Emphasis on parent-child developmental problems and the role of interpersonal relationships within the total family. Students are involved in limited supervised family counseling experiences.

**560 FAMILY COUNSELING LAB (1-6)**

Prereq: admission to MS mental health counseling curriculum or MEd school counseling program. Students observe and conduct family counseling sessions through the psychology department clinic under the supervision of an appropriate faculty member. Repeatable to six credits. S/U grading.

**561 SEMINAR: PROFESSIONAL, LEGAL AND CULTURAL ISSUES (3)**

Prereq: admission to MS mental health counseling curriculum or MEd school counseling program. 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.

**564 INDIVIDUAL COUNSELING TECHNIQUES (5)**

Prereq: admission to MS mental health counseling curriculum or MEd school counseling program. 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.

**565 GROUP PROCESSES IN COUNSELING (4)**

Prereq: admission to MS mental health counseling curriculum or MEd school

counseling program. Current group counseling and psychotherapy techniques. Covers task-directed, encounter, decision-making and communication techniques.

**567 PROFESSIONAL PRACTICE OF COUNSELING (2)**

Prereq: admission to the MS mental health counseling program or to the MEd school counseling program. 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.

**570 PRACTICUM (1-10)**

Prereq: admission to MS mental health counseling curriculum or MEd school counseling program. Professional practice under assigned departmental supervision. Repeatable to 15 credits. S/U grading.

**581 PRACTICUM IN COLLEGE TEACHING OF PSYCHOLOGY (1-12)**

Prereq: permission of instructor. Repeatable to a maximum of 12 credits. S/U grading.

**582 PRACTICUM IN RESEARCH IN PSYCHOLOGY (1-12)**

Prereq: permission of instructor. Student initiates and conducts a project under faculty supervision. Repeatable to a maximum of 12 credits. S/U grading.

**661 ADVANCED SEMINAR IN PROFESSIONAL ISSUES IN COUNSELING PRACTICE (2-4)**

Prereq: admission to MS mental health counseling curriculum, MEd school counseling program, initial certification in school counseling or permission of instructor. 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. No maximum. S/U grading.

**670 INTERNSHIP (1-12)**

Prereq: admission to MS mental health counseling curriculum or MEd school counseling program. 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.

**690 THESIS (1-12)**

Prereq: advancement to candidacy. Repeatable to a maximum of 12 credits. S/U grading.



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# SOCIAL STUDIES EDUCATION

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.”

## BACHELOR OF ARTS IN EDUCATION

### Elementary Education

The elementary social studies major is designed for students enrolled in the Elementary Education Professional program. A 2.75 GPA is required for all courses taken to satisfy this major.

*Major — Social Studies — Elementary*  
55-62 credits

This major 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

- ANTH 201
- ECON 446 (preferred) or ECON 206
- EGEO 201 and 320; and EGEO 250 (preferred) or any one of the following: EGEO 209, 310, 312, 327, 328
- HIST 103, 104, 391
- PLSC 250
- 3-5 credits upper-division social science
- One course from ECON 447, C/AM 410, or upper-division EGEO under advisement

- 10 credits in history including one course in world, Western or Pacific Rim history or civilization

This major must be accompanied by the professional preparation program in elementary education.

## 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: Dr. David M. Nelson
  - Geography/Social Studies — Advisor: Dr. Thomas Terich
  - History/Social Studies — Advisors: Dr. Chris Friday, Dr. Cecilia Danyk, 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’s 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.

# SOCIOLOGY

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 read the *Declaration of Major* section that follows carefully, and are encouraged to meet with the departmental advisor to establish a study plan as soon as possible.

## SOCIOLOGY FACULTY

**JAY D. TEACHMAN** (1998) Chair and Professor. BA, Western Washington University; MA, PhD, University of Chicago.

**KRISTIN ANDERSON** (2001) Associate Professor. BA, University of Northern Iowa; PhD, University of Texas-Austin.

**KAREN BRADLEY** (1992) Professor. BA, Providence College; MA, Boston College, Stanford University; PhD, Stanford University.

**KRIS BULCROFT** (1988) Professor. BA, Pacific Lutheran University; MA, Eastern Washington University; PhD, University of Minnesota.

**RICHARD BULCROFT** (1999) Associate Professor. BA, University of New Hampshire; PhD, University of Minnesota.

**KYLE CROWDER** (1998) Professor. BA, University of Washington; PhD, University-Albany, State University of New York.

**MICK CUNNINGHAM** (2000) Associate Professor. BA, Pacific Lutheran University; PhD, University of Michigan.

**NANETTE DAVIS** (1997) Visiting Professor. BS, St. Cloud State University; MA, University of Minnesota; PhD, Michigan State University.

**SETH FEINBERG** (2005) Assistant Professor. BA, Tufts University; PhD, Ohio State University.

**RONALD HELMS** (2000) Associate Professor. BA, California State University-Chico; PhD, University of Oregon.

**JAMES INVERARITY** (1985) Professor. BA, University of Michigan; PhD, Stanford University.

**JENNIFER LOIS** (2000) Assistant Professor. BS, Dartmouth College; PhD, University of Colorado.

**JOHN RICHARDSON** (1974) Professor. BA, University of the Pacific; PhD, University of California-Davis.

**GLENN TSUNOKAI** (2003) Assistant Professor. BA, PhD, University of California-Riverside.

## 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 middle of his/her junior year. Major omissions from this list will make it difficult or impossible to complete this degree within two additional years.

Any one: SOC 221, 251, 255, 260, 268, 269

SOC 210, 215, 310

## DECLARATION OF MAJOR

Students wishing to major in sociology must submit an application to the department. Applicants' files will be ranked competitively, based on the information provided on the application. In order to apply, students need to have successfully completed at least two courses in sociology at Western in the previous three quarters. The number of students admitted to the major over the course of a year is limited as a result of the structure of the sociology curriculum and departmental staffing capabilities. As a result, the number and proportion of applicants accepted to the major may vary from quarter to quarter, depending on the competitiveness of the pool of applicants. Applications to become a major must be submitted to the department advisor on or before Friday of the second full week of fall, winter, spring or summer quarter. Students can reapply, but they must submit their materials to do so and they will be evaluated independently each time they apply. Students may not apply to the major if they are less than two quarters away from graduation. Students are encouraged to apply for the major early, if possible during the sophomore year. Please see the department advisor or the sociology Web site for application materials.

## 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 *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, as well as SOC 302. Restrictions for most courses will be removed starting on the sixth class day of Phase I registration. If space is available, nonmajors will be able to register for 300-level courses at that time. See the sociology Web site for instructions

on wait lists for filled classes (override requests) at [www.wvu.edu/~socad/registration.html](http://www.wvu.edu/~socad/registration.html).

## BACHELOR OF ARTS

### Major — Sociology

65 credits

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.

#### Core Requirements: 25 credits

- Any one of the following introductory courses: SOC 221, 251, 255, 260, 268, 269
- SOC 210, 215, and 310
- SOC 302

#### Area Requirements: 30 credits

- At least *three* courses from *two* of the following areas, for a total of *six* courses (one of the courses must be designated a writing proficiency course):
  - 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, 332, 333, 338, 354, 360, 368, 380, 390

#### Law/Crime Deviance

SOC 352, 354, 355, 356, 359, 363, 376, 387, 456, 486

#### Population Studies

SOC 321, 326, 333, 375, 385, 418, 421

#### Social Organization/Social Inequality

SOC 303, 330, 340, 361, 363, 364, 367, 368, 369, 370, 375, 390

#### Capstone Seminar: 5 credits

- At least *one* course from one of the following areas:
  - Family/Life Course SOC 430, 460
  - Law/Crime Deviance SOC 430, 450, 452
  - Population Studies SOC 426
  - Social Organization/Inequality SOC 430, 440, 461

SOC 492-Senior Thesis (5) may be selected as the capstone course for any of the areas.

#### Electives: 5 credits minimum

- 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

#### Course restrictions

- No more than two of the following introductory courses may be applied to the major: SOC 221, 251, 255, 260, 268, 269

### Major — Sociology/Social Studies

85-87 credits

The Sociology-Social Studies major consists of a 45-credit core in sociology and 41-43 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.

#### Sociology courses (44-45 credits)

- Any one of the following introductory courses: SOC 221, 251, 255, 260, 268, 269
- SOC 210, 215, 302, 310 and 361
- At least two from: SOC 340, 364, 368, 369, 380
- SOC 461 (preferred) or other SOC 400-level capstone seminar, or SOC 492

#### Social Studies Courses (41-43 credits)

- ECON 206 or ECON 446 (preferred)
- ECON 207 or ECON 447 (preferred)
- EGEO 201
- EGEO 250 or two additional geography credits
- HIST 103 and 104 and 391
- Plus 12 credits in history, including one course in world or Western or Pacific Rim or civilization
- PLSC 250

#### Certification for Secondary Education

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. Courses required for a state teaching endorsement must be completed with a grade of C (2.0) or better.

## MINORS

Access to courses for minors is limited as a result of space limitations. See registration policy for additional information.

### Minor — Sociology

24 credits

- One or two from the following: SOC 221, 251 255, 260, 268, 269
- Electives under departmental advisement (from 300- or 400-level sociology courses *with prerequisites completed*; not to include SOC 400, 471, 480 or 492)

### Minor — Population Studies

24 credits

- SOC 221, 321
- SOC 326 or 375
- Electives under departmental advisement (from SOC 320, 326, 333, 375, 385, 418, 421)

### Minor — Criminology/Sociology of Law

24 credits

- SOC 251 or 255
- SOC 352 or 355
- Electives under departmental advisement (from SOC 320,

## SOCIOLOGY

352, 354, 355, 356, 359, 363, 376, 387, 456, 486)

### BACHELOR OF ARTS IN EDUCATION

*Major — Sociology — Elementary*  
50 credits

This major 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.

- Any *one* of the following introductory courses (no more than two may be applied to the major): SOC 221, 251, 255, 260, 268, 269
- SOC 210, 215, and 310
- SOC 302
- SOC 461 (preferred) or other 400-level capstone seminar, or SOC 492
- At least two courses from SOC 340, 364, 368, 369, 380
- Electives under departmental advisement to bring the total to a minimum of 50 credits in sociology

### BACHELOR OF SCIENCE

*Major — Sociology*  
68 credits

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.

*Core Requirements*  
39 credits

- MATH 124, 125, 204
- Any one of the following introductory courses: SOC 221, 251, 255, 260, 268, 269
- SOC 210, 215, 310
- SOC 302

*Area Requirements*  
24 credits

- SOC 320 and 415
- At least three courses in one of the following areas for a minimum of 15 credits:

*Family/Life Course*

SOC 326, 332, 333, 338, 354, 360, 368, 380, 390

*Law/Crime/Deviance*

SOC 352, 354, 355, 356, 359, 363, 376, 387, 456, 486

*Population Studies*

SOC 321, 326, 333, 375, 385, 418, 421

*Social Organization/Social Inequality*

SOC 303, 330, 340, 361, 363, 364, 367, 368, 369, 370, 375, 390

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.

*Capstone: 5 credits*

- SOC 492

### GRADUATE STUDY

For a concentration leading to the Master of Arts degree, see the *Graduate School* section of this catalog.

### COURSES IN SOCIOLOGY (SOC)

*Courses numbered X37; X97; 300, 400; 417, 445 are described on Page 34 of this catalog.*

#### Core Courses

The following six courses each provide a focused introduction to the discipline of sociology. Any one of these courses will satisfy requirements for an introductory course in this discipline.

- SOC 221 — Introduction to Population Issues (5)
- SOC 251 — Sociology of Deviant Behavior (5)
- SOC 255 — Social Organization of Criminal Justice (5)
- SOC 260 — The Family in Society (5)
- SOC 268 — Gender and Society (5)
- SOC 269 — Race and Ethnic Relations (5)

### COURSES IN SOCIOLOGY (SOC)

*Courses numbered X37, X97; 300, 400, 417; 445 are described on Page 34 of this catalog.*

#### 210 INTRODUCTION TO RESEARCH METHODS (5)

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.

#### 215 SOCIAL STATISTICS (5)

Prereq: SOC 210 and complete or test out of MATH 107 or MATH 112. Introduces students to two important aspects of statistics: graphical and numerical procedures for describing and summarizing data; and quantitative analysis of data to make decisions and predictions and draw inferences. Course also involves use of computers for statistical analysis.

#### 221 INTRODUCTION TO POPULATION ISSUES (5)

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.

#### 251 SOCIOLOGY OF DEVIANT BEHAVIOR (5)

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.

#### 255 SOCIAL ORGANIZATION OF CRIMINAL JUSTICE (5)

A survey of basic concepts, problems and issues in the sociological study of social organizations applied to the criminal justice system.

#### 260 THE FAMILY IN SOCIETY (5)

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.

#### 268 GENDER AND SOCIETY (5)

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.

### 269 RACE AND ETHNIC RELATIONS (5)

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.

### 302 CLASSICAL SOCIOLOGICAL THEORY (5)

Prereq: any SOC 221, 251, 255, 260, 268, 269. 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.

### 303 CONTEMPORARY SOCIOLOGICAL THEORY (5)

Prereq: SOC 302. Contemporary sociological theory examines the roots of major theoretical perspective in the late 19th century classical tradition. Examines major perspectives, such as functionalism, world system theory, and organizational theory, as well as the sociological analysis of modern culture.

### 310 METHODOLOGICAL APPLICATIONS IN SOCIAL RESEARCH (5)

Prereq: SOC 210, 215. An applied course which follows sequentially from SOC 210 and 215, 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. (Writing proficiency course.)

### 320 COMPUTER APPLICATIONS FOR SOCIAL SCIENCE DATA (4)

Prereq: any SOC 221, 251, 255, 260, 268, 269 and SOC 215 or equivalent. 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.

### 321 DEMOGRAPHY (5)

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.

### 326 FAMILY DEMOGRAPHY (5)

Prereq: any SOC 221, 251, 255, 260, 268, 269. 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.

### 330 INTRODUCTION TO SOCIAL PSYCHOLOGY (5)

Prereq: any SOC 221, 251, 255, 260, 268, 269. 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.

### 332 THE SOCIOLOGY OF HUMAN RELATIONSHIPS (5)

Prereq: any SOC 221, 251, 255, 260, 268, 269. 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.

### 333 AGING IN AMERICA (5)

Prereq: any SOC 221, 251, 255, 260, 268, 269. 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.

### 338 SOCIOLOGY OF SEXUAL BEHAVIOR (5)

Prereq: any SOC 221, 251, 255, 260, 268, 269. 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.

### 340 SOCIOLOGY OF ORGANIZATIONS (5)

Prereq: any SOC 221, 251, 255, 260, 268, 269. 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.

### 352 CRIMINOLOGY (5)

Prereq: any SOC 221, 251, 255, 260, 268, 269. 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.

### 354 DOMESTIC VIOLENCE AND THE CRIMINAL JUSTICE SYSTEM (5)

Prereq: any SOC 221, 251, 255, 260, 268, 269. 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 crime, the characteristics of domestic assault, and the variety of criminal justice interventions into domestic violence.

### 355 CRIMINAL JUSTICE SYSTEM (5)

Prereq: SOC 255. 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).

### 356 LAW ENFORCEMENT AND SOCIETY (5)

Prereq: any SOC 221, 251, 255, 260, 268, 269. 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.

### 359 WOMEN AND DEVIANCE (5)

Prereq: any SOC 221, 251, 255, 260, 268, 269. 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.

### 360 MARITAL AND FAMILY INTERACTION (5)

Prereq: SOC 260, 268 or permission. 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.

### 361 SOCIOLOGY OF EDUCATION (5)

Prereq: any SOC 221, 251, 255, 260, 268, 269. 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.

### 363 LAW AND SOCIAL STRATIFICATION (5)

Prereq: any SOC 221, 251, 255, 260, 268, 269, and 302. 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.

### 364 SOCIAL STRATIFICATION (5)

Prereq: any SOC 221, 251, 255, 260, 268, 269. Social causes and consequences of inequality in America. Social distribution of wealth, power and status; emphasis on poverty and racial social inequality.

### 367 SOCIOLOGY OF WORK AND OCCUPATIONS (5)

Prereq: any SOC 221, 251, 255, 260, 268, 269. Sociological and social-psy-

chological significance of work; factors affecting contemporary career patterns/life cycle changes; sex, race, ethnic and social class differences; structural characteristics of selected occupational areas.

### 368 GENDER AND EDUCATION (5)

Prereq: any SOC 221, 251, 255, 260, 268, 269 or equivalent, preferably 268 or a course with equivalent content concerning gender. 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.

### 369 SOCIOLOGY OF RACE AND ETHNICITY (5)

Prereq: any SOC 221, 251, 255, 260, 268, 269 or equivalent, preferably in minority relations. 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.

### 370 HISTORICAL SOCIOLOGY (5)

Prereq: any SOC 221, 251, 255, 260, 268, 269 and 302. 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.

### 375 COMMUNITY AND URBAN SOCIETY (5)

Prereq: Any SOC 221, 251, 255, 260, 268, 269. 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.

### 376 RESEARCH AND POLICY IN CRIMINAL JUSTICE ORGANIZATIONS (5)

Prereq: Any one of SOC 221, 251, 255, 260, 268, 269. 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.

### 380 SOCIOLOGY OF YOUTH (5)

Prereq: any SOC 221, 251, 255, 260, 268, 269. 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.

### 387 SOCIOLOGY OF CORRECTIONAL INSTITUTIONS (5)

Prereq: any SOC 221, 251, 255, 260, 268, 269. 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.

### 390 COMPARATIVE FAMILY: CANADA (5)

Prereq: any one of SOC 221, 251, 255, 260, 268, 269. An introduction to the comparative sociological analysis of institutions through an analysis of the Canadian family and its relationship to Canadian culture, policies, and economic institutions. Comparisons to the U.S. family are emphasized.

### 415 ADVANCED QUANTITATIVE ANALYSIS (4)

Prereq: any SOC 221, 251, 255, 260, 268, 269; Soc 210, 215 or equivalent; or permission of instructor. Experimentation and tests of significance applied to research problems.

### 418 SOCIAL IMPACT ASSESSMENT (5)

Prereq: SOC 210, 215. Utilizing sociological findings and research methods, 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 pro-

posed project or policy change. The focus is on measuring and understanding community level social change in advance of the event. Also offered as ESTU 418.

### 421 DEMOGRAPHIC ANALYSIS (4)

Prereq: any SOC 221, 251, 255, 260, 268, 269; Soc 215, 320, 321; or permission of instructor. Theory and method of population analysis; measures of mortality, fertility and migration; population forecasting techniques.

### 426 ADVANCED TOPICS IN DEMOGRAPHY (5)

Prereq: sociology core, SOC 320. 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.

### 430 FIELD RESEARCH METHODS (5)

Prereq: sociology core; SOC 330 highly recommended. 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.

### 440 GLOBALIZATION (5)

Prereq: sociology core. 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.

### 450 SOCIOLOGY OF LAW (5)

Prereq: sociology core. 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).

### 452 ADVANCED CRIMINOLOGY (5)

Prereq: sociology core and SOC 352. An in-depth examination of selected areas in sociological criminology.

### 456 POLICE AND SOCIETY (4)

Prereq: sociology core; SOC 355 or permission of instructor. 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.

### 460 ADVANCED TOPICS IN FAMILY (5)

Prereq: sociology core. 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.

### 461 ADVANCED SOCIOLOGY OF EDUCATION (5)

Prereq: sociology core and SOC 361 or 368. Advanced study of topics and research presented in SOC 361: educational stratification, origins and expansion of educational systems in the United States and cross-nationally, school and classroom organization and their effects on student learning and socialization; interaction processes in classrooms.

### 471 DIRECTED INTERNSHIP (5)

Prereq: SOC 210, 215, 302 and either SOC 310 or permission of instructor. Application of 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.

### 480 LEARNING AND TEACHING SOCIOLOGY (2-5)

Prereq: sociology core; a minimum grade of B+ in the course for which the student will be a teaching assistant; permission of instructor. 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 a hands-on experience in the various activities asso-

ciated 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. Repeatable to a maximum of 5 credits.

**481 RESEARCH ASSISTANTSHIP (2-5)**

Prereq: permission of instructor. 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. Requires a report or project journal to be submitted 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.

**486 CRITICAL ISSUES IN CORRECTIONS (4)**

Prereq: SOC 387. Offers a critical examination of incarceration by integrating various levels of analysis ranging from the macrosociological aspects of punishment to the organizational and individual dimensions of imprisonment. The overarching themes entail social control and the ironic and self-defeating measures of correctional policy and practice.

**492 SENIOR THESIS (5)**

Prereq: sociology core; 5 credits of SOC 400 (directed independent study) undertaken with the student's senior thesis faculty advisor prior to and in preparation for the 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.

# HUXLEY COLLEGE OF THE ENVIRONMENT

*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 studies. While here, they fulfill the common core requirements and specific requirements for their chosen majors. In addition, however, 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 and the weekly *Ecotones* newsletter.

Faculty specialties include science, social studies, 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 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.

Admission to Huxley College is selective and early application is strongly recommended.

## DEPARTMENT OF ENVIRONMENTAL SCIENCES

*Chair: Wayne G. Landis*

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.

## Degree

Huxley College offers the Bachelor of Science degree in environmental studies under advisement of faculty in the Department of Environmental Sciences. Requirements for this 85-credit, upper-division program are described below.

## Facilities and Equipment

Facilities are available for teaching laboratory courses and for student research projects. Students gain practical hands-on experience in the use of specialized instrumentation for collection and measurement of samples for water quality, hydrography, air pollution, forest ecology and toxicological testing. Computer facilities — including numerous PCs, software and mainframe facilities — are available primarily through University-wide central computing resources located in buildings throughout campus. A Geographic Information System laboratory with state-of-the-art capabilities (see *Minor — Geographic Information Systems*). 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.

## DEPARTMENT OF ENVIRONMENTAL STUDIES: POLICY, PLANNING, EDUCATION AND GEOGRAPHY

*Chair: Gigi Berardi*

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.

### 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.

### Degrees

The Bachelor of Arts degree is offered by Huxley College under advisement of faculty associated with the Department of Environmental Studies: Policy, Planning, Education and Geography. Bachelor of Arts in Education options are available in cooperation with Woodring College of Education for students wishing to major in environmental studies or geography and achieve certification for public school teaching.

### 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

### Department of Environmental Sciences

**WAYNE G. LANDIS** (1989) Professor, Department Chair and Director, Institute of Environmental Toxicology and Chemistry. BA (biology), Wake Forest University; MA (biology) and PhD (zoology), Indiana University.

**BRIAN L. BINGHAM** (1995) Professor. BS (zoology), MS (zoology), Brigham Young University; PhD (biology), Florida State University.

**LEO R. BODENSTEINER** (1995) Associate Professor. BA (biology), Moorhead State University; MA (zoology), PhD (zoology), Southern Illinois University-Carbondale.

**ANDREW G. BUNN** (2006) Assistant Professor. BS (zoology) The Evergreen State College; MEM (resource ecology) Duke University; PhD, Montana State University-Bozeman (environmental science).

**RUTH M. HARPER** (2003) Assistant Professor. BA, West Virginia University; MS, McNeese State University; PhD (environmental science and engineering), Colorado School of Mines.

**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) Associate 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.

**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) Assistant 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.

**DAVID O. WALLIN** (1995) Professor. BS (biology), Juniata College; MA (biology), The College of William and Mary; PhD (environmental science), University of Virginia.

### Department of Environmental Studies: Policy, Planning, Education and Geography

**GIGI BERARDI** (1995) Chair and 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.

**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.

**ANDREW BODMAN** (1999) Provost and Professor. MA, Bach Cambridge; PhD (geography), Ohio State 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)

**JASON K. LEVY** (2007) Assistant Professor. BASc, MASc, PhD (systems design engineering), University of Waterloo.

**MICHAEL J. MEDLER** (2002) Assistant 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.

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**DAVID A. ROSSITER** (2005) Assistant Professor. BA (Honors) (geography), University of British Columbia; MA (geography); PhD, 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

**THOMAS A. TERICH** (1973) Professor. BA, MA, California State University-Los Angeles; PhD (geography), Oregon State University.

**WENDY WALKER** (1991) Lecturer. 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

**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.

**BARRY L. BJORK**, PhD, Boston College.

**WILLARD BROWNELL**, Ecoquest, New Zealand.

**RABEL J. BURDGE** (1996) Visiting Professor. BS (agriculture/economics) and MS (rural sociology), Ohio State University; PhD (sociology), Penn State University.

**BRIAN COFFEY**, Ecoquest, New Zealand.

**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 DINNELL** 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.

**NADEZHDA K. KHRISTOFOROVA**, Professor and Chair of Ecology, Far East State University, Vladivostok, Russia. PhD (electrical chemistry and ecology of animals), Far East State University.

**MIMI LARSON BECKER**, Associate Professor of Natural Resources and Environmental Policy, University of New Hampshire. PhD (international environmental resource policy), Duke University.

**GARY J. LAWRENCE**, Sustainable Strategies and Solutions.

**ROGER MAC GIBBON**, Ecoquest, New Zealand.

**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, Patumthany Province, Thailand, PhD (environmental science and engineering), Colorado School of Mines.

**PAUL OLMSTEAD**, Engineer, MIT. MS, Stanford University; MBA, Harvard.

**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.

**DAWN SODT**, North Cascades Institute.

**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.

**PETER WILLING**, Water Resources Consultant, LLC, Bellingham, Washington. PhD (water resources policy), Cornell University.

### 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 Marine Center.

**DON C. WILLIAMS**, Professor, Department of Biology.

## ADMISSIONS AND DECLARATION OF MAJOR

Admission to Huxley College and its majors is selective and based upon the following four criteria: 1) completion of required preparatory course work, 2) academic performance (GPA), 3) a brief essay in response to a given question, and 4) relevant experience. Applications may be received by the Huxley College office by May 2 for admission to summer or fall quarters; October 20 for admission winter quarter; and January 28 for admission spring quarter. Required preparatory courses are listed below:

### Environmental Science Majors

- One year general chemistry (CHEM 121, 122, 123)
- One year general biology (BIOL 204, 205, 206)
- One quarter of calculus (MATH 124) second quarter (MATH 125) recommended
- Physical geography (EGEO 203) preferred, or physical geology (GEOL 211)
- Completion of Block B of Communication GUR requirement
- Economics, preferably microeconomics (ECON 206)
- Political science

### Environmental Studies/Economics Majors

- One quarter of general chemistry (CHEM 115 or 121)
- One quarter of introductory biology (BIOL 101)
- A third course in general biology, geology, chemistry or physics including a laboratory (which does not duplicate any prerequisite course).
- MATH 114 or 156

### Planning and Environmental Policy, Environmental Education and Geography Majors

- One quarter of general chemistry (CHEM 115 or 121)
- One quarter of introductory biology (BIOL 101)

- A third course in general biology, geology, chemistry or physics including a laboratory (which does not duplicate any prerequisite course)
- MATH 114 or 156
- Introductory statistics course (e.g. SOC 207, MATH 240, DSCI 205, ANTH 335)
- Physical geography (EGEO 203) preferred, or physical geology (GEOL 211)
- Completion of Block B of Communication GUR requirement
- Economics, preferably microeconomics (ECON 206)
- Political science

### Geography/Social Studies Majors

- ESCI 101
- Complete WWU science GUR requirements
- MATH 106 and 107, or MATH 114 or 156
- EGEO 203
- EGEO 201
- ECON 206 or ECON 446
- PLSC 250
- COMM Block B GUR course

Students wishing to complete an environmental science BS degree in four years should complete the general chemistry series during their freshman year and the general biology series during their sophomore year.

Students planning to major in policy, planning or geography should take EGEO 201 as one of their GURs prior to applying to Huxley.

Prospective environmental studies majors are strongly advised to take additional preparatory course work that provides a strong background in chemistry, biology and mathematics.

The above preparatory courses, 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.

It is also highly recommended that students entering Huxley College have good writing skills and be computer literate, possess skills in word processing, spreadsheets, et cetera.

### TRANSFER STUDENTS

Transfer applicants are encouraged to apply since Huxley's curriculum is mainly an upper-division program. The first step for a transfer student is application and admission to Western Washington University. Admission to the environmental studies core course requires completion of all required preparatory courses for the major and admission to Huxley College (see *Huxley College Admissions and Declaration of Major* section). Students are strongly encouraged to complete all required preparatory courses prior to transfer to Western Washington University.

Transfer applicants are evaluated by Western's Office of Admissions for transfer credit and for credit toward completion of the General University Requirements. Students who intend to seek a degree in environmental studies should so indicate on the "Uniform Undergraduate Application for Admission to Four-Year Colleges and Universities, State of Washington" and should request an admission application form for Huxley College.

Students who have earned certain associate's degrees from community colleges in Washington state are considered to have satisfied the General University Requirements; prospective transfers should consult the WWU Office of Admissions for information on which degrees are accepted under this agreement. However,

students holding associate's degrees from community colleges with which Western has no formal agreement must complete Western's General University Requirements.

### DEGREE PROGRAMS

To achieve its purpose in undergraduate education, Huxley College has developed an integrated set of majors, each of which offers the student a number of options and emphases. In addition, students may create their own self-designed major program which must be approved by two faculty advisors and the curriculum committee of the College.

The environmental studies curriculum prepares students for a wide variety of careers involving environmental policy, planning, management, land use, science and education. Students whose concerns are with the effects of humans on environmental systems will find appropriate course work among Huxley College offerings, as will those who plan to concentrate their efforts on the social and humanistic dimensions of environmental problems.

#### *Bachelor of Science in Environmental Studies*

- Environmental Science
- Student/Faculty Design

#### *Bachelor of Arts in Environmental Studies*

- Environmental Education
- Planning and Environmental Policy
- Student/Faculty Design

#### *Bachelor of Arts in Geography*

- Geography
- Geography/Social Studies

#### *Bachelor of Arts in Journalism*

- Environmental Studies/Journalism

#### *Bachelor of Arts in Economics*

- Environmental Studies/Economics

#### *Bachelor of Arts in Education*

- Environmental Studies — Elementary
- Geography — Elementary

#### *Minors*

- Environmental Education
- Environmental Policy
- Environmental Studies
- Environmental Science
- Geography
- Geographic Information Systems
- Sustainable Design

#### *Master of Education in Natural Science/Science Education*

#### *Master of Science in Environmental Science*

#### *Master of Science in Geography*

Students interested in any of these degree programs should contact the Huxley College office for advisement on admission to Huxley College and selection of a faculty advisor.

### DEGREE REQUIREMENTS

In addition to completing General University Requirements necessary for graduation from Western Washington University,

explained elsewhere in this catalog, the environmental studies program has the following specific requirements for baccalaureate degrees in environmental studies:

- An environmental science major (BS program), an environmental education major (BA program), a planning and environmental policy major (BA program), a geography major (BA program), an environmental studies/economics major (BA program in economics), an environmental studies/journalism program (BA program in journalism), or a student/faculty designed major (BA or BS program)
- At least one full year (45 quarter credits) as a major of Huxley College, including the final quarter before granting of a degree
- A cumulative grade point average of 2.0 or better (no grades less than C- in Huxley required preparatory courses or courses that define a student's major or minor)

### HUXLEY CORE REQUIREMENTS

Students admitted to any of the Huxley College baccalaureate degree programs must complete the Huxley core. The core is intended to ensure that Huxley students have a broad introduction both to environmental science and to the social, political and cultural contexts in which solutions to environmental problems are sought. Beyond the required courses, all Huxley students are encouraged to take additional courses under advisement from their non-major department so as to add depth to the breadth which the foundation course requirement aims to establish.

The core consists of the following four requirements:

- An introduction to Huxley course to be taken the first quarter
- Foundation courses from the student's non-major department (to be taken the first year)
- An approved capstone taken during one of the last two quarters before graduation
- Internship or other ESTU/ESCI 498
  - Introduction to Huxley
    - ESTU/ESCI 306: Introduction to Huxley College [1]
  - Foundation courses for environmental studies students. Environmental studies students are required to take one course from each of the following two categories during their first year at Huxley:
    - *Ecological Processes*: ESCI 302 Environmental Pollution [4], ESCI 310 Environmental Systems [4], ESCI 325, Fundamentals of Ecology [3]
    - *Applied Environmental Science*: ESCI 321 Oceanography [4], ESCI 330 Natural History of the Pacific Northwest [4], ESCI 333 Introduction to Toxicology [4], ESCI 361a, Water Quality [4], ESCI 463 Wetlands for Waste Water Treatment
  - Foundation courses for environmental science students. Environmental science students are required to take one course from two of the following three categories during their first year at Huxley:
    - *Human Ecology/Geography*: ESTU 303 Human Ecology [4], EGEO 314 Urbanization: Processes and Patterns [4], EGEO 340 Population and Resources [4]
    - *Environmental Policy*: ESTU 304 Environmental and Resource Policy [4], ESTU 320 Explorations in Environmental Studies [4]
    - *Environmental History, Philosophy, Ethics*: ESTU 305, Environmental History and Ethics [4], ESTU 488, The History of Conservation in America [4]
  - An approved capstone course (list available from departments; select one course with advisement) [4-5 credits]

- The capstone course, taken during one of the last two quarters before graduation, offers a real-world project-based opportunity to work collaboratively in small multidisciplinary groups and to integrate prior Huxley experience. This course emphasizes organization, decision-making process and communication skills.

- ESTU/ESCI 498a,b,c or d

#### *ESTU/ESCI 498 Environmental Applications Experience* 10-15 credits

An environmental applications experience is a self-initiated project in which the student applies knowledge and skills developed at Huxley College to problem-solving in a new in-depth professional, technical, research or cultural setting. The experience provides opportunity to expand skills and understanding, and to clarify career objectives. The experience culminates with a thesis, report or other tangible product. Prior to initiation of the experience, a "498 contract" must be approved by the 498 advisor and the faculty advisor (if different). There are four options:

#### *ESTU/ESCI 498a Senior Thesis*

The senior thesis makes an original contribution to knowledge by using the primary research methods of an academic discipline. In cooperation with a faculty advisor, skills are developed in synthesizing prior knowledge, formulating a question or hypothesis, gathering new data or identifying existing information, analyzing 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 kept in Wilson Library.

#### *ESTU/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. Requires an internship contract in advance. The sponsoring organization may be nonprofit, 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.

#### *ESTU/ESCI 498c Senior Project*

The 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, expertise is developed in planning, development, implementation, management, and completion of an independent project. The approach may be a 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.

#### *ESTU/ESCI 498d International Study*

Study abroad exposes the student to environmental concerns, situations, and problems in the cultural and geographical setting in 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 advisor 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 advisor.

## BACHELOR OF SCIENCE

### *Major — Environmental Science*

85 credits

The environmental science major is a two-year, upper-division BS degree program. It builds upon a substantial background in science and mathematics obtained through required lower-division preparatory courses. See *Huxley College Admissions and Declaration of Major* section for preparatory courses which must be completed prior to admittance to junior-level Huxley common core courses.

#### *Huxley Common Core Requirements*

22-29 credits

- ESCI 306
- One course from each of two of the following categories:
  - Human Ecology, Geography — ESTU 303, EGEO 314, 340
  - Environmental Policy — ESTU 320, 304
  - Environmental History, Philosophy, Ethics — ESTU 305, 488
- Approved capstone course
- ESCI 498a or 498b or 498c or 498d

#### *Major Requirements*

26 credits minimum

- Organic chemistry: CHEM 251 or CHEM 351, 352 and 354
- One course from each of the following:
  - Ecology: ESCI 325 or BIOL 325
  - Biostatistics: ESCI 340 or BIOL 340
- Large-scale systems: one approved course — 3 credits minimum
- Laboratory field courses: two approved courses — 10 credits minimum
- Electives: 37 upper-division credits under faculty advisement (or a number to equal a total of 85 credits for the major)

For students wishing an area of emphasis, advisement plans are available for freshwater ecology, environmental toxicology, environmental chemistry, terrestrial ecology, and marine ecology. Opportunities are available for students with an emphasis in marine ecology to spend a full quarter-in-residence at the Shannon Point Marine Center in Anacortes, Washington, either utilizing on-site housing or commuting.

### *Student/Faculty Designed Major*

Students who wish to design their own majors in environmental studies should obtain complete guidelines from 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.

## BACHELOR OF ARTS

### *Major — Environmental Education*

Advisors: John Miles, Gene Myers, Wendy Walker

85 credits

The general objective of the major in environmental

education is to provide students interested in educational roles of various types with an opportunity to obtain a basic understanding of the qualities of the environment in general and of the environmental education process in particular. The program offers two tracks: 1) Outdoor Education and Interpretation, and 2) Community Education and Mass Communication.

The major consists of several parts. First, students acquire a synthetic and holistic understanding of the content of environmental studies. Second, students examine the process of education for environmental perspective; i.e., how the environmental education process differs from other processes of education, what ideas and methods are central to the process and what specific techniques are available to facilitate it. Third, students investigate ways of applying environmental education content and techniques in the professional roles which they might pursue. Fourth, students participate in internships, a field practicum, or research.

Graduates of this major have assumed positions as teachers in public and private schools, as interpreters with resources management agencies, and as staff in programs for special populations such as high-risk youth and the handicapped, among others.

#### *Huxley Core Requirements*

21-24 credits

- ESTU 306
- Foundation course — Ecological Processes (one of the following: ESCI 302, 310, 325)
- Foundation course — Applied Environmental Science (one of the following: ESCI 321, 330, 333, 361a, 463)
- Approved capstone course
- ESTU 498a or 498b or 498c or 498d

#### *Major requirements*

20 credits

- ESTU 305, 371, 372, 477

#### *Outdoor Education and Interpretation Track Requirements*

25 credits

- ESCI 330; ESTU 473, 474, 476, 483, 484

#### *Outdoor Education and Interpretation Track Electives*

20-23 credits

- Upper-division electives chosen under faculty advisement (20-23 upper-division credits or a number needed to equal a total of 85 credits for the major)

#### *Community Education and Mass Communication Track Requirements*

23 credits

- ESTU 480, 481, 486, 479
- Choose one from ESTU 304, 376, 446, 464, or 468

#### *Community Education and Mass Communication Track Electives — 22-25 credits*

- Upper-division electives chosen under faculty advisement (22-25 upper-division credits or a number needed to equal a total of 85 credits for the major)

Interested students should seek advisement early to

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formulate a degree program within either of the above tracks.

### *Major — Planning and Environmental Policy*

Advisors: Jean Melious, Grace Wang, Troy Abel and Nicholas Zaferatos  
85 credits

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 primary objective of this academic program is to prepare students for employment in planning and policy agencies and private organizations as well as to provide a foundation for graduate study.

See *Huxley College Admissions and Declaration of Major* section for preparatory courses which must be completed prior to admittance to junior-level Huxley common core courses.

### *Program*

The undergraduate program of study for the bachelor's degree requires a major concentration of 85 credits. The program consists of a core, three major concentration tracks, and specialization electives. The core incorporates the interdisciplinary foundation of Huxley College's approach to the study of the environment. The two major concentration tracks, planning and environmental policy, concentrate studies in public policy development, law, and the methods and processes of planning and decision making. The third major concentration is emergency planning and hazards mitigation. The specialization elective component of the program is flexible. It enables the students to develop an area of special interest, concentrating on a minor in an academic discipline, or to select from a number of thematically oriented clusters of courses. Majors are strongly recommended to pursue an internship.

### *Huxley Common Core Requirements*

21-24 credits

- ESTU 306
- Foundation course — Ecological Processes.** One of the following: ESCI 302, 310, 325
- Foundation course — Applied Environmental Science.** One of the following: ESCI 321, 330, 333, 361a, 463
- Approved capstone course
- ESTU 498a, 498b, 498c or 498d

### *Planning and Environmental Policy Major Requirements*

16 credits

- ESTU 369, 436, 466

### *Planning Track Requirements*

27 credits

- ESTU 370, 380, 443, 444, 470, 472, EGEO 350

### *Planning Track Electives*

25-29 credits

- Elective courses selected under faculty advisement in one or more of the following areas: community/sustainable development, natural resources management, urban studies, environmental policy (21-24 upper-division credits or a number needed to equal 85 credits for the major)

### *Environmental Policy Track Requirements*

23-25 credits

- ESTU 464, 465, ECON 383
- ESTU 443 or 468
- ESTU 420 or 463
- One of the following: ESTU 441, 444, 467, 475; EGEO 461

### *Environmental Policy Track Electives*

23-26 credits

- Elective courses selected under faculty advisement (23-26 upper-division credits or a number needed to equal 85 credits for the major)

### **Emergency Planning and Hazards Mitigation Track**

#### *Emergency Planning and Hazard Mitigation Requirements*

30-31 credits

- ENG 302
- COMM 318, 322 or MGMT 311
- EGEO 330, 331, 363 or GEOL 455
- EGEO 350 and ESTU 401
- 6 credits of approved ESTU 499 or EXT 370 and 371
- 4 credits of ESTU 499 or EXT 465

#### *Emergency Planning and Hazards Mitigation Track Electives*

18-22 credits

- Elective credits selected under faculty advisement in areas such as land use law, law and policy, social issues related to disasters and hazards management, environmental risk assessment, communication technologies, systems design, or social issues in emergency management or the number needed to equal a total of 85 credits for the major

### *Major — Geography*

Advisors: Andy Bach, Debnath Mookherjee and Tom Terich  
85 credits

All majors are required to complete a set of core courses, track of concentration requirements, and supporting electives that meet their needs and interests. The undergraduate advisor will recommend courses related to the student's career objectives. Students are urged to consult advisors at the earliest opportunity to plan their program. For required preparatory courses, see *Huxley College Admissions and Declaration of Major* section for preparatory courses to be completed prior to admittance to Huxley core courses.

### *Huxley Core Requirements*

21-24 credits

- ESTU 306
- Foundation course — ecological processes
  - One of the following: ESCI 302, 310, 325
- Foundation course — applied environmental science
  - One of the following: ESCI 321, 330, 333, 361a, 463
- Approved capstone course
- ESTU 498a, 498b, 498c or 498d

### *Major requirements*

24 credits

- EGEO 201, 203, 301, 305, 351, 352, one upper-division GIS course (EGEO 350, 450, 451, 452, 453 or ESTU 401 or approved course)

### *Environmental and Resource Management Track Requirements*

21-23 credits

This option emphasizes the interaction between the natural

environment and human activities. Students investigate issues relating to utilization of resources and develop skills in scientific management of natural resources.

- Five of the following: EGEO 330, 331, 332, 362, 363, 431, 432, 433, 434, 461; ESCI 492
- Regional geography — one of the following: EGEO 320, 321, 322, 323, 324, 327, 328

*Environmental and Resource Management Track Electives*  
14-19 credits

- Elective courses selected under faculty advisement in one or more of the following areas: hydrology, public policy, natural resource management, environmental sciences, spatial analysis, land management, ecology (14-19 upper-division credits or a number needed to equal 85 credits for the major)

*Human and International Geography Track Requirements*  
26 credits minimum

Concentrating on the Pacific rim, students develop investigative skills to analyze issues relating to the environment, culture, spatial economics, urbanization, and development.

- Five of the following (at least two must be at the 400 level): EGEO 310, 311, 312, 314, 412, 414, 421, 423
- Regional geography — three of the following: EGEO 320, 321, 323, 324, 327, 328, 432

*Human and International Studies Track Electives*  
11-14 credits

- Elective courses selected under faculty advisement in one or more of the following areas: economic development, cross-cultural studies, public policy, spatial analysis, planning and resources, demography, regional studies (11-14 upper-division credits or a number needed to equal 85 credits for the major)

*Major — Geography/Social Studies*

*Endorsement for Secondary Education*

Advisor: Thomas Terich

90-92 credits

*Huxley Core Requirements*

5 credits

- ESTU 306
- Select one of the following physical geography courses: EGEO 330, 331, 362, 363, 431, 432, 433

*Geography Core Requirements*

19 credits

- EGEO 201, 203, 209, 301, 320, 351

*Regional Electives*

6 credits

- Select two of the following: EGEO 321, 322, 323, 324, 327, 328

*Geography Electives (8 credits minimum)*

- Selected with faculty advisement

*Track Electives (11 credits minimum)*

- Select three of the following: EGEO 310, 312, 314, 340

*Social Studies Courses*

40-42 credits

- ANTH 201 or one of SOC 221, 251, 255, 260, 268, 269
- ECON 206 or 446 (preferred)
- ECON 207 or 447 (preferred)
- HIST 103, 104, 391
- 12 credits in history, including one course in World or Western or Pacific Rim or Civilization
- PLSC 250

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. Courses required for a state teaching endorsement must be completed with a grade of C (2.0) or better.

*Student/Faculty Designed Major*

Students who wish to design their own majors in environmental studies should obtain complete guidelines from the Huxley College office. The student-designed 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.

*Combined Major — Environmental Studies/ Journalism*

84 credits

A combined major is offered cooperatively by Huxley College and the Department of Journalism. The degree awarded is a BA in Journalism. This program was initiated informally a number of years ago by students themselves with aptitude and interest in developing their communication skills. It has grown steadily and systematically, but continues to be innovative and has attracted wide attention and recognition.

The emphasis is on writing with a purpose: to present data as the means of making wise, informed decisions on critical environmental issues, ranging from global warming and population growth to wildlife and forest conservation and local land use.

The program encompasses courses from journalism in news writing, reporting, copy editing, hands-on desktop publishing, and photojournalism coupled with conservation history, physical science, biology and chemistry. See *Huxley College Admissions and Declaration of Major* section for preparatory courses which must be completed prior to admittance to junior-level Huxley core courses. All students must complete JOUR 207 with a grade of B- or better.

*Huxley requirements*

41 credits

- ESTU 306
- Foundation course — Ecological Processes (one of the following: ESCI 302, 310, 325)
- Foundation course — Applied Environmental Science (one of the following: ESCI 321, 330, 333, 361a, 463)
- Capstone course
- ESTU 480, 481 (6 credits)
- Upper-division electives chosen under faculty advisement (21 credits)

## HUXLEY COLLEGE OF THE ENVIRONMENT

### *Journalism courses — 43 credits*

- JOUR 207 (4 credits)
- JOUR 190, 307, 309, 350, 430, 450, 480 (32 credits)
- Three staff courses or equivalent professional experience: one course from list (a), one course from list (b), and one additional course from list (a) or (b) or a second quarter ESTU 480:
  - (a) JOUR 214, 314, 414, 415
  - (b) JOUR 221, 321, 421, 422

Some of the journalism staff course requirements may be waived by substitution of equivalent professional experience. The journalism *outside concentration* requirements are satisfied by the environmental studies portion of the program.

### *Combined Major — Environmental Studies/Economics* 85 credits

Cooperative Program — Huxley College of the Environment and the College of Business and Economics.

A combined major in environmental studies and economics is available to students having a strong interest in the economic aspects of environmental studies and natural resources. The degree awarded is a BA in economics. Background required preparatory courses: BIOL 101, CHEM 115 or 121, and a second course in general biology, chemistry, geology, or physics including a laboratory; MATH 114 or 157.

### *Huxley Core Requirements*

- ESTU 306
- Foundation course — Ecological Processes (one of the following: ESCI 302, 310, 325)
- Foundation course — Applied Environmental Science (one of the following: ESCI 321, 330, 333, 361a, 463)
- Approved capstone course
- ESTU 436, 464, 468
- One of the following: EGEO 310, 312, 340

### *Economics courses*

- ECON 206, 207, 208, 303, 306, 307, 383, 384, 483
- DSCI 205
- MATH 124 or 157 or equivalent
- ECON/ESTU 493 or 4 credits of ESTU 499
- 15 upper-division credits of electives in economics or environmental studies under faculty advisement
- One communication focus course must be taken

Students applying to this major must have a 2.5 minimum GPA.

## BACHELOR OF ARTS IN EDUCATION

### *Major — Environmental Studies — Elementary* 47 credits

This major 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. Prerequisites: BIOL 101 and a second course in general biology, chemistry, geology, or physics including a laboratory; CHEM 115 or 121; Math 114 or 156.

### *Huxley Core Courses*

9 credits

- ESTU 306
- Foundation course — ecological processes
  - One of the following: ESCI 302, 310, 325
- Foundation course — applied environmental science
  - One of the following: ESCI 321, 330, 333, 361a, 463
- Two of the following: ESTU 303, 304, 305
- Major requirement: ESTU 371, 372
- Environmental studies electives under advisement — 22 credits

### *Major — Geography — Elementary*

Advisor: Thomas Terich

45 credits

This major 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.

### *Major Requirements*

25 credits

- EGEO 201, 203, 209, 250, 301, 310, 320, 351
- Electives selected under faculty advisement — 20 credits

## MINORS

### *Minor — Environmental Education*

26 credits

- ESTU 305 or 488
- ESTU 371, 372
- ESCI 330
- Electives under advisement — 10 credits

### *Minor — Environmental Studies*

24 credits

Huxley's environmental studies minor is open to all students at Western who have completed prerequisites for the courses required for the minor.

- ESCI 101 and ESTU 202
- Two environmental studies core courses selected from ESCI 310, ESTU 303, 304, 305
- Environmental studies electives under advisement — 10 credits

### *Minor — Environmental Science*

24-29 credits

Huxley's environmental science minor is open to students whose majors in the science disciplines would be complemented by an environmental science minor and who have completed prerequisites for the courses comprising the minor.

- ESCI 101, 302, 325
- One course from the large-systems area and one lab/lecture course from the environmental science major (8 credits minimum)
- Upper-division environmental science electives under advisement — 6 credits



**Minor — Environmental Policy**

Advisors: Lynn Robbins, Jean Melious, Grace Wang  
20-25 credits

Huxley's environmental policy minor is open to all students at Western whose majors would be complemented by a minor in environmental policy, and who have completed prerequisites for the courses comprising the minor. (Students majoring in Planning and Environmental Policy or Environmental Studies/Economics are not eligible to take this minor.)

- ESTU 320 or 202
- ESTU 304
- One course from each of the four key aspects of environmental policy
  - Planning: ESTU 369 or EGEO 314
  - Policy: ESTU 464 or 467
  - Skills: ESTU 444 or 466 or EGEO 362
  - Law: ESTU 443 or 468

**Minor — Geography**

Advisor: Thomas Terich  
25 credits

- EGEO 201, 203, 320, 351
- Electives under advisement

**Minor — Geographic Information Systems**

Advisor: Michael Medler  
32-34 credits

- EGEO 305 or ESCI 340 or DSCI 305 or approved intermediate statistics course
- EGEO 350 or ESTU 401
- EGEO 351, 352, 450, 451, 452
- CSCI 140 or an approved programming course
- Electives under faculty advisement [3]

**Minor — Sustainable Design**

30-32 credits

- Environmental Studies** (14-16 credits)
  - ESTU 369
  - ESTU 415
- One of the following:
  - ESCI 310, 325
- One of the following:
  - ESTU 303
  - ESTU 304
  - ESTU 305
  - FAIR 335
- Industrial Design** (8 credits)
  - ETEC 311 (prereq: ETEC 110 or ESTU 401 or EGEO 350 or EGEO 352)
  - ETEC 312 (co-req: ETEC 311)
- Electives under advisement — 8 credits

**HUXLEY COLLEGE GRADUATE PROGRAMS**

Program options and requirements are described in the *Graduate School* section of this catalog.

**MS — Environmental Science**

- Freshwater Ecology
- Environmental Toxicology and Chemistry
- Regional, Global and Terrestrial Ecosystems
- Marine and Estuarine Science

**MS — Geography**

- Resource Conservation and Management
- Regional Development and Environmental Policy
- Earth Surface Processes

**MEd — Natural Science/Science Education**

- Environmental Education
- Environmental Education Residency

The college also participates in a cooperative program with the Department of Political Science, leading to an MA in political science with an emphasis on environmental studies.

**COURSES IN ENVIRONMENTAL SCIENCE (ESCI)**

*Courses numbered X37, X97, 300, 400, 417, 445 are described on Page 34 of this catalog.*

**101 ENVIRONMENTAL STUDIES: A SCIENTIFIC APPROACH (3)**

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.

**204 THE OCEANS: TOPICS IN MARINE SCIENCE (4)**

Prereq: two quarters of natural science courses at the college level and MATH 102. 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.

**302 ENVIRONMENTAL POLLUTION (4)**

Prereq: CHEM 115; one quarter of biology; MATH 114. Examination of human-induced environmental perturbations of air, land and water occurring on local, regional and global scales.

**306 INTRODUCTION TO HUXLEY COLLEGE (1)**

An introduction to Huxley College faculty, programs, resources and community. Explains how the study of the environment is approached in and across disciplines at Huxley.

**310 ENVIRONMENTAL SYSTEMS (4)**

Prereq: CHEM 115; one quarter of biology; MATH 114. 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.

**320 EXPLORATIONS IN ENVIRONMENTAL STUDIES (4)**

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.

**321 OCEANOGRAPHY (4)**

Prereq: two quarters of biology; CHEM 115 or 121; MATH 115; physics recommended. Principles of oceanography, with emphasis on a description of the marine environment as an entity. Physics, chemistry and biology of the ocean.

**322 OCEANOGRAPHY LABORATORY (2)**

Pre- or co-req: ESCI 321. 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.

**325 FUNDAMENTALS OF ECOLOGY (3)**

Prereq: one year general biology and one year general chemistry. 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.

**328 INTRODUCTION TO ECOSYSTEM MANAGEMENT (5)**

Prereq: ESCI 310 or 302 or one year of biology or permission of instructor. 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 iden-

tifying resource values of parks, natural preserves and other areas with high resource values.

### **330 NATURAL HISTORY OF THE PACIFIC NORTHWEST (4)**

Prereq: ESCI 310 or one year of biology or permission of instructor. 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.

### **333 INTRODUCTION TO ENVIRONMENTAL TOXICOLOGY (4)**

Prereq: one course in general biology and one course in general chemistry or permission of instructor. 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.

### **338 INTRODUCTION TO ECOSYSTEM RESTORATION (5)**

Prereq: ESCI 310 or 325 or permission of instructor. An overview of the restoration of ecologically damaged ecosystems, with emphasis on rivers and streams. Examines current techniques and approaches to ecosystem restoration, along with the various physical, biological and socioeconomic factors that influence the success of restoration projects. Lab includes one or more case studies.

### **340 BIostatistical ANALYSIS (5)**

Prereq: one year of general biology. 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.

### **361a WATER QUALITY (3)**

Prereq: one year general biology and one year general chemistry, or one quarter biology and CHEM 115 and ESCI 310 or 302. Water quality principles, problems, and issues; standard methods of assessing water quality; practical approaches in solving water-related problems.

### **361b WATER QUALITY LABORATORY (2)**

Prereq: general chemistry and biology course; ESCI 361a (may be co-requisite); or permission of instructor. Standard laboratory methods of water quality analysis including physical parameters, dissolved oxygen, biological oxygen demand, phosphorous, nitrogen, total and fecal coliform, and heavy metals. Techniques include Winkler titrations, spectrophotometric methods, bioassays, linear regression analysis, and use of computer models.

### **402 TOPICS IN ENVIRONMENTAL STUDIES (1)**

Prereq: Huxley major status. 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.

### **407 FOREST ECOLOGY (5)**

Prereq: ESCI 325 or BIOL 325; ESCI 340 or BIOL 340; or equivalents. 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.

### **408 FIELD METHODS IN WILDLIFE ECOLOGY (5)**

Prereq: ESCI 325 or BIOL 325; ESCI 340; or equivalents. Rationale and practice of methods to study vertebrates in the field. Emphasis on terrestrial environments. Students design and conduct field research projects.

### **410 FOREST-FISH INTERACTIONS (3)**

Prereq: ESCI 310 or 325 or permission of instructor. Examination of the ways in which forestry and fisheries management practices interact, with emphasis on Pacific Northwest ecosystems. Topics 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.

### **411 FOREST AND FISH ASSESSMENT (2)**

Prereq: enrollment in ESCI 410 or permission of instructor. 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.

### **421 FISHERIES MANAGEMENT LABORATORY (2)**

Prereq: ESCI 421a or concurrent. 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.

### **423 PAST ENVIRONMENTS OF THE PACIFIC NORTHWEST (4)**

Prereq: EGEO 331 or equivalent, ESCI 325 or equivalent. 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.

### **425 ENVIRONMENTAL BIOLOGY OF FISHES (3)**

Prereq: ESCI 325 or BIOL 325. 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.

### **426 MARINE INVERTEBRATES AND THEIR ENVIRONMENT (5)**

Prereq: BIOL 202 or equivalent. Classroom and field study of marine invertebrates and adaptation to their environment. Emphasis on identification and study of the diverse Puget Sound marine fauna.

### **429 STREAM ECOLOGY (5)**

Prereq: ESCI 325 or BIOL 325; ESCI 361a,b. 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 lab exercises in sampling and analysis of stream ecosystems.

### **430 LIMNOLOGY (5)**

Prereq: ESCI 325 OR BIOL 325. 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.

### **431 WATERSHED BIOGEOCHEMISTRY (3)**

Prereq: ESCI 325 or BIOL 325; ESCI 361a or EGEO 432. 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.

### **432 TOPICS IN MARINE ECOLOGY (4)**

Prereq: ESCI 321. Primary literature is used to introduce students to important and current topics in marine ecology.

### **433a POPULATION BIOLOGY (3)**

Prereq: ESCI 325 or BIOL 325; MATH 124; ESCI 340; MATH 125 recommended. Introduction to theory and application of population biology, with emphasis on population ecology. Study of structure, distribution, and dynamics of populations. Analysis of species interactions. Applications to population conservation and management.

### **433b POPULATION BIOLOGY LABORATORY (2)**

Prereq: ESCI 433a concurrent; ESCI 340 or BIOL 340. Companion lab for 433a.

### **435 LANDSCAPE ECOLOGY (4)**

Prereq: ESCI 325 or BIOL 325; ESCI 340 or BIOL 340; or equivalents. 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.

### **436 ENVIRONMENTAL IMPACT ASSESSMENT (5)**

Prereq: senior status, completion of analysis course work within majors or permission of instructor. 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.

### **439 CONSERVATION OF BIOLOGICAL DIVERSITY (4)**

Prereq: ENVR 325 or BIOL 325. 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 eval-

uation of conservation efforts directed at single species and at ecosystems. Optional field trips.

#### 440 WETLANDS ECOLOGY (5)

Prereq: ESCI 340 and 325 or concurrent. 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.

#### 441 GIS AND ENVIRONMENTAL MODELING (3)

Prereq: one course in statistics at the 300 level or above; one course in ecology or natural resources management; one course in GIS. An overview of statistical and simulation models and their use to address applied problems in ecology and natural resources management. Geographical Information Systems are used as a tool for these models and for the display and analysis of model output.

#### 442 INTRODUCTION TO REMOTE SENSING (5)

Prereq: one of GEOL 310, ESCI 310, EGEO 330, BIOL 203 or permission of instructor. An introduction to remote sensing techniques for monitoring the earth's surface. Special emphasis on the use of multispectral scanners and radar. Also offered as GEOL 442.

#### 444 BIOGEOCHEMISTRY OF MARINE SEDIMENTS (4)

Prereq: ESCI 321. Introduces concept in chemical oceanography and methodology of studying sediments and their chemistry.

#### 450 ENVIRONMENTAL CHEMISTRY I (4)

Prereq: CHEM 123 and 351 or permission of instructor; CHEM 333, 434 recommended. Development of analytical strategies necessary to identify and measure chemicals in the environment. Methods and concepts of instrumentation, analytical procedures, sampling and quality assurance/quality control.

#### 451 ENVIRONMENTAL CHEMISTRY II (4)

Prereq: ESCI 450; CHEM 351 or permission of instructor; CHEM 333, 434 recommended. A problem-based laboratory applying analytical techniques and methodologies to the assessment of the environmental impact of chemicals. Analytical method development, quality assurance/quality control principles and instrumental techniques. Demonstration of how analytical data is used to support environmental policy decisions.

#### 455 ENVIRONMENTAL TOXICOLOGY I (4)

Prereq: ESCI 302 or permission of instructor. Physiological and biochemical effects of common pollutants found in our environment. Mechanism of action of individual pollutants, including cellular damage at molecular level.

#### 456 ENVIRONMENTAL TOXICOLOGY II (4)

Prereq: ESCI 455 or permission of instructor. Second course in environmental toxicology series. Covers toxicity testing, biomonitoring, data analysis and environmental risk assessment.

#### 457 ENVIRONMENTAL TOXICOLOGY LABORATORY I (4)

Pre- or co-req: ESCI 302, 455; CHEM 471 recommended. 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.

#### 458 ENVIRONMENTAL TOXICOLOGY LABORATORY II (3)

Co- or prereq: ESCI 302 and 455 or permission of instructor; CHEM 471 recommended. 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 population and community levels.

#### 459 AQUATIC TOXICOLOGY (3)

Prereq: ESCI 455 or 456 or at least 4 credits of 400-level course in aquatic ecology. 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.

#### 460 CONTAMINANT MOVEMENT IN THE ENVIRONMENT (4)

Prereq: completion of Huxley ESCI prerequisites; ESCI 361a, CHEM 251 or equivalent recommended; or permission of instructor. Physical, chemical, and biological processes that govern movement of contaminants in the en-

vironment and ultimate fate of these contaminants. Aspects of these processes that will be investigated include concentration, persistence, reactivity and partitioning 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.

#### 462 AIR POLLUTION (4)

Prereq: ESCI 302; general chemistry course. 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.

#### 463 WETLANDS FOR WASTERWATER TREATMENT (3)

Prereq: Huxley or MESP student or permission of instructor. Introduction to conventional wastewater treatment methods (primary, secondary, and tertiary) and chemistry as it relates to wetlands and wastewater treatment. Examines the use of both natural and constructed wetlands for the treatment of municipal wastewater, acid mine drainage, stormwater runoff, and agricultural wastewater. Students will carry out research projects using campus stormwater wetland as study site.

#### 490 ENVIRONMENTAL RISK ASSESSMENT (4)

Prereq: senior status; one 300- or 400-level toxicology course strongly recommended. Principles and methods of quantitative environmental risk assessment, data analysis and risk communication.

#### 491 OCEANOGRAPHY OF PUGET SOUND (4)

Prereq: ESCI 321. Focus 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.

#### 492 EFFECTS OF GLOBAL CLIMATE CHANGE (3)

Prereq: ESCI 325 or BIOL 325; ESCI 302 or GEOL 214; or permission of instructor. Magnitude and extent of climatic change and its probable impact on natural ecosystems, resources (food, water and energy) and society. Possible actions which could minimize the impacts are evaluated.

#### 495 TEACHING PRACTICUM (1-3)

Prereq: relevant work and permission of instructor. Experience in teaching a lecture or laboratory course in environmental sciences. S/U grading. Repeatable to a maximum of 4 credits.

#### 498a SENIOR THESIS (1-15)

Makes an original contribution to knowledge by using primary research of an academic discipline. In cooperation with a faculty advisor, develops skills in synthesizing prior knowledge, formulating a question or hypothesis, gathering new data or identifying existing information, analyzing results and drawing conclusions. Two bound copies of the senior thesis, in an approved format, are submitted by the student, and one is kept in Wilson Library. Repeatable to a maximum of 15 credits.

#### 498b INTERNSHIP (1-15)

Provides the student with a supervised work and learning experience in a paid employment or unpaid voluntary, environmentally relevant professional setting. Requires an internship contract in advance. The sponsoring organization may be nonprofit, 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 is kept in Wilson Library. S/U grading. Repeatable to a maximum of 15 credits.

#### 498c SENIOR PROJECT (1-15)

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.

#### 498d INTERNATIONAL STUDY (1-15)

Exposes the student to environmental concerns, situations and problems in the cultural and geographical setting in 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 advisor 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 advisor. S/U grading. Repeatable to a maximum of 15 credits.

### **499a-d SEMINAR (1)**

Prereq: admission to Huxley College or permission of instructor. Student-faculty interaction on topics of general interest. Repeatable for credit with no maximum. S/U grading.

### **499f-m SEMINAR (2)**

Prereq: admission to Huxley College or permission of instructor. Student-faculty interaction. Repeatable for credit with no maximum. S/U grading.

### **499n-r SEMINAR (1)**

Prereq: admission to Huxley College or permission of instructor. Student-faculty interaction on topics of general interest. Repeatable for credit with no maximum.

### **499s-z SEMINAR (2)**

Prereq: admission to Huxley College or permission of instructor. Student-faculty interaction. Repeatable for credit with no maximum.

## **Graduate Courses in Environmental Science**

*Courses numbered 500; 517; 545; 597 are described on Page 34 of this catalog. Admission to Graduate School or special permission required. See the Graduate School section of this catalog.*

### **501 RESEARCH IN ENVIRONMENTAL SCIENCE (3)**

Prereq: graduate status in environmental science or permission of instructor. 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.

### **502 EXPERIMENTAL DESIGN (4)**

Prereq: at least one 300-level statistics course. 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.

### **503 STATISTICAL ECOLOGY (4)**

Prereq: at least one 300-level biostatistics class and at least 10 credits of ecology. Covers graphical, descriptive and basic inferential statistics; non-parametric 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.

### **507 ADVANCED FOREST ECOLOGY (5)**

Prereq: ESCI 325 or BIOL 325; ESCI 340 or BIOL 340; or equivalents. 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.

### **521 BIOLOGICAL OCEANOGRAPHY (5)**

Provides 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.

### **522 ESTUARINE ECOLOGY (5)**

Prereq: graduate status; course in general ecology, oceanography or limnology. 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.

### **523 PAST ENVIRONMENTS OF THE PACIFIC NORTHWEST (4)**

Prereq: ESCI 325 or equivalent. Introduction to the central concepts of pa-

leocology, 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.

### **529 ADVANCED STREAM ECOLOGY (5)**

Prereq: graduate status; at least 10 credits of general chemistry. 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.

### **530 ADVANCED LIMNOLOGY (5)**

Prereq: graduate status; at least 10 credits of general chemistry. Advanced study of the physical, chemical and biological properties of lakes.

### **533 ADVANCED POPULATION BIOLOGY (4)**

Prereq: ESCI 325 or BIOL 325; MATH 124; BIOL 321. MATH 125 recommended. Study of the structure, distribution, and dynamics of populations. Emphasis is on both empirical and theoretical approaches to studying populations.

### **535 ADVANCED LANDSCAPE ECOLOGY (4)**

Prereq: ESCI 325, 340 or equivalents. 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.

### **536 ENVIRONMENTAL IMPACT ASSESSMENT PRACTICUM (4)**

Prereq: graduate status. 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.

### **539 ADVANCED CONSERVATION OF BIOLOGICAL DIVERSITY (5)**

Prereq: ESCI 325 or BIOL 325. 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.

### **540 WETLANDS ECOLOGY (5)**

Prereq: graduate status; ESCI 502 or concurrent. 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.

### **541 GIS AND ENVIRONMENTAL MODELING (3)**

Prereq: one course in statistics at the 300 level or above; one course in ecology or natural resources management; one course in GIS. 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.

### **542 REMOTE SENSING (5)**

Prereq: graduate status. Concepts and applications of remote sensing data collection and analysis of earth's surface features using radar, aerial photography and multispectral scanners. Also offered as GEOL 542.

### **555 ADVANCED ENVIRONMENTAL TOXICOLOGY I (4)**

Prereq: ESCI 302 and CHEM 375, or permission of instructor. Physiological and biochemical effects of major pollutants found in the environment; influence of various nutrients on pollutant toxicity.

### **556 ADVANCED ENVIRONMENTAL TOXICOLOGY II (4)**

Prereq: ESCI 455 or 555 or permission of instructor. Second course in environmental toxicology series. Covers toxicity testing, biomonitoring, data analysis and environmental risk assessment.

### **557 ADVANCED ENVIRONMENTAL TOXICOLOGY LABORATORY I (3)**

Co- or prereq: ESCI 555 or permission of instructor. Protocols and procedures for evaluating the toxicity of chemicals and environmental samples using a variety of organisms and end point responses. Emphasis on organ-



isms at the biochemical level. One hour lecture pre-experiment background or post-experiment data analysis and four hours practicum.

**558 ADVANCED ENVIRONMENTAL TOXICOLOGY LABORATORY II (3)**  
Co- or prereq: ESCI 556 or permission. Protocols and procedures for evaluating the toxicity of chemicals and environmental samples using a variety of organisms and end point responses. Emphasis on freshwater and marine organisms. One hour lecture pre-experiment background or post-experiment data analysis and four hours practicum.

**559 AQUATIC TOXICOLOGY (3)**  
Prereq: ESCI 555 or 556 or at least 4 credits of 400-level courses in aquatic ecology. 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.

**562 ADVANCED AIR POLLUTION (4)**  
Prereq: graduate status, ESCI 302, general chemistry, two quarters of calculus. 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.

**590 ADVANCED ENVIRONMENTAL RISK ASSESSMENT (4)**  
Prereq: graduate status. Principles and methods of quantitative environmental risk assessment, data analysis and risk communication.

**592 EFFECTS OF GLOBAL CLIMATE CHANGE (4)**  
Prereq: graduate status. 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.

**595 TEACHING PRACTICUM (1-3)**  
Prereq: graduate status, relevant course work and permission of instructor. Experience in teaching a lecture or laboratory course in environmental studies. S/U grading. Repeatable.

**599 GRADUATE ENVIRONMENTAL STUDIES SEMINAR (1-2)**  
Prereq: graduate status. Selected topics across the spectrum of environmental studies (e.g., toxicology, watershed studies, applied ecology, geography, environmental education, et cetera). Repeatable to a maximum of 6 credits. S/U grading.

**690 THESIS RESEARCH (1-12)**  
Prereq: permission of the thesis advisory committee. Thesis research in environmental science under faculty direction, an integral part of the MS in environmental science. Repeatable to a maximum of 36 credits.

**COURSES IN ENVIRONMENTAL STUDIES (ESTU)**  
*Courses numbered X37; X97; 300, 400; 417, 445 are described on Page 34 of this catalog.*

**202 INTRODUCTION TO ENVIRONMENTAL STUDIES AND SUSTAINABILITY (3)**  
A basic overview of environmental issues in the United States and globally. Emphasis on environmental and human sustainability in a social science context.

**303 HUMAN ECOLOGY AND SUSTAINABILITY (4)**  
Prereq: ESTU 202 or Huxley major prerequisites or written permission of instructor. 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.

**304 ENVIRONMENT AND RESOURCE POLICY (4)**  
Prereq: ESTU 202 or Huxley major or written permission of instructor. 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.

**305 ENVIRONMENTAL HISTORY AND ETHICS (4)**  
Prereq: Huxley major prerequisites or written permission of instructor. A concern for nature has slowly emerged as human population has grown, under-

standing 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.

**306 INTRODUCTION TO HUXLEY COLLEGE (1)**  
An introduction to Huxley College faculty, programs, resources and community. Explains how the study of the environment is approached in and across disciplines at Huxley.

**320 EXPLORATIONS IN ENVIRONMENTAL STUDIES (4)**  
Prereq: Huxley major. 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.

**369 INTRODUCTION TO PLANNING (3)**  
Prereq: admission to Huxley or permission of instructor. 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.

**370 PROCESSES AND METHODS IN PLANNING (3)**  
Prereq: ESTU 369. 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.

**371 ENVIRONMENTAL EDUCATION (4)**  
Prereq: admission to Huxley College or permission of instructor. 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.

**372 THE ENVIRONMENTAL EDUCATION CURRICULUM (4)**  
Prereq: ESTU 371. 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.

**380 HISTORY AND POLITICS OF PLANNING (3)**  
Prereq: ESTU 369 or permission of instructor. 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.

**385 ENVIRONMENTAL SOCIOLOGY (5)**  
Prereq: any of the following: SOC 221, 251, 255, 260, 268, ESTU 202. 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. Also offered as SOC 385.

**401 APPLICATIONS IN GIS (3)**  
Prereq: EGEO 350; 12 upper-division credits in environmental studies or permission of instructor. 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.

**402 TOPICS IN ENVIRONMENTAL STUDIES (1)**  
Prereq: Huxley major status. 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.

### **410 AGROECOLOGY AND SUSTAINABLE AGRICULTURE (4)**

Prereq: senior status. Ecological concepts and principles applied to design and management of sustainable food production systems. Consideration given to social and economic components of an agroecosystem, as well as the experience of place. Includes case studies and field experience of sustainable agriculture and horticulture practices and principles. Offered alternate years.

### **411 AGROECOLOGY PRACTICUM (3)**

Prereq: ESTU 410. Field and project work in agroecology and sustainable agriculture design that integrates ecological principles within sociocultural and economic frameworks. Consideration of soil and plant ecology, tillage systems and erosion control, resource cycling, and integrated nutrient systems that comprise best management practices. Required field trips. Offered in alternate years.

### **415 PLANNING FOR SUSTAINABLE COMMUNITIES (4)**

Prereq: admission to the Sustainable Design minor or Huxley College or permission of instructor. 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.

### **418 SOCIAL IMPACT ASSESSMENT (5)**

Prereq: SOC 210 and senior status and completion of analysis course work within major. 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 a Social Impact Assessment 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 the State Environmental Policy Act (SEPA) and the National Environmental Policy Act (NEPA). Also taught as SOC 418. A field trip and site visits are required.

### **420 ENVIRONMENTAL POLITICS (5)**

Prereq: ESTU 202 or 304; PLSC 101 or 250. 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.

### **436 ENVIRONMENTAL IMPACT ASSESSMENT (5)**

Prereq: senior status, completion of analysis course work within majors or permission of instructor. 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.

### **440 ECOTOURISM AND SUSTAINABLE DEVELOPMENT (3)**

Prereq: ESTU 303 or permission of instructor. 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.

### **441 PARKS AND PROTECTED AREAS (3)**

Prereq: ESTU 303 or ESCI 439 or permission of instructor. 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.

### **442 PUBLIC LAND POLICY (3)**

Prereq: ESTU 304 or 464 or permission of instructor. Overview of publicly owned lands (Forest Service, National Park Service, Bureau of Land Management, wildlife refuges, wilderness areas in the United States). Includes administrative history, major players, policy changes over time, administration of these lands, and analysis of current events.

### **443 LAND USE LAW (4)**

Prereq: ESTU 369 or permission of instructor. Land use planning is an attempt to reconcile the fundamental conflict between individual property rights and collective environmental goals. Examines the American legal sys-

tem'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.

### **444 ENVIRONMENTAL DISPUTE RESOLUTION (4)**

Prereq: ESTU 301 or 304 or 464 or 468 or permission of instructor. 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.

### **446 PUBLIC OPINION AND ENVIRONMENTAL ISSUES (4)**

Prereq: introductory statistics or permission of instructor. Examines how different sectors of the public perceive environmental issues, how they feel about those issues and the implications for environmental policy.

### **463 ENVIRONMENTAL POLICY ANALYSIS (4)**

Prereq: ESTU 304 or permission of instructor. Introduction to the policy-making 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.

### **464 UNITED STATES ENVIRONMENTAL POLICY (4)**

Prereq: PLSC 101 or 250 or ESTU 304 or 305 or permission of instructor. 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.

### **465 INTERNATIONAL ENVIRONMENTAL POLICIES (4)**

Prereq: ESTU 304 or permission of instructor. 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.

### **466 U.S. AND WASHINGTON STATE ENVIRONMENTAL REGULATIONS (4)**

Prereq: ESTU 304 or 464 or permission of instructor. 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.

### **467 NATURAL RESOURCE POLICY (3)**

Prereq: ESTU 304 or 464 or permission of instructor. 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.

### **468 ENVIRONMENTAL LAW (4)**

Prereq: ESTU 304 or 464 or 466 or permission of instructor. 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.

### **469 CANADIAN ENVIRONMENTAL POLICY (4)**

Prereq: ESTU 304 or EGEO 328 or political science major or permission of instructor. 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.

**470 PLANNING STUDIO (6)**

Prereq: ESTU 370. 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.

**471 CAMPUS PLANNING STUDIO (2)**

Prereq: ESTU 369 or 304 or equivalent or permission of instructor. 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.

**472 PLANNING THEORY (3)**

Prereq: ESTU 370 or 380 or permission of instructor. 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.

**473 ENVIRONMENTAL INTERPRETATION (4)**

Prereq: ESTU 371 or permission of instructor. 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.

**474 OUTDOOR EDUCATION (4)**

Prereq: ESTU 371 and 372; or permission of instructor; concurrent enrollment in ESTU 476, 483 and 484. 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.

**475 NATIVE AMERICAN PLANNING AND NATURAL RESOURCES POLICY (3)**

Prereq: ESTU 304 or 369 or permission of instructor. 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.

**476 EXPERIENTIAL LEARNING IN ENVIRONMENTAL EDUCATION (4)**

Prereq: ESTU 371 and 372; or permission of instructor; concurrent enrollment in ESTU 474, 483 and 484. 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.

**477 THE AMERICAN LITERATURE OF NATURE AND PLACE (4)**

Prereq: junior status or permission of instructor. 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.

**478 TOPICS IN ENVIRONMENTAL STUDIES (1-6)**

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.

**479 ENVIRONMENTAL INTERPRETATION METHODS (4)**

Prereq: ESTU 473 or permission of instructor. 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 audiovisual presentations, displays and brochures.

**480 WRITING AND EDITING *THE PLANET* (2)**

Prereq: JOUR 207 or permission of instructor. Practical involvement in writing, editing, photography, illustration, design and production of a student environmental magazine issued once each quarter. Repeatable to 6 credits.

**481 ENVIRONMENTAL JOURNALISM (4)**

Prereq: JOUR 207; ESCI 101 or ESTU 202, or permission of instructor. 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.

**483 FIELD METHODS IN ENVIRONMENTAL EDUCATION (5)**

Prereq: ESTU 371, 372 or permission of instructor; concurrent enrollment in ESTU 474, 476 and 484. 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.

**484 NATURAL HISTORY FOR ENVIRONMENTAL EDUCATION (4)**

Prereq: ESTU 371, 372 or permission of instructor, concurrent enrollment in ESTU 483, 474 and 476. Classroom and field study of the natural history of the Pacific Northwest as it relates to environmental education. A spring block course.

**486 COMMUNITY-BASED ENVIRONMENTAL EDUCATION (5)**

Prereq: environmental studies or environmental science major, with completion of environmental studies core course; must be within 3 quarters of graduation. 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.

**487 CONSERVATION PSYCHOLOGY (4)**

Prereq: admission to Huxley or permission of instructor. 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.

**488 THE HISTORY OF CONSERVATION IN AMERICA (4)**

Prereq: ESTU 305 or permission of instructor. 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 the 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.

**493 SENIOR SEMINAR: ECONOMICS, THE ENVIRONMENT AND NATURAL RESOURCES (4)**

Prereq: senior status in the environmental studies/economics combined major. Discussion and analysis of selected issues in the economics of the environment and natural resources. Also offered as ECON 493.

**495 TEACHING PRACTICUM (1-3)**

Prereq: relevant course work and permission of instructor. Experience in teaching a lecture or laboratory course in environmental studies. S/U grading. Repeatable to a maximum of 4 credits.

**496 ENVIRONMENTAL STEWARDSHIP (5)**

Prereq: completion of Huxley core courses, senior standing, and permission of instructor. 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.

**498a SENIOR THESIS (1-15)**

Makes an original contribution to knowledge by using the primary research methods of an academic discipline. In cooperation with a faculty advisor, skills are developed in synthesizing prior knowledge, formulating a question or hypothesis, gathering new data or identifying existing information, analyzing 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 is kept in Wilson Library. Repeatable to a maximum of 15 credits.

**498b INTERNSHIP (1-15)**

Provides the student with a supervised work and learning experience in a paid employment or unpaid voluntary, environmentally relevant, professional setting. Requires an internship contract in advance. The sponsoring organization may be nonprofit, 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 is kept in Wilson Library. S/U grading. Repeatable to a maximum of 15 credits.

### **498c SENIOR PROJECT (1-15)**

Applies knowledge and skills to a practical problem or situation in environmental research, education, or resource management. In cooperation with the faculty advisor, expertise is developed in planning, development, implementation, management, and completion of an independent project. The approach may be a 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.

### **498d FOREIGN STUDY (1-15)**

Exposes the student to environmental concerns, situations, and problems in the cultural and geographical setting in 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 advisor 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 advisor. S/U grading. Repeatable to a maximum of 15 credits.

### **499a-d SEMINAR (1)**

Prereq: admission to Huxley College or permission of instructor. Student-faculty interaction on topics of general interest. Repeatable for credit with no maximum. S/U grading.

### **499f-m SEMINAR (2)**

Prereq: admission to Huxley College or permission of instructor. Student-faculty interaction on topics of general interest. Repeatable for credit with no maximum. S/U grading.

## **Graduate Courses in Environmental Studies**

*Courses numbered X37; X97; 300, 400; 417, 445 are described on Page 34 of this catalog.*

*Admission to Graduate School or special permission required. See the Graduate School section of this catalog.*

### **524 ENVIRONMENTAL POLITICS AND POLICY (3)**

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 and in examining environmental political research as it has addressed issues related to race, class and gender. Also offered as PLSC 524.

### **536 ENVIRONMENTAL IMPACT ASSESSMENT PRACTICUM (4)**

Prereq: graduate status. 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.

### **553 AMERICAN ENVIRONMENTAL HISTORY (4)**

Prereq: graduate status. 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.

### **571 ENVIRONMENTAL EDUCATION FOUNDATIONS (4)**

Prereq: graduate status or permission of instructor. 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.

### **572 INTRODUCTION TO PLACE-BASED ENVIRONMENTAL EDUCATION (4)**

Prereq: admission to MEd environmental education residency option or other master's program in environmental education. Explores ways to teach about a place in the context of environmental education. Includes exami-

nation 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.

### **573 RESOURCE ISSUES IN THE NORTH CASCADES (4)**

Prereq: admission to environmental education master's program. 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.

### **574 CULTURAL STUDIES OF THE NORTH CASCADES (4)**

Prereq: ESTU 572, 573. 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.

### **575 ASSESSMENT, EVALUATION AND RESEARCH IN ENVIRONMENTAL EDUCATION (4)**

Prereq: graduate status or permission of instructor. Critical review and analysis of approaches to research, evaluation and assessment in environmental education. Application of research approaches, designs and methods in practical settings.

### **576 NATURAL HISTORY AND SCIENCE OF THE NORTH CASCADES (4)**

Prereq: ESTU 572, 573. 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.

### **577 NONPROFIT ADMINISTRATION FOR ENVIRONMENTAL EDUCATORS (4)**

Prereq: ESTU 572, 573. 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, fundraising, and organizational development and evaluation. Working with the public and private sector partners will be explored.

### **578 PRACTICUM IN TEACHING NATURAL AND CULTURAL HISTORY (3)**

Prereq: ESTU 572-577, graduate status and permission of instructor. Supervised field experience in teaching about natural and cultural history in an environmental learning center setting.

### **581 PROFESSIONAL WRITING AND PRESENTATION (5)**

Prereq: ESTU 587-589, graduate status and permission of instructor. 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.

### **587 CONSERVATION PSYCHOLOGY (4)**

Prereq: enrollment in MEd in environmental education or permission of instructor. 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. Lecture, discussion, student presentation and research practica.

### **588 LANGUAGE, DISCOURSE, AND ENVIRONMENT (4)**

Focuses on the relationship between the metaphorical nature of language and discourse, with an end to better understand different views of the natural environment.

### **589 CURRICULUM IN ENVIRONMENTAL EDUCATION (5)**

Examines all aspects of curriculum for environmental education, especially



the nonformal setting environmental learning centers, nature centers, and outdoor schools. Study of curriculum theory and methodology appropriate to these settings and of processes of curriculum design. Reviews current programs and materials. Students will practice preparing curriculum and learning materials.

**595 TEACHING PRACTICUM (1-3)**

Prereq: graduate status, relevant course work and permission of instructor. Experience in teaching a lecture or laboratory course in environmental studies. S/U grading. Repeatable.

**598 RESEARCH PROJECT (6)**

Prereq: completion of 15 credits at 500 level toward MEd in environmental education. Research in the field of environmental education for students pursuing the non-thesis option.

**599 GRADUATE ENVIRONMENTAL STUDIES SEMINAR (1-2)**

Prereq: graduate status. 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.

**690a THESIS RESEARCH (1-12)**

Prereq: permission of the thesis advisory committee. Thesis research in environmental studies under faculty direction. Repeatable to a maximum of 12 credits.

**690b FIELD PROJECT (1-12)**

Prereq: completion of 15 credits at the 500 level and approval of student's committee in the MEd in environmental education program. May take various forms: development of an educational program, preparation of curriculum, production of educational materials. May be done off campus between periods of residence work. Repeatable to a maximum of 12 credits.

**COURSES IN GEOGRAPHY (EGEO)**

*Courses numbered X37; X97; 300, 400; 417, 445 are described on Page 34 of this catalog.*

**201 HUMAN GEOGRAPHY (4)**

Regional patterns of population and settlement; spatial analysis of economic, social and political organization.

**203 PHYSICAL GEOGRAPHY (4)**

Prereq: at least one GUR natural science course at the university level. Principles and techniques in analysis of areal distributions in the natural environment; landforms, water, climate, soils, vegetation.

**209 GEOGRAPHY AND WORLD AFFAIRS (2)**

Geographical analysis of selected demographic, economic, political and social problems of the contemporary world.

**250 GEOGRAPHIC INFORMATION SYSTEMS SURVEY (2)**

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.

**301 RESEARCH AND WRITING (3)**

Prereq: EGEO 201, 203 or permission of instructor. Source materials, research and writing techniques; emphasis on the nature and development of geography and planning.

**305 ANALYSIS OF SPATIAL DATA (4)**

Prereq: MATH 240 or SOC 207 and EGEO 201, 203; or permission of instructor. Intermediate-level statistical techniques commonly used in solving geographic problems.

**310 DEVELOPING WORLD (4)**

Prereq: EGEO 201. 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.

**312 GEOGRAPHY OF THE WORLD ECONOMY (4)**

Prereq: EGEO 201 and ECON 206; or permission of instructor. Location

analysis of economic activities; interrelationships of resources, industry, trade and transportation.

**314 URBANIZATION: PROCESSES AND PATTERNS (4)**

Prereq: EGEO 201. Geographic focus upon the development, functions and problems of the modern city with emphasis on American patterns.

**320 THE UNITED STATES: SOCIETY AND ENVIRONMENT (3)**

Prereq: EGEO 201 or permission of instructor. Topical and regional approaches to selected elements of the physical, cultural and economic characteristics of the nation.

**321 AFRICA: SOCIETY AND ENVIRONMENT (3)**

Prereq: EGEO 201 or permission of instructor. Resources, people, regions; economic, social and political development of Africa. Emphasis on areas south of Sahara. Offered alternate years.

**322 THE MIDDLE EAST: SOCIETY AND ENVIRONMENT (3)**

Prereq: EGEO 201 or permission of instructor. Environments, economies and societies of Southwest Asia and North Africa; emphasis on current problems.

**323 SOUTH ASIA: SOCIETY AND ENVIRONMENT (3)**

Prereq: EGEO 201 or permission of instructor. Systematic analysis of the physical and human environments of South Asia; emphasis on developmental problems. Offered alternate years.

**324 EAST ASIA: SOCIETY AND ENVIRONMENT (3)**

Prereq: EGEO 201 or EAST 201 or EAST 202 or permission of instructor. Survey of physical environment, sustainability, peoples, regions and resources of East Asia; problems and prospects.

**327 THE PACIFIC NORTHWEST: SOCIETY AND ENVIRONMENT (3)**

Prereq: EGEO 201 or 203 or permission of instructor. Examination of distribution and character of economic activity, population plus settlement and role of climate, landforms and resources in distributions. Offered alternate years.

**328 CANADA: SOCIETY AND ENVIRONMENT (3)**

Prereq: EGEO 201 or C/AM 200 permission of instructor. 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.

**330 GEOGRAPHY OF LANDFORMS (4)**

Prereq: EGEO 203; GEOL 101 recommended. 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.

**331 CLIMATOLOGY (4)**

Prereq: EGEO 203; PHYS 101 or 114 recommended. Climatic processes, including patterns of climates at various scales; applied climatology; climatic change.

**340 POPULATION AND RESOURCES (3)**

Prereq: EGEO 201 or SOC 321. World distribution of population; patterns of population composition, fertility and mortality. Inter- and intra-regional migrations; resources and population growth.

**350 INTRODUCTION TO GEOGRAPHIC INFORMATION SYSTEMS (4)**

Prereq: Huxley major status or permission of instructor. 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.

**351 MAP READING AND ANALYSIS (3)**

Interpretation of map symbols and content at different scales; introduction to coordinate systems and map projections; analysis of different types of maps and charts.

**352 COMPUTER CARTOGRAPHY (2)**

Prereq: EGEO 201 or 203; co-req: EGEO 351; pre- or co-req: EGEO 305. Map layout, design and production using computer techniques. Methods and limitations of graphic communication are emphasized.

### **362 LAND RESOURCE ANALYSIS (3)**

Prereq: EGEO 201 or ESTU 369. The physical, biological, economic and institutional factors affecting, conditioning and controlling man's use of land.

### **363 NATURAL HAZARDS PLANNING (3)**

Prereq: EGEO 203, GEOL 101. The identification and analysis of the causes and consequences of earth and atmospheric hazards upon humans. Presentation of current federal, state and local hazard reduction policies and programs.

### **412 REGIONAL ENVIRONMENTAL AND ECONOMIC RESOURCE MODELING (4)**

Prereq: EGEO 305 or ESTU 370 or ECON 208 plus 383 or permission of instructor. Spatial resource assessment and planning models, including quality of life, shift-share, input-output and linear programming under resource constraints, and demographic projections.

### **414 THE URBAN ENVIRONMENT (4)**

Prereq: EGEO 201, 203 and 314. Comparative patterns and processes of urban-economic change in the industrial and nonindustrial world. Emphasis on urban environmental development issues and conflict.

### **421 BORDERLANDS (4)**

Prereq: EGEO 320, 327 or 328 or C/AM 200; or permission of instructor. Investigation of issues associated with the growing importance of the United States' border regions, especially our northern border; selected transborder environmental, sustainability, economic and urban topics.

### **423 PACIFIC RIM (4)**

Prereq: EGEO 320 or 324 or 327 or 328, or permission of instructor. Investigation of issues associated with the growing importance of the Pacific Rim nations; selected environmental, sustainability, economic, urban and cultural topics.

### **431 WATER RESOURCES (2)**

Prereq: EGEO 330 or 331; EGEO 305. 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.

### **432 GEOGRAPHY OF SOILS (4)**

Prereq: EGEO 332 or permission of instructor. Advanced topics in soils, including the functional relationships between climate, soils, vegetation, soil erosion, landscape patterns of soils, and the application of soils in paleoenvironmental reconstruction. Students will undertake research project in the field.

### **433 CLIMATE AND BIOPHYSICAL PROCESSES (4)**

Prereq: EGEO 330; 331, ESCI/ESTU 301. 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.

### **434 BIOGEOGRAPHY (3)**

Prereq: EGEO 203 and either EGEO 331, ESCI 325 or permission of instructor. Study of the spatial distribution patterns of organisms through the integration of the many factors that have interacted to determine these patterns.

### **450 INTERMEDIATE GEOGRAPHIC INFORMATION SYSTEMS (4)**

Prereq: EGEO 350 or ESTU 401 or equivalent; and EGEO 305 (or concurrent), or ESCI 340 or ESCI 305 or instructor-approved intermediate-level statistics course; or written permission. 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.

### **451 GIS DATABASES (4)**

Prereq: EGEO 450. 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.

### **452 ADVANCED GIS (4)**

Prereq: EGEO 451. Analysis and application of cartographic techniques and geographic information systems to practical mapping and resource management projects.

### **453 GIS: PROCESSING AND ANALYSIS (3)**

Prereq: ESTU 401 or EGEO 450 and CSCI 140 or permission of instructor. Provides a student with a working knowledge of a major vector software package, Arc/Info. Intended for students familiar with GIS concepts and computer applications, course emphasizes familiarity with the basic skills needed to complete an entry level GIS project in the software. Through lectures, demonstrations, and hands-on exercises, participants will learn to create, import, edit, manipulate, analyze, query and display data sets.

### **461 NATURAL RESOURCES MANAGEMENT (2)**

Prereq: EGEO 305 and 362 or 363. 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.

### **462 TRANSPORTATION SYSTEMS AND PLANNING (3)**

Prereq: EGEO 305 or ESTU 370 or permission of instructor. Locational and network analysis of local, regional and national systems. Also, investigation of alternates to traditional transportation modes.

## **Graduate Courses in Geography**

*Courses numbered 500; 517; 545; 597 are described on Page 34 of this catalog. Admission to Graduate School or special permission required. See the Graduate School section of this catalog.*

### **501 HISTORY AND PHILOSOPHY OF GEOGRAPHY (3)**

Study of geography as a core discipline, its origins and trends in the understanding of multifaceted environmental problems.

### **502 GEOGRAPHIC RESOURCE ASSESSMENT (4)**

Prereq: EGEO 501. Examines the geographic theories and analytical frameworks used in the study of the environment.

### **503 RESEARCH PROBLEMS (4)**

Prereq: EGEO 501, 502. Formulation and development of hypothesis for a thesis, and the development of the necessary methodology; preparation of bibliography and review of literature.

### **504 GEOGRAPHIC METHODS AND TECHNIQUES (5)**

Prereq: EGEO 305 or equivalent; EGEO 501, 502. Advanced methods of gathering and analyzing data and information for the solution of geographic, regional planning, and landscape problems.

### **533 CLIMATE AND BIOPHYSICAL PROCESSES (4)**

Prereq: graduate status. 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.

### **535 ENVIRONMENTAL PROBLEMS AND REGIONAL DEVELOPMENT (5)**

Prereq: five graduate credits. Cities and regions as complex systems of interdependent natural and human elements; key problems and approaches to their solution through planning.

### **552 ADVANCED GIS (4)**

Prereq: permission of instructor. Analysis and application of cartographic techniques and geographic information systems to practical mapping and resource management projects.

### **590 GRADUATE COLLOQUIUM (1)**

Current trends and issues in geographic research.

### **595 TEACHING PRACTICUM (1-3)**

Prereq: graduate status, relevant course work and permission of instructor. Experience in teaching a lecture or laboratory course in geography. S/U grading. Repeatable.

### **690 THESIS (1-12)**

Prereq: advancement to candidacy for the master's degree and appointment of thesis advisor and thesis committee. Repeatable to a maximum of 36 credits.

# INTERDISCIPLINARY STUDIES

## AMERICAN CULTURAL STUDIES

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 207 or Fairhaven College 330.

## FACULTY

**LARRY J. ESTRADA**, Fairhaven; 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, multicultural studies.

**ROSEANNE KANHAI-BRUNTON**, English. Feminist literary theory; post-colonial literatures; African American literature; imaginative literature by women of color.

**BILL DEMMERT**, Education. Education and policy of Native American societies; multicultural education; societies and people of the circumpolar north; comparative cultures.

**MARIE EATON**, Fairhaven College. Minorities and Education, gay/lesbian/bisexual/transgender studies.

**PAT FABIANO**, Woodring College of Education.

**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.

**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.

**JUNGSIK KIM**, Fairhaven College. Social and cultural psychology, Asian American studies, acculturation and identity.

**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.

**JOHN PURDY**, English. Native American literature; ethnic perspectives on literary theory.

**MARSHA RIDDLE-BULY**, Woodring College of Education.

**DAN FIRST SCOUT ROWE**, Fairhaven College. Native American, veterans studies.

**TANIS S'EILTIN**, Fairhaven. Art and creativity; Native American art forms; Native American 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.

## BACHELOR OF ARTS

### Major — American Cultural Studies

70 credits

Core Requirements 39-44 credits

- AMST 301, 499
- Three courses from AMST 202, 203, 204, 205, 206, 242
- Two courses from the social sciences, selected under advisement from AMST 315, ANTH 104 or 353; SOC 221, 255, 260, 268 or 269; GEOG 201; PLSC 101 or 250; FAIR 212, 374b, 443r
- One course from HIST 261, 263, 265, 275, 362, 369, 461, 463, 465, 467
- Two courses from ENG 216, 227, 234, 235, 236, 270, 327, 338
- One course from A/HI 360 or 448 (plus prerequisites); DNC 232; FAIR 373f, 451; MUS 202 or 205

*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 Native American studies minor), or to develop additional depth in one of the traditional academic disciplines or programs of the University.

### Minor — American Cultural Studies

25 credits

Core Courses 21-22 credits

- Three courses from AMST 202, 203, 204, 205, 206, 242

## INTERDISCIPLINARY STUDIES

- AMST 301
- One course from ENG 227, 234, 235, 236 or 327
- One course from HIST 261, 263, 265, 275, 362, 461 or 463 or 467

### *Related Courses* 3-4 credits

For more information, contact Dr. Lawrence J. Estrada, director of American cultural studies.

### *Minor — Native American Studies*

25 credits

The minor in Native American 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 Native Americans 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 Native American Studies minor concentration, or Dr. Lawrence J. Estrada, director of the American Cultural Studies program.

### *Core Courses* 15 credits

- AMST 202, 301, 315
- Any one of the following courses:
  - ANTH 361, ENG 235, FAIR 451, HIST 275
- Elective Courses* 10 credits
- Any related courses under advisement or additional courses from the list above

### *Minor — African American Studies*

25-28 credits

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 the American Cultural Studies program.

### *Core Courses* 11 credits

- AMST 204, The African American Experience (3); AMST, 301, Comparative Cultural Studies (4); AMST 316, Contemporary African American (4)
- 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, Instruction to African American Literature (5), FAIR 373, R-evolution of Hip Hop (4); HIST 263, African Americans since 1865; PLSC 347, Race, Politics and Public Policy (5)

- Additional elective options: ENG 310, 19th and 20th Century African American Literature (5); ENG 327, Marginalized Literature of the 20th Century (5); ENG 335, Literature and Creative Expression Across Cultures (5); FAIR 213, Slave Narratives and Other Testimonies (3); FAIR 216, Testimonies of the New South (3); FAIR 261, Race In/To the Movies I (4); FAIR 361, Race In/To the Movies II (4); HIST 286, Modern Africa (4); LBRL 276, Humanities of Africa (4); MUS 202, Jazz: Genesis and Evolution (3); SOC 269, Race and Ethnic Relations (5); SOC 369, Sociology of Race and Ethnicity (5)

### *Minor — Asian American Studies*

25 credits

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.

### *Core Courses* 15 credits

- AMST 205, 301, 362 (cross listed as HIST 362)
- ENG 236

### *Elective courses* 10 credits

Three courses from the two categories listed below:

- Contextualizing Asian America
  - ENG 335, 406 or 408
  - HIST 461
  - SOC 369
- Focusing on Asian America
  - ENG 327
  - FAIR 362, 363
- 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 ISP and internship guidelines, contact Dr. Midori Takagi.

### *Minor — Gay, Lesbian, Bisexual, Transgender Studies*

25 credits

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 program.

### *Core courses* 16 credits

- AMST 242: The Gay, Lesbian, Bisexual, Transgendered Experience (3)
- ENG 227/FAIR 322: GLBT Literatures (5)



- HIST 265: Lesbian and Gay Experience in American History (4)
- AMST 301: Comparative Cultural Studies (4)

#### Related courses 9 credits

- ANTH 353: Sex and Gender in Culture (4)
- HIST 465: History of Sexuality (4)
- FAIR 313: GLBT Issues in Education (4)
- THTR 428: Major Dramatists: Gay and Lesbian Literatures (3)
- PLSC 421: Lesbian/Gay/Bisexual Transgendered Politics (5)
- FAIR 314: Science and Stories of GLBT Health (4)
- 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

#### Minor — Diversity in Higher Education 25 credits

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 the American Cultural Studies program.

#### Core Courses 16 credits

- AMST 301: Comparative Cultural Studies (4); also offered as FAIR 366e
- COMM 322: Civil Discourse as Learning Interaction (4)
- SAA 375: Diversity in Higher Education and Student Affairs (4)
- AMST 400: Independent Study and/or Internship in Higher Education/Student Affairs (4)

#### 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.

- AMST 202: Native American Experience (3); also offered as FAIR 263b
- AMST 203: Hispano/a American Experience (3); also offered as FAIR 218c
- AMST 204: African American Experience (3); also offered as FAIR 219d
- AMST 205: Asian-American Experience (3); also offered as FAIR 215f
- AMST 206: Jewish-American Experience (3)
- AMST 242: Lesbian, Gay, Bisexual, Transgendered Experience (3)
- AMST 315: Contemporary Native American Issues (4)
- AMST 316: Contemporary African American Issues (4)
- FAIR 313e: Gay, Lesbian, Bisexual and Transgendered Issues in Education (4)
- WMNS 211: Introduction to Women Studies (4)

#### Conceptual Frameworks for Diversity in Higher Education

- SAA 420: Leadership in Higher Education (3)
- ANTH 484: Cross-Cultural Education (5)

- SOC 269: Race and Ethnic Relations (5)
- HIST 461: U.S. Urban History (5)
- HSP 455: Diversity and Social Justice Dynamics (4)
- HSP 443: Disability: Individuals and Systems (4)
- COMM 225: Communication, Diversity, and Controversy (4)
- COMM 325: Introduction to Intercultural Communication (5)
- WMNS 314: Global Women (4)
- INTL 325: Global Literatures (4)

#### Teaching English as a Second Language (TESOL) Certification

Students who major in American cultural studies (ACS) have the option of combining their ACS major core requirements with the WWU TESOL program course requirements to achieve both a BA in American cultural studies and TESOL certification. Students who choose this option should first consult with the director of the American cultural studies program as well as the director of the TESOL program prior to commencing their program of study.

#### COURSES IN AMERICAN CULTURAL STUDIES (AMST)

Courses numbered X37; X97; 300, 400; 417, 445 are described on Page 34 of this catalog.

##### 202 THE AMERICAN INDIAN EXPERIENCE (3)

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 (S/U graded).

##### 203 THE HISPANO/A-AMERICAN EXPERIENCE (3)

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 218c.

##### 204 THE AFRICAN-AMERICAN EXPERIENCE (3)

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. Also offered as FAIR 219d

##### 205 THE ASIAN-AMERICAN EXPERIENCE (3)

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 FAIR 215f.

##### 206 THE JEWISH-AMERICAN EXPERIENCE (3)

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.

##### 242 THE LESBIAN, GAY, BISEXUAL, TRANSGENDERED (GLBT) EXPERIENCE (3)

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.

##### 301 COMPARATIVE CULTURAL STUDIES (4)

Prereq: introductory level course in history, sociology, anthropology or equivalent. 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. Also offered as FAIR 366e.

##### 315 CONTEMPORARY AMERICAN INDIAN ISSUES (4)

Prereq: AMST 202 or HIST 275. A historical and cultural overview of issues in Indian/White relations. Emphasis on issues of sovereignty, land claims, water

## INTERDISCIPLINARY STUDIES

rights, treaty rights, education, women, economic development, religious freedom, and cultural appropriation. Also offered as FAIR 399.

### 316 CONTEMPORARY AFRICAN AMERICAN ISSUES (4)

An interdisciplinary examination of contemporary African American issues from the 1970s to the present. Focus is 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.

### 362 ASIAN-AMERICAN HISTORY (4)

Prereq: HIST 103 or 104 or AMST 203, 205 or 301. 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.

### 499 RESEARCH AND WRITING (4)

Prereq: AMST 301 and senior status or approval of instructor. 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 LBR 499.

## 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 content 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 coordinator, Karen Perry, Old Main 476, 360-650-3757, or via e-mail at [Karen.Perry@wwu.edu](mailto:Karen.Perry@wwu.edu) or the FIG director, Karen Casto, College Hall 303, 360-650-4943, or via e-mail at [Karen.Casto@wwu.edu](mailto:Karen.Casto@wwu.edu).

## GENERAL STUDIES MAJOR

The general studies major is designed for students who want to spread their major studies across courses and departments of their choosing. The major offers students a wide range of choices within each of the following areas: *humanities*, *social sciences*, *sciences*.

**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. For information and advising for this major, students need to make an appointment with the general studies advisor, Karen Perry, Old Main 476. The general studies Web site is [www.wwu.edu/generalstudies](http://www.wwu.edu/generalstudies).

### Requirements

To fulfill the major, students must complete 60 credits of

upper-division course work within one or more of the three areas. At least 50 percent of the credits used in the general studies major must be earned at Western Washington University. A minimum of two departments must be represented. Students must earn grades of C- or better in courses for the major and may not apply Pass/No Pass grades toward the major. GUR courses may apply to this major as long as they are upper division. Courses from two-year institutions cannot apply toward the general studies major.

Students are required to have two faculty advisors who represent two separate departments or colleges. If the major includes courses from more than one of the three areas, students will be required to have an advisor from each of the *areas* in which courses are taken. Students may select any faculty member at Western to serve as an advisor. A list of advisors is available in the Academic Advising Center, Old Main 380.

No more than 44 credits in courses taught in business (classes by the departments of accounting, decision sciences, finance and marketing, and management) can be counted toward the general studies major.

A minimum cumulative grade point average of 2.00 or higher is required for graduation. The required writing proficiency class may be taken in any department.

### Major Declaration

Major declaration forms may be picked up in the Registrar's Office, Old Main 230, or the Academic Advising Center, Old Main 380, and taken to the general studies office, Old Main 476, for signature. The original signed form must be returned to the Registrar's Office and a copy kept by the student.

**NOTE:** Students should be aware that some departments give their own majors registration priority: i.e., enrollment in some courses may be limited for general studies majors.

### Degree Application

Students completing a Bachelor of Arts degree in General Studies are required to have a major evaluation completed and signed by the general studies advisor, Old Main 476. Major evaluation forms are available online from the Registrar's Office Web site: [www.wwu.edu/depts/registrar/degree\\_application.shtml](http://www.wwu.edu/depts/registrar/degree_application.shtml). The major evaluation form and the degree application packet should be completed and returned to the Registrar's Office by the end of the last day of classes two quarters prior to the expected quarter of graduation.

### Areas of Study and Appropriate Departments

**Humanities.** Art; communication; dance; English; history; journalism; liberal studies; modern and classical languages; music; philosophy; theatre arts; Fairhaven College.

**Social Sciences.** Accounting; American cultural studies; anthropology; Canadian-American Studies; communication sciences and disorders; decision sciences; East Asian studies; economics; environmental social sciences; Fairhaven College; finance and marketing, geography; journalism; linguistics; management; physical education, health and recreation; political science; psychology; sociology; social studies education; women studies; Woodring College of Education.

**Sciences.** Biology; chemistry; computer science; engineering technology; environmental sciences; geology; mathematics; physics and astronomy; science education.

## COURSES IN GENERAL STUDIES (UNIV)

### 410 WRITING CAPSTONE: FRAMEWORK FOR YOUR FUTURE (4)

Prereq: general studies majors only. 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. The resulting portfolio will serve as a tangible product that students can use as they leave the University. Satisfies the upper-level writing proficiency requirement.

### THE HONORS PROGRAM

Western's Honors Program provides a challenging opportunity for undergraduate students of demonstrated academic achievement to realize their potential. Freshmen and transfer students are invited into the Honors Program on the bases of results on standardized tests, academic achievement, and recommendations. Students already enrolled at Western may enter the program on the above bases and on the recommendation of a University instructor.

Students in the Honors Program are eligible for Honors GUR courses and seminars in a wide variety of subjects. They also have the opportunity to undertake extended Honors independent study projects in their major fields.

Students interested in the program should contact the Honors Office, College Hall 204, 360-650-3034, for more information.

#### Requirements for Graduation through the Honors Program

Students who enter the program as freshmen must complete the General University Requirements as specified in this catalog with the following GUR courses taken through the Honors Program. GUR areas which these courses satisfy are shown in parentheses.

- HNRS 103, Major Cultural Traditions I (Humanities)
- HNRS 104, Major Cultural Traditions II (Humanities)
- HNRS 105, Major Cultural Traditions III (ACGM)
- or
- HNRS106, Major Cultural Traditions IV (BCGM) Completion of HNRS 103, 104 and 105 or 106 satisfies Block B of the Communications GUR and carries 8 credits of Humanities and 4 credits of CGM GUR; completion of the CGM GUR requires one additional class in an appropriate area; completion of the Humanities GUR requires an additional 4 credits from the program or other departments; ENG 101 is prerequisite to HNRS 105 or 106
- Any *three* additional Honors GUR courses (100 and 200 level)
- In addition to regular Honors classes, students may apply any of the following classes to meet this requirement: MATH 128, MATH 134, MATH 135, CHEM 125, CHEM 126, CHEM 225

*Honors strongly recommends that students take as much of their GUR work as possible through the program.*

- Two Honors seminars
- Completion of a senior project

*Transfer students entering with AA degrees, and Western students who have completed their General University Requirements:*

- Completion of 12 credits in Honors seminars
- Completion of a senior project

*Already enrolled Western students or transfer students who enter the Honors Program prior to completion of their GUR:*

- Completion of 12 credits in Honors seminars
- Completion of a senior project

Students in this category are encouraged to take as much of their outstanding General University Requirements through Honors as possible.

*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

### Honors Courses (Nondepartmental) (HNRS)

#### 103 MAJOR CULTURAL TRADITIONS I (4)

Analysis, interpretation, and discussion of a wide range of texts from ancient times to the 5th century, with emphasis on the Western traditions.

#### 104 MAJOR CULTURAL TRADITIONS II (4)

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.

#### 105 MAJOR CULTURAL TRADITIONS III (4)

Analysis, interpretation, and discussion of a wide range of sources from the contemporary world, with major emphasis on a culture outside North America.

#### 106 MAJOR CULTURAL TRADITIONS IV (4)

Analysis, interpretation, and discussion of a wide range of sources from the contemporary world, with major emphasis on a North American culture.

#### 121 INTRODUCTION TO POLITICAL SCIENCE (4)

An introduction to 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.

#### 155 THE NON-WESTERN TRADITIONS (4)

An introduction to the civilization and culture of one or more of the following areas: Africa, China, Japan and India. Emphasizes the study of literature, philosophical and historical writing, and art in the historical context from which they have emerged.

#### 157 PHYSICS (4)

Laws of motion. Conservation of energy and momentum. Gravitation. Electricity and magnetism. Sound and light waves. Radioactivity. Fission and fusion.

#### 158 GEOLOGY (4)

Origin of the earth. The ways in which different types of rocks form, how their ages can be determined and the implications of those ages for the age of the earth. Volcanology, mountain building and evolution of the continents as a result of surface processes and plate tectonics. The theory of plate tectonics, including earthquakes and paleomagnetism.

#### 159 BIOLOGY (4)

Basic biology, emphasizing cellular, molecular and evolutionary processes. The energetics of living systems, with emphasis on the activities of photosynthesis and respiration and their relationship to the first and second laws of thermodynamics. The physical structure of the hereditary material, DNA, and its involvement in information flow in the cell.

#### 205 COLLOQUIUM IN HISTORY (4)

Prereq: admission to Honors program. Introduces students to the methods and practice of history as a discipline. Acquaints students with a range of primary source materials and the basic techniques of historical research, and students will use the tools they have acquired to explore a specific historical event, the French Revolution of 1789.

#### 251 PSYCHOLOGY (4)

Examination of basic psychological processes utilizing results of research investigations.

#### 252 COLLOQUIUM IN SOCIOLOGY (4)

Introduction to the principles of sociology, including the study of social change, social institutions, and social organizations. Provides an opportunity for concentrated study in one or more areas of the discipline.

#### 253 ANTHROPOLOGY (4)

The study of societies that contrast with Western civilization, leading to an

## INTERDISCIPLINARY STUDIES

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 our own.

### 254 ECONOMICS (4)

An introduction to the principles of micro- and macroeconomics. 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 and control of money; international trade and finance.

### 255 ETHICS (3)

Introduction to philosophical thinking about moral problems. Seeks to understand central moral concepts such as good, right and duty in the context of contemporary issues.

### 256 KNOWLEDGE AND REALITY (3)

Emphasis is given to the nature and possibility of knowledge, to related concepts such as truth, belief and evidence, and to select metaphysical problems.

### 350-359 SEMINAR (3 ea)

Repeatable with various topics.

### 490 SENIOR PROJECT (2 per quarter)

S/U grading. Repeatable to 6 credits.

## INTERNATIONAL STUDIES

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 the international studies advisors in the Department of Anthropology and the Department of Political Science. For advisement on study abroad or international internships, contact International Programs and Exchanges, College Hall 104, 360-650-3298, fax 360-650-6572, MS-9046.

### Minor — International Studies

35 credits

- IS 201 and 499
- 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

## COURSES IN INTERNATIONAL STUDIES (INTL)

### 201 INTRODUCTION TO GLOBAL STUDIES (5)

Introduction to contemporary global issues, drawing on the integrated knowledge and methodologies of multiple disciplines.

### 205/305/405/505 (2-24)

Credit through national and international exchanges, academic programs offered through universities or consortia, cosponsored programs. S/U grading.

### 215/315/415/515 (2-15)

International internships, independent research projects, work experience approved by departments or colleges. S/U grading.

### 301 STUDY ABROAD PREDEPARTURE ORIENTATION (1)

Pre-departure orientation, ethics and intercultural communication issues for study, service work or internships abroad. S/U grading.

### 302 INTERNATIONAL ADVOCACY (1)

Prereq: Participation in an approved international program or exchange. Integration of international experience into academic program of students on re-entry from study abroad. S/U grading.

### 325 GLOBAL LITERATURE (4)

Prereq: ENG 101 or equivalent. Explores themes in global relations through critical reading, thinking and writing about literature from various parts of the world.

### 499 THESIS IN INTERNATIONAL STUDIES (3)

Prereq: IS 201. Capstone independent study course integrating global perspective and interdisciplinary bodies of knowledge into a directed research paper under faculty advisement.

## 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

**BÉLA FOLTIN, JR.** (2001) University Librarian and Professor. BMus, MMus, MLS, University of Illinois-Urbana.

**MARIAN L. ALEXANDER** (1970) Associate Professor. AB, Occidental College; MLS, University of California-Los Angeles.

**JEANNE ARMSTRONG** (1997) Associate Professor. BA, University of Dayton; MA, Rosary College Graduate School; PhD, University of Arizona.

**STEFANIE BUCK** (2004) Lecturer. BA, Iowa State University; MA, MLS, University of Hawaii.

**HAZEL CAMERON** (2001) Associate Professor. BA, University of Victoria; MLS, MBA, University of British Columbia.

**MARGARET FAST** (1997) Associate Professor. BA, Mills College; MA, University of British Columbia; MLS, State University of New York.

**ROBERT LOPRESTI** (1987) Associate Professor. BA, Juniata College; MLS, Rutgers, The State University.

**LEZA (ELIZABETH) MADSEN** (2002) Associate Professor. BA, Western Washington University; MLS, University of Hawaii; MA, Stanford University.

**DONNA E. PACKER** (1982) Associate Professor. BA, BIS, University of British Columbia; MBA, Western Washington 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; 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.

**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.

## COURSES IN LIBRARY INFORMATION (LIBR)

### 125 INTRODUCTION TO INFORMATION LITERACY (2)

Intended for first-year students, this course introduces students to basic skills needed for effective use of library resources and services. Emphasis on locating, selecting and evaluating material in both paper and electronic formats. This course will provide hands-on experience in using information technologies including library databases, the Internet, and may include on-line discussion and creation of Web pages.

### 201 INTRODUCTION TO RESEARCH STRATEGIES (2)

Intended for sophomores and transfer students who have not taken LIB 125 or its equivalent. 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.

### 225 INTERNET LITERACY (3)

Prereq: sophomore level or above or permission of instructor. Teaches Internet literacy, which includes understanding Internet publishing and the role of the Internet in scholarly research; defining information needs; identifying and mastering appropriate resources (search engines, directories, databases, e-lists, digital libraries, e-journals, bibliographies, biographies, encyclopedias, et cetera); evaluating Internet information; exploring the effect of the Internet on social issues (censorship, copyright, use trends, fraud, et cetera). Students will create a Web site of resources.

### 302 RESEARCH PAPER TUTORIAL (1-4)

Prereq: concurrent enrollment in a 300-level writing intensive course. 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.

### 402 RESEARCH TUTORIAL (1-4)

Prereq: junior or senior status or permission of instructor. 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 LIBR 403 for credit.

### 403 RESEARCH TUTORIAL (1-4)

Prereq: junior or senior status or permission of instructor. 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. Equivalent to LIBR 402. S/U graded. Cannot take both LIBR 402 and LIBR 403 for credit.

### 499 SPECIAL PROBLEMS (4)

Prereq: AMST 301 and senior status. Research designed to demonstrate the student's competence in working with the tools of the discipline. Also taught as AMST 499.

## WOMEN STUDIES

[www.wvu.edu/depts/womenstudies/](http://www.wvu.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, comparative and cultural library studies.

**BIDISHA BISWAS**, Political Science. Diaspora politics, international relations, ethnic and civic conflicts, terrorism.

**KAREN BRADLEY**, Sociology. Gender and education.

**MEREDITH CARY**, English. Gender equality in the study of literature and writing.

**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.

**KRISTIN DENHAM**, English. Gender and linguistics.

**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.

**ANNE GOODFELLOW**, Anthropology. Sex and gender in culture.

**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.

**ANNE LOBECK**, English. Language and gender.

**JEN LOIS**, Sociology. Gender and society.

**MARY JANELL METZGER**, English. Feminist theory, women and literature.

**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.

**CYNTHIA MOULDS**, Women studies. Introduction to women studies, gender and globalization, transnational feminism.

## INTERDISCIPLINARY STUDIES

**LISA MOULDS**, Women studies. Service learning, introduction to women studies.

**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.

**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.

**KATHLEEN YOUNG**, Anthropology. Cross cultural gender roles.

### Minor — Women Studies

30 credits

#### Core

8-10 credits

WMNS 211 (4)

WMNS 411 (4-6)

20-22 credits

One course at 300 level or above in 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, 313; FAIR 310, 362, 363, 392, 411, 412, 418; HIST 367, 368, 369, 417, 417a, 417c, 435, 463, 465, 471a, 471b, 556; PLSC 345, 421, 469
- *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, 453, 553; FAIR 313, 314, 338, 341, 342, 345, 347, 445; SOC 354, 359, 368; WMNS 314
- *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; ENG 309, 311, 338, 408, 417, 514, 550, 575; FAIR 389; THTR 428e; WMNS 314

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.

Electives: 4 or more credits from any of the above areas

Students are expected to earn at least a C+ in courses counting toward the minor.

## COURSES IN WOMEN STUDIES (WMNS)

*Courses numbered X37; X97; 300, 400; 417, 445 are described on Page 34 of this catalog.*

### 211 INTRODUCTION TO WOMEN STUDIES (4)

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.

### 212 FEMINIST THEORY AND EXPRESSION (4)

Prereq: ENG 101, 30 credits. Engages students in critical thinking, reading and writing about multicultural and global perspectives that women have developed from a feminist consciousness. May include oral, written and visual texts.

### 311 AMERICAN WOMEN STUDIES: 1620-1850 (5)

Prereq: HIST 103 or 104 or ENG 216 or another women studies course. 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.

### 313 AMERICAN WOMEN STUDIES: 1850-PRESENT (5)

Prereq: HIST 103 or 104 or ENG 216 or another women studies course. 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.

### 314 GLOBAL WOMEN (4)

Prereq: WMNS 211 or 4 credits of any 300-level women studies course. 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.

### 353 SEX AND GENDER IN CULTURE (4)

Prereq: 5 credits of anthropology. Cross-cultural study of gender stereotypes, gender and language, gender and work roles, gender and religion. Also listed as ANTH 353.

### 411 SENIOR PROJECT (1-6)

Prereq: must have completed women studies core. 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 develop interdisciplinary research or field projects that give them opportunity to put into practice the theories and skills they have been learning during the course of their study. Students develop projects that include work with women's community organizations. Repeatable to a maximum of 15 credits.

### 453 WOMEN OF THE GLOBAL SOUTH (5)

Prereq: completion of women studies core. Explores women's economic, religious, political and familial roles through topics such as development and globalization, violence, and women's movements. Emphasizes student contributions to course topics through individual and group panel work. Also offered as ANTH 453.

## Courses from Other Disciplines

**Anthropology:** ANTH 353, Sex and Gender in Culture; ANTH 453, Women of the Global South; ANTH 484, Cross Cultural Education; ANTH 553, Women of the Global South.

**Art History:** A/HI 438, Art and Feminism.

**Communication:** COMM 416, Women and Communication in 20th Century Social Movements.

**English:** ENG 227, Introduction to Gay and Lesbian Literature; ENG 309, Literature and Culture III: 18th and 19th Centuries; ENG 310, Literature and Culture IV, 19th Century American Women Writers; ENG 311, Literature and Culture V, 20th and 21st Centuries; ENG 338, Women and Literature; ENG 351, Introduction to Fiction Writing; ENG 365, Peoples of Latin America; ENG 406, Critical Theory: Contemporary Critic; ENG 408, Cultural Studies; ENG 417, Senior Seminar; ENG 439, Language and Gender; ENG 451, Creative Writing Seminar: Fiction; ENG 514, Studies in Language and Linguistics; ENG 550, Studies in American Literature; ENG 575, Studies in Women's Literature.

**Fairhaven:** FAIR 310k, Culture, Gender and Emotion; FAIR 310r, Radical Women: Emma Goldman; FAIR 313, GLBT Issues in Education; FAIR 314, The Science of GLBT Health; FAIR 341, Awareness Through the Body II; FAIR 345, The Body Speaks: Culture and Eating Disorders; FAIR 362, We're Not for Sale: History of Asian Women in America; FAIR 363, Suzie Wong to Miss Saigon: Asian Presence in Hollywood; FAIR 389, Communication and Gender; FAIR 392, Women of the West; FAIR 410e, History of Modern Feminism; FAIR 411, Political Ideas; FAIR 412, Ecofeminism; FAIR 418, Women, Ideas and Change: A History of Feminist Thoughts and Actions; FAIR 421, Black Women and Law; FAIR 445, Human Aggression.

**History:** HIST 265, Gay and Lesbian Experience in American History; HIST 367, U.S. Women to 1865; HIST 368, U.S. Women from 1865; HIST 369, Topics in U.S. Women's History; HIST 390, Queering Pop Culture; HIST 417, Identity, Class, and Gender in the Ancient World; HIST 463, Latinas and Latinos in the U.S. West; HIST 471a, Women and Gender in Colonial Latin America; HIST 471b, Women and Gender in Latin America: 1825 to Present; HIST 556, Gender, Class and Race in Colonial Latin America.

**Political Science:** PLSC 345, Women and Politics; PLSC 421, Lesbian, Gay, Bisexual, Transgendered Politics; PLSC 469, Feminist Political Theory

**Psychology:** PSY 119, Psychology of Gender.

**Sociology:** SOC 268, Gender and Society; SOC 354, Domestic Violence and the Criminal Justice System; SOC 359, Women and Deviance; SOC 368, Gender and Education.

**Theatre Arts:** THTR 428a, Contemporary Women Dramatists.



David Scherrer / WWU Publishing



# EXTENDED EDUCATION AND SUMMER PROGRAMS

405 32nd St., Suite 209, 360-650-7265  
[www.ExtendedEd.wvu.edu](http://www.ExtendedEd.wvu.edu)

## EXTENDED EDUCATION AND SUMMER PROGRAMS

*Dr. Barbara Audley, Executive Director*

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 for degree completion and professional development purposes. EESP also facilitates the on-campus Summer Session.

EESP reaches out to the public with space-available courses for community members, 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.

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.wvu.edu](http://www.ExtendedEd.wvu.edu)

The following *academic degree, certificate and preparation programs* are offered through the 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.

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 five-quarter lockstep program beginning fall quarter; courses are taken sequentially through the following fall quarter.

- Western Washington University, 516 High St., Bellingham, WA 98225, 360-650-6854

### Educational Administration

The MEd in educational administration and/or post-master's course work leads to Washington state principal certification (residency or continuing). The program is designed to prepare

elementary and secondary school personnel to assume the leadership roles of the principal or associate principal.

- Western Washington University, Miller Hall 204, Bellingham, WA 98225-9087, 866-913-3323
- 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** 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.

- University Center at Everett Station, 3201 Smith Ave., Ste. 200, Everett, WA 98201, 866-913-3323.

### Elementary/Special Education Teacher Certification Program

Transfer students 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 Everett Center at Broadway Center, 840 N. Broadway, Suite 118, Building B, Everett, WA 98201-1288, 425-339-3810, X/11
- WWU Bremerton Center at Olympic College, 1600 Chester Ave., Bremerton, WA 98337-1699, 360-475-7269
- WWU Seattle Center, North Seattle Community College, 9600 College Way N., Seattle, WA 98103-3599, 206-529-6052

A full-time, five-quarter *daytime program* is also offered to post-baccalaureate students seeking a Residency Teaching Certificate with an endorsement in elementary education. The program incorporates extensive field experience in the Bellingham Public Schools within a cohort model. Classes are held on Western's Bellingham campus and local public school classrooms.

- Western Washington University, 516 High St., Bellingham, WA 98225, 360-650-2737

### Environmental Studies

Western's Huxley College of the Environment offers a two-year upper-division undergraduate degree program with course work in two majors: planning and environmental policy, and environmental science.

The BA in planning and environmental policy prepares students to enter professional fields concerned with the sustainability of the human and natural environment. This program provides the knowledge and skills necessary to promote positive change by solving problems and implementing shared visions in both natural settings and urban communities.

The BS in environmental science draws on basic knowledge



of the physical, chemical, biological, and quantitative aspects of natural systems. The program provides the knowledge of how natural systems work and the skills required for solving problems largely created by human activities.

- 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

### 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
- WWU Everett Center at Broadway Center, 840 N. Broadway, Suite 118, Building B, Everett, WA 98201-1228, 425-339-3810, X/17

### Rehabilitation Counseling

The MA in rehabilitation counseling prepares students to work with individuals with disabilities in a variety of public and private settings. The 72-credit graduate program includes a clinical counseling internship component. Courses are offered evenings and by distance education. Graduates are prepared to take the national certification exam.

- WWU Center for Continuing Education and Rehabilitation, 6912 220th St. S.W. #105, Mountlake Terrace, WA 98043-2169, 425-771-7429

### Secondary Teacher Education and Certification

Students may take a sequence of upper-division and graduate courses leading to a residency teaching certificate and MIT. Most of the courses are offered in the evening, allowing students to work toward the certificate or degree on a part-time basis.

- WWU Seattle Center at North Seattle Community College, 9600 College Way N., Seattle, WA 98103-3599, 206-527-3718

### 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, 360-650-2135

### Professional Studies and Independent Learning

360-650-3650

Dr. Carol Nicolay, Director  
[www.ExtendedEd.wvu.edu/ilearn](http://www.ExtendedEd.wvu.edu/ilearn)

The Professional Studies and Independent Learning office offers alternatives for completing university credit. Many of the courses are open to anyone — both Western students and the public may enroll.

Western students often enroll to fulfill their General University Requirements; writing proficiency requirement; electives; or, if available, courses required for their major.

**Professional Development.** Opportunities are available for individuals interested in broadening their professional skills or exploring new careers, and for teachers seeking professional certification, additional endorsements, or courses to enhance their careers. Offerings include:

- **Credit Option/Clock Hour partnerships** with school districts and professional organizations provide Western credit to their course offerings. Course work must meet University academic standards
- **Individual courses** in the classroom offered on a self-supporting basis through academic departments
- **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. Many of these courses are geared toward new, returning and continuing educators, and human services professionals
- **CD-ROM courses** offer special topics for educators and human services professionals

[www.ExtendedEd.wvu.edu/ProfDev](http://www.ExtendedEd.wvu.edu/ProfDev)

**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 12-credit, online **Birth to Five Care** certificate program offers preparation for a career in early childhood training and care. Courses meet state and national Head Start and early childhood education requirements.

[www.ExtendedEd.wvu.edu/Birthto5](http://www.ExtendedEd.wvu.edu/Birthto5)

- 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.wvu.edu](http://www.EmergencyMgmt.wvu.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** 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.

360-650-3347

[www.wce.wvu.edu/Resources/Certification](http://www.wce.wvu.edu/Resources/Certification)

- The **Special Education** 45-credit post-baccalaureate program is designed for 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.
- 360-650-7505

[www.wce.wvu.edu/depts/TEOP/](http://www.wce.wvu.edu/depts/TEOP/)

Offered in:

- Bremerton, Everett, and Seattle

## EXTENDED EDUCATION AND SUMMER PROGRAMS

- **Writing the Modern Memoir Certificate** is a three-course 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. Students may earn an optional 9 WWU credit hours through Extended Education and Summer Programs.

[www.ExtendedEd.wvu.edu/Certificates](http://www.ExtendedEd.wvu.edu/Certificates)

- **Video Production Certificate** is a unique professional studies program for those interested in the exciting and demanding fields of digital video production offered in evening and weekend classes. This hands-on program includes classes and workshops presented by experienced industry professionals to ensure that students develop the necessary skills required to write, produce and edit a narrative fiction, documentary, corporate, training or industrial video. Students will leave with a portfolio of projects and show the final projects at a Video Festival. Students may earn an optional 11 WWU credit hours through Extended Education and Summer Programs.

[www.ExtendedEd.wvu.edu/Certificates](http://www.ExtendedEd.wvu.edu/Certificates)

- The **Project Management Professional Program** is a credit option program that teaches the principles and practices of project management as well as preparation for the national certification exam.

[www.ExtendedEd.wvu.edu/Certificates](http://www.ExtendedEd.wvu.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 Web pages using Macromedia's Dreamweaver, master cascading style sheets, build information-gathering and other critical forms, and learn effective search engine tips. Students will leave this program with a completed Web site.

[www.ExtendedEd.wvu.edu/Certificates](http://www.ExtendedEd.wvu.edu/Certificates)

**SPAN Program.** Space Available to Non-matriculated (SPAN) students enables individuals not formally admitted to WWU to earn credit by attending classes at the Bellingham campus. SPAN registration is offered on a space available basis for fall, winter, and spring quarters only

[www.ExtendedEd.wvu.edu/SPAN](http://www.ExtendedEd.wvu.edu/SPAN)

**Independent Learning** offers:

- **Print-based (correspondence style) courses** enable students to start anytime and work from any location while following a course guide developed for the self-paced student

[www.ExtendedEd.wvu.edu/ilearn](http://www.ExtendedEd.wvu.edu/ilearn)

- **Independent study contracts** are available for students not currently enrolled at WWU

### COURSES IN EXTENDED PROGRAMS (EXT)

Courses numbered X37; X97; 300, 400; 417, 445 are described on Page 34.

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.

### 129 WRITING CONVENTIONS (3)

Vocabulary of language, standard writing conventions, and the process of effective writing. Practice in identifying proper English usage and in developing fluent, professional writing.

### 360 BIRTH TO 5: TYPICAL AND ATYPICAL CHILD DEVELOPMENT (3)

Covers the most common developmental patterns for infants, toddlers and preschoolers. Study physical growth and maturation patterns, development of self-care skills, motor coordination, language, adaptive and social-emotional development. Learn to identify risk factors and how they associate with disabilities and developmental delays in young children.

### 361 BIRTH TO 5: OBSERVATION AND ASSESSMENT OF YOUNG CHILDREN (3)

Survey and practice techniques for observing and recording the skills and behaviors of infants, toddlers and preschoolers. Explore different tools and strategies to assess infants and young children ages 0-5, and how to document and report findings to their parents. Also provides the tools for parent or caregiver-child interactions, environmental settings and design, location of resources, and screening children for referrals to special services.

### 362 BIRTH TO 5: PROGRAM PLANNING (3)

Explore curriculum development, program planning and management within early childhood and daycare settings. Examine the latest recommended practices in caring for infants, toddlers and preschoolers. Emphasis on promoting healthy growth and development, including social skills and readiness to learn in a safe and stimulating environment.

### 363 BIRTH TO 5: FAMILY AND COMMUNITY-BASED SERVICES (3)

Examines family and community systems and integrated service delivery. Learn to identify family strengths and to engage in family-centered practice. Gain the skills to identify resources and services available for children and their families and to work effectively with families from a wide variety of backgrounds.

### 370 PRINCIPLES AND PRACTICES OF EMERGENCY MANAGEMENT (4)

An introduction to society's organized response to natural and technological hazards and disasters. Explores the history and evolution of the profession and investigates the organization of emergency management systems in public and private sectors. Required course for certificate.

### 371 PRACTICAL APPLICATIONS OF EMERGENCY MANAGEMENT (3)

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. Required course for certificate.

### 372 LAW AND POLICY IN EMERGENCY MANAGEMENT (3)

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. Required course for certificate completion.

### 420a-z SOCIAL ISSUES IN EDUCATION (1-5)

Study of sociological problems relating to education; different seminars deal with different problems and related psychological, community health, philosophical and ethical issues facing educators in the 21st century. Offered with different topics. Some courses may be repeatable. Contact EESP for details.

### 421a-z ISSUES IN SPECIAL EDUCATION (1-5)

Study regarding the special needs student for general classroom teachers. Organizing learning experience, selecting methods, processes, curriculum and materials appropriate to the development of the individual or group. Offered with different topics. Some courses may be repeatable. Contact EESP for details.

### 422a-z STRATEGIES FOR TEACHING (1-5)

Systematic study of teaching; observation; analysis and development of teaching and classroom management skills and strategies with the intent of improving learning outcomes, curriculum enhancement. Offered with different topics. Some courses may be repeatable. Contact EESP for details.

**423a-z LITERACY INSTRUCTION METHODS (1-9)**

Examines instructional strategies and assessment tools in literacy education. Explores reading, writing, speaking and listening instructional methods. Offered with different topics. Some courses may be repeatable. Contact EESP for details.

**424a-z CURRENT EDUCATIONAL TOPICS (1-5)**

Varied topical presentations, workshops, seminars and courses designed for individuals seeking educational development and growth or professional renewal. Content tailored to the K-12 system while not specific to any department. S/U grading. Offered with different topics. Some courses may be repeatable. Contact EESP for details.

**425a-z LEADERSHIP IN EDUCATION (1-5)**

Roles and responsibilities of persons serving in leadership roles in education. Topics may include leadership skills, legal issues, budgetary issues, group facilitation, project management, team leadership. S/U grading. Offered with different topics. Some courses may be repeatable. Contact EESP for details.

**426a-z TECHNOLOGY IN EDUCATION (1-5)**

Examines the application of computers, application software, Internet, multimedia and new emerging computer technology in the classroom. Offered with different topics. Some courses may be repeatable. Contact EESP for details.

**427a-z CURRENT READINGS IN EDUCATION (1-5)**

Gain currency in educational research through the review of professional journals and literature. S/U grading. Offered with different topics. Some courses may be repeatable. Contact EESP for details.

**450a-z CURRENT TOPICS FOR PROFESSIONALS (1-5)**

Varied topical presentations, workshops, seminars and courses designed for individuals seeking educational development and growth or professional renewal. Content tailored to the career professional while not specific to any discipline. Offered with different topics. Some courses may be repeatable. Contact EESP for details.

**463 SOCIAL ISSUES IN EMERGENCY MANAGEMENT IN THE 21ST CENTURY (4)**

Prereq: EXT 370, 371, 372 or permission of instructor. 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.

**464 GROUP DYNAMICS AND FACILITATION OF EMERGENCY MANAGEMENT SYSTEMS (3)**

Prereq: EXT 370, 371, 372 or permission of instructor. 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.

**465 IMPACT OF DISASTER (4)**

Prereq: EXT 370, 371, 372 or permission of instructor. 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.

**466 INTERPERSONAL COMMUNICATION IN DISASTER SERVICE (3)**

Prereq: EXT 370, 371, 372 or permission of instructor. 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.

**467 EMERGENCY MANAGEMENT AND THE CHALLENGE OF TERRORISM (3)**

Prereq: EXT 370, 371, 372 or permission of instructor. 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.

**494 EMERGENCY MANAGEMENT INTERNSHIP (2-6)**

Prereq: EXT 370, 371, 372 or permission of instructor and a minimum of 18 completed credits in the certificate program. 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 nonprofit organization. Program provides guidance and goals. S/U grading. Repeatable to a maximum of 6 credits.

**495 PROFESSIONAL RESEARCH PROJECT IN EMERGENCY MANAGEMENT (2-6)**

Prereq: EXT 370, 371, 372 or permission of instructor and a minimum of 18 completed credits in the certificate program. Open only to students of the Emergency Management Certificate. 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 career responsibilities. Project supervised academically by program faculty. S/U grading only. Repeatable to a maximum of 6 credits.

*Summer Programs*

Marlene Harlan, Director

360-650-7221

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

**Summer Session** is a self-support quarter on the Bellingham campus which offers academic credit and professional development courses. Summer enrollment is open to WWU students and the public. 360-650-2841, [www.wvu.edu/~summer](http://www.wvu.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, hospitality, printing, media equipment and support. 360-650-6821, [www.conferences.wvu.edu](http://www.conferences.wvu.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, 360-650-6822/6820.

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

# COLLEGE OF SCIENCES AND TECHNOLOGY

*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 that is dedicated to the enrichment and education of K-12 pre-service teachers and education reform. The college is committed to excellence in teaching, fostering interdisciplinary research and study opportunities, enhancing diversity, enhancing the quality of science 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). 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 with the college are dedicated to providing a high-quality education for students by using undergraduate research and practical laboratory-based experiences designed 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 seven academic departments, students will find a wide variety of majors from which to choose, including many interdisciplinary majors. 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.....	BAEd
Biology/Mathematics.....	BS
Biochemistry.....	BS
Chemistry.....	BA, BS, MS
Chemistry/Mathematics.....	BAEd

Chemistry/Physics.....	BAEd
Computer Science.....	BS, MS
Earth Science.....	BAEd, MEd
Earth Science/General Science.....	BAEd
Economics/Mathematics.....	BA
Electronic Engineering Technology.....	BS
General Science.....	BAEd
Geology.....	BA, BS, MS
Industrial Design.....	BS
Industrial Technology.....	BS
Manufacturing Engineering Technology.....	BS
Mathematics.....	BA, BAEd, BS, MS
Mathematics/Computer Science.....	BS
Natural Science/Science Education.....	MEd
Physics.....	BS
Physics/Mathematics.....	BAEd
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.

## Academic 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
Dr. Steven Dillman.....	Engineering Technology
Dr. Scott Babcock.....	Geology
Dr. Tjalling Ypma.....	Mathematics
Dr. Brad Johnson.....	Physics/Astronomy

## 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 Science(s), 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.

### **COURSES IN INTERDISCIPLINARY SCIENCE(S), TECHNOLOGY and MATHEMATICS (ISTM)**

*Courses numbered x/37; x97; 300,400; 417,445 are described on Page 34 of this catalog.*

#### **201 SCIENCE LITERACY (3)**

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)

# BIOLOGY

Biology — the scientific study of living things — includes a broad spectrum of fascinating fields. Cell and molecular biology, developmental genetics, systematics and evolution, botany, zoology, marine biology, microbial ecology, plant ecology, animal ecology, physiological and behavioral ecology and science education are some of the specialties of study that students can pursue with the biology faculty at Western. The Department of Biology offers major and minor degree programs wherein students can obtain a strong base of biological knowledge from the *core curriculum*. Biology majors become proficient in critical thinking, the application of scientific methods and approaches, and written and oral presentation. Biology majors are provided the opportunity to focus in an area of depth, called an *emphasis*, in which the student takes an array of advanced courses that enables the student to build an interest into a strength. Thus, students are well prepared by the biology faculty to begin post-graduate pursuit of a variety of professional careers in biology, in the health sciences, and in teaching at public schools and community colleges. A description of the Department of Biology may be found on the World Wide Web at [www.biol.wvu.edu/biology/](http://www.biol.wvu.edu/biology/).

An important mode of teaching by faculty in the biology department is laboratory instruction, wherein active learning by students occurs at the lab bench and in the outdoors, under faculty supervision. We strongly recommend that biology majors own a personal computer with current software. These are important tools for analyzing data and preparing graphs, tables, and text for biology classes. Students in many of the advanced courses perform individual and group research projects, wherein the practice of independent learning is refined. Students can also assist in faculty research and can perform quasi-independent research projects as well. These active learning experiences develop the skills that are invaluable for the many careers in biology.

## FACILITIES AND RESOURCES

In 1998, Western Washington University completed construction of three new buildings for the sciences: Biology, Chemistry, and the Science, Math and Technology Education Center. The Department of Biology features teaching labs, research labs, environmental control rooms, a seawater lab, image analysis labs, darkrooms, computer labs and multimedia lecture halls. A greenhouse on campus supports teaching and research in botany. The Sundquist Marine Laboratory at Shannon Point, near Anacortes, supports research and teaching by the marine biologists in the Department of Biology. Several recent National Science Foundation grants for acquisition of state-of-the-art instrumentation have been awarded to the biology faculty. Some of the recent acquisitions are fluorescence and video microscopes, 3-D optical sectioning microscope, image analysis systems, DNA sequencing and PCR equipment, spectrophotometers, hydrolabs for examination of water quality, veterinary-grade X-ray machine, oxygen and carbon dioxide respirometry systems, and bioelectric and force measurement systems.

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. Hence, fascinating learning opportunities abound for students participating in the many laboratory courses and research projects in biology at Western.

## BIOLOGY 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) Associate 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 DE CHAINE** (2006) Assistant Professor. BA, University of California-San Diego; MS, University of Hawaii-Manoa; PhD, University of Colorado-Boulder.

**DEBORAH A. DONOVAN** (1998) Associate Professor. BSc, MSc, University of California-Davis; PhD, University of British Columbia.

**DAVID U. HOOPER** (1998) Associate 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) Associate Professor. BS, MS, Oregon State University; PhD, University of Hawaii.

**GISÈLE MULLER-PARKER** (1990) Professor. BS, State University of New York-Stony Brook; MS, University of Delaware; PhD, University of California-Los Angeles.

**MERRILL A. PETERSON** (1997) Professor. BS, University of Washington; PhD, Cornell University.

**SANDRA SCHULZE** (2006) Assistant Professor. BS, University of British Columbia; PhD, Simon Fraser 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.

**DON C. WILLIAMS** (1968) Professor. BA, Chico State College; MA, PhD, University of California-Davis.

**JEFF C. YOUNG** (1999) Associate Professor. BA, PhD, Ohio State University.

### Research Associates

**DAVID B. 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.

**MARY ANN PULTZ**. BA, PhD, Indiana University.

**FREDERICK M. RHOADES**. BA, Swarthmore; MS, Oregon State University; PhD, University of Oregon.

### Adjunct Faculty

**JOHN BOWERS**. BS, PhD, Cornell University.

**JENNIFER PURCELL**. BS, MS, Stanford University; PhD, University of California-Santa Barbara.

**STEPHEN SULKIN**. BA, Miami University; MS, PhD, Duke University.

**KATHRYN L. VAN ALSTYNE**. BS, University of Rhode Island; PhD, University of Washington.

### The BS Degree

Professions in biology are diverse. Many specialties require additional training after graduation from Western. Students interested in particular professional opportunities should select one of the areas of emphasis listed below, and they should meet with their advisor to organize an appropriate program of study. The BS program is recommended for students who

plan to engage in occupations requiring a specialty in biology: teaching biology in secondary schools and in community colleges, technician-level biological research, or principal-investigator-level biological research and teaching, requiring post-graduate studies in the biological sciences. This BS degree is based on a strong core of biology courses and supporting courses in chemistry, physics and mathematics. The BS degree has a number of different emphases: cellular biology; ecology, evolution, and organismal biology; general biology; secondary teaching; and marine biology.

An interdisciplinary BS major, Cellular and Molecular Biology/Biochemistry is offered with the chemistry department. Two combined BS majors are also offered: Biology/Anthropology and Biology/Mathematics. More specific information about the BS program is available in the biology office or the biology department Web site at [www.biol.wvu.edu/biology/](http://www.biol.wvu.edu/biology/).

### The BA Degree

Many students simply want to make biology the focus of a liberal arts education, and are not directly interested in post-graduate study or professional careers in biology or teaching. These students are encouraged to pursue the BA degree in biology. The number of required courses in the BA degree has been kept low to permit students to add other areas of study and courses suited to their individual needs and interests. Students pursuing the BA degree in biology may wish to combine their interest in biology with a focus of course work in other areas such as geology, history, or political science. Combinations of these sorts are particularly valuable to those interested in environmental science. Course work in other disciplines, such as foreign languages, anthropology, economics, philosophy, and psychology is encouraged for students pursuing a BA degree in biology. Two combined degree programs are available: the Biology/Anthropology BA, offered jointly by the biology and anthropology departments, and the Behavioral Neuroscience BA, offered jointly by the biology and psychology departments.

### TEACHING CAREERS IN BIOLOGY

Students wishing to teach in the Washington public schools should complete the certification program in the Woodring College of Education ([www.wce.wvu.edu/Resources/Certification/](http://www.wce.wvu.edu/Resources/Certification/)), and must obtain endorsements to teach particular subjects. Because certification to teach high school requires more than four years of study, advisement prior to or at the beginning of the third year is essential. Students interested in teaching biology in secondary schools may receive an endorsement in biology by obtaining the Biology BS degree with the secondary teaching emphasis and by taking science methods courses after admission to Woodring College of Education. Courses required for state teaching endorsements must be completed with a grade of C (2.0) or better. By completing GEOL 211 and 212, PHYS 116 and ASTR 315, biology students may also receive the *Science* endorsement. Those who wish endorsements in both biology and chemistry should consider the BA in Education program in biology/chemistry.

Students planning to teach biology at the college level are advised to complete a BS in biology and to continue graduate work leading to a master's or doctoral degree.

### DECLARING A MAJOR

The biology department has a two-step process for admission to a Biology BS or BA major. Students interested in biology should contact the biology department and declare a Biology Phase I pre-major as soon as possible after admission to the University. Biology pre-majors will

be assigned an advisor. Early advisement is important; it will ensure that a student is taking the appropriate course sequences and will facilitate movement through the Biology BS or BA degree program.

Students can apply for admission to Phase II of the biology major after completing CHEM 121, CHEM 122, BIOL 204 and BIOL 205. At this point BS students will identify the emphasis that they wish to complete. Admission to Phase II for the BS and BA degrees is competitive and will be based on performance in these chemistry and biology courses. Additional information on admission to Phase II can be obtained from the biology department office or Web site at [www.biol.wvu.edu/biology/advising.html](http://www.biol.wvu.edu/biology/advising.html).

### PREREGISTRATION COURSE REQUEST FORMS

Many biology courses require students to complete a preregistration course request form to be eligible for registration. Information about these forms is available on the biology department Web site in November, February and May. Students who receive an override from this process are given the opportunity to register for the class. If the class fills before the student has an opportunity to register, the override will not give them admittance to the class. The student will need to contact the instructor on the first day of class.

### TRANSFER STUDENTS

Transfer students can apply for admission to Phase II of the biology major after completing CHEM 121, CHEM 122, BIOL 204 and BIOL 205 or their equivalents. Admission to Phase II for the BS and BA degrees is competitive and will be based on performance in these chemistry and biology courses. Additional information on admission to Phase II can be obtained from the biology department office or Web site at [www.biol.wvu.edu/biology/advising.html](http://www.biol.wvu.edu/biology/advising.html).

Transfer students from the community colleges are strongly advised to complete Option A or B below before matriculating at WWU. Students must expect that a BS or BA in biology will require a **minimum of two additional years of course work after completion of the introductory biology series.**

A. Complete all requirements for an AA degree **and** be sure to include:

- mathematics through one quarter of calculus, **and**
- a year sequence in general chemistry, **and**
- a year sequence in introductory biology for majors

B. Complete all of the following sequences; 90 credits; without an AA:

- one quarter of calculus, **and**
- a year sequence in general chemistry, **and/or**
- two quarters of organic chemistry, or two quarters of physics; **and**
- a year sequence in introductory biology for majors

### MID-PROGRAM CHECKPOINT

Students seeking to complete a BS degree in biology within a four-year time span should have completed the following courses prior to their **junior** year:

- CHEM 121, 122, 123; BIOL 204, 205, 206; ENG 101; MATH 124; 18 additional credits from the non-science section of the GUR

## BIOLOGY

Major omissions from this list will make it difficult or impossible to complete this degree within two additional years.

### BACHELOR OF ARTS

#### Major — Biology

74 credits

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.

#### Basic biology emphasis

- Supporting courses: CHEM 121, 122, 123 (or CHEM 125, 126, 225), 251; MATH 240 or equivalent
  - Required core courses: BIOL 204, 205, 206; BIOL 321, 323, 325, 432
  - PHYS 101 or 114 (PHYS 115 recommended)
  - Upper-division biology courses approved by faculty advisor
- Faculty Advisors: Assigned faculty

#### Major — Behavioral Neuroscience

109-110 credits

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 proposed degree program provides an excellent platform for entry-level positions in such areas as biomedical research and the pharmaceutical industry.

#### Required Supporting Courses 24 credits

- Math 114
- CHEM 121, 122, 123; CHEM 251 or equivalent

#### Required Biology Courses 29 credits

- BIOL 204; BIOL 205, 206; BIOL 321, 323, 325; BIOL 432

#### Required Psychology Courses 33 credits

- PSY 101; PSY 220; PSY 301-303, 320, 328

#### Required Biology or Psychology Courses 4-5 credits

- BIOL 410 or PSY 324

#### Electives under advisement 19 credits

- BIOL 322, 324, 382, 403, 410, 434, 467, 468, 482
- BIOL 300 or 395 or 400 or 494 or 495
- PSY 210, 310, 321, 322, 323, 420, 421, 422, 424, 428
- PSY 300 or 400

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: Roger Anderson (biology), José Serrano-Moreno (biology), Janet Finlay (psychology), Jeffrey Grimm (psychology), Mike Mana (psychology)

#### Combined Major — Biology/Anthropology

89 credits including 23 in supporting courses; Biology Phase II status required for admission into 300- and 400-level biology courses for biology majors.

- CHEM 121, 122, 123 (or CHEM 125, 126, 225), and 251 (or 351, 352, 353)
- PHYS 101 or 114 (PHYS 115 recommended)

- BIOL 204, 205, 206, 321, 348, 349
- ANTH 335, or BIOL 340 or MATH 240
- ANTH 201, 210, 215
- 10 credits in anthropology under advisement
- 8 credits in biology under advisement
- ANTH 496

Faculty Advisors: Roger Anderson, Biology, and Joan Stevenson, Michael Grimes, Anthropology.

### BACHELOR OF ARTS IN EDUCATION

#### Combined Major — Biology/Chemistry — Secondary

103-104 credits; 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.

- CHEM 121, 122, 123 or CHEM 125, 126, 225; 333; CHEM 351, 352, 353, 354
- BIOL/CHEM 471, 472, 474
- BIOL 204, 205, 206; BIOL 321, 323; BIOL 322 or 324; BIOL 325, 326, 432
- PHYS 114, 115, 116 (or PHYS 121, 122, 123, 131, 132, 133)
- MATH 124 or MATH 134
- SCED 370, 481, 491

Faculty Advisors: Deborah Donovan, Alejandro Acevedo-Gutiérrez

**NOTE:** This major meets the requirements for Washington state teaching endorsements in both biology and chemistry. Completion of GEOL 211, 212 and ASTR 315 would provide the student with an additional endorsement in *Science*.

#### Teaching Endorsement

Recommendations for teaching endorsement with the chemistry-biology major concentration normally require completion of the program with a grade point average of 2.75 or better in the chemistry and in the biology courses. Courses required for state teaching endorsements must be completed with a grade of C (2.0) or better.

### BACHELOR OF SCIENCE

A diploma granted under this major will indicate "Bachelor of Science"; official transcripts will indicate *biology* and the area of *emphasis*.)

#### Major — Biology

**Cell Emphasis** — 90 credits

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.

- Supporting courses:* 37 required credits. (Credits for recommended supporting courses cannot be applied toward credits in the major.)
  - CHEM 121, 122, 123 (or CHEM 125, 126, 225)
  - CHEM 351 and 352; CHEM 353 and 354 recommended
  - PHYS 114, 115; PHYS 116 recommended (or PHYS 121, 122, 123, 131, 132, 133)



- MATH 124 or MATH 134; MATH 125 or MATH 135 recommended
- *Basic Requirements:* 14 credits
  - BIOL 204, 205, 206
- *Breadth Requirements:* 19 credits
  - BIOL 321, 323, 325, 432; MATH 240
- *Depth Requirements:* 17-19 credits
  - BIOL 345; BIOL 451 or 482; BIOL 471 or 473
  - Three upper-division lab courses:
    - BIOL 324 or 475
    - Two of the following: BIOL 322, 346, 453, 484
- *Electives:* 2-4 credits to make 53 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, 470, 472, 478, 479, 494, 495, 496, 498
  - BIOL 300, 400 and 445 and other 400-level courses under advisement

Faculty advisors: Marion Brodhagen, David Leaf, Craig Moyer, Joann Otto, Sandra Schulze, José Serrano-Moreno, Anu Singh-Cundy, Carol Trent, Jeff Young.

#### **Ecology, Evolution and Organismal Biology (EEO)**

##### **Emphasis — 90 credits**

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.

- *Supporting courses:* 37 required credits. (Credits for recommended supporting courses cannot be applied toward credits in major.)
  - CHEM 121, 122, 123 (or CHEM 125, 126, 225)
  - CHEM 351 AND 352; CHEM 353 and 354 recommended
  - PHYS 114, 115; PHYS 116 recommended (or PHYS 121, 122, 123, 131, 132, 133)
  - MATH 124 or MATH 134; MATH 125 or MATH 135 recommended
  - GEOL 211 and 212 recommended
- *Basic Requirements:* 14 credits
  - BIOL 204, 205, 206
- *Breadth Requirements:* 20 credits
  - BIOL 321, 323, 325, 340, 432
- *Depth Requirements:* 13-19 credits
  - Three courses from two categories (at least one course from each category):
    - Structure, Function and Ecology: BIOL 403, 405, 407, 410, 416, 450, 451, 453, 457, 467, 468, 479, 482, 484
    - Taxon, Diversity and Evolution: BIOL 434, 436, 439, 452, 456, 457, 460, 462, 463, 464, 465
  - Three upper-division lab classes:
    - One of the following: BIOL 322, 324 or 326
    - 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 and 445; suggested electives include BIOL 395, 455, 478, 494, 495, 496, 498 and any course listed in the categories Structure, Function and Ecology or Taxon, Diversity and Evolution;
- ESCI courses under advisement

Faculty advisors: Alejandro Acevedo-Gutiérrez, Roger Anderson, Eric De Chaine, Deb Donovan, David Hooper, Ben Miner, Craig Moyer, Gisèle Muller-Parker, Merrill Peterson, Anu Singh-Cundy, Jeff Young.

##### **General Emphasis — 90 credits**

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.

- *Supporting courses:* 37 required credits. (Credits for recommended supporting courses cannot be applied toward credits in major.)
    - CHEM 121, 122, 123 (or CHEM 125, 126, 225)
    - CHEM 351 AND 352; CHEM 353 and 354 recommended
    - PHYS 114, 115; PHYS 116 recommended (or PHYS 121, 122, 123, 131, 132, 133)
    - MATH 124 or MATH 134; MATH 125 or MATH 135 recommended
  - *Basic Requirements:* 14 credits
    - BIOL 204, 205, 206
  - *Breadth Requirements:* 20 credits
    - BIOL 321, 323, 325, 340, 432
  - *Depth Requirements:* 12-13 credits
    - 10 credit hours in selected 400-level courses excluding BIOL 432, 494, 495, 496, 498; BIOL 348 does not count toward depth requirements
    - Three upper-division lab classes:
      - One of the following: BIOL 322, 324, 326, 346, 349
      - Two additional upper-division lab (or lecture and lab) courses, including at least one 400-level course
  - *Electives:* 6-7 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, 395, 400, 445, 494, 495, 496, 498
- Faculty Advisors: Assigned faculty.

##### **Marine Emphasis — 95 credits**

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.

- *Supporting courses:* 42 required credits. (Credits for recommended supporting courses cannot be applied toward credits in major.)
  - CHEM 121, 122, 123 (or CHEM 125, 126, 225)
  - CHEM 351 AND 352; CHEM 353 and 354 recommended
  - PHYS 114, 115; PHYS 116 recommended (or PHYS 121, 122, 123, 131, 132, 133)
  - MATH 124 or MATH 134; MATH 125 or MATH 135 recommended

## BIOLOGY

- GEOL 211
- Basic Requirements:* 14 credits
  - BIOL 204, 205, 206
- Breadth Requirements:* 20 credits
  - BIOL 321, 323, 325, 340, 432
- Depth Requirements:* 17 credits
  - BIOL 326
  - Three courses chosen from these two categories (at least one from each category):
    - Taxa: BIOL 456, 460, 464
    - Ecology: BIOL 406, 407
- Electives:* 2 credits (additional electives can be taken to fulfill University Graduation Requirements):
  - BIOL 403, 405; CHEM 333 or ESCI courses under advisement
  - BIOL 300, 395, 400, 445, 494, 495, 496, 498 under advisement

Faculty Advisors: Alejandro Acevedo-Gutiérrez, Deb Donovan, Ben Miner, Craig Moyer, Gisèle Muller-Parker.

### **Secondary Teaching Emphasis** — 90 credits

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.

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. Science courses required for state teaching endorsements must be completed with a grade of C (2.0) or better.

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.

- Supporting courses:* 37 required credits. (Credits for recommended supporting courses cannot be applied toward credits in major.)
  - CHEM 121, 122, 123 (or CHEM 125, 126, 225)
  - CHEM 351 AND 352; CHEM 353 and 354 recommended
  - PHYS 114, 115; PHYS 116 recommended (or PHYS 121, 122, 123, 131, 132, 133)
  - MATH 124 or MATH 134; MATH 125 or MATH 135 recommended
  - GEOL 211, 212 recommended
  - ASTR 315 recommended
- Basic Requirements:* 14 credits
  - BIOL 204, 205, 206
- Breadth Requirements:* 19-20 credits
  - BIOL 321, 323, 325, 432; BIOL 340 or MATH 240
- Depth Requirements:* 18-21 credits
  - BIOL 326; BIOL 322 or 324
  - SCED 370
  - One of the following: BIOL 460, 465, 467 and 468, 482 and 484
  - One of the following: BIOL 450, 451 and 453, 452, 479
- 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 and 491 (see comments above)
- Faculty Advisors: Alejandro Acevedo-Gutiérrez, Deb Donovan

### **Interdisciplinary Major — Cellular and Molecular Biology/Biochemistry**

105 credits; Biology Phase II status required for admission into 300- and 400-level biology courses for biology majors.

Cellular and molecular biology emphasis

For biochemistry emphasis, see the *chemistry department* section of this catalog.

- BIOL required core: 204, 205, 206, 321, 322 or 346, 323, 345, 470, 471, 472, 473, 474, 475
- CHEM 121, 122, 123 (or CHEM 125, 126, 225), 351, 352, 353, 354
- MATH 124 or 134, 125 or 135; MATH 240 or 341
- PHYS 121, 122, 123, 131, 132, 133

Electives should be chosen from the courses listed below.

One Group A selection must be included among the electives chosen.

- Group A Electives: BIOL 436; 451 and 453; 467 and 468; 479; 482 and 484; BIOL 494 or 495 (at least 2 credit hours)
- Group B Electives: BIOL 325, 432; 445 (under advisement); 467, 478

This program is specifically designed for students who seek employment or graduate study in cellular biology, molecular biology, or biochemistry.

Faculty Advisors: Marion Brodhagen, David Leaf, Craig Moyer, Joann Otto, Sandra Schulze, José Serrano-Moreno, Carol Trent, Jeff Young

### **Combined Major — Biology/Anthropology** 101-104 credits

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.

- Supporting courses:* 34-37 required credits. (Credits for recommended supporting courses cannot be applied toward credits in major.)
  - CHEM 121, 122, 123 (or CHEM 125, 126, 225)
  - CHEM 351 and 352 (or CHEM 251 only with approval of advisor; CHEM 353 and 354 recommended)
  - PHYS 114, 115; PHYS 116 recommended (or PHYS 121, 122, 123, 131, 132, 133)
  - MATH 124 or MATH 134
- Basic requirements:* Biology 14 credits
  - BIOL 204, 205, 206
- Basic requirements:* Anthropology 15 credits
  - ANTH 201, 210, 215
- Breadth requirements:* 16-19 credits
  - BIOL 321, BIOL 325 or ANTH 350, BIOL 340 or ANTH 335; BIOL 432 or ANTH 423
- Depth requirements:* 12-15 credits
  - BIOL 348 and 349 or BIOL 467
  - One of the following: ANTH 308, 422, 424, BIOL 410
- Electives:* 3-9 credits to make 66 total when combined with the required biology and anthropology courses
  - BIOL 322 or 324, 323, 345, 382, 410, 465, 467, 478; ANTH 308, 422, 424, 466; other electives under advisement
- Completion requirement:* 1 credit

- ANTH 496

Faculty Advisors: Roger Anderson, Biology; Joan Stevenson and Michael Grimes, Anthropology.

### Combined Major — Biology/Mathematics

104-105 credits; Biology Phase II status required for admission into 300- and 400-level biology courses for biology majors.

- BIOL 204, 205, 206, 321, 323, 325, 432
- MATH 124, 125 (or 134, 135), 204, 224, 331, 341, 342, 432; CSCI 140 or 141 or MATH 207 (the sequence MATH 203 and 303 may be substituted for MATH 204 and 331)
- Plus 8 credits of approved upper-division electives from biology, math, or math/computer science
- CHEM 121, 122, 123 (or CHEM 125, 126, 225); CHEM 251
- PHYS 121, 122, 131, 132

Faculty Advisors: Merrill Peterson, Biology; Tjalling Ypma, Mathematics

### Minor — Biology

43 credits

- Supporting courses: CHEM 121, 122, 123 (or CHEM 125, 126, 225)
- Required core courses: BIOL 204, 205, 206 plus 15 credits of upper-division biology electives

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.

## GRADUATE STUDY

For concentrations leading to the Master of Education or the Master of Science degrees, see the *Graduate School* section of this catalog.

## COURSES IN BIOLOGY (BIOL)

*Courses numbered X37; X97; 300, 400, 417, 445 are described on Page 34 of this catalog. Several 400-level courses are offered in alternate years. See tentative multiyear schedule for courses posted in the biology office or the biology department Web site.*

### 101 INTRODUCTION TO BIOLOGY (4)

Prereq: MATH 106 or higher. 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.

### 102 BIOLOGICAL DIVERSITY: EVOLUTION AND SYSTEMS (4)

Prereq: BIOL 101. 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.

### 150 MARINE BIOLOGY (3)

Prereq: BIOL 101. Recognition, life history, ecological relationships, and distribution and evolutionary trends of representative organisms.

### 204 INTRODUCTION TO EVOLUTION, ECOLOGY AND BIODIVERSITY (4)

Pre- or co-req: CHEM 121 or 125. 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. Includes lab.

### 205 INTRODUCTION TO CELLULAR AND MOLECULAR BIOLOGY (5)

Prereq: BIOL 204, CHEM 121 or 125; pre- or co-req: CHEM 122 or 126.

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. Includes lab.

### 206 INTRODUCTION TO ORGANISMAL BIOLOGY (5)

Prereq: BIOL 205, CHEM 122 or 126; pre- or co-req: CHEM 123 or 225. 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.

### 321 GENETICS (4)

Prereq: BIOL 204, 205, 206. Survey of classical genetics, molecular genetics and genomics in prokaryotic and eukaryotic organisms.

### 322 GENETICS LAB (4)

Prereq: BIOL 321 or concurrent. 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.

### 323 CELL AND MOLECULAR BIOLOGY (4)

Prereq: BIOL 204, 205, 206; CHEM 351 and 352 (or CHEM 251). Cell structure and function. Topics include protein structure and function, gene regulation, cell cycle, signal transduction, and organelle assembly and function.

### 324 METHODS IN MOLECULAR BIOLOGY (3)

Prereq: BIOL 321 or 323. Introduction to widely used molecular biology techniques and laboratory skills.

### 325 ECOLOGY (3)

Prereq: BIOL 204, 205, 206. Organismal-environmental relationships in marine, fresh water and terrestrial habitats. Functions and development of ecosystems.

### 326 ECOLOGY LABORATORY (2)

Prereq: concurrent enrollment in BIOL 325. Field experience working with ecological instruments and sampling methods. Written reports of lab exercises.

### 340 BIOMETRICS (5)

Prereq: BIOL 204, 205, 206; permission of instructor. The design of biological experiments and appropriate statistical analysis of experimental data.

### 345 FUNDAMENTALS OF MICROBIOLOGY (3)

Prereq: BIOL 205; CHEM 351 or 251. Cell structure, metabolism, evolution and ecology of prokaryotes.

### 346 MICROBIOLOGY LAB (2)

Prereq: BIOL 205; CHEM 351 or 251; BIOL 345 or concurrent. Techniques of general microbiology, including isolation, culture, enumeration and identification of prokaryotes.

### 348 HUMAN ANATOMY AND PHYSIOLOGY (5)

Prereq: BIOL 101 or 205. Macroscopic and histological examination of human anatomical systems, and study of general neuromuscular and cardiopulmonary functions. Not available for credit to biology students receiving a bachelor of science degree. Includes lab.

### 349 HUMAN PHYSIOLOGY (5)

Prereq: BIOL 348; CHEM 115 or 121 or 125. A comprehensive introduction to the study of integrated functions of cells, organs and organ systems in humans. Includes lab.

### 382 SOCIOBIOLOGY (4)

Prereq: junior standing in the behavioral or biological sciences, and one of the following: BIOL 101, 205, or ANTH 215; or permission of instructor. Neo-Darwinian approaches for understanding the ultimate causes of behavior in humans and other animals will be reviewed. Topics include resource competition and optimization models, mate choice and reproductive strategies, parental investment, conflict and cooperation, evolution of cognition and morality.

### 395 BIOLOGY RESEARCH PARTICIPATION (1-4)

Prereq: permission of instructor. 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. Repeatable to a maximum of 6 credits.

## BIOLOGY

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### 403 PHYSIOLOGICAL ECOLOGY OF ANIMALS (5)

Prereq: BIOL 206 and 325; permission of instructor. 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.

### 404 PLANT ECOLOGY (5)

Prereq: BIOL 206, 325 and 326; permission of instructor. Ecology of plant communities, interpretation of vegetation pattern, and plant ecophysiology.

### 405 MICROBIAL ECOLOGY (4)

Prereq: BIOL 325; course work in microbiology strongly recommended; permission of instructor. 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. Offered in alternate years.

### 406 GENERAL OCEANOGRAPHY (5)

Prereq: BIOL 204, 205, 206; PHYS 114. Introduction to chemical, physical, geological and biological oceanographic subdisciplines. Sampling methods and analytical techniques applied to local marine areas. Also taught as ESCI 321.

### 407 MARINE ECOLOGY (5)

Prereq: BIOL 325 and 326. 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.

### 410 ANIMAL BEHAVIOR (4)

Prereq: BIOL 206; BIOL 325 (or ESCI 325); or permission of instructor. 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.

### 416 ECOSYSTEM ECOLOGY AND GLOBAL CHANGE (3)

Prereq: BIOL 325 or ESCI 325, BIOL 326 recommended. 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.

### 432 EVOLUTIONARY BIOLOGY (4)

Prereq: BIOL 321. Principles, patterns, processes and mechanisms of evolution.

### 434 POPULATION GENETICS (3)

Prereq: BIOL 321, 325 or equivalents. 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.

### 436 MOLECULAR PHYLOGENY AND MICROBIAL DIVERSITY (5)

Prereq: BIOL 345, 346; permission of instructor. 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.

### 439 SYMBIOSIS (3)

Prereq: BIOL 325; BIOL 432 recommended. 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.

### 450 PLANT ANATOMY (5)

Prereq: BIOL 206. Structure of the plant body, from cellular to whole plant level, including developmental and ecological aspects. Offered alternate years.

### 451 PLANT GROWTH AND DEVELOPMENT (3)

Prereq: BIOL 206. 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.

### 452 SYSTEMATIC BOTANY (5)

Prereq: BIOL 206. Taxonomy of higher plants with emphasis on the characteristics and phylogeny of flowering plant families; collection and identification of local species.

### 453 INVESTIGATIONS IN PLANT DEVELOPMENT (3)

Prereq: BIOL 206; co-req: BIOL 451. Laboratory skills and contemporary methods in plant developmental biology. Each project focuses 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.

### 455 ECONOMIC BOTANY (3)

Prereq: BIOL 206. The agricultural, medicinal, industrial and folk uses of plants and plant products. Offered alternate years.

### 456 ALGAE (5)

Prereq: BIOL 206. 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.

### 457 POLLINATION BIOLOGY (4)

Prereq: BIOL 204, 205, 206. A study of the strategies that plants use to transfer pollen and reproduce, with special attention to the pollination interactions between plants and animals.

### 460 INVERTEBRATE ZOOLOGY (5)

Prereq: BIOL 204, 205, 206. Evolutionary relationships of invertebrate animals, including anatomy, physiology, classification, development and ecology.

### 462 ENTOMOLOGY (5)

Prereq: BIOL 206. 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.

### 463 ORNITHOLOGY (5)

Prereq: BIOL 206 or equivalent. Evolution of morphological adaptations of birds, classification, distribution; annual cycle including migration, breeding and population dynamics; laboratory study, field trips.

### 464 BIOLOGY OF MARINE MAMMALS (4)

Prereq: BIOL 206; BIOL 406 or ESCI 321 recommended. 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.

### 465 VERTEBRATE ZOOLOGY (5)

Prereq: BIOL 206, 325 or written permission. 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.

### 467 COMPARATIVE VERTEBRATE PHYSIOLOGY (3)

Prereq: BIOL 206. 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.

### 468 COMPARATIVE VERTEBRATE PHYSIOLOGY LABORATORY (3)

Prereq: BIOL 206, BIOL 467 or concurrent. Design and implement laboratory research on some aspect of whole-animal performance physiology.

### 470 FUNCTIONAL GENOMICS (3)

Prereq: BIOL 323; 321. Examines the development and application of genome-based experimental approaches in biology.

### 471, 472 MOLECULAR BIOLOGY AND BIOCHEMISTRY (3 ea)

Prereq: BIOL 205; CHEM 123 or 225, 353 or concurrent; BIOL 471 prerequisite to BIOL 472. A consideration of the structure and function of biological macromolecules; intermediary metabolism; membrane structure and function; bioenergetics. Also offered as CHEM 471, 472.



**473 MOLECULAR BIOLOGY (3)**

Prereq: BIOL 321; BIOL 472 or CHEM 472 or permission of instructor. An examination of the structure, replication and expression of genetic information. Also offered as CHEM 473.

**474 BIOCHEMISTRY LABORATORY (3)**

Prereq: BIOL/CHEM 472 or concurrent; CHEM 354. Modern methods of isolation and characterization of biological macromolecules, especially enzymes and other proteins. Also offered as CHEM 474.

**475 MOLECULAR BIOLOGY LABORATORY (3)**

Prereq: BIOL/CHEM 473 or concurrent; BIOL/CHEM 474 or permission of instructor. Survey of modern molecular techniques including nucleic acid manipulation, gel electrophoresis, radiolabeling, DNA sequencing and DNA amplification. Also offered as CHEM 475.

**478 THE BIOCHEMISTRY OF DRUG ACTION (3)**

Prereq: BIOL 323 or CHEM 471. The effect and molecular mechanism of action of selected natural and synthetic chemical compounds, both naturally occurring and introduced, upon target and nontarget organisms. Topics include selected drugs, pesticides, chemical mutagens and certain natural exochemicals produced by plants and animals. Normally offered in alternate years.

**479 PLANT PHYSIOLOGY (5)**

Prereq: BIOL 206; CHEM 351 and 352 or CHEM 251. 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.

**482 DEVELOPMENTAL BIOLOGY OF ANIMALS (3)**

Prereq: BIOL 321; BIOL 323. 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.

**484 DEVELOPMENTAL BIOLOGY LABORATORY (3)**

Pre- or co-req: BIOL 482. Laboratory investigations of the genetic, cellular and molecular control of development, focusing on invertebrate model systems. Microscopy techniques used to study development, including video microscopy, time lapse, DIC, and epifluorescence.

**494 BIOLOGY RESEARCH (1-5)**

Prereq: Phase II in biology and permission of instructor; completion of department's course requirement agreement form required. 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.

**495 RESEARCH COMMUNICATION (1-4)**

Prereq: BIOL 494; Phase II in biology and permission of instructor. 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 4 credits.

**496 PROFESSIONAL WORK EXPERIENCE IN BIOLOGY (1-5)**

Prereq: Phase II in biology and permission of instructor. Full- or part-time work with a cooperating agency or firm. Written reports required. Repeatable to 8 credits. S/U grading.

**498 TEACHING PRACTICUM (1-4)**

Prereq: Phase II in biology and permission of instructor. 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.

**Graduate Courses**

*Courses numbered 500; 517; 545; 597 are described on Page 34 of this catalog. Admission to Graduate School or special permission required. See the Graduate School section of this catalog.*

**NOTE:** BIOL 503, 508, 559, 568, 571, 577 and 583 are broad-titled courses that deal with a variety of topics in biology. Each year there are usually several different subjects offered under these titles, each one taught by a different professor. Examples of recent course titles are: fluid flow in biological systems; environmental entomology; ecological scaling; marine behavioral ecology; plant somatic hybridization; the human genome project.

**501 FUNDAMENTALS OF BIOLOGICAL RESEARCH (3)**

Introduction to developing and writing research proposals, obtaining funding, and conducting research in the biological science. Offered winter quarter only. Required of first-year students.

**503 ADVANCED TOPICS IN ECOLOGY (4)**

Prereq: 25 credits of biology and permission of instructor. Analysis of current literature on fundamental properties of ecosystems, communities, populations, species and characteristic environments. Repeatable with different topics.

**505 CURRENT RESEARCH IN MARINE SCIENCE (1)**

Prereq: permission of instructor. Presentation and discussion of research expertise of University faculty participating in the marine and estuarine science graduate specialization. S/U grading. Repeatable to a maximum of 2 credits.

**508 ADVANCED TOPICS IN MARINE BIOLOGY (4)**

Prereq: 25 credits of biology and permission of instructor. 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.

**513 PHYSIOLOGICAL ECOLOGY OF ANIMALS (5)**

Prereq: BIOL 206 and 325; or introductory courses in zoology and ecology. 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.

**516 ADVANCED ECOSYSTEM ECOLOGY (3)**

Prereq: BIOL 325 or ESCI 325; BIOL 326 recommended. 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.

**525 RESEARCH MENTORSHIP (1)**

Part of the core curriculum for all biology MS students. An overview of research methods in biology and guidance for developing a research program. Through this seminar-style course, students discuss research methods and how to troubleshoot research problems across the discipline. Offered winter and spring quarters only. Required of first- and second-year students in each quarter, for a total of 4 credits. S/U grading.

**534 ADVANCED POPULATION GENETICS (3)**

Prereq: BIOL 325 or ESCI 325; BIOL 321 or equivalent. 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.

**559 ADVANCED TOPICS IN BOTANY (4)**

Prereq: 25 credits of biology and permission of instructor. Analysis and discussion of current literature on plant anatomy, physiology and systematics. Repeatable with different topics.

**568 TOPICS IN DEVELOPMENTAL AND COMPARATIVE MORPHOLOGY (4)**

Prereq: 25 credits of biology and permission of instructor. Structural changes, cellular interactions, and control mechanisms operating during growth and development or evolution of selected organisms. Repeatable with different topics.

**571 ADVANCED TOPICS IN CELL AND MOLECULAR BIOLOGY (4)**

Prereq: 25 credits of biology and permission of instructor. Examination of special topics such as cell cycle control, signal transduction and regulation of gene expression. Repeatable with different topics.

**577 ADVANCED TOPICS IN PHYSIOLOGY (4)**

Prereq: 25 credits of biology and permission of instructor. Topics in general, microbial or comparative physiology; laboratory work illustrating processes or experimental techniques. Repeatable with different topics.

**579 ENZYMOLOGY LABORATORY (3)**

Prereq: upper-division course in biochemistry. Assay and quantification of selected enzymes; isolation and characterization; determination of kinetic parameters.

**583 ADVANCED TOPICS IN BIOSYSTEMATICS (4)**

Prereq: 25 credits of biology and permission of instructor. Role of morphology,

## BIOLOGY

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cytology, biochemistry and genetics in taxonomy; systematic study of a specific group of local organisms. Repeatable with different topics.

### **584 POPULATION AND COMMUNITY BIOLOGY (4)**

Prereq: upper-division course in genetics. 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.

### **593 SEMINAR IN DEVELOPMENTAL BIOLOGY (1)**

Prereq: undergraduate or graduate course work in genetics and cell biology. Concurrent enrollment in BIOL 595. Seminar course that investigates the current experimental analysis of animal and plant development.

### **594 DEVELOPMENTAL BIOLOGY LABORATORY (3)**

Prereq: graduate standing and permission of instructor. Pre- or co-req: BIOL 482/595. Laboratory investigations of the genetic, cellular and molecular control of development, focusing on invertebrate model systems. Microscopy techniques used to study development, including video microscopy, time lapse, DIC, and epifluorescence.

### **595 DEVELOPMENTAL BIOLOGY (2)**

Prereq: 25 credits of biology and permission of instructor. 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.

### **598 ESSENTIALS OF BIOLOGY GRADUATE STUDIES (2)**

Prereq: permission of instructor. An overview of department 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.

### **599 SEMINAR IN BIOLOGY (2)**

Prereq: 40 credits in biology. Selected problems in biology, with emphasis on current literature. Repeatable.

### **690 THESIS RESEARCH (1-12)**

Prereq: permission of thesis advisor. Research contributing to a graduate degree program. Graded "K" until thesis completed. Repeatable to a maximum of 36 credits. S/U grading.



David Scherrer / WWU Publishing Services

# CHEMISTRY

[www.chem.wvu.edu/dept](http://www.chem.wvu.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. Major graduate and professional schools have readily accepted chemistry and biochemistry graduates from Western.

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, atmospheric and environmental chemistry, surface chemistry and catalysis, and new areas of computer applications.

Every effort is made to update and modernize course work and teaching methods. The department strives to maintain 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.

## CHEMISTRY 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 an unusual degree of personal contact between faculty and students in the department. Faculty members are aware of campus policies and resources, and both academic and career counseling is readily available to all chemistry students.

**STEVEN 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) Assistant Professor. BS, California Lutheran University; PhD, Indiana University.

**GEORGE S. KRIZ** (1967) Professor. BS, University of California-Berkeley; PhD, Indiana University.

**GARY M. LAMPMAN** (1964) Professor. BS, University of California-Los Angeles; PhD, University of Washington.

**ARLAN NORMAN** (2003) Professor and Dean of the College of Sciences and Technology. BS, University of North Dakota; PhD, Indiana University.

**DAVID L. PATRICK** (1996) Professor. BS, University of California-Davis; PhD, University of Utah.

**DONALD L. PAVIA** (1970) Professor. AB, Reed College; MS, PhD, Yale University.

**GERRY A. PRODY** (1984) Associate Professor. BS, PhD, University of California-Davis.

**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.

**JAMES R. VYVYAN** (1997) Professor. BS, University of Wisconsin-Eau Claire; PhD, University of Minnesota.

**LOREN D. WILLIAMS** (2006) Associate Professor. BS, University of Washington; PhD, Duke University.

**Research Associate**

**THOMAS K. PRATUM** (2004) BS, University of Puget Sound; PhD, University of California-Berkeley.

## 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 at the beginning of 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 quarter or one semester of analytical chemistry
- One year of organic chemistry
- One year of college-level calculus
- One year of college-level physics

**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

## CHEMISTRY

- 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.

### BACHELOR OF ARTS

#### Major — Chemistry

86 credits

- CHEM 121, 122, 123, 333 (or CHEM 125, 126, 225)
- CHEM 351, 352, 353, 354, 355, 441, 461, 462, 463, 464
- CHEM 375 (or CHEM 471 and 472)
- MATH 124, 125 (or 134, 135), 224
- One year of college physics (recommended sequence is PHYS 121, 122, 123, 131, 132, 133)

#### Minor — Chemistry

30-32 credits

- CHEM 121, 122, 123
- Completion of one of the following tracks:
  - A. CHEM 333, 461, 462, 463
  - B. CHEM 333, 351, 352, 353, 354
  - C. CHEM 351, 352, 353, 354, 375 (or 471)

To obtain minor approval, a minimum of four credits of those required must be taken in chemistry at Western Washington University. The general chemistry honors sequence (CHEM 125, 126, 225) may be substituted for CHEM 121, 122, 123 and 333, for Tracks A and B.

#### Teaching Endorsement

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. Courses required for a state teaching endorsement must be completed with a grade of C (2.0) or above.

### BACHELOR OF ARTS IN EDUCATION

#### Combined Major — Chemistry/Mathematics — Secondary

106-120 credits

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.

- CHEM 121, 122, 123, 333 (or CHEM 125, 126, 225)
- Option A or B:
  - A: CHEM 251, 375
  - B: CHEM 351, 352, 353, 354 and 375 (or 471-473)
- CHEM 461, 462
- MATH 124, 125 (or 134, 135), 224
- MATH 204, 209, 331, 360, 419, 483 (Note: The sequence 203-303 may be substituted for 204 and 331)
- At least two of the following: Math 207, 341, 410
- PHYS 121, 122, 123, 131, 132, 133
- SCED 370, 481, 491

#### Combined Major — Chemistry/Physics — Secondary 102-115 credits

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.

- CHEM 121, 122, 123, 333 (or CHEM 125, 126, 225)
- Option A or B:
  - A: CHEM 251, 375
  - B: CHEM 351, 352, 353, 354 and 375 (or 471-473)
- CHEM 461, 462
- PHYS 121, 122, 123, 131, 132, 133
- PHYS 219, 223, 224, 233, 326
- ASTR 315
- 9 upper-division credits in physics and/or astronomy under advisement, to include 2-3 credits of PHYS 491, 492 or ASTR 493
- MATH 124, 125 (or 134, 135), 224
- SCED 370, 481, 491

#### Combined Major — Chemistry/Biology — Secondary 103-104 credits

- CHEM 121, 122, 123, 333 (or CHEM 125, 126, 225); CHEM 351, 352, 353, 354
- CHEM/BIOL 471, 472, 474
- BIOL 204, 205, 206; BIOL 321, 323; BIOL 322 or 324; BIOL 325, 326, 432
- MATH 124 or 134
- SCED 370, 481, 491
- PHYS 114, 115, 116 (or PHYS 121, 122, 123, 131, 132, 133)

#### Teaching Endorsement

The BAEd degrees above require completion of the professional secondary teacher preparation program in the Woodring College of Education. Recommendation for teaching endorsement normally requires completion of one of the above majors with a grade point of 2.50 or better in the required major courses. 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. Courses required for a state teaching endorsement must be completed with a grade of C (2.0) or above.

### BACHELOR OF SCIENCE

#### Major — Chemistry

106 credits

- CHEM 121, 122, 123, 333 (or CHEM 125, 126, 225)



- CHEM 351, 352, 353, 354, 355
- CHEM 375 (or 471, 472)
- CHEM 434, 441, 461, 462, 463, 464, 465
- MATH 124, 125 (or 134, 135), 224, 204
- PHYS 121, 122, 123, 131, 132, 133
- Advanced electives with prior departmental approval to total 9 credits

**NOTE:** 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 Web site.

### *Interdisciplinary Major — Biochemistry/Cellular and Molecular Biology*

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 Web site for more details.

### *Major — Biochemistry*

108 credits

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.

- BIOL 204, 205, 321, 323
- CHEM 121, 122, 123, 333 (or CHEM 125, 126, 225)
- CHEM 351, 352, 353, 354, 461, 467, 468, 471, 472, 473, 474, 475
- MATH 124, 125 (or 134, 135), 224
- PHYS 121, 122, 123, 131, 132, 133
- Approved electives to total 3 credits

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 Web site.

### **DEPARTMENTAL HONORS**

A chemistry 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.

### **GRADUATE STUDY**

For concentrations leading to the Master of Education or the Master of Science degrees, see the *Graduate School* section of this catalog.

### **COURSES IN CHEMISTRY (CHEM)**

*Courses numbered X37; X97; 300, 400; 417, 445 are described on Page 34 of this catalog.*

#### **101 CHEMICAL CONCEPTS (4)**

Prereq: MATH 107 or 112. 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. Includes lab.

#### **115 GENERAL CHEMISTRY (5)**

Prereq: MATH 114 or the equivalent score on the intermediate algebra mathematics placement test. Principles and laws of chemistry developed from the properties, structure and reactions of matter; an abbreviated course in general chemistry for students not requiring CHEM 121, 122 in their programs. Includes lab.

#### **121, 122, 123 GENERAL CHEMISTRY I, II, III (5,5,4)**

Prereq: MATH 114 or the equivalent score on the intermediate algebra mathematics placement test. Each course prerequisite to the next. Stoichiometry atomic and molecular structure, states of matter, solutions, thermodynamics, chemical equilibrium, kinetics, electrochemistry. Includes lab.

#### **125, 126, 225 GENERAL CHEMISTRY, HONORS (5 ea)**

Prereq: one year high school chemistry or equivalent; MATH 114 (or the equivalent score on the intermediate algebra WWU math placement test); permission of instructor. Each course prerequisite to the next. An accelerated survey of fundamental chemical principles, including atomic and molecular structure, bonding, chemical thermodynamics, equilibria, kinetics, solution chemistry, nuclear chemistry, and analytical methods. Includes lab.

#### **201 INDEPENDENT RESEARCH (1-3)**

Pre- or co-req: CHEM 351 and permission of instructor. Undergraduate research under supervision. Written report required. S/U grading. Repeatable to a maximum of 9 credits over three quarters.

#### **251 ELEMENTARY ORGANIC CHEMISTRY (5)**

Prereq: CHEM 115 or 121 or 125. Reactions, nomenclature and uses of carbon compounds; an abbreviated course in organic chemistry primarily for persons not requiring the CHEM 351-354 series.

#### **301 INDEPENDENT RESEARCH (1-3)**

Prereq: 30 credits in chemistry and permission of instructor. Undergraduate research under supervision. Written report required. S/U grading. Repeatable to a maximum of 9 credits over three quarters.

#### **308 INTRODUCTION TO POLYMER CHEMISTRY (3)**

Prereq: CHEM 115 or 121 or 125, 251, ETEC 333. Types of polymers, methods of polymerization, and preparation of important commercial thermoplastic and thermosetting plastics. Addition and condensation polymers are prepared in the laboratory.

#### **333 ANALYTICAL CHEMISTRY (5)**

Prereq: CHEM 123. 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.

#### **351, 352, 353 ORGANIC CHEMISTRY (4,4,3)**

Prereq: CHEM 123 or 225 (or concurrent); each course prerequisite to the next. Chemistry of carbon compounds with emphasis on structural theory, reactions and mechanisms.

**354 ORGANIC CHEMISTRY LABORATORY I (2)**

Prereq: CHEM 352 or concurrent. Techniques of organic chemistry: reactions, separations and syntheses of organic compounds.

**355 ORGANIC CHEMISTRY LABORATORY II (2)**

Prereq: CHEM 353 (or concurrent) and 354. Techniques of organic chemistry: reactions, separations; syntheses and introduction to practical spectroscopy.

**375 ELEMENTS OF BIOCHEMISTRY (4)**

Prereq: CHEM 251 (or CHEM 351, 352, 353). 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.

**401 INDEPENDENT RESEARCH (1-3)**

Pre- or co-req: CHEM 461 and permission of instructor. Undergraduate research under supervision. Written report required. S/U grading. Repeatable for a maximum of 9 credits over three quarters.

**405 INTENSIVE WRITING IN CHEMISTRY OR BIOCHEMISTRY (1)**

Prereq: CHEM 401, 425, 471, 494 or 498 (or concurrent) and permission of instructor. Concentrated study of a topic associated with chemistry or biochemistry. Students are required to write a substantial expository paper. Writing proficiency course.

**425 ADVANCED TOPICS IN CHEMISTRY (3)**

Prereq: permission of instructor and any additional prerequisites as listed. A series of senior electives in chemistry.

425a Natural Products Chemistry. Prereq: CHEM 353.

425b Organic Reactions. Prereq: CHEM 353.

425d Group Theory and Spectroscopy. Prereq: CHEM 463.

425c Medicinal Chemistry. Prereq: CHEM 353 or permission of instructor; CHEM 471 recommended.

425h Enzyme Chemistry. Prereq: CHEM 463 or 468, 471.

425i Immunology. Prereq: CHEM 473 or BIOL 473.

425k Bioanalytical Instrumentation. Prereq: CHEM 333 or permission of instructor.

425m Organometallic Chemistry. Prereq: CHEM 441.

425p Computers in Chemistry. Prereq: CHEM 461 or 467 or PHYS 331 or concurrent or permission of instructor.

425r Surface Chemistry. Prereq: CHEM 461.

425s Protein Engineering. Prereq: CHEM 471.

425t Virology. Prereq: CHEM/BIOL 473.

**434 INSTRUMENTAL ANALYSIS (4)**

Prereq: CHEM 333 (or 225); CHEM 461 (or concurrent). Theory and experimental techniques of optical, electrical and other physical measurements applied to chemical analysis.

**441 ADVANCED INORGANIC CHEMISTRY (4)**

Prereq: CHEM 462 or concurrent. Bonding, structure and reactivity of inorganic molecules; transition metal and organometallic chemistry; chemistry of the nonmetallic elements.

**454 ORGANIC SPECTROSCOPY (5)**

Prereq: CHEM 123 or 225, 353 and 355. 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.

**455 ADVANCED NMR TECHNIQUES (3)**

Prereq: CHEM 454. A 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. Includes lab.

**461, 462, 463 PHYSICAL CHEMISTRY (4,4,3)**

Prereq: one year of college physics, MATH 224 and one year of general chemistry; each course prerequisite to the next. Atomic and molecular structure, states of matter, solutions, chemical thermodynamics and equilibria, chemical kinetics and electrochemistry.

**464 PHYSICAL/INORGANIC CHEMISTRY LABORATORY I (3)**

Prereq: CHEM 333 (or 225) and 461; pre- or co-req: CHEM 441 and 462. An integrated approach to inorganic synthesis and physical measurement. Includes formal report writing.

**465 PHYSICAL/INORGANIC CHEMISTRY LABORATORY II (3)**

Prereq: CHEM 464; pre- or co-req: CHEM 463. An integrated approach to inorganic synthesis and physical measurement. Includes formal report writing.

**467, 468 BIOPHYSICAL CHEMISTRY (3, 4)**

Prereq: MATH 224; one year of college physics; CHEM/BIOL 471; CHEM 461, 467 prereq to CHEM 468. Biophysical experimental methods and theory, including classical and statistical thermodynamics, bonding, ligand binding, spectroscopy, transport processes, enzyme kinetics, and X-ray diffraction.

**471, 472 BIOCHEMISTRY AND MOLECULAR BIOLOGY (3 ea)**

Prereq: CHEM 123 (or 225), 353 (or concurrent), and BIOL 205; CHEM 333 recommended; CHEM 471 prerequisite to CHEM 472. A consideration of the structure and function of biological macromolecules; intermediary metabolism; membrane structure and function; bioenergetics. Also offered as BIOL 471, 472.

**473 MOLECULAR BIOLOGY (3)**

Prereq: CHEM 472 and BIOL 321 or permission of instructor. An examination of the structure, replication and expression of genetic information. Also offered as BIOL 473.

**474 BIOCHEMISTRY LABORATORY (3)**

Prereq: CHEM 123 (or 225), 354, CHEM/BIOL 472 or concurrent. Modern methods of isolation and characterization of biological macromolecules, especially enzymes and other proteins. Also offered as BIOL 474.

**475 MOLECULAR BIOLOGY LABORATORY (3)**

Prereq: CHEM/BIOL 473 or concurrent; CHEM/BIOL 474 or permission of instructor. Survey of modern molecular techniques including nucleic acid manipulation, gel electrophoresis, radiolabeling, DNA sequencing and DNA amplification. Also offered as BIOL 475.

**494 INDUSTRIAL WORK EXPERIENCE (3)**

Prereq: 30 credits in chemistry including CHEM 333 and permission of department. 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. May be repeated once. See chemistry department for information. S/U grading.

**498 HONORS RESEARCH IN CHEMISTRY (3)**

Prereq: 6 credits of chemistry research courses, advancement to departmental honors candidacy (application required). Oral presentation and honors thesis required. S/U grading.

**Graduate Courses**

*Courses numbered 500; 517; 545; 597 are described on Page 34 of this catalog.*

*Admission to Graduate School or special permission required. See the Graduate School section of this catalog.*

**501 RESEARCH PROJECT IN CHEMISTRY (2-6)**

Prereq: permission of instructor. Advanced individual laboratory projects under supervision. Repeatable to a maximum of 12 credits.

**502 TEACHING PRACTICUM (1)**

Prereq: permission of instructor. Curriculum and instructional support for teaching the general chemistry laboratory sequence. Repeatable to a maximum of 3 credits. S/U grading.

**510 SPECIAL TOPICS (1-3)**

Prereq: permission of instructor. Specialized lectures on a conference basis for a particular area of interest. Repeatable to a maximum of 9 credits.

**511 ADVANCED LABORATORY METHODS (1-3)**

Prereq: CHEM 463. Specialized laboratory on a conference basis for a particular area of interest. Repeatable to a maximum of 9 credits.

**534 INSTRUMENTAL ANALYSIS (4)**

Prereq: CHEM 333, 461 or concurrent, permission of instructor. Principles of chromatographic, spectrochemical and electrochemical methods of analysis.

**535 BIOANALYTICAL INSTRUMENTATION (3)**

Prereq: CHEM 333 or permission of instructor. The analysis of biomolecules, substances of significant biological interest, and substances in biological matrices using advanced instrument methods.

**540 ORGANOMETALLIC CHEMISTRY (3)**

Prereq: CHEM 441. Classes of organometallic compounds; structure, bonding, general patterns of reactivity; reactions; industrial homogeneous catalysis.

**552 CHEMISTRY OF NATURAL PRODUCTS (3)**

Prereq: CHEM 353 or permission. Isolation, structure, synthesis, biosynthesis and photochemistry of selected classes of natural products.

**553 ORGANIC REACTIONS (3)**

Prereq: CHEM 353 or permission. Organic chemical reactions as applied to problems in organic synthesis.

**554 ORGANIC SPECTROSCOPY (5)**

Prereq: CHEM 123, 353, 355. Identification of organic compounds by spectroscopic methods: infrared, nuclear magnetic resonance, ultraviolet and mass spectroscopy. Includes lab.

**555 ADVANCED NMR TECHNIQUES (3)**

Prereq: CHEM 454 or 554. 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.

**556 MEDICINAL CHEMISTRY (3)**

Prereq: CHEM 353 or permission of instructor; CHEM 471 recommended. The chemistry of drug discovery, design, development, and action.

**562 GROUP THEORY AND SPECTROSCOPY (3)**

Prereq: CHEM 463. 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.

**563 COMPUTERS IN CHEMISTRY (3)**

Prereq: CHEM 461 or 467 or PHYS 331 or concurrent or permission of instructor. Use of computers in chemistry and biochemistry, including chemistry on the Internet, molecular modeling, visualization, simulation, and the control of laboratory experiments.

**565 SURFACE CHEMISTRY (3)**

Prereq: CHEM 461. Physical chemistry of solid surfaces. Examples drawn from heterogeneous catalysis and environmental chemistry.

**573 ENZYME CHEMISTRY (3)**

Prereq: CHEM 463 or 468, 471. Preparation and measurement of activities of enzymes; mechanism of enzyme reactions; properties of individual enzymes and coenzymes.

**575 IMMUNOLOGY (3)**

Prereq: CHEM 473 and permission of instructor. Biochemistry of the immune response, antibody structure and function, origin of antibody diversity, cell-mediated immunity.

**578 PROTEIN ENGINEERING (3)**

Prereq: CHEM 471. Analysis of protein structure and protein-ligand interactions, protein design considerations, and design of small molecule and protein-based therapeutic agents.

**579 VIROLOGY (3)**

Prereq: CHEM/BIOLOGICAL 473. Overview of viruses — their structures, life cycles and control. Bacterial, plant and animal viruses will be discussed.

**595 SEMINAR (1)**

Presentation of contemporary subjects in chemistry. S/U grading. Repeatable to 2 credits.

**596 SEMINAR IN CURRENT CHEMISTRY AND BIOCHEMISTRY (1)**

Introduction to current research problems in chemistry and biochemistry. Repeatable to a maximum of 6 credits. S/U grading.

**690 THESIS (1-6)**

Research in chemistry under faculty direction terminating in a master's thesis. S/U grading. Repeatable to a maximum of 12 credits.

**694 INDUSTRIAL INTERNSHIP IN CHEMISTRY (1-6)**

Prereq: advancement to candidacy and permission of graduate advisor. 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. S/U grading. Repeatable to a maximum of 12 credits.



David Scherrer / WWU Publishing Services

# COMPUTER SCIENCE

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.

## 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, and interdisciplinary minor in Internet Resource Creation and Management, and three certificate programs (Web content development, Web programming, and Web site 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 Web pages 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 Web site 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 Web site. The Web programmer certification track provides a deeper technical program for CS majors to master programming skills pertinent to content delivery in large, dynamic Web sites. Finally, the Web site 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 Web site 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.

## COMPUTER SCIENCE FACULTY

**DAVID C. BOVER** (2002) Chair and 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) Associate 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.

**GEOFFREY B. MATTHEWS** (1985), Professor. BA, University of California; MA, PhD, Indiana University.

**MICHAEL MEEHAN** (1996) Associate 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.

**SAIM URAL** (1979) Professor. BS, MS, PhD, Middle East Technical University, Ankara.

**JIANNA ZHANG** (2002) Assistant Professor. BS, MS, PhD, University of Regina.

## FACILITIES

The department has a number of general and special purpose



laboratories that support the computer science program. The general purpose labs contain Pentium 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.

## DECLARING A MAJOR

### 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.

### 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 125
- Two programming courses in a high-level language, such as Ada, C++, C# or Java
- A year sequence chosen from BIOL 204, 205, 206; CHEM 121, 122, 123; PHYS 121/131, 122/132, 123/133; GEOL 211, 212, and one of 308, 309, 310, 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, 125
- CSCI 141, 145, 211, 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.wvu.edu](mailto:csdept@cc.wvu.edu).

### ADVISING

Undergraduate Advisor: Julie Marx, CF 459, 360-650-2300, [Julie.Marx@wvu.edu](mailto:Julie.Marx@wvu.edu)

For more detailed information on advising issues, go to [www.cs.wvu.edu](http://www.cs.wvu.edu) and click on the advising link.

## BACHELOR OF SCIENCE

*Major — Computer Science*

89 to 93 credits from computer science and mathematics

- CSCI 141 and 145; or CSCI 146
- CSCI 211, 225, 227, 241, 305, 322, 341, 344, 347, 351, 352, 367, 401, 405, 410, 460, 496
- MATH 124, 125, 204, 341
- 12 credits chosen from CSCI 311, 321, 342, 343, 380, 400, 402, 417, 420, 430, 442, 444, 450, 461, 467, 480, 483, 494, 505, 517, 520, 525, 527, 528, 530, 536, 540, 545, 555, 571, 572, 573, 577, 578, 580, 584, 585, M/CS 335, 375, 435, 475, of which a maximum of 4 credits may be from CSCI 400 or 494 projects. **Note:** Undergraduate students may take 500-level courses only if they have a GPA of at least 3.0 and instructor permission
- A supporting sequence chosen from: BIOL 204, 205, 206; CHEM 121, 122, 123; GEOL 211, 212 and one of GEOL 308, 309, 310, 314; or PHYS 121/131, 122/132, 123/133 and two additional courses of a supporting nature, each of at least 3 credit hours, and chosen by one of the two methods: 1) a course in the same discipline as the supporting sequence chosen above, which has at least one course in the sequence as a prerequisite or 2) a course from a different discipline than the supporting sequence chosen above, but restricted to the list above.

## 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 Web site, [www.cs.wvu.edu](http://www.cs.wvu.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 510 for CSCI 401, CSCI 511 for CSCI 405, CSCI 512 for CSCI 410, CSCI 513 for a 400-level computer science elective of at least 3 credits.

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.

## COMPUTER SCIENCE

### 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.

Accounting/Computer Science: See *Accounting* under the College of Business and Economics section of this catalog.

Mathematics/Computer Science: See the *Mathematics* section of this catalog.

### MINOR

#### *Minor — Computer Science*

37-40 credits

- CSCI 141, 145, 211, 241, 311, 341, 344
- MATH 124 or 157
- Two upper-division computer science or math/computer science courses

#### *Minor — Computer Systems*

24 credits

- CSCI 146, 241, 322, 341, 347, 351, 352

#### *Minor — Internet Resource Creation and Management*

28-29 credits

- CSCI 112, 202, 403
- MIS 314
- COMM 318
- Either ENG 302, 402 or JOUR 207, 309

### INTERNET STUDIES CENTER CERTIFICATION

#### *Certificate Requirements*

- CSCI 112, 202, MIS 314 and CSCI 403 or CSCI 494 for all students; 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 Web site 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:
  - CSCI 242, 342, 442
  - MIS 324 and 424
  - COMM 244 and 318 (plus one additional course determined by major advisor required to meet 8 hour minimum)
  - ENG 302 and 402 (plus one additional writing course determined by major advisor required to meet 8 hour minimum)
  - JOUR 207 and 309 or JOUR 207, 305 and 330
  - MKTG — Any two marketing courses
  - DSGN 270 and 371

Students whose major course of study does not include pre-approved 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.

### GRADUATE STUDY

For information regarding the Master of Science degree in computer science, please see the *Graduate School* section of the *General Catalog*.

### COURSES IN COMPUTER SCIENCE (CSCI)

*Courses numbered X/37; X97; 300, 400; 417, 445 are described on Page 34 of this catalog.*

#### 101 COMPUTERS AND APPLICATIONS (4)

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.

#### 102 COMPUTER-MEDIATED COMMUNICATIONS (3)

Prereq: basic computer literacy. 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.

#### 103 INTRODUCTION TO COMPUTER GAME DEVELOPMENT (4)

Prereq: basic computer literacy, use of keyboard and mouse. 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.

#### 104 PERSONAL COMPUTER SYSTEMS (4)

Overview of computer hardware components. Installing and configuring Windows operating system. Installing and configuring 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, et cetera) which may be used on their own personal computer.

#### 112 WEB RESOURCE CREATION (4)

Prereq: basic computer literacy. Methods for the construction and maintenance of published materials on the World Wide Web. Hypertext Markup Language (HTML) through advanced level, including frames and tables. Introduction to interactive Web pages with JavaScript programming, Flash and Dreamweaver.

#### 138, 139, 140 PROGRAMMING FUNDAMENTALS (4 each)

Prereq: MATH 102 or permission of instructor. Intended for students wishing to acquire programming skills in connection with natural science or technology. Basic concepts of computer programming using an object-oriented 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.

138 Programming Fundamentals in Visual Basic

139 Programming Fundamentals in Python

140 Programming Fundamentals in C++

#### 141 COMPUTER PROGRAMMING I (4)

Prereq: one of the following: MATH 112, 114, 115, 118, 124, 125, 128 or 156. Intended for those majoring in computer science. Basic concepts of computer programming using an 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. Algorithm development, problem solving and software engineering are emphasized. Programming is required in implementation of concepts. Lab.

#### 142 ADA FOR C++ AND JAVA PROGRAMMERS (1)

Prereq: one quarter of elementary programming in C++ or Java. Review of the Ada programming language for those with experience with C++ or Java.

#### 145 COMPUTER PROGRAMMING AND LINEAR DATA

**STRUCTURES (4)**

Prereq: CSCI 141 or equivalent; any of the following: MATH 115, 118 or 124. 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.

**146 ACCELERATED COMPUTER PROGRAMMING (4)**

Prereq: permission of transfer advisor. Intended for computer science majors. Basic concepts of computer programming using an object-oriented programming language. Topics include 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. Emphasis on algorithm development, problem solving and software engineering. Programming is required in implementation of concepts. Lab.

**172 INTRODUCTION TO ROBOTICS (4)**

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.

**202 DYNAMIC WEB PAGES (4)**

Prereq: CSCI 102 (or CSCI 112) or permission of instructor. Principles and technologies required to produce and distribute Web content, with a focus on site architecture and client-side dynamic pages. In-depth study of cascading style sheets, Javascript, dynamic HTML, Flash and Action Script. Introduction to XML.

**211 DISCRETE STRUCTURES AND FUNCTIONAL PROGRAMMING I (4)**

Prereq: CSCI 145 or 146. Elementary logic, proofs, sets, functions, relations, inductive proof, grammars, and relational algebras. Programming using a functional language is required in the implementation of concepts.

**225 SOCIAL AND ETHICAL ISSUES IN COMPUTER SCIENCE (3)**

Prereq: available only to students who have been accepted into the computer science major. A forum for student learning, discussion, debate, and writing on topics on the ethical issues and the social impact of computing. Students are provided with instruction on oral communications and multimedia presentation.

**227 COMPUTER ORGANIZATION I (4)**

Prereq: CSCI 145 or 146. 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 the Pentium processor, pipelining and vector processors, Flynn's taxonomy, RISC processors.

**241 DATA STRUCTURES (4)**

Prereq: CSCI 145 or 146; MATH 124 or 157. 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.

**242 INTRODUCTION TO JAVA PROGRAMMING (4)**

Prereq: CSCI 145. Introduction to the Java programming language for CS majors and non-majors seeking Web programmer certification from the Internet Studies Center. Subjects include object-oriented programming, language, utilities, abstract, window toolkit, network programming and applets.

**305 ANALYSIS OF ALGORITHMS AND DATA STRUCTURES I (3)**

Prereq: CSCI 211, 241. 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 will correctness proofs for algorithms.

**311 DISCRETE STRUCTURES AND FUNCTIONAL PROGRAMMING II (4)**

Prereq: CSCI 211; MATH 124 or 157. Propositional and predicate logic. Formal and informal proof. Resolution theorem proving. Applications of logic: program correctness, automatic reasoning, logic programming.

**321 GAME PROGRAMMING (4)**

Prereq: CSCI 241. Introduction to the basics of game design and implementation. Game worlds, storytelling, character development and the user experience. Programming audio, 2D or 3D graphics basics. Networking basics. Game artificial intelligence. Game genres: action, strategy, role-playing, sports, vehicles, simulations, adventure.

**322 PRINCIPLES OF CONCURRENT PROGRAMMING (3)**

Prereq: CSCI 211, 241. Algorithms for mutual exclusion. Synchronization and communication techniques: semaphores, monitors, rendezvous, conditional critical conditions. Multi-process and multi-threaded programming. Concurrent programming facilities in high-level languages.

**341 OBJECT-ORIENTED PROGRAMMING IN C++ (4)**

Prereq: CSCI 241. Object-oriented design: Universal Modeling Language (UML); realization of object-oriented design in C++, templates, Standard Template Library.

**342 WEB SCRIPTING (3)**

Prereq: CSCI 145. For CSCI majors and nonmajors seeking Web programmer certification from the Internet Studies Center. Development of dynamic Web applications. Study of various server-side scripting languages (PHP, Perl, Python) for creating dynamic Web pages and querying and manipulating databases on the Web.

**343 PROGRAMMING WORKSHOP (1)**

Prereq: CSCI 341. 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. Repeatable once for credit.

**344 SOFTWARE ENGINEERING (3)**

Prereq: CSCI 341. Requirements analysis, design, development and release of software in a project environment; waterfall model of software development; configuration management and version control. Survey of current technologies such as extreme programming and UML. Writing proficiency course.

**347 COMPUTER ORGANIZATION II (3)**

Prereq: CSCI 227 or ETEC 273; CSCI 241. Pentium assembly language programming, interfacing assembly language programs to high-level languages, memory design, cache memory, virtual memory, I/O interfacing and communication, interrupts.

**351 WINDOWS SOFTWARE DEVELOPMENT (3)**

Prereq: CSCI 341. Design and development of event-driven programming using Win32 API and Visual C#. Use of Framework libraries. Creation of Windows-based applications using forms, controls, and GDI+. Introduction to graphical user interfaces and Visual Studio development tools.

**352 UNIX SOFTWARE DEVELOPMENT (3)**

Prereq: CSCI 341. 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.

**367 COMPUTER NETWORKS I (3)**

Prereq: CSCI 227, 341. Introduction to computer networks; network architecture and design; protocols, management, physical networks; implementation of network protocols, programming projects in protocol usage and applications.

**380 NUMERICAL COMPUTATIONS (4)**

Prereq: CSCI 241, MATH 204. 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.

## COMPUTER SCIENCE

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### 401 FORMAL LANGUAGES AND AUTOMATA (3)

Prereq: CSCI 211. Formal languages, grammars, automata.

### 402 ARTIFICIAL INTELLIGENCE (4)

Prereq: CSCI 211. Introduction to knowledge representation and search. Possible application areas include natural language, perception, learning and expert systems.

### 403 PRACTICUM IN NET RESOURCE MANAGEMENT (3)

Prereq: MIS 314, senior status and permission of instructor; minimum GPA of 2.7. Supervised and fully documented group project involved in the creation and management of a Web site.

### 405 DESIGN AND ANALYSIS OF ADVANCED ALGORITHMS AND DATA STRUCTURES (3)

Prereq: CSCI 305. 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.

### 410 PROGRAMMING LANGUAGES (3)

Prereq: CSCI 401. Introduction to the structure of programming languages; syntax and semantics; properties of algorithmic languages; special purpose languages.

### 420 COMPUTER ARCHITECTURE (4)

Prereq: CSCI 211, 341, 347. Basic processor design: arithmetic logic unit, datapath, control alternatives, pipelining; memory organizations: cache memory, virtual memory; input/output and interfacing; comparative architectures. Student reports.

### 430 DATABASE THEORY (4)

Prereq: CSCI 211, 241. Data models and their access languages. Design issues: ER diagrams, functional dependency analysis and normalization. Database programming.

### 442 ADVANCED WEB PROGRAMMING IN JAVA (4)

Prereq: CSCI 342, 351. 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.

### 444 SOFTWARE TESTING (4)

Prereq: CSCI 344. An overview of software testing principles, design, implementation and automation. Students are exposed to various models of software testing and the implementation of those models in contemporary development environments.

### 450 COMPILER THEORY AND DESIGN (4)

Prereq: CSCI 344, 410; CSCI 401 is recommended. Theory and practice of compiler design. Emphasis is on basic theory and methods necessary to design and implement a functional syntax directed compiler.

### 460 OPERATING SYSTEMS (3)

Prereq: CSCI 347. Principles of operating systems; concurrent processes; resource management; process management; file systems; protection.

### 461 COMPUTER SECURITY (4)

Prereq: CSCI 211, 367. 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 countermeasures.

### 467 COMPUTER NETWORKS II (4)

Prereq: CSCI 367. Advanced computer network. Applications including Internet and distributed computing.

### 480 COMPUTER GRAPHICS (4)

Prereq: CSCI 351; MATH 125, 204. Overview of the hardware, software, and techniques used in computer graphics; raster display devices; input devices; display files, 2-D and 3-D transformations; windowing, clipping; simple surface rendering.

### 483 COMPUTER ANIMATION (4)

Prereq: CSCI 341, MATH 204. Introduction to traditional animation. Three-

dimensional 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.

### 494 PROFESSIONAL WORK EXPERIENCE (4)

Prereq: 30 credits in computer science, including CSCI 344; GPA at least 2.70 and permission of department. Academic credit awarded for employment in industry. Students are required to keep a journal and to submit a written report. See the Department of Computer Science for information. S/U grading.

### 496 SENIOR PROJECT (3)

Prereq: senior status and permission of department, senior evaluation. Software development project requirement specifications, design, implementation, testing, and documentation. Review of the computer science curriculum to prepare students for the Major Field Examination (MFE). Students must take the MFE.

### 498 TEACHING PRACTICUM (2)

Prereq: senior status and permission of department. Classroom experience in computer science teaching. Students will assist faculty in laboratory settings. Repeatable to a maximum of 4 credits.

## GRADUATE COURSES

*Admission to Graduate School or special permission required. See the Graduate School section of this catalog.*

### 510 AUTOMATA AND FORMAL LANGUAGE THEORY (4)

Prereq: CSCI 311. 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.

### 511 ANALYSIS OF ALGORITHMS (4)

Prereq: CSCI 211, 341, MATH 226; graduate status or acceptance to undergraduate honors program in computer science. Systematic study of algorithms and their complexity, searching and sorting, pattern matching, geometric and graph algorithms, NP-complete and intractable problems.

### 512 DESIGN AND IMPLEMENTATION OF COMPUTER PROGRAMMING LANGUAGES (4)

Prereq: CSCI 510. 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.

### 513 SYSTEMS PROGRAMMING AND OPERATING SYSTEMS INTERNALS (4)

Prereq: CSCI 352 or 460. 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.

### 514 RESEARCH METHODOLOGY IN COMPUTER SCIENCE (4)

Prereq: graduate status. Research methodology topics identified as appropriate, emphasizing basic and applied research skills. Focuses on research. Taught by specialists. Content includes preparation of research studies, reports and papers. Students are expected to generate a research paper on their own research topic as a final project.

### 515 PARALLEL COMPUTATION (4)

Prereq: CSCI 401 or 510. 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.



**520 ADVANCED COMPILER DESIGN (4)**

Prereq: CSCI 401 or 510 or any graduate-level course involving work with formal languages. 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.

**525 ADVANCED TOPICS IN OPERATING SYSTEMS (4)**

Prereq: CSCI 460 or 513. Various topics as they relate to distributed operating systems. Case study using a distributed operating system to perform experiments in class laboratory.

**527 EMBEDDED SYSTEMS (4)**

Prereq: CSCI 347 or 513. Design and development of embedded microprocessors in instrumentation, controls and user appliances.

**528 CORBA APPLIED TO SCADA SYSTEMS (4)**

Prereq: CSCI 367 and 460; or 513. SCADA systems, middleware, implementation of a small control system using PLCs and CORBA.

**530 ADVANCED DATABASE THEORY (4)**

Prereq: CSCI 430 or equivalent. Advanced topics in database systems. Possible areas include transaction processing, concurrency control, recovery, security, query optimization, distributed systems, and logic-based systems.

**536 WEB SERVICES (4)**

Prereq: CSCI 410 or 512. Evolution of middleware and web services, architecture of distributed information systems, SOAP, WSDL, UDDI.

**540 THEORY AND PRACTICE OF PROGRAMMING LANGUAGE DESIGN (4)**

Prereq: CSCI 410 or 512. Design and implementation of novel programming languages.

**545 DISTRIBUTED FILE SYSTEMS (4)**

Prereq: graduate standing, CSCI 513. Topics in distributed file systems. Topics include networked file systems, server and client implementation, network protocols, high-level goals, actual implementations, mobile computing needs, current research in distributed file systems.

**571 MACHINE LEARNING ALGORITHMS (4)**

Prereq: CSCI 402 or equivalent. 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.

**572 ROBOTICS (4)**

Prereq: CSCI 571 or equivalent. Class materials cover from hardware to software according to students' needs and available instructors. Each course offering 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.

**573 COMPUTATIONAL LINGUISTICS (4)**

Prereq: CSCI 401 or 510. 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.

**577 DATA MINING (4)**

Prereq: CSCI 510, 511. 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.

**578 CRYPTOGRAPHY (4)**

Prereq: CSCI 211. Selected topics from number theory; simple, homophonic, polyalphabetic substitution ciphers; product ciphers, DES; public-key algorithms, digital signatures and identification schemes; key management.

**580 ADVANCED COMPUTER GRAPHICS (4)**

Prereq: CSCI 480 or equivalent. Three-dimensional concepts, shading techniques, curves and surfaces, ray tracing, radiosity, texture mapping, fractals.

**584 SCIENTIFIC VISUALIZATION (4)**

Prereq: CSCI 480 or equivalent. 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.

**585 IMAGE PROCESSING (4)**

Prereq: CSCI 480. Digital image fundamentals, image transforms, image enhancements, image restoration, image encoding, representation and description, color image processing, morphological operations.

**590 GRADUATE SEMINAR (1)**

Prereq: graduate status. Presentation and discussion of research topics in computer science.

**601 AREA OF SPECIALIZATION RESEARCH EXPERIENCE I (4)**

Prereq: permission of instructor. Work on ongoing research project.

**602 AREA OF SPECIALIZATION RESEARCH EXPERIENCE II (4)**

Prereq: CSCI 601 and permission of instructor. Work on ongoing research project.

**603 AREA OF SPECIALIZATION RESEARCH EXPERIENCE III (4)**

Prereq: CSCI 601, 602 and permission of instructor. Work on ongoing research project.



David Scherrer / WWU Publishing Services

# ENGINEERING TECHNOLOGY

The Department of Engineering Technology offers five 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 laboratory experiences and theoretical course work. Most of the courses within the Department of Engineering Technology have laboratory components where students apply the theory learned in lectures to solve practical problems and experience industrial applications of technology. Creativity is encouraged and emphasized. Several state-of-the-art laboratories support the six programs.

The six distinct programs are:

- Electronics Engineering Technology
- Manufacturing Engineering Technology
- Plastics Engineering Technology
- Industrial Design
- Industrial Technology
- Technology Education

Engineering technology is the profession in which knowledge of mathematics and natural sciences gained by higher education, experience and practice is used to create and enhance technologies that benefit humanity. For example, engineering technologists use their knowledge to help make airplanes, buildings, computer systems, power plants, and transportation systems. Engineering technologists work for major technological companies, including regional operations such as Boeing, Paccar, Alpha Technologies, Nike, Korry Electronics, et cetera. They are employed across the technological spectrum but are best suited to areas that deal with application, manufacturing, implementation, engineering operation, sales and production.

The engineering technology programs at Western provide the theoretical abstract training necessary for planning, design and creating new products. They focus on application and practice and, thus, emphasize laboratory experiences. The programs include specialized technical courses that emphasize problem solving and applying scientific principles to find practical solutions to technical problems, as well as courses in mathematics and sciences that support the technical courses. In addition, Western's General University Requirements (GURs) contribute to a liberal education, providing graduates with a solid foundation in communication skills.

Students planning to major in any engineering technology program are encouraged to have a solid foundation in mathematics and the sciences, especially physics. Students planning to major in industrial design are also encouraged to have a sound background in art and design.

## ENGINEERING TECHNOLOGY FACULTY

**STEVEN H. DILLMAN** (1993) Chair and 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; MEd (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) Associate 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) Assistant Professor. BSME, Bradley University; MSME, University of Washington.

**ERIC C. LEONHARDT** (2002) Assistant Professor. BA, Whitman College; BS, Western Washington University; MS, University of Michigan.

**ERIC K. MCKELL** (1997) Associate Professor. BSMET, MSMFE, Brigham Young University. Registered professional engineer.

**JASON A. MORRIS** (2004) Assistant Professor. BSME, West Virginia University; MID, Pratt Institute.

**TODD MORTON** (1988) Professor. BSEE, MSEE, University of Washington.

**STEVE MOSKOWITZ** (1984) Associate Professor. BEE, MEE, Rensselaer Polytechnic Institute.

**JEFFREY L. NEWCOMER** (1998) Professor. BS, MEng, MS, PhD (mechanical engineering), Rensselaer Polytechnic Institute.

**ARUNAS P. OSLAPAS** (1991) Associate 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.

## DECLARATION OF MAJOR

Students who intend to complete one of the six majors should declare the major early and obtain advisement from a department advisor so that a program of study can be planned. Engineering technology programs require courses that also fulfill GURs (natural sciences and communications, for example). Freshmen and transfer students may begin their studies within the department in their first quarter 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 six 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, 271, 272, 273, 274, 371, 372, 375
- MATH 124 or 134, 125 or 135
- CHEM 115 or 121
- PHYS 121/131, 122/132, 123/133
- COMM 101
- CSCI 140 or 141
- 18 credits technical electives and/or GURs

### Manufacturing Engineering Technology

- ETEC 110, 111, 220, 222, 223, 224, 225
- MATH 124 or 134, 125 or 135, 204
- PHYS 121/131, 122/132, 123/133
- CHEM 115, CSCI 140, COMM 101, ENG 101
- 20-24 credits other GURs

### Plastics Engineering Technology

- ETEC 110, 111, 220, 223, 224, 225
- MATH 124 or 134, 125 or 135, 204, 245 or 240
- PHYS 121/131, 122/132 (or 114, 115)
- CHEM 121 and 251, CSCI 140 or 141, COMM 101, ENG 101
- 25-30 credits other GURs

### Plastics Engineering Technology — Vehicle Engineering Technology Option

- ETEC 110, 111, 220, 223, 224, 225, 280, 281
- MATH 124 or 134, 125 or 135, 204, 245 or 240
- PHYS 114 or 121/131, 115 or 122/132
- CHEM 115 or 121, 251
- CSCI 140 or 141
- COMM 101, ENG 101
- Other GURs (with advisement)

### Industrial Design

- ETEC 110, 111, 214, 215, 216, 231, 311, 312, 315
- MATH 115 or 118, MGMT 271
- PHYS 114, 115
- ART 109, 110, 120, 130, 203, 220
- A/HI 240 or 241
- Other GURs (with advisement)

### Industrial Technology — CAD/CAM

- ETEC 110, 111, 220, 222, 223, 224, 225
- MATH 114, 115 or 118, 124 or 134, 125 or 135
- CSCI 140
- CHEM 115
- PHYS 114, 115
- Minimum of 24 credits of GURs

### Industrial Technology — Vehicle Design

- ETEC 110, 111, 220, 223, 224, 225, 280, 281
- MATH 114, 115 or 118, 124 or 134, 125 or 135
- CSCI 140
- CHEM 115
- PHYS 114, 115
- 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. The post-baccalaureate program is self supporting and has a different tuition rate. Students interested in the post-baccalaureate program need to be referred by Eric Leonhardt. Upon referral, students need to complete the Extension Undergraduate Application. Extension admission and registration information is available from Extended Education and Summer Programs, 360-650-3308.

## BACCALAUREATE PROGRAMS

The department administers six undergraduate programs that lead to the Bachelor of Science degree: electronics engineering technology; industrial design; industrial technology; manufacturing engineering technology; plastics engineering technology; and technology education.

## ACADEMIC STANDARDS

A minimum grade point average of 2.00 in the appropriate engineering technology program sequence (electronics core, industrial design core, industrial technology core and specialization, manufacturing core, plastics core, breadth/depth

core for technology education) is required for graduation. A minimum grade point average of 2.0 is also required in all courses listed in a minor to receive that minor.

A grade of C- or better is required in all program courses. This means that a grade of C- or better is needed in all prerequisite courses listed for any subsequent course. Students enrolled in a course with a D+ or lower in a prerequisite course are required to drop the subsequent course. A K grade in a listed prerequisite course must be completed with a C- or better before the subsequent course can be taken.

Students must request, in writing, any program course exception to the engineering technology department's curriculum committee. A D+ or lower in a required program course is always considered a program exception.

In the application to the curriculum committee, clearly state the requested exception and a detailed explanation why the exception is being requested and why it is appropriate. Students must inform their faculty advisor of the request and provide a copy of the request to their advisor. The student's faculty advisor will be expected to submit a response to the request to the curriculum committee. Students should expect that the curriculum committee will need ample time to consider the request and the application process must be completed by the end of the fifth week of the quarter prior to the time at which a decision is required.

## BACHELOR OF SCIENCE

### ELECTRONICS ENGINEERING TECHNOLOGY

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.

### Major — Electronics Engineering Technology

149 credits

*Electronics Core:* 104 credits

- ETEC 270, 271, 272, 273, 274, 371, 372, 373, 374, 375, 376, 378, 379, 405, 455, 457, 471, 474, 475, technical electives

*Supporting Courses:* 45 credits

- Mathematics 14 credits: MATH 124 or 134, 125 or 135, 321
- Chemistry 5 credits: CHEM 115 or 121
- Physics 15 credits: PHYS 121/131, 122/132, 123/133\*
- Communications 7 credits: ENG 302 or ETEC 341, COMM 101
- Computer Science 4 credits: CSCI 140 or 141\*\*

Minimum total credits for the electronics engineering technology degree, including additional GUR requirements, equal 186.

\*PHYS 114, 115, 116 may satisfy Physics requirement with approval by program advisor.

\*\* CSCI 141 is recommended as it allows students to take more CSCI courses as technical electives.

*Minor — Embedded Systems*

27 credits

- ETEC 271, 272, 373, 374, 375, 454

**INDUSTRIAL DESIGN**

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.

**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 Web site, [www.wvu.edu/id/links.html](http://www.wvu.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 color photocopies, digital images on CD, or 35mm slides of a maximum of 12 pieces of their work. 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 110, 214, 215, 216, 231, 311, 312, 315; a minimum of five studio art courses (ART 110, 120, 130, 203 and 220 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 Web site 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.

*Major — Industrial Design*

135 credits

*Industrial Design Core: 44 credits*

- ETEC 110, 111, 214, 215, 216, 223, 231, 301, 311, 312, 315

*Professional Practice Series: 30 credits*

- ETEC 314, 316, 318, 414, 416, 418

*Supporting Courses: 61 credits*

- ART 109, 110, 120, 130, 203, 220, 230, 290
- A/HI 240 or 241, 270
- DSGN 270
- MATH 115 or 118
- PHYS 114, 115
- MGMT 271
- MKTG 380

*Minor — Sustainable Design*

28-32 credits

Huxley College of the Environment and the Department of Engineering Technology jointly offer a minor in Sustainable Design. Design is the process of conceptualization, representing, and creating projects, processes, or products (ranging in scale from consumer objects to regions). Sustainability requires that designed products promote long-term social equity, economic, and ecological values. The minor provides basic foundations in environmental studies and design, and allows for individualized tailoring according to the student's interest.

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 in the program will obtain an understanding of the natural systems within which human institutions and technologies function, and of the social systems which mediate human interactions with ecosystems. This background allows the student to make informed decisions about how ecological constraints define



sustainability, and how human choices shape the context in which sustainable projects may be implemented or used. The course work in industrial design introduces the design process and provides skills in the representation of design concepts.

Students are accepted into the sustainable design through an application process. An applicant should prepare a statement explaining how his or her educational goals, background course work, and experiences qualify him or her for this program. Examples of the applicant's own design concepts or products, or evidence of participation in ecological management are also welcome. Those students who show the highest affinity for integrating environmental systems information, sustainable design principles, and understanding of practical applications will be accepted into the minor. The statement should be submitted to either the Department of Engineering Technology or to Huxley College. Space in the minor will be limited through a portfolio application which can be found on both the WWU Industrial Design Web site and the Huxley College of the Environment Web site.

- **Environmental Studies** (13-15 credits)
  - ESTU 369 (3 credits)
  - ESTU 415 (3 credits)
  - One of the following:
    - ESCI 310 (4 credits)
    - ESCI 325 (3 credits)
  - One of the following:
    - ESTU 303 (4 credits)
    - ESTU 304 (4 credits)
    - ESTU 305 (4 credits)
    - FAIR 335 (4-5 credits)
- **Industrial Design** (8 credits)
  - ETEC 311 (4 credits) (prereq: ETEC 110 or ESTU 401 or EGEO 350 or EGEO 352)
  - ETEC 312 (4 credits) (pre- or co-req: ETEC 311)
- **Electives under advisement** (7-9 credits)

## INDUSTRIAL TECHNOLOGY

The Bachelor of Science degree program in industrial technology prepares graduates to enter supervisory and management levels of technical industries. The major provides a general understanding of tools, materials and processes used in industry, a fundamental supporting background in business and/or economics and depth in a technical area. Areas of specialization within the major include the vehicle design program of the Vehicle Research Institute, CAD/CAM, and specialization by advisement. Graduates of this program hold management positions throughout the Northwest.

### Major — Industrial Technology

110 credits

Core Courses: 73 credits

Required of all IT majors:

- ETEC 110, 111, 220, 223, 224, 225, 327, 333, 351; MATH 114, 115 or 118, 124 or 134, 125 or 135; CHEM 115; CSCI 140; PHYS 114, 115

#### Specialization

At the time of declaration of a major in industrial technology, students must select one of the following specializations:

- **CAD/CAM** — 37 credits minimum
  - *Required:* ETEC 222, 322, 335, 344, 361, 362, 426a-d (select any one), 427; MATH 245
  - *Optional:* ETEC 312 (pre- or co-req of ETEC 311), 313,

- 334, 338, 402 (1-9), 419, 425, 426 (additional versions), 428, 431, electives by advisement
- **Vehicle Design** — 37 credits minimum
  - *Required:* ETEC 280, 281, 334, 380, 382, 400 (1 credit), 480, 484, 486
  - *Optional:* ETEC 311, 322, 381, 481, 489 (3 credits)
- **Specialization by advisement** — 37 credits minimum
  - Acceptance into the specialization by advisement option must be before 50 percent of the proposed courses are completed. Option must be approved by the Industrial Technology program coordinator

### Minor — Industrial Technology — Vehicle Design

25 credits

- ETEC 280, 281, 380, 382, 484, 486

## MANUFACTURING ENGINEERING TECHNOLOGY

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 manufacturing, robotics, cost analysis, production supervision and management, marketing and technical support, production process control, manufacturing support, and technical sales and service.

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.

### Major — Manufacturing Engineering Technology

144 credits

*Manufacturing Core:* 86 credits

- ETEC 110, 111, 220, 222, 223, 224, 225, 322, 326, 327, 328, 333, 341, 351, 352, 354, 420, 424, 427, 444, technical electives (3 courses)\*

*Supporting Courses:* 58 credits

- Mathematics, 17 credits: MATH 124 or 134, 125 or 135, 204, 245
- Computer Science, 4 credits: CSCI 140
- Operations Management, 8 credits: OPS 460, 461
- Physics, 15 credits: PHYS 121/131, 122/132, 123/133
- Chemistry, 5 credits: CHEM 115
- Communication, 9 credits: COMM 101, ETEC 341, ETEC 422

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. Some electives are grouped by subject area*

## ENGINEERING TECHNOLOGY

so that some degree of specialization may be attained. Only one 200-level course may be counted.

- Technical electives: ETEC 226, 329, 334\*\*, 335, 338\*\*, 361, 362, 377, 397 (when relevant), 425, 426a\*\*, 426b\*\*, 426c\*\*, 426d\*\*, 428\*\*, 429, 431, 433, 434, 439, 497 (when relevant), MATH 224, 331, MGMT 311, 313, OPS 463, 466, 467, 468

### Minor — Manufacturing Engineering Technology

#### Manufacturing Engineering Technology Core

17 credits

- ETEC 110, 111, 220, 223, 328
- One of the following sequences:
  - General Manufacturing (8 or 9 credits): Choose 2 of the following — ETEC 222, 322, 333
  - Engineering Design (8 credits): ETEC 224, 225
  - Computer Aided Manufacturing (10 credits): ETEC 322, 427, 426a,b or c
  - Engineering Polymers (10 credits): ETEC 333, 334

\* 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/CAD/CAM majors cannot get the MET minor; the programs are too closely related
- 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

## PLASTICS ENGINEERING TECHNOLOGY

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.

### Major — Plastics Engineering Technology

139 credits

Plastics Core: 86 credits

- ETEC 110, 111, 220, 223, 224, 225, 322, 333, 334, 335, 337, 338, 344, 351, 431, 432, 433, 434, 436, 444, technical electives (12 credits)

Supporting Courses: 53 credits

- Mathematics, 17 credits: MATH 124 or 134, 125 or 135, 204, 245 or 240
- Physics, 10 credits: PHYS 121/131, 122/132 (or 114, 115)
- Chemistry, 13 credits: CHEM 121, 251, 308
- Communication, 9 credits: COMM 101, ETEC 341, 430
- Computer Science, 4 credits: CSCI 140 or 141

**NOTE:** PHYS 123/133 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.

### Option — Vehicle Engineering Technology Option in Plastics Engineering Technology

139 credits

Technical Core: 81 credits

- ETEC 110, 111, 220, 223, 224, 225, 280, 281, 327, 333, 334, 344, 351, 380, 382, 432, 434, 444, 480, 481, 484, 486

Technical electives

- 5 credits chosen from: ETEC 322, 335, 337, 338, 431, 433, 436, 438, 445, 300/400, 489

Supporting courses: 53 credits

- Mathematics, 17 credits: MATH 124, 125, 204, 240 or 245
- Physics, 10 credits: PHYS 114 or 121/131, 115 or 122/132
- Chemistry, 10 credits: CHEM 115 or 121, 251
- Computer Science, 4 credits: CSCI 140 or 141
- Communication, 9 credits: COMM 101, ETEC 341, 430

Total credits for the Vehicle Engineering Technology Option in Plastics Engineering Technology, including additional GUR requirements, equal 186.

## TECHNOLOGY EDUCATION

This program is not currently accepting new students. Admission to the program may be reopened should there be sufficient student interest. Individuals with an interest in the Technology Education program should contact Dr. Steven Dillman, Chair, Department of Engineering Technology, dillman@cc.wvu.edu.

## COURSES IN ENGINEERING TECHNOLOGY (ETEC)

Courses numbered X37; X97; 300, 400; 417, 445 are described on Page 34 of this catalog.

### 110 ENGINEERING DESIGN GRAPHICS I (3)

Introduction to the engineering design process. Course topics include the design process, ideation sketching, communication drawing, documentation drawing, three-dimensional computer-aided design and rapid prototyping.

### 111 ENGINEERING DESIGN GRAPHICS II (3)

Prereq: ETEC 110 or equivalent. Second course in engineering design graphics. Includes the design process, parametric modeling and design, tolerance specification, documentation drawing and assembly modeling.

### 212 INTRODUCTION TO TECHNOLOGY FOR EDUCATORS (3)

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.

### 213 DESIGN DEVELOPMENT FOR TECHNOLOGY EDUCATION (3)

Prereq: technology education major or permission of the instructor. Basic design fundamentals applied to technology education teaching. Development of creativity with application to school projects and design problems.

### 214 SOPHOMORE INDUSTRIAL DESIGN I (5)

Prereq: ETEC 231. 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.

### 215 HISTORY OF INDUSTRIAL DESIGN (3)

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.

### 216 SOPHOMORE INDUSTRIAL DESIGN II (5)

Prereq: ETEC 110, 214. 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.

### 220 INTRODUCTION TO ENGINEERING MATERIALS (4)

Prereq: MATH 115 or 118, CHEM 115 or 121/131. Co-req: PHYS 114 or 121. 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.

### 221 WELDING (3)

Prereq: ETEC 220. Basic concepts in welding to include shielded metal arc welding, oxy-acetylene welding, welding symbols, heat treatment, soldering and brazing, survey of processes.

### 222 FOUNDRY, FORMING AND JOINING (4)

Prereq: ETEC 220. 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.

### 223 MACHINE METAL PROCESSES (4)

Prereq: MATH 114; pre- or co-req: ETEC 111. Basic concepts and skills in machine metal processes.

### 224 APPLIED ENGINEERING STATICS (3)

Prereq: MATH 125 (or concurrent), and PHYS 121/131 or departmental permission. 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.

### 225 STRENGTH OF MATERIALS (5)

Prereq: ETEC 220, 224, MATH 125. Internal response of structural members to forces; principal stresses and strains; combined stresses.

### 226 ENGINEERING DYNAMICS (4)

Prereq: ETEC 224 and MATH 224 or permission of instructor. Kinematics and kinetics of particles and rigid bodies, including methods of work and energy, and impulse and momentum.

### 231 DESIGN PROBLEMS IN WOODWORKING (4)

Prereq: ETEC 110 recommended. Technology education and industrial design majors are given priority enrollment. Wood as a material for solving a variety of design problems.

### 270 ELECTRONICS SEMINAR (1)

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.

### 271 CIRCUIT ANALYSIS I (4)

Pre- or co-req: MATH 114, EET major or permission. 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.

### 272 ELECTRONIC DEVICES AND CIRCUITS (4)

Prereq: ETEC 271, EET major or written permission. 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.

### 273 DIGITAL ELECTRONICS (4)

Prereq: ETEC 271, EET major or written permission. Introductory digital electronics with emphasis on basic digital concepts, Boolean algebra, dig-

ital integrated circuit devices and the major functional units from building block approach. Laboratory with applications, constructing, testing and troubleshooting of digital circuits.

### 274 FUNDAMENTALS OF MICROPROCESSORS (5)

Prereq: ETEC 273, EET major or written permission. Introduction to microprocessors and programming concepts. Study of structured programming, instruction sets, hardware and interfacing techniques. Laboratory experiments with popular units.

### 280 POWER MECHANICS (5)

Design principles of major power sources: including Otto cycle, Clerk cycle, Diesel, Wankel, Stirling cycle and Rankine cycle engines.

### 281 POWER TRANSMISSION (5)

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.

### 301 MATERIALS FOR DESIGN (5)

Prereq: ETEC 110, industrial design or technology education major or permission. Fundamentals of materials technology for industrial design majors. Properties and processing of materials with an emphasis on plastics.

### 305 COMPUTER-AIDED DESIGN ANIMATION (4)

Prereq: ETEC 110 or written permission. Development of design animations. Students will utilize a computer-aided design package to produce renderings and animations.

### 311 PERSPECTIVE AND RENDERING I (4)

Prereq: ETEC 110 (may be taken as a co-req with junior standing) or one of the following with permission of instructor: EGEO 350, EGEO 352, ESTU 401. 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.

### 312 INDUSTRIAL DESIGN CAD SKILLS (4)

Pre- or co-req: ETEC 311 or permission of instructor. 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.

### 313 ARCHITECTURAL CONCEPTS AND RESIDENTIAL PLANNING (5)

Prereq: ETEC 110. Historical development; considerations of design; analysis of needs; utilization of sites; preparation of plans.

### 314 JUNIOR INDUSTRIAL DESIGN I (5)

Prereq: acceptance into junior industrial design program. 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.

### 316 JUNIOR INDUSTRIAL DESIGN II (5)

Prereq: ETEC 314. 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.

### 318 JUNIOR INDUSTRIAL DESIGN III (5)

Prereq: ETEC 316. 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.

### 315 PERSPECTIVE AND RENDERING II (4)

Prereq: ETEC 311. Advanced applications of perspective and rendering will include further exploration in various media including the use of computers in generating product images.

### 322 NUMERICAL CONTROL OPERATIONS (4)

Prereq: ETEC 111, 220, 223 and MATH 115. Laboratory-intensive course which provides students with the opportunity to design, program and produce NC and CNC manufactured parts.

### **326 FLUID POWER (4)**

Prereq: MATH 125, CSCI 140 or equivalent; pre- or co-req: ETEC 225, 351. Fluid properties, basic principles of pneumatic and hydraulic power components and systems, control techniques, and fluid system analysis and design.

### **327 MANUFACTURING ECONOMICS (3)**

Prereq: MATH 115 and ETEC 223. Examines many techniques to factor cost into manufacturing decisions. Topics covered include capital allocation, product cost estimating, work measurement, value engineering and budgeting.

### **328 MANUFACTURING ERGONOMICS, SAFETY AND HEALTH (3)**

Prereq: ETEC 223. Methods for ergonomic job design and evaluation. Design of equipment and facilities in manufacturing systems for human use. Development of environmental comfort and safety, including materials handling, storage, and workers' right to know.

### **329 VIRTUAL SIMULATION (4)**

Prereq: ETEC 223. 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.

### **333 POLYMER TECHNOLOGY (5)**

Prereq: ETEC 220; ETEC 110 recommended. Polymer science and analysis of basic plastics materials; experience in product design, tooling, and processing of thermoplastic.

### **334 REINFORCED PLASTICS/COMPOSITES (5)**

Prereq: ETEC 333. Polymer and reinforcement systems; material testing; mold design and development; laboratory involvement in reinforced plastics production processes.

### **335 TOOLING FOR PLASTICS PROCESSING (3)**

Prereq: ETEC 322, 333; ETEC 338 or permission of instructor. 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.

### **336 TOOLING AND INJECTION MOLDING (4)**

Prereq: ETEC 322, 333. Design and construction of various types of plastics processing tooling. Theory and practice of the injection molding process, product design in relationship to process techniques, tooling materials, economics and maintenance are the major units of study. Extensive laboratory experience.

### **337 SECONDARY OPERATIONS (3)**

Co-req: ETEC 333. 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.

### **338 INJECTION MOLDING (4)**

Prereq: ETEC 333. Theory and practice of injection molding. Analysis of machine functions, processing parameters, production tooling, process control systems, quality assurance, automation, rheology of polymers, heat transfer. Extensive lab experience.

### **341 ENGINEERING AND SOCIETY (3)**

Prereq: ENG 101, ETEC 223 or ETEC 271 or equivalent. 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.

### **344 INDUSTRIAL QUALITY ASSURANCE (4)**

Prereq: MATH 240 or 245. Quality assurance as applied to industrial manufacturing operations. One-fourth of this course is used to enhance and expand on applied statistics.

### **351 ELECTRONICS FOR ENGINEERING TECHNOLOGY I (4)**

Prereq: MATH 115 or 118; PHYS 115 or co-req PHYS 122 and 132. 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.

### **352 ELECTRONICS FOR ENGINEERING TECHNOLOGY II (4)**

Prereq: ETEC 351. 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.

### **354 ELECTRONICS FOR ENGINEERING TECHNOLOGY III (4)**

Prereq: ETEC 352. 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.

### **361 ADVANCED CAD: ASSEMBLY DESIGN AND MECHANISMS (4)**

Prereq: ETEC 111. Advanced topics in computer-aided design and parametric modeling, including advanced part design, top-down assembly design, and modeling and simulation of mechanisms.

### **362 ADVANCED CAD: SURFACE MODELING (4)**

Prereq: ETEC 111. Advanced topics in computer-aided design and parametric modeling, with a focus on surface modeling for creating complex and free-form shapes.

### **371 CIRCUIT ANALYSIS II (5)**

Prereq: ETEC 271, MATH 115 or 118, EET major or written permission. 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.

### **372 ELECTRONIC ANALYSIS AND DESIGN (5)**

Prereq: ETEC 272, 371, EET major or written permission. 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.

### **373 DIGITAL SYSTEMS (5)**

Prereq: ETEC 272, 273 or CSCI 227. 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.

### **374 MICROPROCESSOR APPLICATIONS (5)**

Prereq: ETEC 274 or CSCI 227, ETEC 373, EET major or written permission. 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.

### **375 ELECTRONIC SYSTEMS (5)**

Prereq: ETEC 272, EET major or written permission. A study designed to acquaint the student with the operation of electronic systems. Structured laboratory with emphasis on experimental verification of results, original design, data analysis and formal report preparation.

### **376 ELECTRICAL POWER (5)**

Prereq: ETEC 371 or written permission. 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.

### **377 INSTRUMENTATION (4)**

Prereq: ETEC 375 or 354; EET major or written permission. 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.

### **378 NETWORK ANALYSIS (4)**

Prereq: ETEC 371. Pre- or co-req: MATH 321, EET major or written permission. 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.

### 379 ACTIVE LINEAR AND NONLINEAR CIRCUITS (5)

Prereq: ETEC 375, 378 or written permission. Upper-division treatment of active linear and nonlinear 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 worst-case analysis. Laboratory projects with formal report preparation.

### 380 ADVANCED POWER MECHANICS (3)

Prereq: ETEC 280. Efficiency determinants, power measurement, development of concepts introduced in ETEC 280. Engine and chassis dynamometer testing and port air flow testing.

### 381 ADVANCED POWER TRANSMISSION (3)

Prereq: ETEC 281. Practical application of hydraulic and mechanical theory as applied to automatic transmissions.

### 382 AUTOMOTIVE ELECTRICAL AND ELECTRONICS SYSTEMS (2)

Prereq: ETEC 280, 351. Basic principles of electrical components on systems of the automobile and other engines. Electronic fuel injection is covered in detail.

### 402 COOPERATIVE WORK/STUDY (1-9)

Prereq: junior status; approval of advisor. 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.

### 405 COMMUNICATIONS CIRCUITS (4)

Prereq: ETEC 375; pre- or co-req: MATH 321, EET major or written permission. 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.

### 412 INDUSTRIAL DESIGN INTERNSHIP (4)

Prereq: ETEC 318 or permission of instructor. 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.

### 414 SENIOR INDUSTRIAL DESIGN I (5)

Prereq: ETEC 318. 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.

### 415 INDUSTRIAL DESIGN INTERNSHIP PRESENTATION (1)

Prereq: ETEC 412. Follow-up course to ETEC 412. A formal presentation of a recently completed industrial design internship which includes a visual presentation and report.

### 416 SENIOR INDUSTRIAL DESIGN II (5)

Prereq: ETEC 414. 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.

### 418 SENIOR INDUSTRIAL DESIGN III (5)

Prereq: ETEC 416. Studio course work with a strong focus on entrepreneurialism. Business aspects of industrial design are explored and applied in the design projects.

### 419 DIRECTED RESEARCH IN DRAFTING/DESIGN (1-3)

Prereq: ETEC 111. Research problem in drafting or design conducted under supervision. Repeatable three times to a maximum of 9 credits.

### 420 MANUFACTURING AUTOMATION AND ROBOTICS (4)

Prereq: ETEC 322, 326 and 351 or 374. 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.

### 422 MANUFACTURING PROJECT DEFINITION (2)

Prereq: ETEC 341, 444. 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.

### 424 MANUFACTURING IMPLEMENTATION (4)

Prereq: ETEC 422. 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.

### 425 MACHINE DESIGN (4)

Prereq: ETEC 225. Design and modeling of machine components (gears, bearings, shafts, etc.) with an emphasis on industrial practices. Theoretical dynamics also is included.

### 426a ADVANCED COMPUTER NUMERICAL CONTROL — SURFACING AND CONTOURS (3)

Prereq: ETEC 322. CNC programming techniques and requirements for manufacturing components on CNC machining centers, emphasizing programming and applications of three-dimensional surfaces and contours.

### 426b ADVANCED COMPUTER NUMERICAL CONTROL — MILL/TURN (3)

Prereq: ETEC 322. CNC programming techniques and requirements for manufacturing components on CNC turning centers, emphasizing programming and applications where live tooling can be applied.

### 426c ADVANCED COMPUTER NUMERICAL CONTROL — HI-SPEED MACHINING (3)

Prereq: ETEC 322. CNC programming techniques and requirements for manufacturing components on CNC turning centers, emphasizing programming and applications where high-speed machining can be applied.

### 426d ADVANCED COMPUTER NUMERICAL CONTROL — EDM (3)

Prereq: ETEC 322. CNC programming techniques and requirements for manufacturing components on EDM machines, emphasizing programming and applications where Wire EDM and Ram EDM can be applied.

### 427 TOOL DESIGN (3)

Prereq: ETEC 222, 322, 327. Design of special tooling used in manufacturing processes to include, but not limited to, inspection gauges, fixtures, jigs, assembly fixtures, punch and dies.

### 428 ADVANCED MANUFACTURING LABORATORY (3)

Prereq: ETEC 420 or instructor permission. 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.

### 429 DIRECTED RESEARCH IN MANUFACTURING (1-3)

Research under supervision within one of the areas of manufacturing technology. Repeatable three times to a maximum of 9 credits.

### 430 PLASTICS SENIOR PROJECT — DEFINITION (2)

Prereq: senior status, ETEC 341; co-req: ETEC 444. 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.

### 431 PLASTICS PRODUCT DESIGN (3)

Prereq: ETEC 335, 338. 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.

### 432 PLASTICS SENIOR PROJECT — IMPLEMENTATION (4)

Prereq: ETEC 430. Implementation of project proposed in ETEC 430. Manufacture of a tool, prototype, or product, design an industrial process, investigation of a material.

### 433 ENGINEERING POLYMERS (3)

Prereq: ETEC 338 or permission of instructor. Structure, properties, process-

ing and applications of engineering polymers. Advanced analysis and testing of polymers for engineering applications.

### **434 ADVANCED COMPOSITES (3)**

Prereq: ETEC 225, 334 or permission. Advanced polymer matrix and reinforcement systems; structural design and analysis; advanced composites processes and automated production systems.

### **436 POLYMER COMPOUNDING (3)**

Prereq: ETEC 433; CHEM 251; ETEC 444. Principles of polymer formulation and modification. Additives and modifiers, compounding processes and equipment. Use of experimental design in compound formulation.

### **438 DIRECTED RESEARCH IN PLASTICS (1-3)**

Prereq: ETEC 333, 433 or 434 or 335. Selection, development and research, under supervision, within one of the areas of plastics engineering technology. Repeatable three times to a maximum of 9 credits.

### **439 DIRECTED RESEARCH IN WOODS (1-3)**

Prereq: ETEC 231. Selection, development and research, under supervision, within one of the areas of wood technology. Repeatable three times to a maximum of 9 credits.

### **444 DATA ANALYSIS AND DESIGN OF EXPERIMENTS (4)**

Prereq: ETEC 344 or permission, competence in Excel. 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.

### **454 EMBEDDED SYSTEMS (4)**

Prereq: ETEC 374, CSCI 141 or equivalent; EET major or written permission. 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.

### **455 COMMUNICATION SYSTEMS (4)**

Prereq: ETEC 405; pre- or co-req: ETEC 378, EET major or written permission. 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.

### **457 AUTOMATIC CONTROL SYSTEMS (4)**

Prereq: ETEC 378. 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.

### **471 PROJECT DEFINITION (2)**

Prereq: ETEC 374, EET major or written permission. Students define objectives and prepare project proposals for ETEC 474.

### **474 MICROCOMPUTER-BASED DESIGN (4)**

Prereq: ETEC 374, 471, EET major or written permission. Analysis and design of smart microcomputer-based instrument and control systems. Design and implementation of a microcomputer-based system.

### **475 DIGITAL COMMUNICATIONS (4)**

Prereq: ETEC 374, 455, EET major or written permission. 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.

### **479 DIRECTED RESEARCH IN ELECTRONIC TECHNOLOGY (1-3)**

Advanced study in problems chosen and conducted under supervision. Repeatable three times to a maximum of 9 credits.

### **480 ADVANCED EMISSION CONTROL (3)**

Prereq: ETEC 280 and 380. Experimental research in emission control on

operating laboratory engines. Topics center around temperature control on NO<sub>x</sub>, new methods of optimizing stoichiometric combustion, and thermal and catalytic exhaust treatment.

### **481 GASEOUS FUELS (4)**

Prereq: ETEC 380. 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.

### **484 VEHICLE DESIGN (5)**

Prereq: ETEC 280, 380 or permission of instructor. Suspension design; chassis design, spring rates, tire design parameters; automobile aerodynamics; brake system.

### **486 ADVANCED VEHICLE DESIGN (5)**

Prereq: ETEC 484. Advanced body design, ergonomics, aerodynamics, climate control, aesthetic design of automobile interiors and exteriors. Practical work includes wind tunnel model construction and testing.

### **488 TECHNOLOGY EDUCATION: SAFETY PRINCIPLES AND PRACTICES (2)**

Basic course in safety practices for technology education teachers in grades 1-12 and for vocational teachers who must meet state certification requirements.

### **489 DIRECTED RESEARCH IN POWER MECHANICS (1-3)**

Prereq: ETEC 280, 380. Advanced study in problems chosen and conducted under supervision. Repeatable three times to a maximum of 9 credits.

### **491 HISTORY AND PHILOSOPHY OF VOCATIONAL EDUCATION (3)**

Evolving issues, objectives, programs and legislation in vocational education.

### **493 TECHNOLOGY EDUCATION: METHODS (3)**

Prereq: admission to technology education professional block. Competency-based approach to principles, practices and problems in teaching technology education and vocational laboratory courses.

### **494 TECHNOLOGY EDUCATION: CURRICULAR APPROACHES (3)**

Prereq: admission to technology education professional block. An examination of the rationales, content and formats of the new technology education curricula, with strategies for change from traditional industrial arts.

### **496 COMMUNITY AND INDUSTRIAL RESOURCES (1-3)**

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 three times to a maximum of 9 credits.

## **Graduate Courses**

*Courses numbered 500; 517; 545; 597 are described on Page 34 of this catalog.*

*Admission to Graduate School or special permission required. See the Graduate School section of this catalog.*

### **590 PRINCIPLES OF TECHNOLOGY I (4)**

Prereq: teaching experience in physics or technology education or mathematics. 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.

### **591 PRINCIPLES OF TECHNOLOGY II (5)**

Prereq: teaching experience in Principles of Technology I. 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.

### **592 CURRICULUM DEVELOPMENT IN TECHNOLOGY EDUCATION (1-3)**

Prereq: public school teaching experience in technology education. 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 per course.

592a Electronics  
592b Drafting/Design  
592c Metals  
592d Plastics  
592e Power Mechanics  
592f Woods  
592g Visual Communication  
592h Photography  
592j Man/Technology  
592k Manufacturing  
592m Construction  
592n Computer Applications

**593 TECHNOLOGY EDUCATION METHODS (3)**

Prereq: graduate with major in technology education/industrial arts. An application of principles, practices and problem solutions in the development and implementation of teaching methods appropriate for technology education. S/U grading.

**594 TECHNOLOGY EDUCATION: CURRICULAR APPROACHES (3)**

Prereq: graduate with major in technology education/industrial arts. An application of rationales, content and formats in the development and implementation of curriculum materials for technology education. S/U grading.

**691 RESEARCH SEMINAR (9)**

Graduate research or final project under direction of graduate committee or program advisor.



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# GEOLOGY

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 12 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.

## 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, BA/Ed, 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



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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.

## GEOLOGY FACULTY

**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.

**BERNARD A. HOUSEN** (1997) Associate 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) Associate 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.

## BACHELOR OF ARTS

### Major — Geology

70 credits

An accompanying minor in one of the sciences or in mathematics is recommended.

- GEOL 211, 212, 306, 310, 318, 406
- 18 credits under advisement from geology courses above the 100 level
- CHEM 121; MATH 124; PHYS 114 and 115 or PHYS 121, 122, 131, 132 (preferred and required for graduate programs); 10 additional credits selected from MATH 125, 240; CHEM 122, 123; BIOL 204

### Major — Geology — Thesis Option

68-71 credits

An accompanying minor in one of the sciences or in mathematics is recommended.

- GEOL 211, 212, 306, 310, 318, 406
- 10 credits under advisement from geology courses above the 100 level
- One of the following research methods courses in consultation with advisor: GEOL 411, 413, 415, 423, 425, 440, 450, 451, 452, 453, 454, 456, 457, 461, 472, 473, 474
- Successful application to the department approving the thesis topic
- Complete at least 4 credits of GEOL 490
- CHEM 121; MATH 124; PHYS 114 and 115 or PHYS 121, 122, 131, 132 (preferred and required for graduate programs); 10 additional credits selected from MATH 125, 240; CHEM 122, 123; BIOL 204

### Minor — Geology

25 credits

- GEOL 211, 212
- Electives under departmental advisement

## MID-PROGRAM CHECKPOINT

Students seeking to complete a BA degree in geology within a four-year time span should have completed GEOL 211 and 212, MATH 124, PHYS 121 and 131, and CHEM 121 by the start of their junior year.

## BACHELOR OF ARTS IN EDUCATION

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. Courses required for a state teaching endorsement must be completed with a grade of C (2.0) or better.

### Major — Earth Science — Elementary

75-77 credits

This major does not lead to an endorsement in earth science.

This major 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.

- GEOL 211, 212, 310, 311, (or 306 and 406), 340, EGEO 331 or GEOL 252
- MATH 114 and 115, CHEM 121 and 122; EGEO 203; PHYS 114; ASTR 103 or 315
- SCED 480, 490
- Electives (choose two of the following):
  - GEOL 214, 308, 309, 314, 315, 316, 318, 352, 400, 410a, 410b, 414, 415, 430, 440; EGEO 431, 432; ASTR 316; BIOL 406

### Major — Earth Science — Secondary

86-88 credits

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 science.

- GEOL 211, 212, 214, 311 (or 306 and 406), 310, 340;

## GEOLOGY

- EGEO 331 or GEOL 252; ASTR 103 or 315
- MATH 114 and 115; PHYS 114 and 115; CHEM 121 and 122; SCED 370, 481, 491
- Electives (choose two of the following):
  - GEOL 308, 309, 314, 315, 316, 318, 352, 400, 407, 410a, 410b, 414, 415, 430, 440

It is recommended that this major be accompanied by a minor in chemistry, physics or biology.

### *Combined Major — Earth Science/General Science — Secondary*

107-108 credits

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 science and science.

- GEOL 211, 212, 214, 311 (or 306 and 406), 310, 340; EGEO 331 or GEOL 252; ASTR 103 or 315
- MATH 114 and 115; CHEM 121, 122, 251; BIOL 204, 205, 206; PHYS 114, 115, 116 or 121, 122, 123, and 131, 132, 133
- SCED 370, 481, 491
- At least one elective from: GEOL 308, 309, 314, 315, 316, 318, 352, 400, 407, 410a, 410b, 414, 415, 430, 440

## BACHELOR OF SCIENCE

### *Major — Geology*

97-110 credits

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.

#### *Core Program*

- GEOL 211, 212, 306, 310, 318, 352, 406, 410 a and b, 415, and one of GEOL 442, 447, 448
- CHEM 121, 122, 123; MATH 128 or MATH 124 and 125, PHYS 121, 122, 131, 132

#### *Geology Concentration*

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.

- The core courses
- GEOL 316, 407
- One of MATH 204, 224, 341
- Two of the following, or substitute courses under advisement: GEOL 411, 423, 424, 425, 428, 430, 450, 451, 454, 456

#### *Geology Concentration — Thesis Option*

97-102 credits

- Core courses, with the exception that one of GEOL 442,

447, 448 is waived

- GEOL 316, 407
- One of the following research methods courses in consultation with advisor: GEOL 411, 423, 425, 450, 454, 456
- Successful application to the department approving the thesis topic
- Complete at least 4 credits of GEOL 490

#### *Environmental Geology Concentration*

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.

- The core courses
- GEOL 314, 473
- One of MATH 204, 224, 341
- 9 additional credits from GEOL 413, 430, 440, 449, 450, 451, 452, 461, 462, 470, 472, 474

#### *Environmental Geology — Thesis Option*

94-104 credits

- Core courses, with the exception that one of GEOL 442, 447, 448 is waived
- GEOL 314, 473
- MATH 204
- One of the following research methods courses in consultation with advisor: GEOL 413, 440, 450, 451, 452, 461, 462, 470, 472, 474
- Successful application to the department approving the thesis topic
- Complete at least 4 credits of GEOL 490

#### *Geophysics Concentration*

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.

- Core courses plus GEOL 452
- At least one from GEOL 453, 456, 457
- At least one from GEOL 432, 449, 450, 451, 454, 472, 473 or 4 additional credits from the math or physics courses listed below.
- 8 credits from MATH 204, 224, 225, 331; PHYS 123,

133, 368, 369

**Geophysics Concentration — Thesis Option**  
105-112 credits

- Core courses, with the exception that one of GEOL 442, 447, 448 is waived
- GEOL 452
- At least one course from GEOL 449, 450, 451, 453, 472, 473, or 4 additional credits from the math or physics courses listed below
- One of MATH 204, 224, 225, 331; PHYS 123, 133, 325, 368, 369
- One of the following research methods courses: GEOL 454, 456, 457
- Successful application to the department approving the thesis topic
- Complete at least 4 credits of GEOL 490

**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.

**MID-PROGRAM CHECKPOINT**

Students seeking to complete a BS degree in geology within a four-year time span should have completed GEOL 211 and 212; MATH 124 and 125; CHEM 121, 122 and 123; and PHYS 121, 122, 131, 132 and, if graduate school is contemplated, PHYS 123, by the start of their junior year. Omissions from this list will make it difficult or impossible to complete this degree within two additional years.

**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.

**WRITING PROFICIENCY COURSE GUIDELINES**

The geology department has a multitiered system for writing proficiency courses. Courses are assigned writing proficiency (WP) points based on the percentage of the course grade that

is determined by writing assignments that go through revision as follows:

- Greater than or equal to 30 percent of the grade = 1 WP pt
- Greater than or equal to 50 percent of the grade = 2 WP pt
- Greater than or equal to 75 percent of the grade = 3 WP pt

GEOL 400 (Independent Study) can also be designated a writing proficiency course, subject to the conditions above and with the approval of the Expository Writing Committee. A total of 3 WP points in geology courses are required to satisfy the University requirement of one approved writing proficiency course at WWU (taking a WP course outside of the Department of Geology will also satisfy the University requirement). These points can be accumulated in any combination of courses, i.e., in one course worth 3 WP points, three courses worth 1 WP point each, et cetera.

Students in the geology program are required to take "Writing Points" (WP) courses to satisfy the writing proficiency component of the bachelor's degree, with a total of 3 WP required. GEOL 301 will fulfill 1 WP in conjunction with research in the field of geology. Students will conduct research related to the topic of the associated course. The research will be written up in draft stages so that appropriate writing standards can be taught and applied during multiple revisions. As a stand-alone course, the students will be able to focus on writing, but the connection to the main course will provide relevance.

**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.

**GRADUATE STUDY**

For concentrations leading to the Master of Education or the Master of Science degrees, see the *Graduate School* section of this catalog.

**COURSES IN GEOLOGY (GEOL)**

*Courses numbered X37; X97; 300, 400; 417, 445 are described on Page 34 of this catalog.*

**101 INTRODUCTION TO GEOLOGY (4)**

Prereq: MATH 106 or higher. 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 focus 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.

**202 PLATE TECTONICS AND CONTINENTAL DRIFT (4)**

Prereq: GEOL 101 or equivalent. 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.

**204 GEOLOGY AND SOCIETY (3)**

Prereq: GEOL 101 or BIOL 101 or CHEM 101 or PHYS 101 or permission of instructor. Thematic approach to geology, with different themes exploring the relationship between scientific ways of knowing, and geology in particular, with society.

**211 PHYSICAL GEOLOGY (5)**

Prereq: MATH 114 or higher and high school or college chemistry. Course for science and geology majors in which the origin, composition and structure of earth are explored. Emphasizes identification of common rocks and minerals; the evolution of the surface features and structures of continents and interpretation of landforms from maps. Includes 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. Includes lab.

**211a PHYSICAL GEOLOGY REVIEW (2)**

Prereq: GEOL 101 with a grade of B- or better; MATH 114; high school or college chemistry. This is a laboratory-only course for students who wish to enter the geology major or minor or take upper-division geology courses and who have had a general introduction to geology. Emphasis on rock and mineral identification, geologic structures, map interpretation. Successful completion of both GEOL 101 and 211a may substitute for GEOL 211 in all geology department requirements. GEOL 211a may not be used to fulfill general education requirements.

**212 HISTORICAL GEOLOGY (4)**

Prereq: GEOL 211. Evolution of the major features of the earth 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. Includes lab.

**214 ENVIRONMENTAL GEOLOGY (3)**

Prereq: GEOL 101 or 211. 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.

**252 THE EARTH AND ITS WEATHER (4)**

Prereq: GEOL 101, CHEM 101 or PHYS 101. 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. Includes lab.

**301 GEOLOGY WRITING CO-REQUISITE (1)**

Prereq: concurrent registration in either GEOL 308, 309, 310, 311, 314 or 340. A writing-intensive supplement to a geology course. Students will explore research topics and learn to write scientific papers about those topics.

**303 DINOSAURS AND THEIR ENVIRONMENT (3)**

Prereq: GEOL 101. Dinosaurs and their world; their biology, behavior, evolution, and what the world was like during their reign.

**306 MINERALOGY (4)**

Prereq: GEOL 211; CHEM 121, 122. 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.

**307 GEOLOGY WRITING CO-REQUISITE (1)**

Prereq: concurrent registration in GEOL 308, 309, 310, 311, 314, or 340. 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.

**308 EARTHQUAKE GEOLOGY (3)**

Prereq: GEOL 211. Examination of the geologic records of past earthquakes and crustal deformation held in landforms and crustal structures with an introduction to the techniques of geomorphology and structural geology. Topics include global distribution of earthquakes; active tectonic deformation of alluvial fans, rivers, and coastlines; fault scarps and active folding; paleoseismology; and the influence of climate on mountain building. Focus on cases studies from the Pacific Northwest.

**308w RESEARCH AND WRITING IN EARTHQUAKE GEOLOGY (1)**

Prereq: concurrent registration in GEOL 308. A writing-intensive supplement to GEOL 308. Students will explore research topics and learn to write scientific papers about those topics.

**309 VOLCANOLOGY (3)**

Prereq: GEOL 211. 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.

**309a VOLCANOLOGY LAB (1)**

Co-req: GEOL 309. Optional lab to accompany GEOL 309. Observation and interpretation of volcanic rocks and interpretation of volcanic eruption styles.

**309w RESEARCH AND WRITING IN VOLCANOLOGY (1)**

Prereq: concurrent registration in GEOL 309. A writing-intensive supplement to GEOL 309. Students will explore research topics and learn to write research papers about those topics.

**310 GEOMORPHOLOGY (5)**

Prereq: GEOL 211, MATH 114 or higher. Origin and evolution of topographic features by surface processes; analysis of glaciers, streams, wind, waves, ground water and other agents in development of landforms.

**311 EARTH MATERIALS (4)**

Prereq: GEOL 211; CHEM 121. 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). Lab exercises emphasize the scientific skills of observation, identification, and classification in lab and in the field. Field trips required.

**311w RESEARCH AND WRITING IN EARTH MATERIALS (1)**

Prereq: concurrent registration in GEOL 311. A writing-intensive supplement to GEOL 311. Students will explore research topics and learn to write scientific papers about those topics.

**314 ENGINEERING GEOLOGY (3)**

Prereq: GEOL 211, PHYS 121. 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.

**314w RESEARCH AND WRITING IN ENGINEERING GEOLOGY (1)**

Prereq: concurrent registration in GEOL 314. A writing-intensive supplement to GEOL 314. Students will explore research topics and learn to write scientific papers about those topics.

**315 MINERALS, ENERGY AND SOCIETY (4)**

Prereq: GEOL 101 or 211. 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?

**316 RESEARCH IN MARINE PALEONTOLOGY (4)**

Prereq: GEOL 212. 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. Includes lab.

**318 STRUCTURAL GEOLOGY (5)**

Prereq: GEOL 211, 212; PHYS 114 or 121. 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. In alternate years, one section that year is taught entirely in the field.

**340 GEOLOGICAL OCEANOGRAPHY (3)**

Prereq: GEOL 211, CHEM 115 or CHEM 121 or equivalent. 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, seawater-rock interactions, and the role of oceanic circulation in climate and climate change will be studied. Additional topics based on student interest will be explored via independent reading assignments.



**340w RESEARCH AND WRITING IN GEOLOGICAL OCEANOGRAPHY (1)**

Prereq: concurrent registration in GEOL 340. A writing-intensive supplement to GEOL 340. Students will explore research topics and learn to write scientific papers about those topics.

**352 INTRODUCTION TO GEOPHYSICS (4)**

Prereq: GEOL 318; PHYS 121. Basic elements of geomagnetism, seismology, gravity and heat flow with reference to the internal structure of the earth.

**372 WATERSHED HYDROLOGY (3)**

Prereq: GEOL 211. 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.

**396a,b,c HONORS TUTORIALS (2-5)**

Repeatable with no maximum.

**401a TEACHING PRACTICUM (1)**

Prereq: GEOL 211, with a minimum of a B grade, and permission of chair. 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.

**401b TEACHING PRACTICUM (2)**

Prereq: permission of chair; student must have received a minimum of a B grade in the course for which they will be a Teaching Fellow. 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.

**406 PETROLOGY (4)**

Prereq: GEOL 306. Origin, occurrence and classification of igneous, sedimentary and metamorphic rocks, hand specimen identification of rocks. In alternate years, one section that year is taught entirely in the field.

**407 ADVANCED PETROGRAPHY (3)**

Prereq: GEOL 406. 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.

**410a FIELD METHODS AND THEORY (6)**

Prereq: GEOL 211, 212, 318, 406. Concurrent or successive enrollment in Geol 410b required. Methods of geological field investigations; includes use of field instruments and outcrop studies.

**410b GEOLOGIC MAPPING (6)**

Prereq: concurrent or immediately prior enrollment in GEOL 410a. Application of geological field methods to making geological maps and reports of specific areas; supervised investigation of one or more map areas.

**411 FIELD GEOLOGY OF WESTERN UNITED STATES (3)**

Prereq: Concurrent or prior enrollment in GEOL 410a, 410b. 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.

**413 FLUVIAL GEOMORPHOLOGY (4)**

Prereq: GEOL 310 or permission of instructor. Stream processes, equilibrium in fluvial environments, channel adjustments, mechanics of sediment erosion and transport. Weekly field trips.

**414 GEOLOGY OF WASHINGTON (3-5)**

Prereq: GEOL 101 or 211. The significant geologic features of Washington state; field studies. Offered summer only.

**415 STRATIGRAPHY AND SEDIMENTATION (4)**

Prereq: GEOL 212, 306 and 310 or permission of instructor. Analysis of the transportation, deposition and consolidation of sediments; classification of sedimentary rocks; determination of depositional facies; principles of stratigraphic nomenclature.

**423 ADVANCED IGNEOUS PETROLOGY (4)**

Prereq: GEOL 406, 407. Advanced course on modern methods of igneous petrology. Focus on magma generation and evolution, utilizing major element, trace element, and isotope geochemistry. Interpretive methods in-

clude use of the petrographic microscope and geochemical modeling exercises. Individual research projects required.

**424 ADVANCED SEDIMENTARY PETROLOGY (5)**

Prereq: GEOL 406, 407 or equivalent. Description, classification and interpretation of sedimentary rocks, including provenance, depositional history and diagenesis. Advanced lab stresses work with petrographic microscope. Individual research projects.

**425 ADVANCED METAMORPHIC PETROLOGY (5)**

Prereq: GEOL 406, 407 or equivalent. 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.

**428 DEPOSITIONAL ENVIRONMENTS (3)**

Prereq: GEOL 415 or equivalent. Depositional framework of marine and continental sedimentary basins. Study of the means by which depositional environments of sedimentary rocks are determined.

**430 IMAGE INTERPRETATION (3)**

Prereq: GEOL 310; GEOL 318 recommended. 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.

**440 GLACIAL GEOLOGY (4)**

Prereq: GEOL 310. 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.

**442 INTRODUCTION TO REMOTE SENSING (5)**

Prereq: upper-division standing in the sciences or permission of instructor. Concepts and applications of remote sensing data collection analysis of earths surface features using radar, aerial photography and multispectral scanners.

**447 INTRODUCTION TO GIS (3)**

Prereq: senior status in geology. Introduction of ArcGIS as a tool for manipulating and displaying spatial data. Explores several projects that apply ArcGIS to geologic problems.

**448 APPLIED GEOSTATISTICS (3)**

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.

**449 GEOMECHANICS (3)**

Prereq: PHYS 121; GEOL 318 or 314; GEOL 352 recommended. Reviews 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.

**450 ADVANCED TOPICS IN STRUCTURAL GEOLOGY (4)**

Prereq: GEOL 318, 406, 410. 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.

**451 ACTIVE TECTONICS SEMINAR (4)**

Prereq: GEOL 318, 352. 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.

**452 APPLIED GEOPHYSICS (5)**

Prereq: GEOL 352 or equivalent. 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, ground-water estimates and earthquake potential and grounds response.

### 453 PLATE TECTONICS (4)

Prereq: GEOL 352. Kinematics and dynamics of plate motions, with applications to geotectonics.

### 454 MAGNETIC FABRICS AND GEOLOGIC PROCESSES (4)

Prereq: GEOL 352 or equivalent. 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.

### 455 CLIMATE-RELATED GEOLOGIC HAZARDS (3)

Prereq: PHYS 121 or equivalent. 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.

### 456 PRINCIPLES OF OROGENY (5)

Prereq: GEOL 318, 352 and 406. Application of geological and geophysical tools to understanding of earths mountain belts. Research project required.

### 457 PRACTICAL PALEOMAGNETISM (4)

Prereq: GEOL 352. 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.

### 461 ANALYTICAL GEOCHEMISTRY (2)

Prereq: GEOL 306, CHEM 123. Introduction to analysis of rocks, soil and water. Methods include atomic absorption spectrophotometry, ion chromatography, gas chromatography and quadrupole mass spectrometry as well as gravimetric, volumetric and colorimetric analysis.

### 462 HYDROGEOCHEMISTRY (3)

Prereq: GEOL 211; CHEM 121, 122. A discussion of the geological and geochemical processes that control the chemical composition of surface and groundwater.

### 463 INTRODUCTION TO SEISMOLOGY (4)

Prereq: GEOL 352. 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 analysis.

### 470 LANDSLIDES AND SLOPE STABILITY (3)

Prereq: GEOL 310 and GEOL 318 or 314. Reviews 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.

### 472 SURFACE WATER HYDROLOGY (3)

Prereq: GEOL 211, MATH 125. Components of the hydrologic cycle, including precipitation, infiltration, evapotranspiration, and runoff, and their effect on a water balance in a watershed.

### 473 GROUND WATER HYDROLOGY (4)

Prereq: GEOL 211, PHYS 122. Introduction to the geologic and hydrologic factors controlling the occurrence and movement of subsurface water. Applications in well hydraulics and groundwater site investigations.

### 474 GROUND WATER CONTAMINATION (3)

Prereq: GEOL 473 or permission of instructor. 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.

### 476 SURFACE WATER QUALITY MODELING AND ANALYSIS (3)

Prereq: senior status in the sciences and computer literacy, e.g., competency in the use of a mathematical analysis program. 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.

### 490 SENIOR THESIS (1-5)

Prereq: senior status. Research project under direction of faculty. Repeatable to a maximum of 9 credits.

## Graduate Courses

*Courses numbered 500; 517; 545; 597 are described on Page 34 of this catalog. Admission to Graduate School or special permission required. See the Graduate School section of this catalog.*

### 501 TEACHING PRACTICUM (2)

Prereq: graduate status and permission of chair. 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. Repeatable to a maximum of 12 credits.

### 513 FLUVIAL GEOMORPHOLOGY (4)

Prereq: GEOL 310 or permission of instructor. Stream processes, equilibrium in fluvial environments, channel adjustments, mechanics of sediment erosion and transport. Weekly field trips.

### 518 STRUCTURAL GEOLOGY AND TECTONICS OF WASHINGTON (3)

Prereq: graduate status, permission of instructor, GEOL 318 or equivalent. 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.

### 523 ADVANCED IGNEOUS PETROLOGY (4)

Prereq: GEOL 406 and 407 or equivalent. 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.

### 524 SEDIMENTARY PETROLOGY AND PETROGRAPHY (5)

Prereq: GEOL 406, 407 or equivalent. Description, classification and interpretation of sedimentary rocks, including provenance, depositional history and diagenesis. Advanced lab stresses work with the petrographic microscope.

### 525 ADVANCED METAMORPHIC PETROLOGY (5)

Prereq: GEOL 406, 407 or equivalent. 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.

### 528 DEPOSITIONAL ENVIRONMENTS (3)

Prereq: GEOL 415 or equivalent. Depositional framework of marine and continental sedimentary basins. Study of the means by which depositional environments of sedimentary rocks are determined.

### 530 IMAGE INTERPRETATION (3)

Prereq: GEOL 310; GEOL 318 recommended. 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.

### 536 PALEOBIOLOGY (3)

Prereq: GEOL 316 or permission of instructor. Explores current topics in the study of fossils. Topics may include mass extinctions, community paleoecology, dinosaur behavior or the effects of extraterrestrial events on the earths biosphere. Specific topics for each quarter will be decided by the class.

### 540 GLACIAL GEOLOGY (4)

Prereq: GEOL 310 or equivalent. 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.

#### 542 INTRODUCTION TO REMOTE SENSING (5)

Prereq: graduate status. Concepts and applications of remote sensing data collection analysis of the earth's surface features using radar, aerial photography and multispectral scanners.

#### 547 INTRODUCTION TO GIS (3)

Introduction of ArcGIS as a tool for manipulating and displaying spatial data. Introduces a variety of projections and discusses geodatabases. GPS systems are used in data collection.

#### 548 APPLIED GEOSTATISTICS (3)

Prereq: computer literacy, graduate status. Study of applied statistical analysis using environmental data. Introduces the S-Plus language.

#### 549 GEOMECHANICS (3)

Prereq: PHYS 121, GEOL 314, 318; GEOL 352 recommended. Reviews 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 by all students. Offered alternate years.

#### 550 ADVANCED TOPICS IN STRUCTURAL GEOLOGY (4)

Prereq: GEOL 318, 406, 410. 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.

#### 551 ACTIVE TECTONICS SEMINAR (4)

Prereq: GEOL 318, 352. 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.

#### 552 APPLIED GEOPHYSICS (5)

Prereq: GEOL 352 or equivalent. 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 ground response.

#### 553 PLATE TECTONICS (4)

Prereq: GEOL 352. Kinematics and dynamics of plate motions, with applications to geotectonics.

#### 554 MAGNETIC FABRICS AND GEOLOGICAL PROCESSES (4)

Prereq: GEOL 352 or equivalent. 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.

#### 555 CLIMATE-RELATED GEOLOGIC HAZARDS (3)

Prereq: PHYS 121 or equivalent. 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.

#### 556 PRINCIPLES OF OROGENY (5)

Prereq: GEOL 318, 352, and 406. Application of geology and geophysical tools to gain understanding of earth's mountain belts. Research project required.

#### 557 PRACTICAL PALEOMAGNETISM (4)

Prereq: GEOL 352. 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.

#### 558 PALEOMAGNETISM AND TECTONICS LAB SEMINAR (1-2)

Prereq: GEOL 457/557. Advanced instruction in the operation of paleomagnetic lab equipment, research techniques in rock and paleomagnetism, dis-

ussion 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 to a maximum of 4 credits.

#### 559 ROCK MAGNETISM AND GEOMAGNETIC FIELD LAB (1-2)

Prereq: GEOL 457/557 or permission of instructor. 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 to a maximum of 4 credits.

#### 560 GEOLOGIC PHASE EQUILIBRIA (3)

Prereq: permission of instructor. Analysis of geologic phase equilibria in terms of classical thermodynamics. Review of current research literature and seminar presentations.

#### 561 ANALYTICAL GEOCHEMISTRY (2)

Prereq: permission of instructor. 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.

#### 562 ADVANCED HYDROGEOCHEMISTRY (3)

Prereq: GEOL 211; CHEM 121, 122. 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.

#### 563 INTRODUCTION TO SEISMOLOGY (4)

Prereq: GEOL 352. 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 analysis.

#### 570 LANDSLIDES AND SLOPE STABILITY (3)

Prereq: GEOL 310 and GEOL 318 or 314 or equivalent. Reviews 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.

#### 572 SURFACE WATER HYDROLOGY (4)

Prereq: permission of instructor. Components of the hydrologic cycle and their interaction, including precipitation, infiltration, evapotranspiration, and runoff, and their effect on a water balance in a watershed.

#### 573 GROUND WATER HYDROLOGY (4)

Prereq: permission of instructor. Introduction to the geologic and hydrologic factors controlling the occurrence and movement of subsurface water. Applications in well hydraulics and groundwater site investigations.

#### 574 GROUND WATER CONTAMINATION (3)

Prereq: GEOL 573 or permission of instructor. 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.

#### 576 SURFACE WATER QUALITY MODELING AND ANALYSIS (3)

Prereq: graduate status in the sciences and computer literacy, e.g., competency in the use of MathCAD. 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.

#### 595 SEMINAR IN CONTEMPORARY GEOLOGY PROBLEMS (2)

Prereq: graduate status in department. Seminar and weekend field trips introduce geology graduate students to research problems. S/U grading. Repeatable to a maximum of 6 credits.

#### 690 THESIS (2-15)

Thesis research, repeatable.

# MATHEMATICS

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.”

— Excerpt 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.

## 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 will be 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, 112, 106, 107, 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, 125, 224, 226 (calculus)
- MATH 204, 304 (linear algebra)
- Either MATH 209 or MATH 302
- MATH 312 (proofs in elementary analysis)
- One of CSCI 140, 141, MATH 207; M/CS majors should complete CSCI 141

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, any student pursuing a Bachelor of Science degree in the department should complete MATH 225, the second quarter of multivariable calculus except that the applied math major has an option. 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.

Transfer students must complete at this institution a minimum of nine upper-division credits for a major in the department or five upper-division credits for a minor in the department.

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. Bachelor of Arts-Secondary Education has the same core except for MATH 312 and requires both MATH 209 and MATH 302.

### DECLARATION OF MAJOR

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.

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.

### ACADEMIC EXCELLENCE

The mathematics department offers three 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. The third, Graduation with Honors in Mathematics, is part of the University Honors Program and includes a substantial general education component as well as most of the requirements for Graduation with Distinction. 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 either or both of the other programs.

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

## MATHEMATICS

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.

### *Graduation with Honors*

Students may graduate with honors in mathematics by completing one of the majors listed for graduation with merit in mathematics and completing the usual requirements for the Honors program (see the Honors Program in the *Interdisciplinary Programs* section of this catalog) with the following modifications:

- Entering freshmen must satisfy the General University Requirement (GUR) in science by completing one of the following sequences:
  - CHEM 121, 122, 123
  - PHYS 121, 131, 122, 132, 123, 133
- The comprehensive examination described under *Graduation with Distinction* may be substituted for the honors senior project

A student interested in the Honors Program should contact both the chair of the Department of Mathematics and the director of the Honors Program.

### 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.

### MATHEMATICS 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 State University; MA, University of Oregon; PhD, University of Washington.

**ARPAD BENYI** (2005) Assistant Professor. BS, MS, West University of Timisoara, Romania; MA, PhD, University of Kansas-Lawrence.

**MICHELLE L. BYRTEK** (2004) Assistant Professor. BS, Lewis and Clark College; MS, Portland State University; PhD, National University of Ireland, Cork.

**LINDA M. CAVE** (1994) Associate Professor. BS, Oregon State University; MEd, University of Portland; PhD, Oregon State University.

**DONALD R. CHALICE** (1967) Associate Professor. BA, University of Wisconsin; MA, PhD, Northwestern University.

**VICTOR CHAN** (2001) Assistant Professor. BA, Whitman College; MS, State University of New York; MS, PhD, Iowa 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) Assistant Professor. First Degree, Technische Universität, Berlin; MS, PhD, Emory University.

**DAVID A. HARTENSTINE** (2004) Assistant 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.

**NORMAN F. LINDQUIST** (1967) Associate Professor. BA, Linfield College; PhD, Oregon State University.

**STEPHEN R. MCDOWALL** (2001) Associate Professor. BS, MS, University of Canterbury, New Zealand; PhD, University of Washington.

**MICHAEL NAYLOR** (1999) Associate Professor. BS, Michigan State University; MS, PhD, Florida State University.

**THOMAS T. READ** (1967) Professor. BA, Oberlin College; MA, PhD, Yale University.

**AMITES SAKAR** (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.

**JOHN W. WOLL** (1968) Professor. BS, Haverford College; PhD, Princeton University.

**JIANYING ZHANG** (2006) Assistant Professor. BS, MS, Tsinghua University, China; PhD, University of California-Santa Barbara.

## BACHELOR OF ARTS

### *Major — Mathematics*

70-73 credits in mathematics plus 14-19 credits in other courses

- MATH 124, 125 (or 134, 135), 204, 224, 226, 331 (**Note:** The sequence 203-303 may be substituted for 204 and 331); 341 or 441; 419 or 420
- One of CSCI 140, 141, MATH 207
- At least three courses from MATH 209, 302, 304, 312, 360
- At least two courses from MATH 410, M/CS 335, 375, 435, 475
- MATH 419 or 420
- No fewer than 16 additional approved credits in mathematics or math-computer science, including completion of at least two of the following sequences: MATH 331-432, MATH 341-342, MATH 401-402, MATH 441-442, M/CS 335-435, M/CS 375-475
- At least one of the following sequences:
  - PHYS 121, 122, 123, 131, 132, 133
  - CHEM 121, 122, 123 (or CHEM 125, 126, 225)
  - CSCI 141, 145, 211, 241, 401
  - ECON 206, 207, 306 and one of 375, 470 or 475

### *Combined Major — Economics/Mathematics*

94-95 credits

This major is for students who wish considerable depth in both disciplines, and it is particularly recommended as preparation for graduate study in economics.

- ECON 206, 207, 303, 306, 307, 406 or 407, 475
- 16 additional credits in upper-division courses in economics, of which 4 credits must be a communication focus class, under **prior** departmental advisement; 8 of these 16 credits must be at the 400 level
- MATH 124, 125 (or 134, 135), 204, 224, 225, 226, 304, 331 (**Note:** The sequence 203-303 may be substituted for 204 and 331); 341-342 or 441-442
- M/CS 435
- One of CSCI 140, 141, MATH 207

## BACHELOR OF ARTS IN EDUCATION

### *Teaching Certification and Endorsement*

The BA/Ed degrees below require completion of the professional secondary teacher preparation program in the Woodring College of Education. Recommendation for teaching endorsement normally requires completion of one of the above majors 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.

**Major — Mathematics — Elementary**

50 credits

This major 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.

- MATH 124, 125 (or 134, 135), 204, 207, 209, 302, 341, 360, 381, 382, 383, 419, 491

**Major — Mathematics — Secondary**

70 credits

This major must be accompanied by the professional preparation program in secondary education and leads to an endorsement in secondary mathematics. See the *Secondary Education* section of this catalog for program admission, completion, and teacher certification requirements.

- MATH 124, 125 (or 134, 135), 204, 207, 209, 224, 226, 302, 331, 341, 360, 419, 483 (Note: The sequence 203-303 may be substituted for 204 and 331)
- At least four courses selected from the following: MATH 304, 312, 401, 402, 410, 441, and M/CS 375

**Minor — Mathematics — Secondary**

40 credits

This minor leads to an additional endorsement in secondary mathematics accompanied by the professional program in secondary education and an endorsement in another content area. See the *Secondary Education* section of this catalog for program admission, completion, and teacher certification requirements.

- MATH 124, 125 (or 134, 135), 204, 207, 209, 302, 341, 360, 419, 483

**Combined Major — Chemistry/Mathematics — Secondary**

106-120 credits plus supporting courses in physics

This major meets the requirements for Washington state teaching endorsements in both chemistry and mathematics. This major must be accompanied by the professional education program in secondary education. See the *Secondary Education* section of this catalog for program admission, completion, and teacher certification requirements.

- CHEM 121, 122, 123, 333 (or CHEM 125, 126, 225)
- Option A or B:
  - A: CHEM 251, 375
  - B: CHEM 351, 352, 353, 354 and 375 (or 471-473)
- CHEM 461, 462
- MATH 124, 125 (or 134, 135), 204, 209, 224, 331, 360, 419, 483 (Note: The sequence 203-303 may be substituted for 204 and 331)
- At least two of the following: MATH 207, 341, 410
- PHYS 121, 122, 123, 131, 132, 133
- SCED 370, 481, 491

**Combined Major — Physics/Mathematics — Secondary**

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.

- PHYS 121, 122, 123, 131, 132, 133; 219, 223, 224, 225, 233, 322, 326, 391
- ASTR 315

- 10 additional credits of upper-division physics or astronomy courses, including 2-3 credits of PHYS 491, 492, ASTR 493
- MATH 124, 125 (or 134, 135), 204, 209, 224, 331, 360, 419, 483 (Note: The sequence 203-303 may be substituted for 204 and 331)
- At least two of the following: MATH 207, 341, or 410
- SCED 370, 481, 491

**BACHELOR OF SCIENCE**

**Major — Mathematics**

70 credits in mathematics plus 19-20 credits in other courses

- MATH 124, 125 (or 134, 135), 204, 224, 225, 226, 304, 312; 209 or 302
- No fewer than 31 approved credits in mathematics or math-computer sciences, including at least two of the following sequences: MATH 331-432, MATH 341-342, MATH 441-442, M/CS 335-435, M/CS 375-475, MATH 401-402, MATH 421-422; and to include 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 and MATH 420 (Note: The sequence 203-303 may be substituted for 204 and 331)

*Supporting Courses*

- One of CSCI 140, 141, MATH 207
- One of the following sequences:
  - PHYS 121, 122, 123, 131, 132, 133
  - CHEM 121, 122, 123 (or CHEM 125, 126, 225)
  - CSCI 141, 145, 211, 241, 401
  - ECON 206, 207, 306 and one of 375, 470 or 475

Language competency in French, German or Russian is strongly recommended for those students who may go to graduate school.

**NOTE:** Those students who are interested in the actuarial sciences should complete MATH 441, 442, M/CS 335, 435, and M/CS 375, 475 as part of their major programs.

**Major — Applied Mathematics**

70 credits in mathematics plus 19-20 credits in other courses

- MATH 124, 125 (or 134, 135); 204, 224, 226, 304, 312, 331 (Note: The sequence 203-303 may be substituted for 204 and 331); 209 or 302; 341-342 or 441-442
- One of CSCI 140, 141, MATH 207
- M/CS 375-475
- One of the following concentrations:
  - Engineering Concentration: MATH 225, either 430 or 432, 438
  - Operations Research Concentration: M/CS 335-435, MATH 410
- No fewer than 3 additional credits at the 400 level from MATH, M/CS, or CSCI 405, 480
- One of the following sequences:
  - PHYS 121, 122, 123, 131, 132, 133
  - CHEM 121, 122, 123 (or CHEM 125, 126, 225)
  - CSCI 141, 145, 211, 241, 401
  - ECON 206, 207, 306 and one of 375, 470 or 475

**Minor — Mathematics**

34-35 credits

- MATH 124, 125 (or 134, 135), 204, 224
- One of CSCI 140, 141, MATH 207

## MATHEMATICS

- 12 credits of approved electives from MATH 209, 225, 226 and upper-division courses except MATH 381, 382, 383, 483, 491

### Combined Major — Mathematics/Computer Science 91 credits

- MATH 124, 125 (or 134, 135), 204, 224, 226, 302, 312, 331, 430 or 432; 341 or 441; 304 or 401 (**Note:** The sequence 203-303 may be substituted for 204 and 331)
- Three courses from M/CS 335, 375, 435, 475
- CSCI 141, 145, 211, 241, 305, 341, 401, 405
- 3 additional upper-division credits in mathematics or computer science as advised

### Combined Major — Biology/Mathematics

104-105 credits; biology Phase II status required for admission into 300- and 400-level biology courses for biology majors.

- BIOL 204, 205, 206, 321, 323, 325, 432
- MATH 124, 125 (or 134, 135), 204, 224, 331, 341, 342, 432; (**Note:** The sequence 203 and 303 may be substituted for 204 and 331)
- One of CSCI 140 or 141 or MATH 207
- Plus 8 credits of approved upper-division electives from biology, math or math/computer science
- CHEM 121, 122, 123 (or CHEM 125, 126, 225); 251
- PHYS 121, 122, 131, 132

Faculty advisor: Merrill Peterson, Biology; Tjalling Ypma, Mathematics.

## 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.

## COURSES IN MATHEMATICS (MATH)

*Courses numbered X37; X97; 300, 400; 417, 445 are described on Page 34 of this catalog.*

*(Courses in Mathematics-Computer Science are listed after the listings in Mathematics.)*

### 99 INTRODUCTORY ALGEBRA (0)

Prereq: None. 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. Pass/Fail grading. A TI-83 is recommended.

### 101 FUNCTIONS AND ALGEBRAIC METHODS FOR K-8 TEACHERS (5)

Prereq: suitable score on the Intermediate Math Placement Test or completion of a college intermediate algebra course with a grade of C- or better and permission of instructor. 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.

### 106 QUANTITATIVE REASONING (4)

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.

### 107 MATHEMATICAL REASONING AND ITS APPLICATIONS (4)

Prereq: suitable score on the Intermediate Math Placement Test or at least C- in

MATH 99, 106, 112, or a college intermediate algebra course. Reading quantitative information, reasoning, personal finance, data display and summary, assessing risk; quantitative decisions in life, careers, and public issues. Students interested in studying a single area of mathematics in detail should consider substituting a course from MATH 114, 118, 124, 156, 157 or 240. To take MATH 114, a student must take a math placement test or MATH 112.

### 112 FUNCTIONS AND ALGEBRAIC METHODS (5)

Prereq: suitable score on the Intermediate Math Placement Test or completion of a college intermediate algebra course with C- or better. 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.

### 114 PRECALCULUS I (5)

Prereq: suitable score on the Intermediate mathematics placement test or at least C- in MATH 112. 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.

### 115 PRECALCULUS II (5)

Prereq: At least C- in MATH 114. Data analysis, modeling, trigonometry, inverse functions. Graphing calculator required. Cannot be counted toward majors or minors in mathematics or computer science.

### 118 ACCELERATED PRECALCULUS (5)

Prereq: suitable score on the intermediate or the advanced placement test. 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.

### 119a TOPICS IN MATHEMATICS (variable)

Prereq: permission of instructor. A supplement to one or more math courses offered at the 100 level. Repeatable subject to permission of department.

### 119b TOPICS IN MATHEMATICS (variable)

Prereq: permission of instructor. A supplement to one or more math courses offered at the 100 level. Repeatable subject to permission of department. S/U grading.

### 124 CALCULUS AND ANALYTIC GEOMETRY (5)

Prereq: suitable score on the Advanced Mathematics Placement Test or at least C- in MATH 115 or 118. Average and instantaneous rates of change, interpretation, computation, and application of derivatives to optimization, rates, graphing, and antiderivative problems. Graphing calculator required.

### 125 CALCULUS AND ANALYTIC GEOMETRY (5)

Prereq: MATH 124 or 134. Riemann sums and the definite integral, interpretation and application to area, volume, growth and decay, techniques of integration. Introduction to differential equations.

### 128 ACCELERATED CALCULUS (5)

Prereq: one year of AP-level high school calculus and permission. 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.

### 134 HONORS CALCULUS I (5)

Prereq: suitable score on the Advanced Mathematics Placement Test or at least an A in MATH 115 or 118, and permission of instructor. 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.

### 135 HONORS CALCULUS II (5)

Prereq: MATH 124 or 134, and permission of instructor. 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.



**156 ALGEBRA WITH APPLICATIONS TO BUSINESS AND ECONOMICS (4)**

Prereq: suitable score on the intermediate mathematics placement test or at least C- in MATH 112. Equations and inequalities, graphs and functions, exponential and logarithmic functions, mathematics of finance, systems of linear equations and matrices, systems of linear inequalities.

**157 CALCULUS WITH APPLICATIONS TO BUSINESS AND ECONOMICS (4)**

Prereq: suitable score on the advanced mathematics placement test or at least C- in MATH 156, MATH 114 or 118. Limits, rates of change, differentiation, graphing and optimization, integration, business applications, partial differentiation. MATH 124 may be substituted for MATH 157. Cannot be taken for credit by a student who has already completed another college-level calculus course.

**203 LINEAR ALGEBRA AND DIFFERENTIAL EQUATIONS I (4)**

Prereq: MATH 125, 135 or equivalent. 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.

**204 ELEMENTARY LINEAR ALGEBRA (4)**

Prereq: MATH 125, 135; MATH 224 recommended. 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.

**205 LINEAR ALGEBRA WORKSHOP (1)**

Prereq: MATH 204 or concurrent. Elementary linear algebra projects on a computer. S/U grading.

**207 MATHEMATICAL COMPUTING (3)**

Prereq: Basic computer literacy (CSCI 101 or equivalent); MATH 125, 135 and 204. Use of mathematical software such as Matlab and Mathematica. Elementary programming, numerical and symbolic computation, visualization and technical reporting in mathematical context.

**209 DISCRETE MATHEMATICS (4)**

Prereq: MATH 124, 134 or 128. The logic of proofs, combinatorics, graph theory, and topics from recurrences and generating functions, set theory.

**217a TOPICS IN MATHEMATICS (1-4)**

Prereq: permission of instructor. A supplement to one or more math courses offered at the 200 level. Repeatable subject to permission of department.

**217b TOPICS IN MATHEMATICS (1-4)**

Prereq: permission of instructor. A supplement to one or more math courses offered at the 200 level. Repeatable subject to permission of department. S/U grading.

**220 VISUALIZATION IN MULTIVARIABLE CALCULUS (1)**

Co-req: Math 224. 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.

**224 MULTIVARIABLE CALCULUS AND GEOMETRY (5)**

Prereq: MATH 125, 135 or 128. Coordinate systems, curves and vectors in the plane and in space, partial derivatives, applications including optimization and motion, multiple integrals.

**225 MULTIVARIABLE CALCULUS AND GEOMETRY (4)**

Prereq: MATH 224. Multiple integrals, line and surface integrals, gradient fields, Green's and Stokes' theorems.

**226 LIMITS AND INFINITE SERIES (4)**

Prereq: MATH 125, 135 or 128. Limits, continuity, convergence of sequences and infinite series, Taylor series, applications.

**240 INTRODUCTION TO STATISTICS (4)**

Prereq: suitable score on the intermediate mathematics placement test or MATH 112. Descriptive statistics, basic ideas of probability, normal distribution, sampling, 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.

**245 STATISTICS FOR ENGINEERING TECHNOLOGY (3)**

Prereq: MATH 115 or 118. Descriptive statistics, basic probability, discrete distributions, normal distribution, statistical methods useful in engineering.

**302 INTRODUCTION TO PROOFS VIA NUMBER THEORY (4)**

Prereq: MATH 125, 135 or 128. The properties of integers, prime numbers, Euclidean algorithm, congruences. The student is expected to develop competence in proving basic results in number theory.

**303 LINEAR ALGEBRA AND DIFFERENTIAL EQUATIONS II (4)**

Prereq: MATH 203. 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.

**304 LINEAR ALGEBRA (4)**

Prereq: MATH 204. 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.

**312 PROOFS IN ELEMENTARY ANALYSIS (4)**

Prereq: MATH 226 and either MATH 209 or 302 (restricted to majors during Phase I of registration). 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.

**321 MATHEMATICS FOR TECHNOLOGY (4)**

Prereq: MATH 125, 135. 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.

**331 ORDINARY DIFFERENTIAL EQUATIONS (4)**

Prereq: MATH 204; co-req: MATH 224 recommended. First order equations, first order systems (primarily linear), applications and modeling, qualitative reasoning. First course in the 331-432 sequence.

**341 PROBABILITY AND STATISTICAL INFERENCE (4)**

Prereq: MATH 125, 135 or 128. 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.

**342 STATISTICAL METHODS (4)**

Prereq: MATH 341. Statistical techniques including chi square tests, simple and multiple linear regression, and one-way analysis of variance. Extensive use of a computer statistical package.

**360 EUCLIDEAN AND NON-EUCLIDEAN GEOMETRY (4)**

Prereq: MATH 125, 135 or 128, 204 and either MATH 209 or 302. Metric development of Euclidean geometry and consideration of non-Euclidean geometries.

**381 TEACHING K-8 MATHEMATICS I (4)**

Prereq: suitable score on the Intermediate Math Placement Test or a grade of C or better in MATH 112 or a college intermediate algebra course, and ELED 370 or 372, or SPED 320 or 420. Investigations of mathematical 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 department major except BA/Ed-Elementary, and does not satisfy GUR mathematics requirement except for those who complete the BA/Ed-Elementary.

**382 TEACHING K-8 MATHEMATICS II (4)**

Prereq: a grade of C or better in MATH 381. 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.

**383 TEACHING K-8 MATHEMATICS III (4)**

Prereq: a grade of C or better in MATH 382. Investigation of mathematics topics that focus on probability and statistics. Emphasis on problem solving, the use of manipulatives and computing technologies, remediation and resource materials, and optimal pedagogical techniques that help students

## MATHEMATICS

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learn quality mathematics. Not acceptable for any departmental major except BA/Ed, Elementary, and does not satisfy GUR mathematics requirement except for those who complete the BA/Ed, Elementary, and does not satisfy GUR mathematics requirement except for those who complete the BA/Ed, Elementary.

### **401, 402 INTRODUCTION TO ABSTRACT ALGEBRA (4 ea)**

Prereq: MATH 204 and either MATH 209 or 302; MATH 401 prerequisite to 402. Groups, rings, fields, field extensions, Galois Theory.

### **410 MATHEMATICAL MODELING (4)**

Prereq: MATH 204 and 331 or 203 and 303; and 224. The construction and solution of mathematical models, using optimization, stability analysis, eigenvalue methods, probability and simulation.

### **412 MATHEMATICAL MODELING COMPETITION (1)**

Prereq: permission of instructor. Preparation for participation in the national mathematics modeling competition. Repeatable, no maximum.

### **419 HISTORICAL PERSPECTIVES OF MATHEMATICS (3)**

Prereq: 12 credits of upper-division mathematics. History and development of mathematical thought from ancient to modern times. Philosophical, sociological and biographical perspectives.

### **420 TOPICS IN THE HISTORY AND PHILOSOPHY OF MATHEMATICS (3)**

Prereq: MATH 312. 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.

### **421 METHODS OF MATHEMATICAL ANALYSIS I (4)**

Prereq: MATH 312. 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.

### **422 METHODS OF MATHEMATICAL ANALYSIS II (4)**

Prereq: MATH 421. 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.

### **424 TOPICS IN ANALYSIS (4)**

Prereq: MATH 422. Topics such as pointwise convergence of Fourier series, Gibbs phenomenon, Poisson summability, Dirichlet problem for the disc, Weierstrass approximation theorem. Repeatable with various topics.

### **430 FOURIER SERIES AND PARTIAL DIFFERENTIAL EQUATIONS (4)**

Prereq: MATH 204 and 331 or 203 and 303; and 226. An introduction to the Fourier series and the Fourier transform; applications to boundary value problems including the wave and heat equations.

### **432 SYSTEMS OF DIFFERENTIAL EQUATIONS (4)**

Prereq: either MATH 204 and 331, or MATH 203 and 303. Forced second order equations, systems of nonlinear differential equations, applications.

### **438 INTRODUCTION TO COMPLEX VARIABLES (4)**

Prereq: MATH 225, 226. Differentiation and integration of complex-valued functions; Cauchy integral theorem; calculations of residues.

### **441 PROBABILITY (4)**

Prereq: MATH 204 and 224. 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.

### **442 MATHEMATICAL STATISTICS (4)**

Prereq: MATH 441 or equivalent. Limiting distributions, the Central Limit Theorem, statistical inferences such as confidence intervals, hypothesis testing and chi-square tests, maximum likelihood methods, sufficiency.

### **447 STATISTICAL DESIGN OF EXPERIMENTS (3)**

Prereq: MATH 342 or equivalent. Topics and concepts useful in the design and analysis of experiments: randomization, blocking, analysis of variance, randomized block designs, Latin square designs, factorial designs, fractional factorial designs. Use of statistical software packages. Emphasizes applications and analysis of experimental data.

### **448 STATISTICAL QUALITY ASSURANCE AND RELIABILITY (4)**

Prereq: MATH 441 and MATH 342 or 442 or equivalent. Statistical theory and methods for monitoring and improving industrial processes and their reliability. Topics include Shewhart, EWMA, CUSUM charts, acceptance sampling, stochastic modeling and analysis of lifetime data, censored data, and accelerated testing.

### **483 METHODS OF TEACHING SECONDARY MATHEMATICS (4)**

Prereq: at least two upper-division mathematics courses. Topics include pre-algebra, algebra, geometry, problem solving and resource materials.

### **490 SENIOR PROJECT (4)**

Prereq: successful completion of the comprehensive exam for graduation with distinction in mathematics; permission of the chair. Intensive study of an advanced topic in mathematics.

### **491 INTERNSHIP SEMINAR — TEACHING K-8 MATHEMATICS (2)**

Prereq: a grade of C or better in MATH 383. 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 MATH 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.

### **495 ACADEMIC OR INDUSTRIAL LEARNING AND RESEARCH EXPERIENCE IN MATH (1-4)**

Prereq: 20 credits in Math above 100 level, and permission of department. 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.

## **Graduate Courses**

*Courses numbered 500; 517; 545; 597 are described on Page 34 of this catalog. Admission to Graduate School or special permission required. See the Graduate School section of this catalog.*

### **502 ABSTRACT ALGEBRA (4)**

Prereq: MATH 401 or equivalent. Rings, fields, field extensions, Galois Theory.

### **503 TOPICS IN ABSTRACT ALGEBRA (3)**

Prereq: MATH 502 or equivalent. Topics based on the theory of groups and its applications. Repeatable with various topics.

### **504 ABSTRACT LINEAR ALGEBRA (4)**

Prereq: MATH 304 or equivalent. Abstract vector spaces, linear transformations, spectral theory.

### **510 MATHEMATICAL MODELING (4)**

Prereq: MATH 204 and 331 or 203 and 303; and 224. The construction and solution of mathematical models, using optimization, stability analysis, eigenvalue methods, probability and simulation.

### **511 ADVANCED MODELING (4)**

Prereq: MATH 331, permission of instructor. Exact and numerical techniques for the development and analysis of models of dynamic processes, including the construction and validation of models.

### **521 METHODS OF MATHEMATICAL ANALYSIS I (4)**

Introduction to metric spaces, properties of functions on metric spaces, compactness and continuity.

### **522 METHODS OF MATHEMATICAL ANALYSIS II (4)**

Prereq: MATH 521. Analysis on the real line, including uniform convergence of series, using metric space notions.

### **523 ADVANCED CALCULUS OF SEVERAL VARIABLES (4)**

Prereq: MATH 304 or equivalent, MATH 521. Parameterization, integration and changes of variables in Euclidean spaces.

### **524 TOPICS IN ANALYSIS (4)**

Prereq: MATH 522. Topics such as pointwise convergence of Fourier series, Gibbs phenomenon, Poisson summability, Dirichlet problem for the disc, Weierstrass approximation theorem. Repeatable with various topics.

### **525 TOPOLOGY (3)**

Prereq: MATH 521. Topological spaces, connectedness, compactness, product and quotient spaces, homotopy.

**527 REAL ANALYSIS (4)**

Prereq: MATH 522. Theory of Lebesgue measure and integration.

**528 FUNCTIONAL ANALYSIS (4)**

Prereq: MATH 522. Spaces of functions, linear functionals and their representation, applications.

**530 FOURIER SERIES AND PARTIAL DIFFERENTIAL EQUATIONS (4)**

Prereq: MATH 204 and 331 or 203 and 303; and 226. An introduction to the Fourier series and the Fourier transform; applications to boundary value problems including the wave and heat equations.

**533 ADVANCED ORDINARY DIFFERENTIAL EQUATIONS (3)**

Prereq: MATH 432 or equivalent, MATH 521. Existence and uniqueness of solutions, stability theory for nonlinear equations, bifurcation.

**535 NONLINEAR OPTIMIZATION (4)**

Prereq: MATH 204, 224, and one of CSCI 140 or 141 or MATH 207. 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.

**538 COMPLEX VARIABLES (4)**

Prereq: MATH 226 or equivalent. Differentiation and integration of complex-valued functions, Cauchy integral theorem, residues.

**539 TOPICS IN COMPLEX ANALYSIS (3)**

Prereq: MATH 521, 538. Topics such as normal families, mapping properties of analytic functions, conformal mappings, fluid flow, Dirichlet and Neumann problems, Julia sets. Repeatable with various topics.

**541 PROBABILITY (4)**

Prereq: MATH 204, 224. Probability theory, both discrete and continuous. The Central Limit Theorem.

**542 MATHEMATICAL STATISTICS (4)**

Prereq: MATH 441 or equivalent. Distributions, generating functions, averages, moments, regression, correlation, variance, statistical inference.

**545 TOPICS IN PROBABILITY (3)**

Prereq: MATH 541. Topics from Markov and sequential decision processes, renewal theory, inventory theory, stochastic control, random arrival and service processes, waiting time, number in queue, bulk arrivals, networks, balking. Repeatable with various topics.

**547 STATISTICAL DESIGN OF EXPERIMENTS (3)**

Prereq: MATH 342 or equivalent. Topics and concepts useful in the design and analysis of experiments: randomization, blocking, analysis of variance, randomized block designs, Latin square designs, factorial designs, fractional factorial designs, Use of statistical software packages. Emphasis on applications and analysis of experimental data.

**548 STATISTICAL QUALITY ASSURANCE AND RELIABILITY (4)**

Prereq: MATH 441 and either MATH 342 or 422 or equivalent. Statistical theory and methods for monitoring and improving industrial processes and their reliability. Topics include Shewhart, EWMA, CUSUM charts, acceptance sampling, stochastic modeling and analysis of lifetime data, censored data, and accelerated testing.

**560 TOPICS IN GEOMETRY (3)**

A study of one or more topics in geometry such as convex sets, polytopes, tilings, integral geometry or combinatorial geometry. Repeatable with various topics.

**562 DIFFERENTIAL GEOMETRY (4)**

Prereq: MATH 522. Geometry of curves, surfaces and manifolds.

**564 GRAPH THEORY (3)**

Basic properties of graphs, trees, Eulerian and Hamiltonian circuits, genera of graphs, algorithms, applications.

**566 TOPICS IN COMBINATORICS (3)**

Counting techniques, generating functions, coding, coloring and relations with probability theory. Repeatable with various topics.

**570 TOPICS IN OPTIMIZATION (4)**

Prereq: MATH 304 and 521. Topics taken from nonlinear programming, calculus of variations or the theory of optimal control. Repeatable with various topics.

**573 NUMERICAL LINEAR ALGEBRA (4)**

Prereq: MATH 304, ability to program. Norms; fundamental matrix types, transformations and factorizations; linear equations, linear least squares; rounding error, condition and stability; the algebraic eigenvalue problem (QR method).

**575 NUMERICAL ANALYSIS (4)**

Prereq: MATH 224, M/CS 375. 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.

**577 TOPICS IN NUMERICAL ANALYSIS (4)**

Prereq: M/CS 375 or MATH 573. Topics from numerical optimization, approximation, linear algebra, quadrature, and the solution of algebraic and differential equations. Repeatable with various topics.

**595 TEACHING ALGEBRA AND PRECALCULUS (2)**

Curriculum and instructional support for teaching the algebra and precalculus sequence. S/U grading.

**599 MATHEMATICS SEMINAR (1-3)**

Repeatable to a maximum of 4 credits.

**680 INTERNSHIP IN INDUSTRIAL MATHEMATICS (2-8)**

Prereq: MATH 510, 547, and 575 or equivalents. 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.

**690 THESIS (variable credit)**

Repeatable to a maximum of 4 credits. S/U grading.

**691 REQUIRED PROJECT (1 or 2)**

Prereq: advancement to candidacy. Repeatable to a maximum of 2 credits. S/U grading.

**COURSES IN MATHEMATICS-COMPUTER SCIENCE (M/CS)**

*Courses numbered X37; X97; 300, 400; 417, 445 are described on Page 34 of this catalog.*

*The courses listed below require background in both mathematics and computer science. The problems attacked in these courses cannot be solved without fruitful wedding of knowledge from both areas. In many of the upper-level computer science and math-computer science courses, majors have priority for admission.*

**335 LINEAR OPTIMIZATION (4)**

Prereq: MATH 204 and one of CSCI 140 or 141 or MATH 207. The optimization of linear functions subject to linear constraints. Linear programming, duality theory, sensitivity analysis, applications.

**375 NUMERICAL COMPUTATION (4)**

Prereq: MATH 204 and one of CSCI 140 or 141 or MATH 207. Computer arithmetic, solution of nonlinear equations and optimization in a single variable; matrix factorization; matrix iterative techniques.

**435 NONLINEAR OPTIMIZATION (4)**

Prereq: MATH 204, 224 and one of CSCI 140 or 141 or MATH 207. 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.

**475 NUMERICAL ANALYSIS (4)**

Prereq: MATH 224, M/CS 375. 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.

# PHYSICS AND ASTRONOMY

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 349 (Optics Laboratory), 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.

## 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) 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. 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 is still taken the first quarter. Freshmen who elect to delay PHYS 121 one quarter are advised to take PHYS 219 (Principles of Relativity) their first quarter at Western. This course does not require calculus beyond what the student would know from



taking MATH 124 or 134 concurrently, yet it deals with an interesting and important area of physics that will be useful when taking later physics courses.

### Advice to Transfer Students

The first two years of the physics BS program is based on the following core courses:

- PHYS 121, 122, 123, 131, 132, 133; MATH 124 or 134, 125 or 135, 224; CSCI 140
- PHYS 223, 224, 225, 233, 322; MATH 203, 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 PHYS 131-132-133, which are just the lab courses that accompany the corresponding PHYS 121-122-123 courses. MATH 124 or 134, MATH 125 or 135, 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, 122, 123, 131, 132, 133, 223, 224, 225, 233, 322
- MATH 124 or 134, 125 or 135, 203, 224, 303
- CSCI 140

Students may make an appointment to see the chair during the fall quarter of their junior year, to make arrangements for research and/or project material for their senior project.

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, 122, 123, 131, 132, 133, 219, 223, 224, 225, 233, 322
- MATH 124 or 134, 125 or 135, 203, 209, 224, 303

### ADMISSION TO THE MAJOR

The department has established a requirement that holds for both the physics BS major, and the physics/mathematics and chemistry/physics BA in Education: *A cumulative GPA of at least 2.50 must be maintained in the courses required by the major.* This is a requirement that applies to admission to the major, retention in the major, and graduation with a degree in the major. A freshman or transfer student who has not yet received grades at Western in courses required by the major can still be admitted to the major but will be dropped if grades received later fail to meet the department's GPA requirement.

To declare a physics major, a student takes his/her Degree Planning Guide (DPG) to the physics/astronomy office (Communications Facility 385) and meets with the department chair. The student fills out an official declaration of undergraduate major card. The department chair signs both the card and the major declaration section of the DPG.

Students planning to major in physics are urged to declare the major as early as possible, preferably their freshman year. This will enable them to obtain advice that may shorten the total time

required to complete the degree. 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.

### 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.wvu.edu/depts/physics](http://www.wvu.edu/depts/physics). The department is in Communications Facility 385.

### PHYSICS AND ASTRONOMY FACULTY

**BRAD L. 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.

**MILTON FROM** (1998) Associate Professor. BSc, University of Manitoba; MSc, PhD, McGill University.

**KRISTEN A. LARSON** (2002) Assistant Professor. BS, University of California-San Diego; MS, PhD, Rensselaer Polytechnic Institute.

**GEORGE D. 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.

**AJIT S. RUPAAL** (1964) Professor. BSc, MSc, Punjab University; PhD, University of British Columbia.

**JAMES E. STEWART** (1987) Professor. BA, BS, University of North Dakota; MS, PhD, University of New Mexico.

**TAKELE SEDA** (2002) Assistant Professor. BS, Asmara University (Eritrea); MS, Addis Ababa University (Ethiopia); PhD, University of the Witwatersand, Johannesburg, South Africa.

**RICHARD D. VAWTER** (1968) Associate Professor. BS, Texas Technological University; MS, State University of Iowa; PhD, State University of New York.

### Adjunct Faculty

**ANDREW BOUDREAUX**, BS, University of California-Berkeley; PhD, University of Washington.

**KATHLEEN SANDELIN**, BS, Western Washington University; MS, College of William and Mary.

**JOHN WILLS**, BA, San Diego State University; PhD, University of Washington.

### BACHELOR OF SCIENCE

#### Major — Physics

106-107 credits

- PHYS 121, 122, 123, 131, 132, 133; MATH 124 or 134, 125 or 135, 224; CSCI 140
- PHYS 223, 224, 225, 233, 322; MATH 203, 303
- PHYS 326, 335, 363, 368, 369, 391, 392
- PHYS 419, 455, 456, 485
- Six courses selected from PHYS 219, 323, 336, 339 and 349, 472, 475, 476, 486; ASTR 315, 316, 320, 416

**NOTE:** PHYS 419 may be replaced by at least 2 credits of PHYS 491, 492, or ASTR 493 with permission of the chair.

## PHYSICS AND ASTRONOMY

### Minor — Physics

41-42 credits

- PHYS 121, 122, 123, 131, 132, 133, 223, 233
- At least two courses selected from PHYS 219, 224, 225, 322, 323
- MATH 124 or 134, 125 or 135, 224

### Minor — Astronomy

30 credits

- PHYS 114, 115 and 116; or PHYS 121, 122, 123, 131, 132 and 133, 219
- ASTR 315, 316, 320

## BACHELOR OF ARTS IN EDUCATION

### Combined Major — Physics/Mathematics — Secondary 106-107 credits

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.

- PHYS 121, 122, 123, 131, 132, 133, 219, 223, 224, 225, 233, 322, 326, 391
- PHYS 201 or 205
- ASTR 315
- 10 additional credits of upper-division physics or astronomy courses, including 2-3 credits of PHYS 491, 492, ASTR 493
- MATH 124, 125 (or 134, 135), 204, 209, 224, 331, 360, 419, 483 (**Note:** The sequence 203-303 may be substituted for 204 and 331)
- At least two courses from MATH 207, 341, or 410
- SCED 370, 481, 491

This major meets the requirements for Washington state teaching endorsements in both physics and mathematics.

### Combined Major — Chemistry/Physics — Secondary 102-115 credits

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.

- CHEM 121, 122, 123, 333 (or CHEM 125, 126, 225)
- Option A or B
  - A: CHEM 251, 375
  - B: CHEM 351, 352, 353, 354 and 375 (or 471-473)
- CHEM 461, 462
- PHYS 121, 122, 123, 131, 132, 133
- PHYS 219, 223, 224, 233, 326
- ASTR 315
- 9 additional credits of upper-division physics or astronomy courses, including 2-3 credits of PHYS 491, 492, or ASTR 493
- MATH 124 or 134, 125 or 135, 224
- SCED 370, 481, 491

This major meets the requirements for Washington state teaching endorsements in both chemistry and physics.

### Teaching Endorsement

The BA in Education degrees above require completion of the professional secondary teacher preparation program in the Woodring College of Education. Recommendation for teaching endorsement normally requires completion of one of the above

majors with a grade of 2.50 or better in the required major courses. Courses required for a state teaching endorsement must be completed with a grade of C (2.0) or better. 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.

## COURSES IN PHYSICS (PHYS)

*Courses numbered X37; X97; 300, 400, 417, 445 are described on Page 34 of this catalog.*

### 101 PHYSICS ANALYSIS (4) F,W,S

Prereq: MATH 107 or higher. 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.

### 102 PHYSICS AND SOCIETY (3)

Prereq: MATH 107 or higher. 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.

### 104 PHYSICS APPLICATIONS (4)

Prereq: MATH 107 or higher. 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.

### 114 PRINCIPLES OF PHYSICS I (5) F,W

Prereq: MATH 115. 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.

### 115 PRINCIPLES OF PHYSICS II (5) W,S

Prereq: PHYS 114. Fluids, kinetic theory, heat and thermodynamics, principles of electricity and magnetism. Lab.

### 116 PRINCIPLES OF PHYSICS III (5) S

Prereq: PHYS 115. Waves and sound, geometrical and physical optics, relativity and modern physics. Lab.

### 121 PHYSICS WITH CALCULUS I (4) F,W

Prereq or co-req: MATH 124 or 134; concurrent enrollment in PHYS 131 (lab) required for physics majors. Kinematics and dynamics of particles; work and energy; gravitation; collisions and conservation of momentum.

### 122 PHYSICS WITH CALCULUS II (4) W,S

Prereq: PHYS 121; MATH 124 or 134; pre- or co-req: MATH 125; concurrent enrollment in PHYS 132 (lab) required for physics majors. Rotational kinematics and dynamics; oscillations; fluid statics and dynamics; thermodynamics.

### 123 ELECTRICITY AND MAGNETISM (4) F,S

Prereq: PHYS 122; MATH 125 or 135; pre- or co-req MATH 224; concurrent enrollment in PHYS 133 (lab) required for physics majors. Electrostatics; magnetic fields of steady currents; time-varying electric and magnetic fields; DC and AC circuits; electromagnetic waves.

### 131 PHYSICS WITH CALCULUS I LAB (1) F,W

Prereq: concurrent enrollment in PHYS 121.

### 132 PHYSICS WITH CALCULUS II LAB (1) W,S

Prereq: concurrent enrollment in PHYS 122.

### 133 E AND M LABORATORY (1) F,S

Prereq: concurrent enrollment in PHYS 123.

### 190 EXPLORING PHYSICS AND ASTRONOMY (1) W

Co-req: PHYS 121 or PHYS 122. Seminar for students interested in major-

ing in physics. Current topics and trends in physics, with emphasis on research opportunities for undergraduates.

### 201 THE SCIENCE OF SOUND (3) S

Prereq: one quarter of college-level physics; not intended for BS physics majors. Basic principles needed to understand the production, transmission and detection of sound waves; standing and complex waves; decibels; hearing and psychoacoustics; musical and room acoustics. Lab.

### 219 PRINCIPLES OF RELATIVITY (3) F

Prereq: MATH 124 or 134 (or concurrent). The unity of space and time; inertial and accelerated reference frames; time dilation, length contraction and relativity paradoxes; relativistic energy and momentum; introduction to gravity.

### 223 WAVES AND OPTICS (3) F

Prereq: PHYS 123; MATH 224; concurrent enrollment in PHYS 233 (lab) required for physics majors. Waves in elastic media, superposition, interference and standing waves; sound waves; electromagnetic waves; reflection, refraction and polarization of light; geometrical optics; interference and diffraction of light; special relativity.

### 224 MODERN PHYSICS I (4) W

Prereq: PHYS 223. Quantization of charge, light, and energy; nuclear atom; wavelike properties of particles; Schrödinger equation; atomic physics; nuclear physics.

### 225 MODERN PHYSICS II (3) S

Prereq: PHYS 224. Bose-Einstein and Fermi-Dirac statistics; molecular structure and spectra; solid state physics; nuclear reactions and applications; particle physics.

### 233 WAVES AND OPTICS LABORATORY (1) F

Prereq: concurrent enrollment in PHYS 223.

### 322 FUNDAMENTALS OF ELECTRONICS (4) W

Prereq: PHYS 123. Principles of DC and AC circuit theory; diodes; bipolar and FET transistors; amplifiers; SCRs; test equipment; transducers; AM and FM modulation. Lab.

### 323 ANALOG AND DIGITAL ELECTRONICS (4) S

Prereq: PHYS 322. Operational amplifiers; active filters; Boolean algebra; digital circuitry and signal processing; interfacing science experiments to personal computers; Labview programming. Lab.

### 326 TOOLS AND DATA ANALYSIS (2) F

Prereq: PHYS 224, 233; MATH 203, 224. Introduction to error analysis and data handling in physics using Excel and other computer programs. Lecture and computer lab. S/U grading.

### 335 STATISTICAL AND THERMAL PHYSICS I (3) W

Prereq: PHYS 225, MATH 224. Statistical description of physical systems; foundations of macroscopic thermodynamics; laws of thermodynamics; Maxwell relations; statistical ensemble theory.

### 336 STATISTICAL AND THERMAL PHYSICS II (3) S

Prereq: PHYS 335. Applications of ensemble theory; quantum statistics; systems of interacting particles; low temperature magnetism.

### 339 OPTICS (3) F

Prereq: PHYS 223; concurrent enrollment in PHYS 349 (lab) required for physics majors. Reflection and refraction at plane and spherical surfaces; lenses and aberrations; optical instruments; interference and interferometers; diffraction; polarization.

### 349 OPTICS LABORATORY (1) F

Prereq: concurrent enrollment in PHYS 339.

### 363 CLASSICAL MECHANICS (4) F

Prereq: PHYS 122, MATH 303. 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.

### 368 ELECTROMAGNETISM I (4) W

Prereq: PHYS 225, MATH 203, 224. Vector calculus, Green's and Stokes'

theorems; static electric and magnetic field laws; boundary-value problems; Lorentz force; polarization and magnetization in materials.

### 369 ELECTROMAGNETISM II (3) S

Prereq: PHYS 368; MATH 303. Electrodynamics; Maxwell's equations; plane electromagnetic waves in free space; dielectrics and conductors; reflection and refraction at a plane boundary; electromagnetic radiation; relativistic dynamics.

### 391 JUNIOR LAB I (2) W

Prereq: PHYS 225, 322, 326. Selected experiments in atomic physics and nuclear physics.

### 392 JUNIOR LAB II (2) S

Prereq: PHYS 391. Selected experiments in condensed matter physics and materials science. Topics in error analysis (co-variance, distributions, curve fitting).

### 419 PROFESSIONAL WRITING FOR PHYSICISTS (3) F

Prereq: one year of college-level physics. Consult instructor prior to enrollment. Presentation of scientific research in written form; abstracts, project reports, and documentation; elements of successful posters; proposals and professional critique. Writing proficiency course.

### 455 QUANTUM MECHANICS I (3) F

Prereq: PHYS 225, 363; MATH 303. 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.

### 456 QUANTUM MECHANICS II (3) W

Prereq: PHYS 455. 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.

### 472 ELEMENTARY PARTICLES (3) S

Prereq: PHYS 368, 456. Fermions and bosons; conservation laws (charge, parity and time invariance); electromagnetic, weak and hadronic interactions; gauge theories; electroweak theory; quarks, mesons, and baryons.

### 475 PHYSICS OF SOLIDS AND MATERIALS I (3) W

Prereq: PHYS 255 or permission of instructor. Structure and properties of materials including crystallography, symmetry, bonding-related properties, electronic structure, phase diagrams, surfaces, semiconductors, metals.

### 476 PHYSICS OF SOLIDS AND MATERIALS II (3) S

Prereq: PHYS 475. Application and investigation of materials including amorphous, liquid crystal, magnetic, porous and novel materials, lasers, photo detectors, optical fibers, microscopy, spectroscopy.

### 485 MATHEMATICAL PHYSICS (3) F

Prereq: MATH 203, 224. Fourier transforms; Laplace transforms; orthogonal functions and boundary value problems; series expansions; rotations and tensors; complex integration.

### 486 COMPUTATIONAL PHYSICS (3) S

Prereq: PHYS 363; MATH 303. 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.

### 491 SENIOR PROJECT IN EXPERIMENTAL PHYSICS (1-3) F,W,S

Prereq: PHYS 391; senior status in physics; permission of instructor required. 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. Writing proficiency course.

### 492 SENIOR PROJECT IN THEORETICAL PHYSICS (1-3) F,W,S

Prereq: PHYS 363, 368; senior status in physics; permission of instructor required. 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.

## PHYSICS AND ASTRONOMY

### COURSES IN ASTRONOMY (ASTR)

*Courses numbered X37; X97; 300, 400; 417, 445 are described on Page 34 of this catalog.*

#### 103 INTRODUCTION TO ASTRONOMY (4) F,W,S

Prereq: MATH 107 or higher. A survey of astronomy including the solar system, galactic structure and cosmology. Not recommended for science, math or computer science majors.

#### 315 THE SOLAR SYSTEM (4) F

Prereq: PHYS 114 or equivalent. Motions of the planets, satellites and other bodies of the solar system. Eclipses; time systems; properties and composition of the planets and their satellites, with particular emphasis on the discoveries of the space program. Intended for science, math and computer science majors.

#### 316 STARS AND GALAXIES (4) W

Prereq: one year of college physics. Observational evidence of the nature of stars; star formation and star death; structure and kinematics of the Milky Way and other galaxies.

#### 320 COSMOLOGY (4) S

Prereq: ASTR 316. 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.

#### 326 ASTROPHYSICAL INSTRUMENTATION LAB (1) W

Prereq: concurrent enrollment in ASTR 316 and permission of instructor (override required). Operation of manual and computerized telescope systems, including the WWU 12-inch Meade LX 200. Astronomical units and coordinate systems. Basic optics and detector theory. Planning planetarium shows and observations for public outreach. Meeting schedule will depend on weather. S/U grading.

#### 333 LIFE IN THE UNIVERSE (3) F

Prereq: 3 credits of college astronomy. Nature and formation of life in the solar system; extra-solar planets, habitability zones, and life in extreme environments; search for extraterrestrial life and intelligence; problems of interstellar communication and travel.

#### 416 STELLAR ASTROPHYSICS (3) W

Prereq: PHYS 336, 363 and ASTR 316. Stellar physics. Radiation transport and spectral line formation in stellar atmospheres; interior stellar structure, including composition and energy generation; stellar models.

#### 493 SENIOR PROJECT IN ASTRONOMY (1-3) F,W,S

Prereq: ASTR 316; senior status in physics; permission of instructor required. 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.



David Scherrer / WWU Publishing Services



# SCIENCE EDUCATION

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, Elementary with Science plus one discipline endorsement for students intending to teach science in grades K-8, and Secondary for students intending to teach science in grades 5-12. Students planning a major in science for high school education should consult with the appropriate science education advisors within the natural science departments 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.

## FACILITIES AND RESOURCES

Pivotal to this program is a facility designed to accommodate this academic vision. The 15,000 square foot facility contains four 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 North Cascades Olympic Science Partnership National Science Foundation-funded \$12 million project is directed and coordinated through the SMATE program. The project involves 28 school districts, two education service districts, four two-year colleges, the Pacific Science Center, and Western Washington University, and runs through August 2008.

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, or stop by the Science, Math and Technology Education Building, Science Lecture 220.

## SCIENCE EDUCATION FACULTY

**ALEJANDRO ACEVEDO-GUTIÉRREZ** (2002) Assistant Professor. BSc, Universidad Autonoma de Baja California Sur, Mexico; PhD, Texas A&M University.

**SUSAN M. DEBARI** (1998) Associate Professor. BA, Cornell University; PhD, Stanford University.

**JACOB BLICKENSTAFF** (2004) Assistant Professor. BA-Physics, MA-Education, PhD-Science Education, University of California-Davis.

**EMILY BORDA** (2005) Assistant Professor. BS-Chemistry, Gonzaga University; MEd-Educational Leadership and Policy, MS, PhD-Chemistry, University of Washington.

**DONALD BURGESS** (2004) Lecturer. MS Education-Biology, State University of New York, Cortland.

**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.

**CAROLYN LANDEL** (2005) Research Associate. MS, PhD, University of Chicago.

**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.

## BACHELOR OF ARTS IN EDUCATION

### *Major — General Science — Elementary* 45 credits

This major 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.

- PHYS 114 or PHYS 121 and 131; ASTR 103 or 315
- CHEM 115 or 123
- GEOL 212 or 311
- BIOL 101 or 204
- SCED 201, 202 and 203, 294, 370
- Electives under advisement

### *Major — General Science — Elementary (with Endorsements in Science and One Other Discipline)*

69-82 credits (plus 107 credits to complete the professional preparation program in elementary education)

This major 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. Courses required for a state teaching endorsement must be completed with a grade of C (2.0) or better.

The student must choose one of the four options — biology, chemistry, earth science, or physics — for the in-depth study required to meet state guidelines for a science endorsement, which includes one in-depth field of study. The minimum number of credits, ranging from 69-82 for the various options, is based on the minimum state requirements for each area plus MATH 115. Changing from one program option to another will increase the total number of credits required to complete the major. The methods courses SCED 480 and 490 are part of the preparation for all elementary teachers. SCED 370 is part of the in-depth study area credits for all four options and meets the writing intensive course requirements.

### **General Science with Biology**

77-80 credits

- Biology — 14 credits: BIOL 204, 205, 206; 3 credits: BIOL

## SCIENCE EDUCATION

- 323; 4 credits: BIOL 321; 2-3 credits: BIOL 322 or 324; 5 credits: BIOL 325, 326; 4 credits: BIOL 432
- 3 credits: SCED 370
- Chemistry — 15 credits: CHEM 121, 122, 251
- Geology — 9-10 credits: GEOL 211, 212 and 414
- Physics — 5 credits: PHYS 114
- Supporting courses — 10 credits: MATH 114, 115

### General Science with Earth Science

78-82 credits

- Geology — 9 credits: GEOL 211, 212; 3 credits: GEOL 214; 4 credits: GEOL 252 or EGEO 331; 5 credits: GEOL 310; 3 credits: GEOL 340; 4 credits: GEOL 311 (or GEOL 306 and 406); 10 credits: geology electives under advisement
- Science Education — 3 credits: SCED 370
- Astronomy — 3 credits: ASTR 103
- Chemistry — 10 credits: CHEM 121, 122
- Physics — 5 credits: PHYS 114
- Biology — 8 credits: BIOL 101, 102
- Supporting courses — 10 credits: MATH 114, 115

### General Science with Chemistry

69-75 credits

- Chemistry — 14 credits: CHEM 121, 122, 123; 5 credits: CHEM 333; 5 credits: CHEM 251 or 11 credits: CHEM 351, 352, 353; 4 credits: CHEM 375
- Science Education — 3 credits: SCED 370
- Physics — 15 credits: PHYS 114, 115, 116
- Geology — 5 credits: GEOL 211
- Biology — 4 credits: BIOL 101
- Geology: 4-5 credits: GEOL 212 or 214
- Supporting courses — 10 credits: MATH 114, 115

### General Science with Physics

74 credits

- Physics — 15 credits: PHYS 121, 122, 123, 131, 132, 133; 3 credits: PHYS 219; 7 credits: PHYS 224, 225; 4 credits: PHYS 322; 5 credits: physics electives under advisement
- Astronomy — 4 credits: ASTR 315
- Science Education — 3 credits: SCED 370
- Chemistry — 5 credits: CHEM 115 or 121
- Biology — 8 credits: BIOL 101, 102
- Geology — 5 credits: GEOL 211
- Supporting courses — 15 credits: MATH 124, 125, 224

### Major — General Science — Secondary

88-99 credits

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.

- Physics — 15 credits: PHYS 114, 115, 116 or PHYS 121, 122, 123 with lab
- Chemistry — 15 credits: CHEM 121, 122, 251
- Biology — 14 credits: BIOL 204, 205, 206
- Earth Science — 13 credits: GEOL 211, 212 and ASTR 103 or GEOL 252 or EGEO 331 or GEOL 340
- Science Education — 3 credits: SCED 370 or equivalent
- Science Education — 7 credits: SCED 481, 491
- Electives in a single scientific discipline, under advisement

to meet state endorsement standards for that discipline: 22-32 additional credits from single science discipline.

## GRADUATE STUDY

For a concentration leading to a Master of Education degree in natural science/science education see the *Graduate School* section of this catalog.

## COURSES IN SCIENCE EDUCATION (SCED)

*Courses numbered X37; X97; 300, 400; 417, 445 are described on Page 34 of this catalog.*

### 201 MATTER AND ENERGY IN PHYSICAL SYSTEMS (4)

Prereq: MATH 112 or higher. The first course in a three 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.

### 202 MATTER AND ENERGY IN EARTH SYSTEMS (4)

Prereq: SCED 201 and MATH 112 or higher or permission of instructor. The second course in a three 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.

### 203 MATTER AND ENERGY IN LIFE SYSTEMS (4)

Prereq: SCED 202 and MATH 112 or higher or permission of instructor. The third course in a three 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.

### 294 INVESTIGATIVE SCIENCE (4)

Prereq: three courses in the natural sciences. Experimental science for pre-service elementary education students. Through "directed discovery," students collaborate in developing and executing a plan to investigate a topic as a common thread in biology, chemistry, geology and physics. Includes experimental work and discussion/lecture, allowing students to develop a theoretical base and practice experimental design.

### 370 SCIENCE AND SOCIETY (3)

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." Writing proficiency course.

### 401 READING IN SCIENCE EDUCATION (1)

Prereq: SCED 491 or concurrent enrollment or permission of instructor. 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.

### 480 SCIENCE METHODS AND CURRICULUM FOR THE ELEMENTARY SCHOOL (5)

Prereq: at least 12 credits in the natural sciences; general university requirements in mathematics; ELED 320. 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.

### 481 FUNDAMENTALS OF TEACHING SCIENCE (2)

Prereq: CHEM 123 or 225 or GEOL 212 or BIOL 206 or PHYS 123. Study of key topics related to teaching science, including nature of science, science standards, constructivism, preconceptions, and assessment.

### 490 LABORATORY/FIELD EXPERIENCE IN ELEMENTARY SCIENCE (3)

Prereq: SCED 480. A field-based experience in which WWU students teach science within their internship year. Includes biweekly seminar.

### 491 METHODS IN SECONDARY EDUCATION FOR SCIENCE TEACHERS (5)

Prereq: admission to the secondary teaching program and a major or con-

centration in natural sciences; SEC 431 or 532 and SCED 481. Study of literature, curriculum and teaching strategies in life, earth and physical sciences for grades 4-12, plus peer teaching and school observations.

## Graduate Courses

*Courses numbered 500; 517; 545; 597 are described on Page 34 of this catalog. Admission to Graduate School or special permission required. See the Graduate School section of this catalog.*

### 501 ADVANCED STUDIES IN SCIENCE EDUCATION (4)

Prereq: teaching experience or permission of instructor. A critical study of research and developments related to science education.

### 511 INTERNSHIP IN SCIENCE EDUCATION (3)

Prereq: permission of instructor. Assisting with the teaching of an on-campus science methods course for pre-service elementary school teachers. S/U grading.

### 512 IN-SERVICE WORKSHOPS IN SCIENCE EDUCATION (3)

Prereq: permission of instructor. Planning and implementing a series of not less than three in-service workshops in elementary school science. Repeatable for elective credit. S/U grading.

### 513 SCIENCE CURRICULUM GRADES K-12 (3)

Prereq: teaching experience or permission of instructor. Examination of science curricula for grades K-12 as a basis for selection of a science curriculum and teacher's guide for use in local school systems.

### 514 SEMINAR IN ELEMENTARY SCIENCE EDUCATION (1-3)

Prereq: permission of instructor. Repeatable to a maximum of 3 credits.

### 515 ASSESSMENT OF SCIENCE UNDERSTANDING (3)

Prereq: EDUC 501, SCED 501. A seminar addressing the development of a variety of formative and summative assessment techniques and exploring the psychometric properties of science items and tests for science teachers.

### 580 SPECIAL PROBLEMS IN SCIENCE TEACHING IN THE ELEMENTARY SCHOOL (2-5)

Prereq: teaching experience or permission of instructor. Problems related to science instruction and curriculum. Repeatable to a maximum of 10 credits.

### 582 SPECIAL TOPICS IN THE PHYSICAL SCIENCES FOR ELEMENTARY SCHOOL TEACHERS (4)

Prereq: SCED 390, 391 or equivalent. In-depth study of topics in the physical sciences most appropriate for instruction in the elementary school. Repeatable with permission of instructor and/or graduate advisor, to a maximum of 8 credits.

### 583 SPECIAL TOPICS IN THE BIOLOGICAL SCIENCES FOR ELEMENTARY SCHOOL TEACHERS (4)

Prereq: SCED 390, 391 or equivalent. In-depth study of topics in the biological sciences most appropriate for instruction in elementary school. Repeatable with permission of instructor and/or graduate advisor, to a maximum of 8 credits.

### 584 SPECIAL TOPICS IN THE EARTH SCIENCES FOR ELEMENTARY SCHOOL TEACHERS (4)

Prereq: SCED 390, 391 or equivalent. In-depth study of topics in earth sciences most appropriate for instruction in the elementary school. Repeatable with permission of instructor and/or graduate advisor, to a maximum of 8 credits.

### 590 SPECIAL PROBLEMS IN SCIENCE TEACHING IN THE JUNIOR AND SENIOR HIGH SCHOOL (2-5)

Prereq: teaching experience or permission of instructor. Problems related to science instruction and curriculum. Repeatable with no maximum.

### 592 SPECIAL TOPICS IN THE PHYSICAL SCIENCES (4)

Prereq: secondary method course, admission to MEd natural sciences program and completion of undergraduate courses required for admission. Content topics in chemistry and physics of special interest to secondary teachers. Repeatable with permission of instructor and/or graduate advisor, to a maximum of 8 credits.

### 593 SPECIAL TOPICS IN THE BIOLOGICAL SCIENCES (4)

Prereq: secondary science methods course, admission to MEd natural sciences program and completion of undergraduate courses required for admission. Content topics in biology of special interest to the secondary teacher. Repeatable with permission of instructor and/or graduate advisor, to a maximum of 8 credits.

### 594 SPECIAL TOPICS IN THE EARTH SCIENCES (4)

Prereq: secondary science methods course, admission to MEd natural sciences program and completion of undergraduate courses required for admission. Content topics in geology and related fields of special interest to secondary teachers. Repeatable with permission of instructor and/or graduate advisor, to a maximum of 8 credits.

### 598 RESEARCH PROJECT (6)

Prereq: admission to MEd natural sciences program, and completion of 15 credits of 500-level courses including one of EDU 501, 506 and SCED 501. Research in fields of biology, chemistry, earth science, general science, physical science, physics or education for non-thesis option.

### 690a RESEARCH (1-12)

Prereq: admission to program, permission of instructor. Restricted to thesis-related research. Repeatable to a maximum of 12 credits.

### 690b FIELD PROJECT (1-12)

Prereq: approval of the student's graduate committee. Field project under the direction of a faculty committee. A portion of the field project normally requires work off campus. S/U grading. Repeatable to a maximum of 12 credits.

# WOODRING COLLEGE OF EDUCATION

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 Office of Superintendent of Public Instruction. 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.

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. An undergraduate certificate program in Teaching English to Speakers of Other Languages is also available.

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.

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 .....	BAEd
Secondary Education .....	MIT
(For information regarding academic majors and endorsements for elementary and secondary education, see departmental listings.)	
Special Education.....	BAEd, MEd
Human Services .....	BA
Education Administration.....	MEd
with administrator certification (principal and superintendent)	
Continuing and College Education .....	MEd
Student Affairs Administration.....	MEd
Rehabilitation Counseling .....	MA

## Teacher Certification Requirements

Teacher certification requirements are outlined in the *Elementary Education, Secondary Education* and *Special Education* sections 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.

## OVERVIEW: WOODRING COLLEGE OF EDUCATION

### Administrative Services

- Dr. Michael Henniger, Associate Dean
- Dr. Sheila Fox, Director, University-School Partnerships
- Dana Edward, Director, Certification and Accreditation
  - Residency Teacher Certification
  - Professional Teacher Certification
- E. Kristine McDuffy, Program Director, Educational Administration
  - Residency Administrator Certification (Principal)
  - Initial Administrator Certification (Superintendent)
- Teacher Education Admissions, Gretchen Anderson, Admissions Administrator
- Office of Field Experiences, Jennifer McCleery, Director
  - Teacher Education internship administration



- Center for Continuing Education in Rehabilitation
- Center for Educational Pluralism
- 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

## **DIVISION OF TEACHER EDUCATION**

### **Department of Elementary Education**

Dr. Chris Ohana, Chair

#### *Programs Offered*

- Elementary Education/Certification — Undergraduate and Post-Baccalaureate
- Early Childhood Education Endorsement (P-3)

### **Department of Secondary Education**

Dr. Bruce Larson, 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. Keith Hyatt, Chair

#### *Programs Offered*

- Early Childhood Special Education/Certification
- Special Education (P-12) with Elementary Education
- Special Education (P-12) with Secondary Education
- Special Education (P-12)/Certification

### **Teacher Education Outreach Programs**

Dr. Laurence Antil, Chair

#### *Programs Offered*

- Elementary Education/Certification with Special Education (P-12) — Undergraduate
- Elementary Education/Certification — Post-baccalaureate
- Special Education (P-12) Endorsement
- Elementary Education Endorsement

### **Teacher Education**

#### *Advanced Programs Offered*

- Professional Certification
- National Board Certification Support Program
- Special Education — Master's

## **DIVISION OF EDUCATIONAL AND COMMUNITY LEADERSHIP**

### **Department of Educational Leadership**

Dr. Susan Mancuso, Chair

#### *Programs Offered*

- Continuing and College Education
- Educational Administration
- Student Affairs Administration
- Teaching English to Speakers of Other Languages (TESOL)

### **Department of Human Services and Rehabilitation**

Dr. Jaquelyn Baker-Sennett, Chair

#### *Programs Offered*

- Human Services
- Rehabilitation Counseling

### **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.

# 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. The Continuing and College Education program is also offered at the Everett site.

For additional information, refer to the Continuing and College Education program in the *Graduate School* section of this catalog. The program office is located in Miller Hall 311 and the phone number is 360-650-3190.

## CONTINUING AND COLLEGE EDUCATION FACULTY

**SUSAN MANCUSO** (1995) Associate Professor. BA, University of California-Los Angeles; MA, Western Washington University; EdD, University of Washington.

**SANDRA DAFFRON** (2002) Assistant Professor. BS, Eastern Illinois University; MS, Southern Illinois University; EdD, Northern Illinois University.

**STANFORD GOTO** (2004) Assistant Professor. BA, MA, PhD, University of California-Berkeley.

### Adjunct Professors

**GEORGE PIERCE** (1998) BA, Farleigh Dickinson University; MA, New School for Social Research; PhD, Claremont Graduate School.

## DEGREE GRANTED

- Master of Education in Continuing and College Education
  - Certificate in Community and Technical College Teaching

## COURSES IN CONTINUING AND COLLEGE EDUCATION (CCE)

*Courses numbered X37, X97; 300, 400; 417. 445 are described on Page 34 of this catalog.*

### 473 METHODS FOR WRITING ASSISTANTS (1-3)

Prereq: selection as a Writing Center Assistant. Study and practice in theories and strategies for guiding writers, one-to-one or in groups, face-to-face or online. S/U grading.

### Graduate courses

*Courses numbered 500; 517; 545; 597 are described on Page 34 of this catalog. Admission to graduate school or special permission required. See the Graduate School section of this catalog.*

### 501 INTRODUCTION TO RESEARCH IN EDUCATION (4)

Prereq: admission to Continuing and College Education program or permission of instructor. 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.

### 510 SECOND LANGUAGE ACQUISITION THEORY FOR THE ADULT LEARNER OF ENGLISH (4)

Prereq: TESOL 401 recommended. Content includes insights of modern linguistic and psychological theory into the process of second language learn-

ing, 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.

### 518 CURRENT ISSUES IN EDUCATION (1-5)

Prereq: graduate status or permission of instructor. Examination and discussion of several current and controversial issues in education. Repeatable with no maximum.

### 521 METHODS AND MATERIALS FOR THE ADULT ENGLISH LANGUAGE LEARNER IN CONTENT COURSES (5)

Prereq: permission of instructor. 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 effective scaffolding unit plan and through a project informed by research and a weekly practicum component with adult English language learners in a classroom setting.

### 542 CLASSROOM MANAGEMENT (2)

Prereq: admission to Community and Technical College Certificate Program or permission of instructor. Techniques for dealing with ethical, behavioral, and motivational challenges experienced both inside and outside the classroom. Legal rights and responsibilities of students and faculty.

### 554 FOUNDATIONS OF CONTINUING EDUCATION (4)

Prereq: graduate status or permission of instructor. 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.

### 556 THE COMMUNITY COLLEGE (3)

History, objectives, organization and role of the public community college; special attention to the expanding system in the state of Washington.

### 570 ISSUES IN ADULT LITERACY (3)

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.

### 571 CURRICULUM DEVELOPMENT AND ASSESSMENT (4)

Prereq: graduate status or permission of instructor. Students will analyze and apply models of curriculum development and assessment.

### 572 CONTINUING PROFESSIONAL EDUCATION (4)

An overview of continuing education programs for professionals, the role of the provider and current issues in the field.

### 573a-d HUMAN RESOURCE MANAGEMENT (2-8)

Prereq: permission of instructor. Provides a foundation for conceptualizing, developing, administering, correcting and improving the effectiveness of the human resource function in community-based organizations, private or public, as well as some educational institutions or agencies. In addition to an overview course 573a, three other sections are available. The four course titles are as follows:

573a INTRODUCTION (2)

573b STAFF DEVELOPMENT AND TRAINING (2)

573c VOLUNTEER MANAGEMENT (2)

573d SUPERVISION (2)

**Note:** CCE 573a must be taken prior to or concurrently with 573b, 573c and/or 573d.

### 574 EXPERIENTIAL LEARNING: THEORY TO PRACTICE (4)

Designed to provide theory and practice in the use of educational strategies that enhance the learner's ability to translate research into usable knowledge.

### 576 LEADERSHIP AND MANAGEMENT OF EDUCATIONAL PROGRAMS (4)

Prereq: graduate status or permission of instructor. A study of contemporary theories of leadership and their application in private, public and non-profit agencies.

### 577 LEARNING IN ADULTHOOD (4)

Prereq: graduate status or permission of instructor. Study of the ways adults

learn and the factors related to their motivation, participation and achievement. Application of theory to practice.

#### 578 PROGRAM PLANNING (4)

Prereq: graduate status or permission of instructor. Program planning for all types of institutionalized adult education settings, including both private and public organizations, in-service education, etc. Case studies utilized.

#### 579 POWER IN ORGANIZATIONS (4)

Prereq: graduate status or permission of instructor. Study of the sources of power in organizations, power acquisition and various kinds of power. Examine alternatives to traditional views of power and bureaucracy.

#### 580 EFFECTIVE TEACHING (5)

Prereq: graduate status or permission of instructor; CCE 577 recommended prior to CCE 580. 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.

#### 581 READINGS IN CONTINUING AND COLLEGE EDUCATION (2-5)

Prereq: permission of instructor. 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.

#### 590 GLOBAL PERSPECTIVES IN EDUCATION (4)

Prereq: graduate status or permission of instructor. 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.

#### 591 APPLIED RESEARCH PROPOSAL (2)

Prereq: CCE 501. Use of qualitative research models to develop a research proposal to study a question from the student's own practice. S/U grading.

#### 592 FIELD EXPERIENCE (2-6)

Prereq: graduate status or permission of instructor. 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.

#### 599 GRADUATION SEMINAR (1-3)

Prereq: student (a) must be in final quarter of classes excluding thesis/field project and (b) must receive approval of program advisor. 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.

#### 690 THESIS (1-9)

Prereq: advancement to candidacy and approval of the student's graduate committee. Research study under the direction of a faculty committee. Repeatable to a maximum of 9 credits. S/U grading.

#### 691 RESEARCH SEMINAR (1-6)

Prereq: approval of the student's graduate committee or program advisor. Graduate research under the direction of program advisor/committee. Repeatable to a maximum of 6 credits. S/U grading.



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# 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.

## COURSES IN EDUCATION (EDUC)

### 108 PURPOSEFUL LEARNING (2)

Prereq: first-year freshman, warning or probation status. Seminar course developed for enhancing student understanding and application of the meta-cognitive process of lifelong learning.

### 109 EXPLORATIONS IN EDUCATION (3)

Provides pre-professional students an opportunity to explore the profession of teaching, professional teacher education programs and citizen participation in the process of education.

### 301 EDUCATIONAL PSYCHOLOGY I: DEVELOPMENT AND INDIVIDUAL DIFFERENCES (4)

Prereq: admission to Woodring College of Education or permission of department chair. Principles of development and individual differences as they relate to both academic and nonacademic functioning. Emphasis on implications for P-12 classrooms.

### 302 EDUCATIONAL PSYCHOLOGY II: MOTIVATION, LEARNING AND ASSESSMENT (4)

Prereq: EDU 301. Principles of human motivation and learning and their implications for P-12 classrooms; basic statistical and applied concepts used in assessment of student performance.

### 309 STORYTELLING: ORAL NARRATIVE HISTORY, CULTURE AND SOCIETY (4)

Current trends and interdisciplinary applications of storytelling. Selection, adaptation and presentation of stories for various settings and audiences, with emphasis on the history of oral narrative traditions, cultural perspectives, and societal impact.

### 310 TEACHER AND THE SOCIAL ORDER (4)

Prereq: admission to Woodring College of Education or written permission of department chair. Dominant aspects of society as they interact with schools and teaching. Requires 15 hours working with a service learning organization.

### 320 READER'S THEATRE IN THE CLASSROOM (4)

Prereq: LIBR 405 or ENG 441 recommended. Adaptation of fiction and non-fiction into script form for K-12 classroom. Emphasis on teaching creative writing, literature appreciation, teamwork and oral skills development.

### 409 ADVANCED STORYTELLING (3)

Prereq: LIB 309 and/or permission of instructor. 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.

### 450 TEACHER ASSISTANCE PROGRAM (2)

Prereq: contracted first- or second-year teacher. Focuses on the induction of first- and second-year teachers to the profession and supports professional practice known to support student learning.

### 451 PROFESSIONAL CERTIFICATION PRE-ASSESSMENT SEMINAR (3)

Prereq: admission to the Professional Certification Program. Candidates form a Professional Growth Team and develop a Professional Growth Plan in accordance with state guidelines. Through seminar discussion they align professional practice with the researched knowledge base of the profession.

### 452 PROFESSIONAL CERTIFICATION CORE (3)

Prereq: satisfactory completion of EDUC 451 and formal admission to the Pro-

fessional Certification program. Develop portfolio evidence aligned with Professional Certification Standards and Criteria. Select elective credit courses/workshops that further professional development toward goal written in the prerequisite seminar.

### 453 PROFESSIONAL CERTIFICATION LINKING CLASS (1)

Prereq: permission of instructor. Create an organized and "at standard" portfolio of evidence to meet Professional Certification standards.

### 454 CULMINATING SEMINAR (2)

Prereq: successful completion of the Pre-Assessment and Core components in the Professional Certificate sequence. This is a final course in the Professional Certificate sequence. Candidates discuss and present evidence of continuous student performance progress monitoring strategies. They formally present a summary of professional development activities related to the goals written earlier in the program and identify next steps in their professional development plans.

### 455 EFFECTIVE TEACHING MODULE IV (3)

Prereq: Alternate Certificate Modules I, II, III. Candidates complete program outcomes by submitting "at standard" performance indicators that are embedded in instructional and classroom management plans. They create an annotated bibliography of research-based effective teaching strategies, facilitate student use of technology and complete a draft of a Professional Growth Plan.

### 456 ALTERNATE ROUTE: INTERNSHIP (3)

Prereq: concurrent enrollment in EDUC 455. A mentored teaching experience to develop and demonstrate the knowledge and skills learned in the accompanying EDUC 455 course.

### 457 NATIONAL BOARD PREPARATION PART I (3)

Prereq: candidacy for National Board Certification. Development of the first National Board entry focused on professional accomplishments and outreach to families and the community. Participation in cohort group discussions and group evaluation of entry drafts.

### 458 NATIONAL BOARD PREPARATION PART II (3)

Prereq: candidacy for National Board Certification. Candidates participate in discussions of "at standard" performance, timelines and differences between analytic, reflective and descriptive writing. They submit all entries to the National Board and complete an Assessment Center test in their certificate area by an established March deadline.

## Graduate Courses

*Courses numbered 500; 517; 545; 597 are described on Page 34 of this catalog. Admission to Graduate School or special permission required. See the Graduate School section of this catalog.*

### 501 INTRODUCTION TO EDUCATIONAL RESEARCH (4)

Prereq: graduate status or permission of instructor; must be taken within the first 12-16 credit hours under advisement. Introduction to the concepts and procedures of contemporary educational 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.

### 502 LEARNING AND INSTRUCTION (4)

Prereq: graduate status or permission of instructor; must be taken within the first 12-16 credit hours under advisement. Presents the student with content pertaining to learning processes of students as they relate to the acquisition of skills and knowledge through classroom instruction.

### 504 PHILOSOPHICAL INQUIRY AND PRACTICE (4)

Prereq: graduate status and EDUC 501 or permission of instructor. A seminar in which participants become members of a "community of inquiry" to deepen their understanding of the transformational aspects of pedagogy. Participants examine both enduring and contemporary issues and analyze some central assumptions embedded in current teaching practice. The engagement provides a means by which participants can begin to transform their own pedagogical practice.

### 505 CREATING CLASSROOMS FOR LEARNING (4)

Prereq: graduate status and EDUC 501 or permission of instructor. Advanced studies in culturally responsive curriculum, instruction, and assessment.



**506 ACTION RESEARCH: APPLIED RESEARCH AND PROJECT DESIGN (4)**

Prereq: graduate status, EDUC 501, 502, and 505 or permission of instructor. Examination and analysis of research related to contemporary issues in education, including research methods and inquiry approaches. Development of a literature review, and an individualized proposal for a project or thesis.

**534 ASSESSING EDUCATIONAL QUALITY (3)**

Prereq: EDUC 501 or permission of instructor. Developing criteria and designing procedures for measuring input process and product resulting from special or innovative programs, community factors, options in ad-

ministrative and instructional organization; for coordinators and research workers in the public schools.

**690 THESIS (1-5)**

Prereq: advancement to candidacy and approval of the student's graduate committee. Research study under the direction of a faculty committee. Repeatable to a maximum of 5 credits. S/U grading.

**691 RESEARCH SEMINAR AND INQUIRY PROJECT (1-5)**

Prereq: advancement to candidacy and approval of the student's graduate committee. Research study under the direction of a faculty committee. Repeatable to a maximum of 5 credits. S/U grading.

# EDUCATIONAL ADMINISTRATION

The Educational Administration program is designed to prepare thoughtful, knowledgeable, and effective P-12 school leaders for a diverse society. Upon successful completion of the program, candidates are recommended for the master's degree and/or principal's certificate or the superintendent's certificate. 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 principal certificate programs are offered in Bellingham, Bremerton and Shoreline; the superintendent certification program is 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 204A, phone 360-650-3708, toll-free 866-913-3323, e-mail Judy.Gramm@wwu.edu.

*\*NOTE: Verification of good moral character and personal fitness forms available in the Educational Administration Office, Miller Hall 204A, 360-650-3708, are required if the applicant does not hold a valid Washington certificate at the time of application.*

## EDUCATIONAL ADMINISTRATION FACULTY

**WARREN ALLER** (1996) Lecturer. BS, University of Idaho; MEd, Western Washington University.

**MARY LYNN DERRINGTON** (2006) Assistant Professor. BS, Southern Illinois University; MS, Portland State University; EdD, University of Washington.

**DONALD E. LARSEN** (2005) Assistant Professor. BA, Seattle Pacific University; MA, Pacific Lutheran University; PhD, Washington State University.

**LAWRENCE W. MARRS** (1984) Professor. BS, MS, University of Utah; PhD, University of Texas.

**E. KRISTINE MCDUFFY** (1994) Program Director. BAE, MEd, Western Washington University; EdD, Seattle University.

## DEGREES GRANTED

- Master of Education in Educational Administration (Elementary/Secondary or Instructional Technology)
  - Principal's (Residency or Professional) Certificates
  - Superintendent's Certificate

**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.

Information on demonstrating or developing competence is available in Miller Hall 204.

## COURSES IN EDUCATIONAL ADMINISTRATION (EDAD)

*Courses numbered X37; X97; 300, 400; 417, 445 are described on page 34 of this catalog.*

### 101a-f INTRODUCTORY PRINCIPLES AND PRACTICES IN SCHOOL DISTRICT FINANCIAL SUPPORT SERVICES (1-3)

Instruction and practicum experiences for beginning school district financial

support personnel. Studies of topics in any of the following areas: (a) school district accounting; (b) school district purchasing; (c) school district payroll; (d) departmental management; (e) student body fund management; (f) school district current topics. Repeatable with no maximum. S/U grading.

### 201a-h INTERMEDIATE PRINCIPLES AND PRACTICES IN SCHOOL DISTRICT FINANCIAL SUPPORT SERVICES (1-3)

Prereq: permission of instructor. Instruction and practicum experiences at the intermediate level for the school district financial support personnel. Studies of topics in any one of the following areas: (a) school district accounting; (b) school district purchasing — standards and specifications; (c) school district payroll; (d) departmental management; (e) student body fund management; (f) school district current topics; (g) school district bidding; (h) budget analysis. Repeatable with no maximum. S/U grading.

### 301a-f ADVANCED PRINCIPLES AND PRACTICES IN SCHOOL DISTRICT FINANCIAL SUPPORT SERVICES (1-3)

Prereq: permission of instructor. Instruction and practicum experiences at the advanced level for school district financial support personnel. Studies of topics in any one of the following areas: (a) school district financial analysis; (b) public works purchasing; (c) school district payroll; (d) departmental management; (e) student body fund management; (f) school district current topics. Repeatable with no maximum. S/U grading.

### 456 PRINCIPLES AND PRACTICES OF INDIVIDUALIZED INSTRUCTION AND CONTINUOUS PROGRESS EDUCATION (4)

Prereq: practicing teacher. Survey of practices related to most individualized programs and how such practices and programs relate to certain principles of learning; emphasis on types and uses of alternative learning materials found in such programs and systems for monitoring and managing learner progress.

### 458a-m MANAGING CONFLICT AND STRESS (1-4)

Examines the relationships among conflict, stress and health. Emphasizes coping and managing techniques. Self-assessment methods necessary to diagnose stressors in the work setting, et cetera, are included. Repeatable with no maximum. S/U grading.

## Graduate Courses

*Courses numbered 500; 517; 545; 597 are described on page 34 of this catalog.*

*Admission to Graduate School or special permission required. See the Graduate School section of this catalog.*

### 501 INTRODUCTION TO EDUCATIONAL RESEARCH AND EVALUATION (4)

Prereq: graduate status or permission of instructor. 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 instruction decision making.

### 512 POLICY STUDIES IN EDUCATIONAL ADMINISTRATION (4)

Prereq: graduate status or permission of instructor. 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.

### 518 CURRENT ISSUES IN EDUCATION (1-5)

Prereq: graduate status or permission of instructor. Examination and discussion of several current and controversial issues in education. Repeatable with no maximum.

### 537 SEMINAR IN PUBLIC SCHOOL FINANCE (4)

Local-state fiscal arrangements; current school budgets; related educational finance procedures.

### 538 CASE STUDIES IN SCHOOL ADMINISTRATION (2-4)

Prereq: graduate status or permission of instructor. Studies to assist students in understanding school administration. Repeatable to a maximum of 6 credits.

### 539 EDUCATIONAL LEADERSHIP (4)

Prereq: teaching experience or permission of instructor. Roles and respon-

sibilities of persons serving as members of the leadership team in public schools. S/U grading.

**540 POLITICAL AND ECONOMIC FORCES SHAPING EDUCATION (4)**  
Prereq: graduate status or permission of instructor. A study of major forces and groups at the federal, local and state level which impact education through political and economic means.

**541 THEORY IN EDUCATIONAL ADMINISTRATION (4)**  
Prereq: graduate status or permission of instructor. The study of major administrative theories, and the impact of management, leadership, and decision-making for school administrators.

**542 PUBLIC SCHOOL ORGANIZATION AND ADMINISTRATION (4)**  
Problems and potentials of the principalship.

**543 SUPERVISION IN THE PUBLIC SCHOOLS (4)**  
Supervision as educational leadership in continuous evaluation and improvement of school practice.

**544 COLLECTIVE BARGAINING IN THE PUBLIC SCHOOLS (4)**  
Technical structure and protocol of collective bargaining as well as issues and practices.

**546 ADMINISTRATIVE RESEARCH TOPICS (2-3)**  
Prereq: graduate status or permission of instructor. Identification, study and evaluation of research topics appropriate for building level administrators. Repeatable to a maximum of 6 credits.

**547 READINGS IN SCHOOL ADMINISTRATION (2-5)**  
Prereq: permission of instructor. Supervised study focusing on one or more selected topics. Repeatable to a maximum of 6 credits.

**548 SCHOOL LAW (4)**  
Legal principles underlying statutes and court decisions related to the schools.

**549 SEMINAR IN SCHOOL PERSONNEL ADMINISTRATION (4)**  
Prereq: permission of instructor. Professional relationships among certified employees and other school personnel; development and implementation of policies.

**550 DEVELOPING STAFF AND COMMUNITY RELATIONS (4)**  
Prereq: graduate status or permission of instructor. Models for planning, implementing and evaluating professional development and school/community relations programs.

**551 SYSTEMS APPROACH AND EDUCATIONAL MANAGEMENT (4)**  
The systems approach as related to educational project planning and management.

**552 PLANNING FOR CURRICULUM ADMINISTRATION (4)**  
Prereq: graduate status or permission of instructor. Planning and decision-making process as related to development and administration of educational curriculum and innovations.

**553 ADMINISTERING ELEMENTARY AND SECONDARY SCHOOLS (4)**  
Prereq: permission of instructor. Program articulation between elementary and secondary schools as well as unique aspects of these schools.

**554 ADMINISTRATION AND THE INTERNATIONAL SCHOOL (2-6)**  
Prereq: permission of instructor; graduate status. 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.

**555 SEMINAR IN EFFECTIVE SCHOOL PRACTICES (4)**  
Review and analysis of research findings related to effective school practices.

**556 FIELD STUDY IN EDUCATIONAL ADMINISTRATION (2-3)**  
Prereq: advancement to candidacy, permission of instructor and submission of outline indicating scope of project. Design, implementation and evaluation of a field project (6 credits maximum/minimum).

**592 FIELD EXPERIENCE IN ADMINISTRATION FOR THE PRINCIPAL (2-6)**  
Prereq: written permission of instructor. Applicants for the Washington State Administrative Certificate. Repeatable with no maximum. S/U grading.

**594 PRACTICA IN ACTION RESEARCH (3 ea)**  
Prereq: teaching experience and permission of instructor. 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.

**640 CURRENT TOPICS IN EDUCATION (1-5)**  
Prereq: master's degree and permission of instructor. Studies of current topics in educational administration, personnel administration, interprogram topics. Repeatable with no maximum.

**641 IMPROVING STUDENT LEARNING (4)**  
Prereq: master's degree and EDAD 552 or equivalent. Systematic examination of curriculum and instruction policy development, implementation and maintenance of curriculum models, and development of guidelines for curriculum governance.

**642 EFFECTIVE SCHOOL SYSTEM MANAGEMENT (5)**  
Prereq: master's degree and permission of instructor. Examination of important school system management theories and models. Development of strategies for management models implementation, evaluation and maintenance.

**643 ADVANCED LEADERSHIP THEORY (5)**  
Prereq: master's degree. 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.

**644 PUBLIC POLICY FORMULATION AND PRACTICE (4)**  
Prereq: master's degree. Exploration of research-based approaches to the development and implementation of public policy. Examines successful approaches to implementation and dissemination.

**646 FIELD PROJECT IN EDUCATIONAL ADMINISTRATION (2-5)**  
Prereq: master's degree, permission of instructor and submission of a one-page outline indicating scope of proposed project. Repeatable to a maximum of 8 credits.

**647 SEMINAR FOR SCHOOL DISTRICT LEADERS (4)**  
Prereq: master's degree, applicant for a Washington State Superintendent's Certificate and/or permission of instructor. Current problems and issues facing school administrators.

**690 THESIS (1-9)**  
Prereq: advancement to candidacy and approval of the student's graduate committee. Research study under the direction of a faculty committee. Repeatable to a maximum of 9 credits. S/U grading.

**691 RESEARCH SEMINAR (1-6)**  
Prereq: advancement to candidacy and approval of the student's graduate committee or program advisor. Research study under the direction of a faculty committee. Repeatable to a maximum of 6 credits. S/U grading.

**692 FIELD EXPERIENCE IN ADMINISTRATION FOR THE SUPERINTENDENT (1-6)**  
Prereq: master's degree and written permission of instructor. Applicants for the Washington State Administrative Certificate. S/U grading. Repeatable with no maximum.

# ELEMENTARY EDUCATION

The Department of Elementary Education offers professional education programs that lead to recommendation to the Office of the Superintendent of Public Instruction for residency 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 the needs of individual students.

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 is a carefully sequenced professional program that is firmly backed by current research on effective teaching and learning.

## Information

Individuals interested in teacher education can obtain information from the Web site at [www.wce.wvu.edu/Admiss](http://www.wce.wvu.edu/Admiss). Inquiries should be directed to the Woodring College Teacher Education Admissions Office, Miller Hall 206, phone 360-650-3313, e-mail address [TeacherEdAdmissions@wvu.edu](mailto:TeacherEdAdmissions@wvu.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 Web site at [www.wce.wvu.edu/Depts/ELED](http://www.wce.wvu.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@wvu.edu](mailto:Ellen.Kreider@wvu.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@wvu.edu](mailto:gradschl@wvu.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.

## ELEMENTARY EDUCATION FACULTY

**CHRIS OHANA** (1999) Chair and Associate Professor. BA, University of California-Berkeley; MA, University of Oregon; PhD, Iowa State University.

**JOANNE CARNEY** (2003) 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.

**TRACY COSKIE** (2003) Assistant Professor. BA, University of Rochester; MEd, PhD, University of Washington.

**WILLIAM DEMMERT** (1999) Professor. BA, Seattle Pacific College; EdM, University of Alaska; EdD, Harvard Graduate School.

**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) Lecturer. MA, California State University; PhD, University of California-Santa Barbara.

**SUZANNE KROGH** (1990) Professor. BA, Florida State University; MEd, University of Maryland; PhD, University of Oregon.

**MATTHEW MILLER** (2005) Assistant Professor. BA, St. Olaf College; MA,

University of Arizona; MEd, University of Minnesota; PhD, University of Washington.

**MARSHA RIDDLE BULY** (1999) Associate Professor. BA, Western Washington University; MA, California State University; PhD, University of Washington.

**ROSEMARY VOHS** (1994) Lecturer. BA, Northwest College; MA, Western Washington University.

## ELEMENTARY EDUCATION PROGRAMS

The elementary education department 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 professional education program, a major in an approved area, and a one-year internship experience that includes one quarter of full-time teaching.
- **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 Child Development Studies Major and the Early Childhood Education Professional Program requirements, which are currently under revision. See the elementary education department for details.

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. The WEST-E test for Washington state is changing. For current information on test requirements, registration, fees, and test dates and locations, refer to the WEST-E Resource Web site, [www.wce.wvu.edu/Resources/Endorsements/WEST-E.shtml](http://www.wce.wvu.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.

Residency certificates are valid until completion of provisional employment as a contracted teacher, and reissued for a period of five years. Application for the residency certificate is made to the Woodring College of Education Certification Office, Miller Hall 216, phone 360-650-4930, no later than three months prior to the start of the internship.

### 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 202.

## 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. Elementary education students complete the professional program leading to an endorsement in Elementary Education, and an approved major designed specifically for elementary education candidates. Approved academic majors are listed below under *Choosing an Academic Major*. Elementary education students may also earn an additional endorsement in Early Childhood Education 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 202.

## 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, 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, 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 206 and are also printable from [www.wce.wvu.edu/Admiss](http://www.wce.wvu.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 Web site 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
- Completion of an acceptable public speaking 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

## ELEMENTARY EDUCATION

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 I
- Completion of the Woodring College of Education Blood-Borne Pathogens Training I
- Students should obtain and read a copy of the *Student Conduct and Case Conference Handbook*, available in Miller Hall 262, and discuss any questions with a faculty advisor

#### *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 202 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

### ELEMENTARY PROGRAM

Requirements for completion of the professional program in Elementary Education are outlined below.

#### *Elementary Education Professional Program Requirements* 107 credits

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.

#### *Professional Studies Core*

25 credits

- Psychological Foundations
  - EDUC 301
  - EDUC 302
- Social/Philosophical Foundations
  - EDUC 310
- Instructional Foundations
  - SPED 364
  - ELED 370
  - IT 344
  - IT 442

#### *Elementary Program — Methods, Curriculum Content, and Field Experiences*

82 credits

- ART 380
- ELED 380, 425, 470, 471, 480, 481, 494
- HLED 455
- MATH 381, 382, 383, 491
- MUS 361
- PE 345
- SCED 480, 490
- SPED 464

### 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)

## 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 Web site, [www.wce.wvu.edu/Resources/OFE](http://www.wce.wvu.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 of Education, Office of Field Experiences, phone 360-650-3310, Miller Hall 206.

## BACHELOR OF ARTS IN EDUCATION

The Child Development Studies Major and the Early Childhood Education Professional program requirements currently are under revision. See the elementary education department for details.

### Major — Child Development Studies (P-3)

This major must be accompanied by the professional preparation program in early childhood education. Program admission, completion, and teacher certification requirements are provided within the Elementary Education section of the catalog.

This major is currently under revision. See the elementary education department for details.

#### Required courses

29-30 credits

- ELED 435
- ELED 438 or SPED 468 or HSP 331
- ELED 405, 430, 431
- ENG 441
- SPED 364, 443

#### Elective courses

Added for a total of 45 credits

- CSD 251, 354, 485
- PSY 210, 240, 274, 330\*
- ANTH 351, 353, 481, 484
- SOC 260, 268, 368, 380
- HSP 315
- EDUC 309
- ENG 442
- TESL 401, 402, 410

\*PSY 330 requires SOC 207 or PSY 301 as a prerequisite. Either prerequisite course may apply to the total credits in this major.

### Early Childhood Education Professional Program

102-103 credits

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 Child Development Studies Major, and the professional education course work below.

This major is currently under revision. See the elementary education department for details.

#### Professional studies core

20-21 credits

- EDUC 301, 302, 310
- ELED 370\*
- IT 344, 442

### Early Childhood Program — Methods, Curriculum Content

60 credits

- ART 380
- ELED 380, 434, 437, 470,\* 471,\* 480\*
- MATH 381, 382, 383
- MUS 361
- PE 345
- SCED 480
- SPED 365, 444

## ELEMENTARY EDUCATION

### Required field experiences

- ELED 390, 494
- SCED 490

\*The following courses also contain practicum components: ELED 370, 470, 471, 480.

### English as a Second Language Endorsement and WWU TESL Certificate (optional)

27 credits

Students should choose TESL 401, 402, 410 as part of the Child Development Studies major. In addition, they should add for endorsement:

- TESL 420, 421, 430

See the TESOL Program for prerequisites.

### Major — Elementary Education Studies

53-57 credits

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.

- Mathematics
  - MATH 381, 382, 383
- Science
  - SCED 294, 370, 480
- Humanities
  - ENG 202 or 203 or 446
  - ENG 347 or 441 or ELED 405
  - MUS 202 or 205 or PHIL 350 or 360 or THTR 351 or a course in Art History
  - HIST 391
  - HIST 280 or 285 or 287
- Social Sciences
  - PLSC 250
  - ESTU 303 or 304 or 305 or ECON 446 or PLSC 345 or 346 or 347 or 353 or ELED 464

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.

### COURSES IN ELEMENTARY EDUCATION (ELED)

Courses numbered X37; X97; 300, 400; 417-445 are described on Page 34 of this catalog.

#### 131 INTRODUCTION TO EARLY CHILDHOOD EDUCATION (3)

Review of the field in terms of history, philosophy and professional opportunities; observation of young children.

#### 350 INTRODUCTION TO MIDDLE SCHOOLS (4)

Prereq: admission to Woodring College of Education. 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.

#### 370 INTRODUCTION TO TEACHING (5)

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.

#### 372 INTRODUCTION TO TEACHING SEMINAR (4)

Prereq: admission to Woodring College Elementary Teacher Education Out-

reach Programs. Co-req: ELED 373. Explores 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.

#### 373 INTRODUCTION TO TEACHING — PRACTICUM (1)

Prereq: admission to Woodring College Elementary Teacher Education Outreach Programs. Co-req: ELED 372. Practicum experience 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.

#### 380 LITERACY I: FOUNDATIONS (4)

Terminology and concept development of the language of literacy; introduction to assessment, curriculum, and instruction of literacy teaching and learning.

#### 390 EARLY CHILDHOOD PRACTICUM AND SEMINAR (3)

Prereq: permission of instructor. Observation, participation and related seminars in pre-kindergarten (infant, toddler, and/or preschool) sites. S/U grading.

#### 405 BOOKS AND MATERIALS FOR ELEMENTARY SCHOOLS (4)

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.

#### 407 BOOKS AND MATERIALS FOR YOUNG ADULTS (4)

Reading and uses of books for adolescents and their curriculum; multicultural and self-concept literature; realistic and mystical fiction and poetry; literary analysis.

#### 424 LANGUAGE ARTS IN THE ELEMENTARY CURRICULUM (4)

Prereq: ELED 320. Functions and programs of language arts in the curriculum including reading, writing, speaking, listening.

#### 425 SOCIAL STUDIES FOR THE ELEMENTARY SCHOOL (5)

Prereq: ELED 370. 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.

#### 430 CREATIVITY AND PLAY IN EARLY EDUCATION (3)

Prereq: ELED 370 or SPED 420; EDUC 301 and 302. The content, skills, and techniques for working with young children in arts disciplines. Includes study of cognitive development and hearing through play.

#### 431 HISTORICAL AND CURRENT ISSUES IN EARLY CHILDHOOD EDUCATION (4)

Prereq: permission of instructor. An in-depth study of the historical and philosophical bases of the education of young children and an examination of psychological principles as they relate to current programs.

#### 432 SOCIAL STUDIES FOR EARLY CHILDHOOD (4)

Prereq: ELED 370 or SPED 420; EDUC 301 and 302. The content, skills, and techniques for teaching social studies in preschool through grade 3. Includes the study of integrated curriculum, curriculum unit design.

#### 434 ENVIRONMENTS FOR EARLY LEARNING (4)

Prereq: ELED 370 or SPED 420; EDUC 301 and 302. Observation and analysis of, and planning for, early childhood classroom environments. Includes study of guidance strategies and the importance of the environment to cognitive and social development.

#### 435 CHILD ABUSE AND NEGLECT (3)

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.

#### 438 SCHOOL-HOME-COMMUNITY RELATIONSHIPS (1-3)

Problems of communication and interaction among teachers, parents, and paraprofessionals, administrators, and community; conferencing, planning meetings, community survey. PR publications, use of mass media.

#### 442 WORKING WITH STUDENT TEACHERS (3)

Prereq: teaching experience. Techniques for the orientation of student teachers, major problems which confront student teachers, and evaluation of their achievement.



**458 MANAGING CONFLICT AND STRESS IN TEACHING (1-3)**

Prereq: teaching experience. Examines the relationships among conflict, stress and health. Emphasizes coping and managing techniques. Also includes self-assessment methods necessary to diagnose stressors in the work setting, et cetera.

**464 MULTICULTURAL EDUCATION FOR TEACHERS (4)**

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.

**470 DEVELOPING TEACHING (5)**

Prereq: completion of the Western Washington University Elementary Education Degree Requirements. 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.

**471 DOCUMENTING TEACHING (5)**

Prereq: ELED 470. 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. Includes practicum experiences in an elementary or middle school classroom and participation in a collegial learning community.

**472 DEVELOPING TEACHER SEMINAR (3)**

Prereq: admission to Woodring College Elementary Teacher Education Outreach Programs; ELED 372, 373. Co-req: ELED 473. 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 and organization. Not open to students who have received credit for ELED 470.

**473 DEVELOPING TEACHING — PRACTICUM (2)**

Prereq: admission to Woodring College Elementary Teacher Education Outreach Programs; ELED 372, 373. Co-req: ELED 472. Practicum experience 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.

**474 DOCUMENTING TEACHING SEMINAR (3)**

Prereq: admission to Woodring College Elementary Teacher Education Outreach Programs; ELED 472, 473. Co-req: ELED 475. 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.

**475 DOCUMENTING TEACHING —PRACTICUM (2)**

Prereq: admission to Woodring College Elementary Teacher Education Outreach Programs; ELED 472, 473. Co-req: ELED 474. Practicum experience 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.

**478 LITERACY: FLUENT COMMUNICATORS SEMINAR (4)**

Prereq: admission to Woodring College Elementary Teacher Education Outreach Programs; ELED 380. Co-req: ELED 479. 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.

**480 LITERACY II: BEGINNING COMMUNICATORS (5)**

Prereq: ELED 380 (or ENG 370 for English-Elementary majors). English-Elementary majors must also take ENG 440 and ENG 441 as pre- or co-requisites. 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.

**481 LITERACY III: FLUENT COMMUNICATORS (5)**

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.

**485 BASIC READING INSTRUCTION (3-4)**

Prereq: ELED 320. 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.

**486 PROBLEMS IN CORRECTIVE READING INSTRUCTION (4)**

Prereq: permission of instructor. Analysis, correction and prevention of reading problems; refinement of group and informal testing; supervised practicum with pupils having mild disabilities in reading.

**487 CRITICAL ISSUES: ETHICS, PEDAGOGY, AND POLICY (4)**

Inquiry into critical issues in education at the school, local district, state, and national levels with particular reference to professional ethics, pedagogical practice and beliefs, and educational policy and reform.

**488 INDIVIDUALIZED READING INSTRUCTION (1-5)**

Principles and practices of individualized reading with emphasis on problems in organizing classroom programs for meeting individual interests and needs.

**489 LANGUAGE STRUCTURE AND READING DEVELOPMENT (4)**

Examines the structure of language and its development in children with consideration of how this structure and development are critical to effective reading instruction.

**490 TEACHING LABORATORY (4)**

Prereq: SEC 471 or 571 or permission of program advisor. Diagnosis of students, lesson preparation, videotaped peer teaching, analysis of teaching, lesson redesign.

**491 SEPTEMBER EXPERIENCE (2-3)**

Prereq: permission of department. Observation and participation in the opening of school. S/U grading.

**494 INTERNSHIP — ELEMENTARY (2-18)**

Prereq: recommendation for supervised teaching. Supervised teaching experience to develop and demonstrate teaching competence at the primary and/or intermediate grades. Repeatable to 24 credits. S/U grading.

**495 INTERNSHIP — EARLY CHILDHOOD EDUCATION (2-24)**

Prereq: recommendation for supervised teaching. Supervised teaching experience to develop and demonstrate teaching competence at the pre-primary or primary level. Repeatable to 24 credits. S/U grading.

**Graduate Courses**

*Courses numbered 500; 517; 545; 597 are described on Page 34 of this catalog. Admission to Graduate School or special permission is required. See the Graduate School section of this catalog.*

**518 CURRENT ISSUES IN EDUCATION (1-5)**

Prereq: graduate status or permission of instructor. Examination and discussion of several current issues in Elementary Education.

**521 SEMINAR IN ELEMENTARY CURRICULUM (4)**

Prereq: completion of requirements for teaching certification and an elementary K-8 teaching endorsement. Advanced study of curriculum planning and development, including design, materials and problems in curriculum change. Independent research is expected.

**530 PLAY AND THE CHILD (4)**

Prereq: graduate status or teaching experience. 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.

**531 SEMINAR IN EARLY CHILDHOOD EDUCATION (4)**

Prereq: permission of instructor. In-depth exploration of programs, theories and significant recent research in early childhood education.

**531a ADVANCED SEMINAR IN EARLY CHILDHOOD EDUCATION (3)**

Prereq: ELED 531, 596a. Specific problems are drawn from the field and content organized according to student need.

**533 ADVANCED SEMINAR IN ELEMENTARY EDUCATION (4)**

Prereq: advancement to candidacy. Advanced study of individual research topics in elementary education.

## ELEMENTARY EDUCATION

### 535 RESEARCH ANALYSIS OF CURRENT ISSUES IN ELEMENTARY EDUCATION (4)

Prereq: completion of requirements for teaching certification and an elementary K-8 teaching endorsement, graduate status and EDU 501. Examination and analysis of research underlying current issues and problems in elementary education.

### 538 CURRENT ISSUES IN ASSESSMENT AND EVALUATION IN ELEMENTARY LITERACY EDUCATION (4)

Prereq: graduate status or teaching experience. Examines current theory and research and practice in classroom-based literacy assessment and evaluation.

### 539 MASTER'S SEMINAR (4)

Prereq: completion of requirements for teaching certification and an elementary K-8 teaching endorsement, advancement to candidacy, ELED 501, EDF 512, 513, ELED 521, 535. Preparation and presentation of a seminar paper on a problem or issue in education.

### 555 MIDDLE SCHOOL CURRICULUM DESIGNS AND INSTRUCTIONAL STRATEGIES (4)

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.

### 569a ISSUES IN INCLUSIVE EARLY EDUCATION (3)

Prereq: admission to graduate school or permission of instructor. 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.

### 569b ASSESSMENT OF YOUNG CHILDREN (BIRTH-8 YEARS) (4)

Prereq: admission to graduate school or permission of instructor. 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.

### 569c INCLUSIVE CURRICULUM IN EARLY CHILDHOOD (3)

Prereq: admission to graduate school or permission of instructor. 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.

### 583 LITERACY AND CHILDREN'S LITERATURE (4)

Prereq: teaching experience. 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.

### 584 TEACHING THE INTEGRATED LANGUAGE ARTS (4)

Prereq: graduate status or teaching experience. Teaching activities designed to foster continuing development of literacy, in part, through stressing interrelationships between the various forms of language.

### 585 SEMINAR IN LITERACY EDUCATION (3-4)

Prereq: permission of instructor. Literacy education research and its application to classroom practices, to individual problems in the teaching of reading, to supervision and administration of reading programs.

### 586 SEMINAR FOR READING SPECIALISTS (4)

Prereq: advancement to candidacy or permission of instructor. Critical examination of issues in reading education in the areas of developmental reading, diagnosis/remediation of reading disabilities and content area reading. A summary course to be taken after other required course work in reading/literacy.

### 587 IMPROVEMENT OF INSTRUCTION IN LITERACY (4)

Prereq: at least one previous course in the teaching of reading or teaching experience. Teaching developmental reading; methods, materials, theory.

### 589 LANGUAGE ACQUISITION AND LITERACY DEVELOPMENT (4)

Prereq: graduate status or teaching experience. Exploration of current theories in language acquisition, linguistics and psycholinguistics, and implications for early childhood education and literacy instruction.

### 594e,f PRACTICUM IN READING DIAGNOSIS AND REMEDIATION (4 ea)

Prereq: graduate status or permission of instructor: (e) assessment and correction of reading difficulties: supervised practica in use of diagnostic reading tests; (f) remedial instruction of children with reading problems: clinical practicum.

### 690 THESIS (1-9)

Prereq: advancement to candidacy and approval of the student's graduate committee. Research study under the direction of a faculty committee. S/U grading. Repeatable to a maximum of 9 credits.

### 691 RESEARCH SEMINAR (1-6)

Prereq: approval of the student's graduate committee or program advisor. Graduate research under the direction of a program advisor/committee. S/U grading. Repeatable to a maximum of 6 credits.



# HUMAN SERVICES

Students interested in a career where they can make a difference in the lives of individuals, communities, and societies often enter the human services major ([www.wwu.edu/hs](http://www.wwu.edu/hs)). As a human services major, students explore multiple perspectives, theories, and disciplines in the classroom and in the community as they become aware of the diverse cultural and lived experiences of self and others.

For more than 30 years, Western has graduated thousands of human services majors who have committed their careers to the helping professions. Graduates are trained professionals, working with individuals, groups, and communities to engage in direct and indirect services. Graduates work in agencies and organizations in mental health services, nonprofit management, human resources, faith-based services, community development, advocacy and public policy, corrections, and international relief. Graduates often serve as case managers, grant writers, educators, or administrators to address such important social issues as poverty, child abuse, domestic violence, and homelessness. Many graduates pursue advanced study in social work, education, law, and counseling.

## COURSE OF STUDY

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 may enroll in the bachelor of arts program in Bellingham, Everett, and Bremerton. Most classes meet in the late afternoon and evening.

Courses are organized in a spiraling curriculum, centered on six consecutive core courses related to human services professionals and varying sizes and levels of systems. The study of systems begins with small systems (personal, interpersonal and small group) and moves through layers of increasingly complex, nested, and overlapping systems (organizational, community, and global). Students move through the required core courses in 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. The program also incorporates several quarters of field study, including practicum and internship that integrates knowledge and skills with professional practice. The program partners with community-based human services agencies that serve as practicum and internship placements.

In addition to the core sequence and the field-based study, students also gain knowledge and expertise in case management, interviewing, human development, diversity and social justice, applied research, agency management, and program planning and evaluation. Throughout the course of study all students create a professional portfolio that highlights knowledge and skills, and upon completion of the program provides evidence of meeting National Standards.

## ADMISSION

To apply to the human services program applicants must have a 2.75 GPA (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

- A three-page written essay describing interests in and experiences with human services
- Documented evidence of computer competency and completed self-assessment statement
- A Washington State Patrol criminal history background check, including fingerprinting
- A signed contract indicating an understanding and intention to comply with the program's 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 to the program. Please contact the program for application deadlines. Students with a Washington state transferrable Associate of Arts degree must apply to Western and to the major.

**Admissions Exceptions:** Students with a GPA below 2.75 may contact the site's program director for admissions exceptions. A personal interview may be required.

Students 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. Nonmatriculated students, undeclared majors, and/or students from other majors at Western are able to enroll in courses on a space available basis, with permission of the program director or the department chair.

## Competency in Integrated Software

Students admitted to programs in the Woodring College of Education are required to possess competence in the use of word processing, spreadsheet and database applications.

## TUITION

Note that tuition rates and fees may be different for classes taken at off-campus locations.

## Program Retention

In addition to University retention requirements, retention in the human services program is dependent upon each student's ability to comply with the program's expectations for academic and professional performance.

## Questions

For further information on the human services program, please contact the program coordinator by phone, 360-650-7759, or send e-mail to [hsp.info@wwu.edu](mailto:hsp.info@wwu.edu). Please visit us on the Web at [www.wwu.edu/hs](http://www.wwu.edu/hs).

## HUMAN SERVICES FACULTY

**JACQUELYN BAKER-SENNETT** (2000) Chair and Associate Professor. AB, Occidental College; PhD, Cornell University.

**SANDRA CROSS** (1997) Director HS Bremerton site, Lecturer. BEd, Western Washington University; MEd, University of Washington; EdD, Seattle University.

**JUDITH ANE DEIRO** (1997) Director HS Everett site, Lecturer. BA, Oklahoma State University; MA, University of Florida; PhD, University of Washington.

**NANDINI GUNWARDENA** (2006) Lecturer. BA, California State University-Los Angeles; MA, PhD, University of California, Los Angeles.

**SUSAN KINCAID** (1995) Lecturer. BA, MEd, Western Washington University; PhD, Walden University.

**JOHN KORSMO** (2006) Lecturer. BA, Portland State University; MS, PhD, University of Wisconsin-Milwaukee.

## HUMAN SERVICES

**MARY MORGAN LIVINGSTON** (1997) Lecturer. BA, MA, University of Oregon.

**TRULA NICHOLAS** (1994) Lecturer. BA, MS, Western Washington University; EdD, Nova Southeastern University.

**JANE VERNER** (1994) Director HS Bellingham, Lecturer. BS, New York University; MBA, University of Toronto.

### Adjunct Faculty

**Patricia M. Fabiano** (1991). BA, University of Pittsburgh; MA, University of Wisconsin; MS, Southern Illinois University; PhD, The Union Institute.

## BACHELOR OF ARTS

### Major — Human Services

76 credits

#### Program Requirements

- ❑ Core courses (24 credits) taken in sequential order over six quarters. HSP 301, 303, 305, 402, 404, 406
- ❑ Other required courses (31 credits): HSP 302, 315, 325, 345, 385, 435, 455, 485
- ❑ Field study (16 credits): HSP 340, 341 provide entry level skills prior to internship; HSP 440 (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 introduces students to portfolio learning. Students create portfolio artifacts throughout the major curriculum, and then revise and complete portfolios in a capstone course, HSP 495

## COURSES IN HUMAN SERVICES (HSP)

*Courses numbered X37, X97, 300, 400; 417, 445 are described on Page 34 of this catalog.*

*HSP 385 is a writing proficiency (WP) course.*

### 301 HUMAN SERVICES PROFESSIONALS AND PERSONAL SYSTEMS (4)

Prereq: admission to major or permission of human services program. Explores personal systems in relation to other systems with an emphasis on motives, values, personal communication, and self-determination.

### 302 INTRODUCTION TO HUMAN SERVICES (3)

A survey introduction to the field of human services, with an emphasis on history, current models, and roles and ethical responsibilities for human services professionals.

### 303 HUMAN SERVICES PROFESSIONALS AND INTERPERSONAL SYSTEMS (4)

Prereq: HSP 301 or permission of instructor. Investigates interpersonal systems in relation to other systems, with an emphasis on communication models and professional strategies.

### 304 PORTFOLIO LEARNING IN HUMAN SERVICES (1)

Must be taken in the first 5 credits of the major. Reading, writing, and discussion elaborating the portfolio processes for learning, assessment and professional development in the human services field. An emphasis is placed on benchmark assessment in relationship to Council for Standards in Human Service Education national standards and a survey of writing styles of the human services profession. Portfolios will be finalized in HSP 495.

### 305 HUMAN SERVICES PROFESSIONALS AND SMALL GROUP SYSTEMS (4)

Prereq: HSP 303 or permission of instructor. A study of small groups in relation to other systems, with emphasis on theories of group dynamics, process, facilitation, and leadership.

### 311 HEALTH CARE AND HUMAN SERVICES (4)

Examines societal, cultural, and economic factors that affect characteristics of the health care 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.

### 315 HUMAN DEVELOPMENT AND HUMAN SERVICES (4)

An interdisciplinary examination of human development across the lifespan, with an emphasis on issues that are relevant to providing effective human services delivery. Examines 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.

### 323 CONFLICT RESOLUTION IN HUMAN SERVICES (4)

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.

### 325 INTERVIEWING FOR HUMAN SERVICES (4)

Must be taken prior to or concurrent with HSP 440. 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.

### 331 CHILDREN, FAMILIES, AND COMMUNITIES (4)

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 practice, and integrated services.

### 340 PRACTICUM AND SEMINAR I (4)

Prereq: HSP 301. 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. Includes supervised field experience. S/U grading.

### 341 PRACTICUM AND SEMINAR II (4)

Prereq: HSP 340. 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. Includes supervised field experience. S/U grading.

### 345 CASE MANAGEMENT AND INTERVENTIONS (4)

Must be taken prior to or concurrent with HSP 440. 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.

### 356 NARRATIVE IN HUMAN SERVICES (4)

Interdisciplinary study of the uses of narrative in social science research, psychological theory, cultural and individual identity, and the professional practice of human services.

### 371 ISSUES AND CONCEPTS IN HUMAN SERVICES SYSTEMS (4)

Discussion and analysis of selected issues and concepts in human services. Repeatable to a maximum of 8 credits.

### 373 LAW AND HUMAN SERVICES (4)

Study of the interaction of legal systems with human services delivery systems and the role of the courts in impacting social change in society. Examines 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.

### 385 APPLIED RESEARCH METHODS (4)

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.



**402 HUMAN SERVICES PROFESSIONALS AND ORGANIZATIONAL SYSTEMS (4)**

Prereq: HSP 305 or permission of instructor. 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.

**404 HUMAN SERVICES PROFESSIONALS AND COMMUNITY SYSTEMS (4)**

Prereq: HSP 402 or permission of instructor. 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.

**406 HUMAN SERVICES PROFESSIONALS AND GLOBAL SYSTEMS (4)**

Prereq: HSP 404 or permission of instructor. Explores societal and global systems in relation to human services systems, with an emphasis on advocacy, change, and social justice.

**410 MENTAL HEALTH: INDIVIDUALS & SYSTEMS (4)**

Prereq: HSP 315 or permission of instructor. A survey of diagnostic criteria and an overview of theory and research describing the interactions of biological, environmental, psychosocial, cognitive, and sociocultural 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 and referral practices are examined within the context of mental health services and general human services delivery.

**430 READINGS AND PROJECTS IN HUMAN SERVICES (1-4)**

Supervised readings and projects on selected contemporary topics that impact human services. Repeatable to a maximum of 6 credits.

**435 HUMAN SERVICES AND MANAGEMENT (4)**

Fundamentals of management in public and nonprofit agencies and organizations including budget development and diversification of revenue sources.

**440 INTERNSHIP AND SEMINAR (4)**

Prereq: HSP 325, 341, 345. 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.

**443 DISABILITY: INDIVIDUALS AND SYSTEMS (4)**

An exploration of disability issues relating to work in human services, including historical, legal, ethical, medical, psychosocial, employment, and independent living issues, in addition to a review of specific disabilities.

**450 SURVEY OF ADDICTIONS AND DEPENDENCIES (4)**

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.

**455 DIVERSITY & SOCIAL JUSTICE DYNAMICS (4)**

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.

**484 PROGRAM FUNDING AND GRANT WRITING (4)**

Prereq: HSP 445 or permission of instructor. 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.

**485 PROGRAM PLANNING AND EVALUATION (4)**

Prereq: HSP 385. Fundamentals of program planning in human services delivery including needs assessment and program evaluation.

**486 HUMAN RESOURCES IN HUMAN SERVICES (4)**

Overview of the human resources knowledge and skills required of human services professionals.

**487 LEADERSHIP (4)**

Interdisciplinary exploration of theories, models, principles, research, and skills as they relate to personal and organizational leadership.

**495 CAPSTONE PORTFOLIO (4)**

Must be taken in the last 5 credits of the major. Assess integrated learning through discussion and writing related to the Council for Standards in Human Service Education national standards. Review and revise capstone essay, writing samples; review, select and revise portfolio artifacts. Finalize the student capstone portfolio to complete benchmark assessment in the human services major.

# 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.

Instructional Technology includes:

- Certificate Program: Leadership in School Technology
- Certificate Program: Instructional Design and E-Learning
- Master of Education in Educational Administration — Instructional Technology
- Elective concentration within the MEd in Advanced Classroom Practice (see the Graduate School section of the catalog; 24 credits including IT 550, 571, 572, 573, 574, 575, 690, or 691)
- Elective concentration within the MEd in Continuing and College Education (see the *Graduate School* section of this catalog); 20 credits, including IT 558, 563, 565, 567, 569

For further information, contact the program advisement office, Miller Hall 204, phone 360-650-3090, e-mail Tony. Jongejan@wwu.edu.

## INSTRUCTIONAL TECHNOLOGY FACULTY

**JOANNE CARNEY** (2003) Associate Professor. BA, MA, Gannon University; PhD, University of Washington.

**JUNE DODD** (2000) Lecturer. BA, MEd, Western Washington University.

**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.

**LEANNE ROBINSON** (2002) Associate Professor. BAEd, Western Washington University; MAEd, Central Washington University; PhD, Washington State University.

### *Instructional Technology in Education*

This program is 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 with the background necessary to integrate instructional technology into their lessons. Because changes in technology are ongoing, please consult an advisor.

**NOTE:** Concentrations of instructional technology courses are also available to support most Woodring College of Education MEd programs. For further information, contact Instructional Technology faculty, Miller Hall 204.

### *Certificate in Instructional Design and E-Learning*

A professional certificate designed to prepare students for a career in teaching and training adults utilizing instructional technology, with an emphasis on distance delivery, is offered through Woodring College of Education. Students completing the emphasis earn the Instructional Design and E-Learning Certificate. The certificate is available at the undergraduate, master's, and post-master's levels. The program includes a seven-course sequence of 28 credits in the design and development of multimedia materials. Course topics include instructional design, distance delivery, graphic tools, audio and visual tools, Web-

based content, and implementation issues. Further information can be obtained by contacting the instructional technology program, Miller Hall 204, 360-650-3090.

**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, or 444 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 204

Information on demonstrating or developing competence is available from the instructional technology program, Miller Hall 204 or on the Web at <http://it.wce.wwu.edu/344>.

## COURSES IN INSTRUCTIONAL TECHNOLOGY (IT)

*Courses numbered X37; X97; 300, 400; 417, 445 are described on page 34 of this catalog.*

### 344 BASIC INSTRUCTIONAL TECHNOLOGY SKILLS (1)

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.

### 442 CLASSROOM USE OF INSTRUCTIONAL TECHNOLOGY (ELEMENTARY) (3)

Prereq: IT 344 or portfolio of basic instructional technology skills. 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.

### 443 CLASSROOM USE OF INSTRUCTIONAL TECHNOLOGY (SPECIAL EDUCATION) (3)

Prereq: IT 344 or portfolio of basic instructional technology skills. 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.

### 444 CLASSROOM USE OF INSTRUCTIONAL TECHNOLOGY (SECONDARY) (3)

Prereq: IT 344 or portfolio of basic instructional technology skills. 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.

### 460 DESKTOP PUBLISHING AND TECHNICAL WRITING (3)

Prereq: IT 442, 443 or 444 or permission of instructor. Basic issues of desktop publishing for technical documents, including layout, design, scanning and graphics.

### 461 MULTIMEDIA TOOLS AND APPLICATIONS (3)

Prereq: IT 442, 443 or 444 or permission of instructor. 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).

### 462 DIGITAL VIDEO AND AUDIO PRODUCTION (3)

Prereq: IT 461 or permission of instructor. Principles of audio and video production and methods for digitizing for multimedia development.

### 463 TECHNIQUES AND TOOLS IN GRAPHIC DESIGN (3)

Prereq: IT 461 or permission of instructor. 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.

**465 AUTHORIZING FOR INTERNET DELIVERY (3)**

Prereq: IT 461 or permission of instructor. Techniques and procedures for creating Internet and Intranet-based instructional materials. Topics will include design, development and delivery issues.

**466 AUTHORIZING FOR MULTIMEDIA DEVELOPMENT (3)**

Prereq: IT 461 or permission of instructor. Techniques and procedures for authoring when developing multimedia. Scripting required in implementation of concepts.

**467 AUTHORIZING SYSTEMS FOR COMPUTER-BASED TRAINING (3)**

Prereq: IT 461 or permission of instructor. Features of authoring languages and systems, including templates, multimedia, record keeping, variables, data structures, and Internet delivery.

**468 INTERACTIVE MULTIMEDIA SYSTEMS (3)**

Prereq: IT 442, 443 or 444 or permission of instructor. An introductory study of interactive multimedia systems. Includes videodiscs, computer interfacing, CD ROM and multimedia authoring software.

**470 THE INTERNET IN EDUCATION (3)**

Prereq: IT 442, 443 or 444 or permission of instructor. 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.

**Graduate Courses**

*Courses numbered 500; 517; 545; 597 are described on page 34 of this catalog. Admission to Graduate School or special permission required. See the Graduate School section of this catalog.*

**503 DESIGNING INSTRUCTION AND SELECTING TECHNOLOGIES FOR LEARNING (4)**

Prereq: IT 442, 443 or 444 or equivalent; graduate status and EDUC 501 or permission of instructor. 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.

**518 CURRENT ISSUES IN EDUCATION (1-5)**

Prereq: graduate status or permission of instructor. Examination and discussion of several current and controversial issues in education. Repeatable with no maximum.

**544 INSTRUCTIONAL TECHNOLOGY AND EDUCATION (4)**

Prereq: graduate status or permission of instructor. 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.

**546 INSTRUCTIONAL TECHNOLOGY AND EDUCATION — CCE (4)**

Prereq: admission to the CCE program or permission of instructor. 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 Education Master's program.

**550 TECHNOLOGY LEADERSHIP: POLICIES, PLANNING AND ADMINISTRATION (4)**

Prereq: IT 442, 443 or 444 or equivalent; graduate status; and IT 503, 571 and 572 or permission of instructor. 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.

**551 SEMINAR IN INSTRUCTIONAL TECHNOLOGY (4)**

Prereq: 20 credits in the program and permission of instructor. Analysis of issues affecting present and future implementations of instructional technology.

**552 INSTRUCTIONAL DESIGN: STRATEGIES (3)**

Prereq: IT 560 or permission of instructor. 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.

**555 READINGS IN INSTRUCTIONAL TECHNOLOGY (2-5)**

Prereq: permission of instructor. Supervised study focusing on one or more selected topics in instructional technology. Repeatable to a maximum of 6 credits.

**558 DISTANCE EDUCATION: THEORY AND PRACTICE (4)**

Prereq: IT 546 and IT 560 or permission of instructor. Examines the concepts, technologies and issues related to the design, development, delivery, policy making and evaluation of distance education courses and programs. Includes development of online learning environments.

**560 INSTRUCTIONAL DESIGN (4)**

Prereq: graduate status or permission of instructor. 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.

**561 DESIGNING COMPUTER-BASED INSTRUCTION (3)**

Prereq: IT 560 and 566 or 567 or permission of instructor. Addresses the design, development and evaluation of computer-based instructional (CBI) 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.

**563 TECHNIQUES AND TOOLS IN GRAPHIC DESIGN (3)**

Prereq: IT 546, 560, 558 or permission of instructor. 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.

**565 DEVELOPMENT OF WEB-BASED LEARNING ENVIRONMENTS (4)**

Prereq: IT 546, 560, and 558 or permission of instructor. 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.

**566 AUTHORIZING FOR MULTIMEDIA DEVELOPMENT (3)**

Prereq: IT 461 or permission of instructor. Techniques and procedures for authoring when developing multimedia. Scripting required in implementation of concepts.

**567 CREATING MODULES FOR ELECTRONIC DELIVERY (3)**

Prereq: IT 546, 560, and 558 or permission of instructor. 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.

**568 ADVANCED DESIGN OF MULTIMEDIA INSTRUCTION (3-6)**

Prereq: IT 566 or 567 or permission of instructor. 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.

**571 IMPLEMENTING TECHNOLOGY-ENHANCED LEARNING ACTIVITIES (3)**

Prereq: IT 442, 443 or 444 or equivalent; graduate status; and IT 503 or permission of instructor. 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.

**572 ADVANCED TECHNOLOGY TOOLS AND CLASSROOM APPLICATIONS (3)**

Prereq: IT 442, 443 or 444 or equivalent; graduate status; IT 503 and 571 or permission of instructor. Develop advanced skills in information and communication technologies, assistive technologies, and productivity tools. Employ

## INSTRUCTIONAL TECHNOLOGY

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one of these technologies in creating a prototype to be used for research. Develop materials and methods for teaching of software applications.

### **573 EMERGING ISSUES: THE SOCIAL, ETHICAL, LEGAL AND HUMAN IMPLICATIONS OF TECHNOLOGY (3)**

Prereq: IT 442, 443 or 444 or equivalent; graduate status; and IT 503, 571, 572 or permission of instructor. 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.

### **574 EDUCATIONAL TECHNOLOGY RESEARCH, EVALUATION AND ASSESSMENT (3)**

Prereq: IT 442, 443 or 444 or equivalent; graduate status; and IT 503, 571, 572 or permission of instructor. Research the effectiveness of technology products and processes, selecting appropriate technology tools for assessment, and evaluating learner and program outcomes.

### **575 DESIGNING, IMPLEMENTING AND EVALUATING PROFESSIONAL DEVELOPMENT (3)**

Prereq: IT 442, 443 or 444 or equivalent; graduate status; and IT 503, 571, 572 or permission of instructor. 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.

### **640 CURRENT TOPICS IN EDUCATION (1-5)**

Prereq: master's degree and permission of instructor. Studies of current topics in learning resources/library science or instructional technology. Repeatable with no maximum.

### **690 THESIS (1-9)**

Prereq: advancement to candidacy and approval of the student's graduate committee. Research study under the direction of a faculty committee. Repeatable to a maximum of 9 credits. S/U grading.

### **691 RESEARCH SEMINAR (1-6)**

Prereq: approval of the student's graduate committee or program advisor. Graduate research under the direction of program advisor/committee. Repeatable to a maximum of 6 credits. S/U grading.



# REHABILITATION COUNSELING

The rehabilitation counseling program 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 is offered at the program's off-campus site at Mountlake Terrace. For additional information, refer to Rehabilitation Counseling in the *Graduate School* section of this catalog.

## DEGREE GRANTED

- Master of Arts in Rehabilitation Counseling

## REHABILITATION COUNSELING FACULTY

**ELIZABETH SWETT** (2005) Director, Graduate Program in Rehabilitation Counseling; Assistant Professor. BBA, University of Wisconsin-Whitewater; MS, PhD, University of Wisconsin-Madison.

## COURSES IN REHABILITATION COUNSELING (RC)

*Courses numbered X/37, X/97, 300, 400, 445 are described on Page 34 of this catalog.*

### 482 INTRODUCTION TO VOCATIONAL REHABILITATION OF NATIVE AMERICANS (3)

Introduction to the vocational rehabilitation service delivery system to Native Americans with disabilities.

### 490 JOB PLACEMENT ISSUES OF NATIVE AMERICANS WITH DISABILITIES (3)

Prereq: RC 482. Introduction to job placement of Native Americans with disabilities.

### 496 VOCATIONAL ASSESSMENT OF NATIVE AMERICANS WITH DISABILITIES (3)

Introduction to assessment of Native Americans with disabilities.

## Graduate Courses

*Courses numbered X/37, X/97, 300, 400, 445 are described on Page 34 of this catalog.*

*Admission to Graduate School or special permission required. See the Graduate School section of this catalog.*

### 501 REHABILITATION RESEARCH (4)

Prereq: graduate status or permission of instructor. An overview of what research will include: design and analysis; criteria for reading and interpreting existing studies; practice in identifying problems suitable for research; formulating hypotheses and appropriate methods; and guidance in preparing a program evaluation. Emphasis on the application of research in clinical and rehabilitation settings.

### 519 CURRENT ISSUES IN REHABILITATION COUNSELING (3)

Examination of several current and controversial issues in rehabilitation. Topics change. Repeatable to a maximum of 6 credits.

### 546 RELAPSE PREVENTION AND REHABILITATION (3)

Prereq: HS 450. Addresses personal, family, and social rehabilitation issues that emerge within the first five years of recovery from addiction. Discusses the processes and behaviors leading to relapse and theoretical models for prevention and promoting recovery.

### 580 THEORY OF REHABILITATION COUNSELING (3)

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.

### 581 READINGS AND PROJECTS IN REHABILITATION (2-4)

Supervised readings and projects on selected contemporary topics that impact rehabilitation counseling. Repeatable to a maximum of 6 credits.

### 582 INTRODUCTION TO REHABILITATION COUNSELING (3)

Prereq: graduate status or permission of instructor. An overview of the principles and practices of vocational rehabilitation which serve as the foundation for rehabilitation counseling. Various specialties within the field of rehabilitation and rehabilitation counseling as a profession.

### 583 PRACTICE OF REHABILITATION COUNSELING (3)

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.

### 584 GROUP COUNSELING TECHNIQUES IN REHABILITATION (3)

Prereq: RC 583 or permission of instructor. A didactic and experiential course to introduce students to the dynamics of group counseling. Purpose, process, and techniques related to various types of groups.

### 585 SOCIAL, PSYCHOLOGICAL AND ATTITUDINAL ASPECTS OF DISABILITY (3)

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 a broader environmental context.

### 586 MEDICAL ASPECTS OF DISABILITY (3)

Prereq: graduate status or permission of instructor. 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.

### 587 UTILIZATION OF TESTS AND EVALUATION TOOLS (3)

Prereq: RC 582 or permission of instructor. Gathering, analyzing, and synthesizing of vocationally relevant information for use in the rehabilitation process. Advantages and limitations of traditional psychological inventories and various assessment tools. Emphasis on collaborative client-centered approach to assessment.

### 588 OCCUPATIONAL INFORMATION AND CAREER DEVELOPMENT (3)

Prereq: RC 582 or permission of instructor. Explores occupational information, labor market trends, and meaningful employment with a career focus. Examines career development theories.

### 589 CASE MANAGEMENT IN REHABILITATION (3)

Prereq: RC 582 or permission of instructor. A close examination of techniques and procedures related to individualized case management and case-load management. Emphasis is on selecting the services that will meet the unique needs of individuals with disabilities and assisting them in developing and implementing an individual rehabilitation plan. Techniques related to working simultaneously with multiple individuals will be examined.

### 590 EMPLOYMENT STRATEGIES AND JOB PLACEMENT (3)

Prereq: RC 582, 588, or permission of instructor. A comprehensive exploration of the process and techniques of job development with employers and assisting individuals with disabilities to find and maintain employment. Includes job analysis, work site modification, employment techniques, and legislation. Students will develop employment plans, implement placement strategies, and develop job contracts.

### 591 PRACTICUM IN REHABILITATION COUNSELING (2-6)

Prereq: permission of instructor. Demonstration of counseling skills with individuals with disabilities in a rehabilitation agency. Supervision by agency personnel. Repeatable to a maximum of 8 credits. S/U grading.

### 592 INTERNSHIP IN REHABILITATION COUNSELING (1-10)

Prereq: RC 591 and permission of instructor. 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.

## REHABILITATION COUNSELING

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### **593 INTRODUCTION TO ASSISTIVE TECHNOLOGY (3)**

Understand the ecology of assistive technology for people with disabilities. Emphasis 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.

### **594 INTRODUCTION TO PSYCHIATRIC REHABILITATION (4)**

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.

### **595 COGNITIVE DISABILITIES IN REHABILITATION (3)**

Prereq: graduate status or permission of instructor. An examination of the etiology, prognosis, treatment, and vocational implications of cognitive disabilities.

### **596 VOCATIONAL ASSESSMENT IN REHABILITATION (3)**

Prereq: RC 587, 588 or permission of instructor. Advanced course designed to draw upon medical, vocational, and assessment knowledge and skills to apply skills in planning, selection, and interpretation of the rehabilitation process for individuals with disabilities.

### **598 THE FAMILY AND REHABILITATION COUNSELING (3)**

Prereq: RC 583, 585, or permission of instructor. A theoretical understanding of how to work with families for achieving maximum outcomes in the rehabilitation counseling process.

### **599 PRACTICE OF REHABILITATION COUNSELING II (3)**

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.

# SECONDARY EDUCATION

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 Web site at [www.wce.wvu.edu/Admiss](http://www.wce.wvu.edu/Admiss). Inquiries should be directed to the Woodring College Teacher Education Admissions Office, Miller Hall 206, phone 360-650-3313, e-mail address [TeacherAdmissions@wvu.edu](mailto:TeacherAdmissions@wvu.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 Web site at [www.wce.wvu.edu/Depts/SEC](http://www.wce.wvu.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 306, by phone at 360-650-3327, or by e-mail to [Patricia.Roberts@wvu.edu](mailto:Patricia.Roberts@wvu.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@wvu.edu](mailto:gradschl@wvu.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.

## SECONDARY EDUCATION FACULTY

**BRUCE LARSON** (1996) Chair and Professor. BAE, Pacific Lutheran University; MEd, PhD, University of Washington.

**JACOB CLARK BLICKENSTAFF** (2004) Assistant Professor. BA, MA, PhD, University of California-Davis.

**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.

**MOLLY LAWRENCE** (2007) Assistant Professor. BA, Principai College; MEd, University of Georgia.

**LAUREN MCCLANAHAN** (2000) Assistant Professor. BA, MA, PhD, The Ohio State University.

**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.

**RAY WOLPOW** (1994) Associate Professor. BA, Wagner College; MA, Columbia University; PhD, Pennsylvania State 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 Post-baccalaureate
  - This secondary education program leads to a recommendation to the state of Washington for a teaching certificate with an endorsement in an approved academic teaching field for Secondary or P-12. This program requires completion of the secondary professional education course sequence, a major in a state-approved endorsable area, and a full semester internship
- Master's in Teaching with Residency Certification (MIT)
  - This program is designed for students who have already completed a baccalaureate degree with a *state-approved endorsable academic major* 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 Seattle

## 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

## SECONDARY EDUCATION

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for certification. WWU requires submission of a passing WEST-E score for each endorsement to be earned, before commencement of the student teaching internship. The WEST-E test for Washington state is changing. For current information on test requirements, registration, fees, and test dates and locations, refer to the WEST-E Resource Web site, [www.wce.wvu.edu/Resources/Endorsements/WEST-E.shtml](http://www.wce.wvu.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.

Residency certificates are valid until completion of provisional employment as a contracted teacher, and reissued for a period of five years. Application for the residency certificate is made to the Woodring College of Education Certification Office, Miller Hall 216, 360-650-4930, no later than three months prior to the start of student teaching.

### *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 of Professional Teaching Standards. For further information, contact the Woodring College of Education certification officer at 360-650-4630, Miller Hall 202.

## 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 are required to complete a state-approved endorsement program. Students completing a major in theatre arts, health and fitness, music, special education, visual arts or world languages will be prepared to teach grade levels P-12. The remaining majors listed below under *Choosing an Academic Major* 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 202.

## CHOOSING AN ACADEMIC MAJOR

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 academic majors 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 major advisor early in their program. Western Washington University academic departments offer the following majors which lead to a recommendation by that department for a qualifying teaching endorsement:

- Anthropology/Social Studies
- Biology (BS)
- Biology/Science
- Chemistry
- Chemistry/Biology

- Chemistry/Mathematics
- Chemistry/Physics
- Dance
- Earth Science
- Earth Science/Science
- Economics/Social Studies
- English Language Arts
- General Science
- Geography/Social Studies
- History/Social Studies
- Mathematics
- Music Education
- Physical Education and Health
- Physics/Mathematics
- Political Science/Social Studies
- Sociology/Social Studies
- Special Education
- Theatre Arts
- Visual Arts
- World Languages

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.

### *Academic Major Methods Courses*

Academic 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.

## UNDERGRADUATE AND POST-BACCALAUREATE PROGRAMS

### 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 an endorsable major and a 3.0 GPA are strongly encouraged to apply to the MIT program outlined below.

### 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 206 and are also printable from [www.wce.wvu.edu/Admiss](http://www.wce.wvu.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 Web site 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

## ADVISEMENT 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 I*
- 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 202 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
- Successful attainment of these general retention requirements is necessary before beginning the internship
- Completion of the Woodring College of Education *prevention of sexual harassment training II*

## 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

## SECONDARY EDUCATION

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

### UNDERGRADUATE AND POST-BACCALAUREATE CERTIFICATION PROGRAM

Course work: 40 credits

- EDUC 301 (4)
- EDUC 302 (4)
- EDUC 310 (4)
- SEC 411 (4)
- SPED 363 (3)
- IT 444 (3)
- SEC 410 (2)
- SEC 425 (4)
- SEC 431 (4)
- SEC 432 (4)
- SEC 433 (1)
- SEC 435 (2)
- SEC 436 (1)

Internship: 24 credits

- SEC 495 (see *Internships* below)

#### *Academic Major Methods Courses*

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 TEACHING PROGRAM (WITH RESIDENCY CERTIFICATION)

The secondary education department offers a Master in Teaching (MIT) program to students who have completed a baccalaureate degree from an accredited college or university with an *endorsable major* (see *Choosing an Academic Major*, above). This program combines many of the requirements of certification with course work required for the master's. The graduate program advisor, in conference with the individual student, creates a graduate plan of study which is kept on file in the graduate office. Additional certification courses beyond those required for the master's degree lead to the residency teaching certificate. The program is also offered off campus in Seattle.

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 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.

### ADMISSION REQUIREMENTS

- Credits
  - Completion of a baccalaureate degree from an accredited college or university with an *endorsable major* (see list)
- Grade Point Average
  - A 3.0 cumulative grade point average (GPA) determined on the basis of the student's most recent 90 quarter hour credits or 60 semester hour credits, including upper-division post-baccalaureate course work
- Entrance Tests
  - Minimum test scores on the GRE or the MAT. Test scores are established by the department: GRE General Test with combined score of 1,000 on the Verbal and Quantitative and minimum of 4.5 on the Analytical; MAT score of 45 (GRE preferred); applicants who have advanced degrees (i.e., JD, master's, PhD) are exempt from this requirement.
  - Minimum passing scores on all three subtests (reading, math, writing) of The Washington Educator Skills Test - Basic (WEST-B). For information on test dates and location, registration and fees, check the WEST-B Web site at [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 information.
- Résumé
- Letters of Recommendation
  - 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. English 101, 201, 202 and 301 at Western or equivalent courses fulfill this requirement
- A personal statement that describes your experience(s) with adolescents and background as it applies to the teaching profession. Include any and all background or experiences you have had with diverse, multicultural populations
- An interview with Secondary Education faculty
- Student Conduct
  - The *Student Conduct Requirements and Agreement* portion of the supplemental Woodring College application must be completed

### ADMISSIONS PROCEDURES

Students who wish to pursue a Master's in Teaching degree in Secondary Education with certification must apply first for admission to the Graduate School and upon admission to the Graduate Secondary program complete a supplemental application for the Woodring College of Education. See the *Graduate School* section of this catalog.

Applicants may access the online application by visiting the Graduate School Web site at [www.wvu.edu/depts/gradschool](http://www.wvu.edu/depts/gradschool). The deadlines for each respective quarter are as follows:

- April 1 — for admission fall quarter

- October 1 — for admission winter quarter
- February 1 — for admission to the Seattle program summer quarter only. For information, see the Web site, [www.wce.wvu.edu/Resources/CRS/SecEdME.html](http://www.wce.wvu.edu/Resources/CRS/SecEdME.html) or call (206) 729-3257

### ADVISEMENT AND ORIENTATION

Upon acceptance, each student is assigned a secondary education graduate 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

Program retention requirements for the MIT may be found in the General Retention section of this catalog.

### PROGRAM COMPLETION

Program completion requirements for the MIT are the same as for the undergraduate and post-baccalaureate certification program, and may be found in that section of this catalog.

### Master in Teaching Program (with Residency Certification)

- Secondary Research and Foundations Core (12 cr)
  - SEC 501 (4)
  - SEC 512 (4)
  - SEC 513 (4)
- Secondary Program and Certification Core (34 cr)
  - SEC 433 (1)
  - SEC 435 (2)
  - SEC 436 (1)
  - SEC 510 (2)
  - SEC 525 (4)
  - SEC 531 (4)
  - SEC 532 (4)
  - SEC 533 (4)
  - SEC 534 (4)
  - SPED 510 (2)
  - IT 544 (4)
- Internship (24 cr)
  - SEC 595 (24) (See Internships)
- Research Course (1-6 cr)
  - SEC 691

### Academic Major Methods Courses

Academic 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.

### HUMANITIES — MIDDLE LEVEL — ADDITIONAL ENDORSEMENT

30-38 credits

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.

### Middle School Pedagogy

- SEC 450 (4)
- SEC 451 (4) — taken in place of SEC 431
- SEC 452 — taken in place of SEC 435

### Content and Methods — Option I or Option II

#### Option I

##### Social Studies Endorsement

See the *Social Studies Education* section of this catalog 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 or equivalent (5)
- ENG 370 (5)
- ENG 347 or ENG 441 (5)
- One of the following (5):
  - ENG 301
  - ENG 302
  - ENG 350
  - ENG 371
- ENG 443 (5)

#### Option II

##### English Language Arts Endorsement

See the English section of this catalog for a description of the major in English Language Arts — Secondary leading to an endorsement in English Language Arts.

##### Social Studies Supporting Component

- HIST 103 (4)
- HIST 104 (4)
- HIST 391 (4)
- HIST 111 (4)
- EGEO 201 (4)
- PLSC 250 (5)
- ECON 206 (4) or 446 (3)
- SEC 426 (4)

### ACADEMIC MAJOR

While students in the MIT program have completed an academic major as part of their undergraduate degree, it is necessary to have transcripts evaluated to determine whether additional course work is required to meet state or department requirements. Students should contact the academic major endorsement advisor at Western to arrange this evaluation.

### 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

## SECONDARY EDUCATION

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 Performance Standards and Secondary Education Department Code of Ethics

### TEACHER EDUCATION 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 in Miller Hall 206.

### COURSES IN SECONDARY EDUCATION (SEC)

*Courses numbered X37; X97; 300, 400; 417 445 are described on Page 34 of this catalog.*

#### 410 DYNAMICS OF TEACHING (2)

Prereq: admission to Secondary Education. 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.

#### 411 PHILOSOPHICAL FOUNDATIONS OF EDUCATION (4)

Prereq: EDUC 310. Examines the central concepts, basic premises and historical underpinnings that frame contemporary ideas of education and teaching practice.

#### 415 ANALYSIS AND STRATEGIES OF TEACHING (3-5)

Prereq: one course from the educational psychology or foundations area, or permission of instructor. Systematic study of teaching; observation; analysis and development of teaching skills and strategies; individual projects.

#### 423 CURRICULA IN BASIC LANGUAGE ARTS SKILLS IN SECONDARY SCHOOLS (3)

Prereq: admission to a professional studies program. 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.

#### 425 DEVELOPMENTAL READING, WRITING AND LEARNING IN SECONDARY SCHOOLS (4)

Prereq: admission to Secondary Education. 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 ninth-12th grade students from diverse socioeconomic and ethnic backgrounds as well as students with special learning needs.

#### 426 SOCIAL STUDIES FOR THE SECONDARY SCHOOL (4)

Prereq: SEC 431 or 532. Social studies methods, resources, curriculum, objectives, planning. For secondary certification.

#### 427 LAW-FOCUSED TEACHING AND CURRICULUM (1-5)

Prereq: junior status. Course to enable teachers to teach about criminal jus-



tice system, police, juvenile justice, consumer law, due process, et cetera. Provides teachers with tested classroom procedures, substantive law and field experience with justice agencies. Repeatable under different topics.

#### 428 SOCIAL STUDIES IN THE SECONDARY CURRICULUM (3)

Prereq: teaching experience or permission of department. Functions, programs and materials in the social studies.

#### 429a,b,c INNOVATIVE TECHNIQUES IN SOCIAL STUDIES (1-4)

Prereq: SEC 431 or teaching experience. 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.

#### 431 INSTRUCTION IN SECONDARY SCHOOLS — METHODS I (4)

Prereq: SEC 410, 425; prereq or concurrent, IT 444 and EDUC 301; co-req SEC 435 or 434. Secondary curricula, lesson and unit planning, instructional strategies. Introduces methods to infuse multicultural perspective into instruction and use of multicultural educational resources.

#### 432 INSTRUCTION IN SECONDARY SCHOOLS — METHODS II (4)

Prereq: SEC 425, 431; concurrent registration in SEC 436, 433. Management, motivation, discipline, assessment and evaluation strategies. Issues related to school law; teachers' rights and responsibilities. Explores how overall curriculum addresses and supports the many aspects of diversity.

#### 433 PEER TEACHING LABORATORY (1)

Prereq: SEC 431 or 532; co-req: concurrent registration in SEC 432. Videotaped lesson presentations; peer, instructor, and self-evaluations. S/U grading.

#### 434 SERVICE LEARNING (1-2)

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.

#### 435 MIDDLE LEVEL PRACTICUM (2)

Prereq: concurrent registration in SEC 431 or 532. Specific placement in area middle school with opportunity to assist and learn from a cooperating teacher. Regular required seminars. S/U grading.

#### 436 SECONDARY SCHOOL PRACTICUM (1)

Co-req: concurrent registration in SEC 432 or 534. Assigned placement in area high school with opportunity to assist and learn from a cooperating teacher. S/U grading.

#### 450 INTRODUCTION TO MIDDLE SCHOOLS (4)

Prereq: admission to Woodring College of Education. 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.

#### 451 CURRICULUM AND INSTRUCTION IN MIDDLE SCHOOLS (3)

Prereq: admission to the Woodring College of Education; EDUC 301, 302, 310 (also SEC 410 for secondary students). Interdisciplinary middle school curricula; team planning strategies; thematic unit and lesson development; instructional and skill building strategies.

#### 452 INTENSIVE MIDDLE SCHOOL PRACTICUM (3)

Prereq: admission to the Woodring College of Education; SEC 450. 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.

#### 464 MULTICULTURAL EDUCATION FOR TEACHERS (4)

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.

#### 480 EVALUATING PUPIL GROWTH (3)

Prereq: teaching experience or permission of instructor; for experienced

teachers and research workers. Evaluative techniques related to significant or complex objectives; assessing outcomes of innovative teaching.

#### 481 WORKING WITH STUDENT TEACHERS (3)

Prereq: teaching experience. Techniques for the orientation of student teachers, major problems which confront student teachers, and evaluation of their achievement.

#### 490 TEACHING LABORATORY (4)

Prereq: permission of program advisor. Diagnosis of students, lesson preparation, videotaped peer teaching, analysis of teaching, lesson redesign.

#### 490a SEPTEMBER EXPERIENCE (2-3)

Prereq: permission of department. Observation and participation in the opening of school. S/U grading.

#### 491 PUBLIC SCHOOL PRACTICUM (4)

Coreq: SPED 462b. Practicum experience in a school setting. Designed to provide students with the opportunity to practice and receive feedback on instruction, management, assessment, and professionalism.

#### 495 INTERNSHIP — SECONDARY (2-18)

Prereq: recommendation for supervised teaching. 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.

### Graduate Courses

*Courses numbered 500, 517, 545, 597 are described on Page 34 of this catalog.*

*Admission to Graduate School or special permission required. See the Graduate School section of this catalog.*

#### 501 INTRODUCTION TO EDUCATIONAL INQUIRY FOR SECONDARY TEACHERS (4)

Prereq: admission to secondary MIT program or permission of instructor. 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.

#### 510 TEACHER AS COMMUNICATOR (2)

Prereq: admission to graduate program or permission of program advisor. Methods and means of becoming a more effective communicator. Examination 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.

#### 512 SEMINAR IN EDUCATIONAL PHILOSOPHY (4)

Prereq: SEC 501 or permission of instructor. Examines the central concepts, basic premises and underlying assumptions of controversial issues in contemporary educational practice.

#### 513 SEMINAR IN SOCIOCULTURAL AND LEGAL ISSUES IN EDUCATION (4)

Prereq: SEC 501 or permission of instructor. This seminar examines the larger cultural issues affecting education within a social, political and legal framework.

#### 518 CURRENT ISSUES IN EDUCATION (1-5)

Prereq: graduate status or permission of instructor. Examination and discussion of current issues in contemporary education. Repeatable.

#### 520 TEACHING AND ADMINISTERING IN SCHOOLS ABROAD: K-12 (3)

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.

#### 521 SUMMER STUDY ABROAD (6)

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.

## SECONDARY EDUCATION

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### **524 SEMINAR IN SECONDARY SCHOOL LANGUAGE ARTS CURRICULUM (2-4)**

Planning and developing curriculum in language, literature and composition. Advanced study in specialized curriculum design and materials.

### **525 CONTENT READING, WRITING AND COMMUNICATION IN SECONDARY SCHOOLS (4)**

Prereq: admission to Secondary Master in Teaching program or permission of graduate advisor. 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.

### **531 TEACHING ADOLESCENTS (4)**

Prereq: permission of program advisor. 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.

### **532 CURRICULUM AND INSTRUCTION IN SECONDARY SCHOOLS (4)**

Prereq: SEC 531; co-req: SEC 435 or 434. 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.

### **533 ASSESSMENT AND PROFESSIONAL DEVELOPMENT IN SECONDARY SCHOOLS (4)**

Prereq: SEC 525, 532. 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.

### **534 MANAGEMENT, MOTIVATION AND DISCIPLINE IN THE SECONDARY SCHOOLS (4)**

Prereq: SEC 435, 525, 532; co-req: SEC 436. 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.

### **555 MIDDLE SCHOOL CURRICULUM DESIGNS AND INSTRUCTIONAL STRATEGIES (4)**

Prereq: SEC 531; co-req: SEC 434 or 452. Current trends in middle-level ed-

ucation; 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.

### **580 SEMINAR IN SECONDARY CURRICULUM (4)**

Prereq: admission to graduate school or permission of program advisor. Historical and philosophical perspectives on school curriculum as these relate to modern curricula.

### **582 ANALYSIS OF RESEARCH IN SECONDARY EDUCATION (4)**

Prereq: graduate status; EDU 501. Examination and analysis of research related to contemporary issues in secondary education.

### **590 SEMINAR IN ANALYZING TEACHING AND SUPERVISION (3)**

Prereq: SEC 481 or permission of department. Advanced studies in the principles of supervision; utilization of instructional resources and the evaluation and improvement of teaching.

### **595 GRADUATE INTERNSHIP (2-18)**

Prereq: permission of department. 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.

### **598 ADVANCED PRACTICUM: SECONDARY EDUCATION (2-12)**

Prereq: permission of graduate advisor. 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.

### **639 CURRENT TOPICS IN EDUCATION (1-5)**

Prereq: master's degree and permission of instructor. Studies of current topics in Secondary Education.

### **690 THESIS (1-9)**

Prereq: advancement to candidacy and approval of the student's graduate committee. Research study under the direction of a faculty committee. Repeatable to a maximum of 9 credits. S/U grading.

### **691 RESEARCH SEMINAR (1-6)**

Prereq: approval of the student's graduate committee or program advisor. Graduate research under the direction of a program advisor/committee. Repeatable to a maximum of 6 credits. S/U grading.

# SPECIAL EDUCATION

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.

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. 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 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 Web site at [www.wce.wvu.edu/Admiss](http://www.wce.wvu.edu/Admiss). Inquiries should be directed to the Woodring College Teacher Education Admissions Office, Miller Hall 206, 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 Web site at [www.wce.wvu.edu/Depts/SPED](http://www.wce.wvu.edu/Depts/SPED). Applicants who wish to speak with a faculty advisor may request an appointment through the special education department in Miller Hall 322 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 [gradsch@wwu.edu](mailto:gradsch@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.

## SPECIAL EDUCATION FACULTY

**KEITH J. HYATT** (2002) Chair and Associate Professor. BS, MS, University of Idaho; EdS, EdD, University of Nevada-Las Vegas.

**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.

**BRIDGET KELLEY** (1995) Assistant Professor. BS, University of Pittsburgh; MEd, Arizona State University; PhD, University of Washington.

**M. CHUCK LAMBERT** (2004) Assistant Professor. BEd, Gonzaga University; MA, San Francisco State University; PhD, Ohio State University.

**WILLIAM H. LAY** (1986) Lecturer. BA, University of Montana; MEd, Western Washington University.

**KARNA L. NELSON** (1987) Lecturer. BA, MA, Arizona State University.

**JENNY PARKER** (2003) Lecturer. BA, University of Washington; MEd, Antioch University, Seattle.

**KAY PRICE** (1984) Lecturer. BA, MA, Western Washington University.

**LEANNE K. ROBINSON** (2002) Associate Professor. BAEd, Central Washington University; MEd, Western Washington University; PhD, Washington State University.

**LINDA SCHLEEF** (1997) Lecturer. BAEd, 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 endorsements in Early Childhood Special Education Preschool through Grade 3 (P-3) and Special Education Preschool through Grade 12 (P-12), with the option of adding Elementary Education Preschool through Grade 3 (P-3)
- 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 and Secondary Education
  - Completion of course work leading toward P-12 Special Education endorsement can be arranged in coordination with the secondary education department advisor
- Post-baccalaureate Special Education
  - 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

## SPECIAL EDUCATION

state certificate may earn an additional 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. The WEST-E test for Washington state is changing. For current information on test requirements, registration, fees, and test dates and locations, refer to the WEST-E Resource Web site, [www.wce.wvu.edu/Resources/Endorsements/WEST-E.shtml](http://www.wce.wvu.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.

Residency certificates are valid until completion of provisional employment as a contracted teacher, and reissued after a period of five years. Application for the residency certificate is made to the Woodring College of Education Certification Office, Miller Hall 216, 360-650-4930, no later than three months prior to the start of the internship.

#### *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 202.

### 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 state teaching endorsement and the professional education sequence must be completed with a grade of C (2.0) or better.

### 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, varies from two to three years. Students earning both Special Education P-12 and Elementary Education endorsements should plan on approximately 8 to 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 206 and are also printable from [www.wce.wvu.edu/Admiss](http://www.wce.wvu.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 3.0 or higher over all college-level course work or over the last 45 credits. Students with a cumulative GPA between 2.75 and 2.99 may be reviewed for possible consideration. They should consult with a Special Education advisor before applying
- Passing scores on all three subtests (reading, mathematics, writing) of the Washington Educator Skills Test-Basic (WEST-B). Visit the WEST-B Web site 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 in his or her education program. 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 I
- 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 202 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.

### 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)

## BACHELOR OF ARTS IN EDUCATION

### Major — Special Education — P-12 and Professional Program Requirements

104-105 credits (major and professional program)

Students seeking a bachelor's degree with teacher certification and an endorsement in Special Education must complete the 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.

### Major — Special Education

55 credits

- SPED 360, 390, 460, 466, 467, 468, 471, 472, 474, 480, 481, 482, 483, 484, 485, 486

### Professional Studies Core

33-34 credits

- Psychological Foundations
  - EDUC 301, 302
- Social Foundations/Philosophical
  - EDUC 310
- Instructional Foundations
  - SPED 420, 440
  - IT 443 (**Note:** IT 344 is a prerequisite)

## SPECIAL EDUCATION

- General Methods
  - MATH 381
  - ELED 424 or ENG 440
  - HLED 455

### *Internship — Special Education*

16 credits

- SPED 498 or 499

**Note:** 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.

### *Major — Special Education — P-12 and Elementary Education (Dual Endorsement) and Professional Program Requirements*

149-150 credits (major and professional program)

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.

### *Major — Special Education*

55 credits

- SPED 360, 390, 460, 466, 467, 468, 471, 472, 474, 480, 481, 482, 483, 484, 485, 486

### *Elementary Program Curriculum and Methods*

29 credits

- MATH 382, 383
- SCED 480, 490
- ELED 425
- MUS 361
- ART 380
- PE 345

### *Professional Studies Core*

33-34 credits

- Psychological Foundations
  - EDUC 301, 302
- Social Foundations/Philosophical
  - EDUC 310
- Instructional Foundations
  - SPED 420, 440
  - IT 443 (**Note:** IT 344 is a prerequisite)
- General Methods
  - MATH 381
  - ELED 424 or ENG 440
  - HLED 455

### *Internships — Special Education and Elementary Education*

32 credits

- SPED 498
- ELED 494

### *Major — Early Childhood Special Education (P-3) and Professional Program Requirements*

108-109 credits (without teacher certification)

130-131 credits (with teacher certification)

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 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 endorsements in Early Childhood Special Education and Special Education must complete the Professional Studies Core, the Early Childhood Special Education (P-3) major, and Public School Practica and Internship.

### *Major — Early Childhood Special Education (P-3)*

79 credits (Special Education and Early Childhood Studies)

- Special Education Studies (46 credits)
  - SPED 360, 390, 444, 460, 466, 467, 468, 474, 480, 483, 484, 485, 486
- Early Childhood Studies (33 credits)
  - ELED 390, 430, 431, 432, 434
  - SPED 443
  - SOC 260
  - PE 308 or 443
  - CSD 251 or 354

### *Professional Studies Core*

29-30 credits

- Psychological Foundations
  - EDUC 301, 302
- Social Foundations/Philosophical
  - EDUC 310
- Instructional Foundations
  - SPED 420, 440
  - IT 443 (**Note:** IT 344 is a prerequisite)
- General Methods
  - MATH 381
  - HLED 455 or ELED 435

### *Public School Practica and Internship — Special Education*

22 credits

- SPED 481, 482
- SPED 496

## 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 major 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 Web site, [www.wce.wvu.edu/Resources/OFE](http://www.wce.wvu.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, phone 360-650-3310, Miller Hall 206.

## COURSES IN SPECIAL EDUCATION (SPED)

*Courses numbered X37; X97; 300, 400; 417 445 are described on Page 34 of this catalog.*

### 360 INTRODUCTION TO SPECIAL EDUCATION (4)

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. Requires a minimum of 15 hours of practicum experience during the quarter.

### 363 SECONDARY STUDENTS WITH SPECIAL NEEDS (3)

Pre- or co-req: admission to the Woodring College of Education, SEC 431, 435. 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.

### 364 TEACHING ALL STUDENTS (4)

Prereq: admission to the Woodring College of Education. 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.

### 390 SPECIAL EDUCATION PRACTICUM (3)

Prereq: special education major or permission. Practicum experience in school setting. Designed to provide opportunities for students to observe instructional intervention programs for individual students, small groups, and large groups. S/U grading.

### 420 EFFECTIVE TEACHING (4)

Prereq: admission to the Woodring College of Education or permission of the instructor and concurrent enrollment in SPED 440 and 460. Research-based recommended practices in the design, delivery and evaluation of instruction for diverse learners.

### 430 PROBLEM SOLVING FOR DIVERSE NEEDS (3)

Prereq: SPED 364; concurrent enrollment in ELED 494. 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.

### 440 SCHOOL PRACTICUM (1-4)

Prereq: admission to Woodring College of Education; SPED 390 or permission of instructor; SPED 420 and SPED 460 concurrent. Practicum experience in school setting designed to provide opportunities to demonstrate effective teaching and behavior management practices.

### 441 ANALYSIS AND STRATEGIES OF TEACHING (3-5)

Prereq: one course from the educational psychology or foundations area, or permission of instructor. Systematic study of teaching; observation; analysis and development of teaching skills and strategies; individual projects. Repeatable to a maximum of 10 credits.

### 441a-m ANALYSIS AND STRATEGIES OF TEACHING (1-5)

Prereq: one course from the educational psychology or foundations area, or permission of instructor. 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.

### 442 WORKING WITH STUDENT TEACHERS (3)

Prereq: teaching experience. Techniques for the orientation of student teachers, major problems which confront student teachers, and evaluation of their achievement. Repeatable to a maximum of 9 credits.

### 443 EARLY DEVELOPMENTAL VARIATIONS (3)

Prereq: SPED 360 or permission of instructor. Typical sequences of development from birth to age eight, and educational implications of atypical patterns.

### 444 ASSESSMENT AND INTERVENTION IN EARLY CHILDHOOD SPECIAL EDUCATION (4)

Prereq: SPED 360, 420, 466. 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.

### 460 UNIVERSAL INTERVENTIONS FOR CLASSROOM MANAGEMENT (3)

Prereq: SPED 360 or permission of instructor. Universal behavioral interventions for group management with a focus on preventive strategies and improving social behavior.

### 461 EDUCATION FOR THE GIFTED AND TALENTED (4)

Prereq: SPED 360 or permission of instructor. 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.

### 466 ASSESSMENT, EVALUATION AND IEP (4)

Prereq: SPED 360, 420, EDUC 302; co-req: SPED 467. 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.

## SPECIAL EDUCATION

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### **467 CURRICULUM-BASED EVALUATION (3)**

Prereq: SPED 360, 420, EDUC 302; co-req: SPED 466. Curriculum-based procedures and formative evaluation. Determining present levels of educational performance, developing associated goals and objectives and monitoring progress.

### **468 FAMILIES, PROFESSIONALS AND EXCEPTIONAL CHILDREN (4)**

Prereq: SPED 360. Techniques for collaborating and communicating with professionals and families of children and youth who have disabilities and challenges.

### **470 VIOLENT AND AGGRESSIVE YOUTH (3)**

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.

### **471 INTERVENTIONS FOR LEARNING PROBLEMS (4)**

Prereq: SPED 360, 420, 460. 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.

### **472 BEHAVIOR ASSESSMENT AND INTERVENTION (3)**

Prereq: SPED 460, 466, 467. 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.

### **473 PROMOTING RESILIENCY IN VULNERABLE STUDENTS (3)**

Prereq: admission to the Woodring College of Education or permission of instructor. 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.

### **474 STUDENTS WITH COMPLEX SPECIAL NEEDS (4)**

Prereq: SPED 360, 420, 466. 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.

### **480 SPECIAL EDUCATION PRACTICUM II: LITERACY I (1-3)**

Prereq: special education major or permission of instructor. 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.

### **481 SPECIAL EDUCATION PRACTICUM III: LITERACY 2 (1-3)**

Prereq: special education major or permission of instructor. 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.

### **482 SPECIAL EDUCATION PRACTICUM IV: MATH (1-3)**

Prereq: special education majors only or permission of instructor. 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.

### **483 READING INSTRUCTION FOR STUDENTS WITH SPECIAL NEEDS (4)**

Prereq: SPED 466, 467. Co-req: SPED 480. Basic reading instruction for K-12 students in inclusive classrooms; emergent literacy, instructional methods, curriculum and materials; accommodating for individual differences.

### **484 WRITTEN EXPRESSION INSTRUCTION FOR STUDENTS WITH SPECIAL NEEDS (4)**

Prereq: SPED 467, 483. Co-req: SPED 481, 482, 485, 486. Differentiated instruction strategies for P-12 students with special needs specific to the writing process. Focus on the range of assessment strategies, instructional methods, curriculum and material available to special educators for addressing students' individual needs with written language.

### **485 MATH INSTRUCTION FOR STUDENTS WITH SPECIAL NEEDS (4)**

Prereq: MATH 381, SPED 467, concurrent enrollment in SPED 467, 481, 482, 484, 486. Specially designed, differentiated instruction for P-12 students in inclusive resource and self-contained classrooms. Includes emergency numeracy, computation, problem solving, generalization and functional application to measurement, time and money. Covers a range of assessment strategies, instructional methods, curricula and materials plus accommodations and modifications for addressing individual student needs.

### **486 CASE STUDY APPLICATIONS IN SPECIAL EDUCATION (2)**

Prereq: all required special education 400-level courses to be taken as prerequisites or concurrent. 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.

### **491 SEPTEMBER EXPERIENCE (2-3)**

Prereq: permission of department. Observation and participation in the opening of school. Repeatable to a maximum of 9 credits. S/U grading.

### **496 INTERNSHIP — EXCEPTIONAL CHILDREN/EARLY CHILDHOOD (2-18)**

Prereq: recommendation for supervised teaching. Supervised teaching experience to develop and demonstrate teaching competence for exceptional children. Repeatable to 24 credits. S/U grading.

### **498 INTERNSHIP — EXCEPTIONAL CHILDREN/ELEMENTARY (2-18)**

Prereq: recommendation for supervised teaching. Supervised teaching experience to develop and demonstrate teaching competence for exceptional children. Repeatable to 24 credits. S/U grading.

### **499 INTERNSHIP — EXCEPTIONAL CHILDREN/SECONDARY (2-18)**

Prereq: recommendation for supervised teaching. Supervised teaching experience to develop and demonstrate teaching competence for exceptional children. Repeatable to 24 credits. S/U grading.

## **Graduate Courses**

*Courses numbered 500, 517, 545, 597 are described on Page 34 of this catalog. Admission to Graduate School or special permission required. See the Graduate School section of this catalog.*

### **510 MIDDLE AND SECONDARY LEVEL LEARNING PROBLEMS (4)**

Prereq: admission to graduate program or permission of instructor. 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.

### **518 CURRENT ISSUES IN EDUCATION: SPECIAL EDUCATION (1-5)**

Prereq: graduate status or permission of instructor. Examination and discussion of current issues in special education. Repeatable to a maximum of 10 credits.

### **542 ISSUES IN INCLUSIVE EARLY EDUCATION (3)**

Prereq: admission to graduate school or permission of instructor. 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.

### **543 ASSESSMENT OF YOUNG CHILDREN (BIRTH TO 8 YEARS) (4)**

Prereq: admission to graduate school or permission of instructor. 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.

### **544 INCLUSIVE CURRICULUM IN EARLY CHILDHOOD (3)**

Prereq: admission to graduate school or permission of instructor. 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.



**560 LITERACY INSTRUCTION FOR STUDENTS WITH SPECIAL NEEDS (4)**

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.

**562 LEARNING PROBLEMS (4)**

Prereq: admission to graduate program or permission of instructor. 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.

**563 CURRICULUM AND METHODS IN SPECIAL EDUCATION (4)**

Prereq: admission to graduate program or permission of instructor. Analysis and application of curricular design, research-based instructional models, and assistive technology with discussions of universal design and legal mandates.

**564 SOCIAL SKILLS (4)**

Prereq: admission to graduate program or permission of instructor. Applied behavior analysis and cognitive intervention strategies for disabled children and high-risk children. Emphasis on functional assessment, single-subject research design and the teaching of social skills.

**565 COMMUNICATION AND COLLABORATION IN SPECIAL EDUCATION (4)**

Prereq: admission to graduate program or permission of instructor. 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.

**567 ADVANCED ISSUES IN SPECIAL EDUCATION (2)**

Prereq: admission to graduate program or permission of instructor. Intensive study of legal, intervention and ethical issues in special education. Repeatable to a maximum of 6 credits.

**568 CURRICULUM-BASED EVALUATION AND DECISION MAKING (4)**

Prereq: admission to graduate program or permission of instructor. 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.

**570 VIOLENT AND AGGRESSIVE YOUTH (3)**

This course is designed to present information on the problem of violent and 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.

**590 SEMINAR IN DEMONSTRATION TEACHING AND SUPERVISION (3)**

Prereq: ELED 442 or permission of department. Advanced studies in the principles of supervision; utilization of instructional resources and the evaluation and improvement of teaching.

**598 RESIDENCY IN SPECIAL EDUCATION (4-16)**

Full-time residency placement in a special education environment in the public schools. Repeatable to a maximum of 16 credits.

**598a INTERNSHIP: EXCEPTIONAL CHILDREN (8 or 16)**

Full-time student teaching placement in a special education environment for ME certification students. Not applicable to graduate plans of study. Repeatable to 24 credits. S/U grading.

**690 THESIS (1-9)**

Prereq: approval of the student's graduate committee. Research study under the direction of a faculty committee. Repeatable to a maximum of 9 credits. S/U grading.

**691 RESEARCH SEMINAR (1-6)**

Prereq: approval of the student's graduate committee or program advisor. Graduate research under the direction of a program advisor/committee. S/U grading. Repeatable to a maximum of 6 credits.

# 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, diversity and cultural awareness, 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.

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 311 and the phone number is 360-650-3190.

## STUDENT AFFAIRS ADMINISTRATION FACULTY

**SUSAN MANCUSO** (1995) Associate Professor. BA, University of California-Los Angeles; MA, Western Washington University; EdD, University of Washington.

### Adjunct 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.

**KUNLE OJIKUTU** (1996) Adjunct Professor. BS, Clark Atlanta University; MFA, University of New Mexico; PhD, University of Nebraska-Lincoln.

## DEGREE GRANTED

- Master of Education in Student Affairs Administration in Higher Education

## COURSES IN STUDENT AFFAIRS ADMINISTRATION IN HIGHER EDUCATION PROGRAM (SAA)

*Courses numbered X37; X97; 300, 400; 417, 445 are described on Page 34 of this catalog.*

### Student Affairs Administration Program (SAA)

#### 340 PARAPROFESSIONAL ADVISEMENT (2-4)

Prereq: permission of instructor and anticipated employment in campus-based student services. Emphasizes the helping relationship in various student affairs advising, educational and residential program areas. Repeatable with different topics.

#### 341 PRACTICUM IN PARAPROFESSIONAL ADVISEMENT (1-4)

Prereq: AHE 340 and permission of instructor. Supervised practicum for students to work in university student services programs. Repeatable with various experiences to a maximum of 6 credits. S/U grading.

#### 375 DIVERSITY IN HIGHER EDUCATION AND STUDENT AFFAIRS (4)

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 the growth in diversity of students and the range and complexity of services and programs designed to ensure their academic and personal success.

#### 420 FOUNDATIONS OF STUDENT LEADERSHIP: THEORY AND PRACTICE (3)

Prereq: permission of instructor. Introduces leadership theories and facilitates student understanding and application of their leadership styles and strategies as emerging leaders.

## Graduate Courses

*Courses numbered 500; 517; 545; 597 are described on Page 34 of this catalog. Admission to Graduate School or special permission required. See the Graduate School Section of this catalog.*

#### 501 ASSESSMENT AND RESEARCH IN STUDENT AFFAIRS (4)

Prereq: admission to Student Affairs Administration program or permission of instructor. History, philosophy and goals of assessment and research in student affairs. 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. Emphasis on ethics throughout the research and assessment processes.

#### 555 FOUNDATIONS OF HIGHER EDUCATION (3)

Prereq: graduate status or permission of instructor. 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.

#### 557 STUDENT DEVELOPMENT THEORY AND PRACTICE (4)

Prereq: admission to Student Affairs Administration program or permission of instructor. Examines cognitive, psychosocial and identity development theories and models as well as implications for student affairs programs, services, and student interactions.

#### 558 INTERVIEWING AND INTERPERSONAL EFFECTIVENESS (3)

Prereq: admission to Student Affairs Administration program or permission of instructor. 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.

#### 559 LEADERSHIP AND ORGANIZATIONAL MANAGEMENT (3)

Prereq: admission to Student Affairs Administration program or permission of instructor. Study of contemporary theories of leadership and management techniques with applications to higher education settings.

#### 560 STUDENT AFFAIRS PRACTICE AND THE COLLEGE STUDENT (4)

Prereq: admission to Student Affairs Administration program or permission of instructor. 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.

#### 561 COLLABORATION AND GROUP DYNAMICS (3)

Prereq: admission to Student Affairs Administration program. 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.

#### 562 CULTURAL PLURALISM IN HIGHER EDUCATION (4)

Prereq: admission to Student Affairs Administration program or permission of instructor. 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.

#### 563 PROGRAM DEVELOPMENT AND INSTRUCTION (4)

Prereq: admission to Student Affairs Administration program. 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.

#### 564 CURRENT ISSUES AND TRENDS IN HIGHER EDUCATION (3)

Prereq: admission to Student Affairs Administration program or permission of instructor. Examines several current and controversial issues and trends in higher education. Repeatable to a maximum of 6 credits.

**592 INTERNSHIP IN STUDENT AFFAIRS ADMINISTRATION (2-6)**

Prereq: admission to Student Affairs Administration program. Development of professional competencies through an internship in a college student affairs office. Repeatable to a maximum of 9 credits. S/U grading.

**599 GRADUATION SEMINAR (1-3)**

Prereq: student (a) must be in final quarter of classes excluding thesis/field project and (b) must receive approval of program advisor. 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.

**690 THESIS (1-9)**

Prereq: advancement to candidacy and approval of the student's graduate committee. Research study under the direction of a faculty committee. Repeatable to a maximum of 9 credits. S/U grading.

**691 RESEARCH SEMINAR (1-6)**

Prereq: approval of the student's graduate committee or program advisor. Graduate research under the direction of program advisor/committee. Repeatable to a maximum of 6 credits. S/U grading.

## 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 teaching certification in the state of Washington. These programs integrate studies in Elementary Education, Special Education, and across nine 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. With the completion of an optional second internship, students will receive 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 on the Western Washington University Bellingham campus and at program sites in Bremerton, Everett, and Seattle. 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 Web site, [www.wce.wvu.edu/Depts/TEOP](http://www.wce.wvu.edu/Depts/TEOP).

Inquiries should be directed to the site you wish to attend. Bellingham (post-baccalaureate only), 360-650-7358; Bremerton, 360-475-7272; Everett, 425-339-3810, X/11; Seattle, 206-527-3718.

### TEACHER EDUCATION OUTREACH PROGRAMS FACULTY

**LAURENCE ANTIL.** Chair. BS, Fitchburg State College; MEd, Charles Sturt University; PhD, University of Washington.

**PAUL BEISENHERZ** (2002) Lecturer. BA, William Jewell College; MA, University of Minnesota; PhD, University of Washington.

**DINA BENEDETTI** (1999) Program Director for WWU Seattle Urban Center, Lecturer. BA, MA, University of New Mexico; PhD, University of Washington.

**LYUBOV LAROCHE** (2004) Lecturer/Academic Advisement Coordinator for Everett Education Center. BA, Sverdlovsk Art College, Russia; MS, Middle Tennessee State University; BS, MS, Ural State University, Russia; PhD, University of British Columbia.

**CHRISTINE MCLEAN KESLER** (2002) Lecturer, Oak Harbor and Everett. BA, Central Washington University; MEd, Western Washington University.

**SUZIE NELSON** (2000) Practicum Advisor/Lecturer, Everett Education Center. BA, MA, California State University.

**MARGIE NORDEN-WOOD** (2000) Practicum Advisor/Lecturer, Everett Education Center. BA (fifth year), University of Washington; MA, City University.

**LAURIE PHELAN** (1995) Program Director, Bellingham Elementary Post-Baccalaureate Certification Program. BA, MEd, Western Washington University.

**GENÉT SIMONE** (2002) Director, Bremerton Education Center, Lecturer. BA, Western Washington University; MS, Minnesota State University-Mankato; PhD, University of Colorado-Boulder.

**BARBARA WAGENAAR** (2001) Intern Administrator, Seattle and Everett Education Centers, Teacher Education Outreach Programs. MA, Ohio State University.

### TEACHER EDUCATION OUTREACH PROGRAMS

- BA in Education (Special Education major) leading to a teacher certificate endorsed in Elementary Education
- BA in Education (Special Education major) leading to a teacher certificate endorsed in Elementary and Special Education
- Post-Baccalaureate teacher certification with Elementary Education endorsement
- Special Education (P-12) additional endorsement

### PROGRAM LENGTH

The sequence of study is designed for students who hold a transferrable 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 except for the Bellingham Post-Baccalaureate summer start. Students at all sites 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
- Post-Baccalaureate students attend classes for 7 quarters (5 quarters at the Bellingham site), including the internship.

### ELEMENTARY EDUCATION PROGRAM REQUIREMENTS

Refer to the *Elementary Education* section of this catalog for program admission, continuation, completion, and certification requirements, for Elementary Education Professional Program requirements, and for Elementary Education course descriptions.

### SPECIAL EDUCATION MAJOR

Refer to the *Special Education* section of this catalog for *Special Education* major requirements and for Special Education course descriptions.

# TEACHING ENGLISH TO SPEAKERS OF OTHER LANGUAGES

The Teaching English to Speakers of Other Languages (TESOL) program prepares future instructors to teach English to immigrants in our society, as well as to international students both in the United States and abroad. 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 a primary 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 a two-part methods course. Hands-on classroom experience with English as a Second Language (ESL) learners is an essential part of all program courses, culminating in the final course — a mentored teaching practicum 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. Students seeking a TESOL certificate, a minor in TESOL, or a Washington state endorsement in teaching ESL, must complete a three- or four-credit elective focusing on another culture, as well as the equivalent of one year of college-level foreign language study. The cross-cultural and foreign language requirements may be satisfied through previous course work or experience, at the discretion of the program director. The cross-cultural and foreign language requirements may be satisfied through previous course work or experience at the discretion of the program director, **or concurrently with the program.** Non-native speakers of English are required to have a TOEFL score of 550 or higher, preferably met prior to beginning the program.

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.

All applicants should contact the TESOL office for advising on the admissions process, which will include an application to the TESOL program, and may require 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 251D, phone 360-650-4949, or visit the Web site at [www.wce.wvu.edu/tesol](http://www.wce.wvu.edu/tesol).

## *Certificate of Achievement*

All TESOL program graduates completing the program with a minimum GPA of 2.7 in program course work earn a certificate of achievement, which can be used both domestically and internationally as proof of in-depth training in TESOL. 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.

## *Minor — TESOL*

Undergraduates may choose to complete a 27-credit minor in

TESOL. To declare the 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. Students must complete the minor with a minimum GPA of 2.7 in minor course work.

□ TESL 401, 402, 410, 420, 421, 430

## *Endorsement in teaching ESL*

This program leads to an additional endorsement in English as a Second Language based on Washington state English as a Second Language endorsement competencies; when accompanied by a professional teacher education program and a first endorsement in another content area. Each required course must be completed with a grade of B- (2.7) or better.

## COURSES IN TESOL (TESL)

### 401 INTRODUCTION TO ENGLISH LINGUISTICS FOR TESOL (4)

Introduction 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.

### 402 ENGLISH GRAMMAR FOR TESOL (5)

Prereq: TESL 401 or permission. The fundamentals of English syntactic structure with emphasis on its application to teaching of ESL. Demonstration and practice in explaining and presenting key structures, including the structure of sentences, parts of speech, modification, complementation, and nominalization. Required participation in embedded practicum with English language learners.

### 403 APPLICATIONS OF LINGUISTICS TO TESOL (1)

Prereq: permission of program director. A one-credit version of TESL 401 for students who have successfully completed an equivalent course in introductory linguistics.

### 410 SECOND LANGUAGE ACQUISITION THEORY FOR TESOL (4)

Prereq: admission to TESOL program or permission of instructor; TESL 401 recommended. 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.

### 420 METHODS AND MATERIALS FOR BASIC COMMUNICATION (5)

Prereq: admission to TESOL program or permission of instructor; TESL 401 recommended. 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.

### 421 METHODS AND MATERIALS FOR ACADEMIC LANGUAGE PROFICIENCY (5)

Prereq: TESL 420 or permission of instructor; TESL 401 recommended. 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.

### 430 SEMINAR AND PRACTICUM IN TESOL (4)

Prereq: TESL 401, 410, 420, 421; 410 can be taken concurrently. Supervised teaching of ESL in public school, adult education, and university programs. International placements available. Includes a weekly seminar to discuss observations, materials and teaching strategies. S/U grading. Repeatable.



# UNIVERSITY PERSONNEL

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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. Sucek
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
1990-91	Richard W. Thompson
1987-89	George E. Mariz
1986-87	Harry Jackson
1985-86	Robert M. Thorndike

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Professor Emeritus of Environmental Studies. BA, University of Utah; MA, PhD, University of Oregon. (1971-2005)

**WALTER L. ROBINSON**

Professor Emeritus of Foreign Languages and Literatures. BA, MA, PhD, University of Texas.

**JUNE R.P. ROSS**

Professor Emeritus of Biology. BSc, PhD, DSc, University of Sydney, Sydney, Australia. (1967-2003)

**SALVATORE S. RUSSO**

Professor Emeritus of Chemistry. BA, Wesleyan University; PhD, Northwestern University. (1968-2005)

**GERARD F. RUTAN**

Professor Emeritus of Political Science. BA, MA, University of Montana; PhD, University of North Carolina.

## S

**RONALD N. SAVEY**

Associate Professor Emeritus of Accounting. BA, Western State College of Colorado; MBA, University of Denver.

**LEONARD SAVITCH**

Associate Professor Emeritus of Education. BS, Pennsylvania State; MA, Teachers College, Columbia University; PhD, University of Washington.

**ROBERT L. SCANDRETT**

## UNIVERSITY PERSONNEL

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Professor Emeritus of Music. BA, Seattle Pacific College; MA, PhD, University of Washington.

### **THOMAS SCHLOTTERBACK**

Professor Emeritus of Art. Chair, Department of Art. Acting Dean of College of Fine and Performing Arts. BFA, MFA, University of Kansas; PhD, the State University of Iowa.

### **DAVID E. SCHNEIDER**

Professor Emeritus of Biology. BS, Bates College; PhD, Duke University. (1966-2003)

### **CARL U. SCHULER**

Associate Professor Emeritus of History. BS, MA, PhD, University of Wisconsin.

### **HENRY G. SCHWARZ**

Professor Emeritus of History/East Asian Studies. BA, MA, PhD, University of Wisconsin.

### **MAURICE L. SCHWARTZ**

Professor Emeritus of Geology and Education. BA, MS, PhD, Columbia University.

### **SY SCHWARTZ**

Associate Professor Emeritus of Educational Administration and Foundations. BS, MS, EdD, Wayne State University.

### **DONALD J. SCHWEMMIN**

Associate Professor Emeritus of Biology. BS, MS, PhD, University of Michigan.

### **JAMES W. SCOTT**

Professor Emeritus of Geography and Regional Planning. BA, MA, University of Cambridge; PhD, Indiana University.

### **MICHAEL R. SEAL**

Professor Emeritus of Engineering. BEd, University of British Columbia; MEd, Western Washington State College; DEd, Texas A&M University. (1968-2004)

### **CLYDE M. SENGER**

Professor Emeritus of Biology. BA, Reed College; MS, Purdue University; PhD, Utah State University.

### **WALTER D. SUESS**

Associate Professor Emeritus of Modern and Classical Languages. BA, Ruhr-Universität; MA (English), MA (German), California State University-San Francisco; PhD, University of California-Davis. (1991-2007)

### **ALBERT C. SHAW**

Professor Emeritus of Music. BMusEd, Wheaton College; MMusEd, Drake University; DMusEd, Indiana University. (1978-1999)

### **KNUTE SKINNER**

Professor Emeritus of English. BA, University of Northern Colorado; MA, Middlebury College; PhD, University of Iowa. (1962-1997)

### **ALAN G. SLEEMAN**

Associate Professor of Economics. BSc, London School of Economics; PhD, Simon Fraser University. (1977-2005)

### **IRWIN L. SLESNICK**

Professor Emeritus of Biology. BS, BA, Bowling Green State University; MS, University of Michigan; PhD, The Ohio State University. (1963-1998)

### **ALDEN C. SMITH**

Associate Professor Emeritus of Communication. BS, Florida Southern; MS, Syracuse University; PhD, University of Illinois. (1966-1997)

### **ARTHUR L. SOLOMON**

Professor Emeritus of Speech and Broadcast. BA, Antioch College; MA, University of North Carolina; PhD, Stanford University.

### **MARVIN A. SOUTHCOTT**

Associate Professor Emeritus of Technology. BA, University of Washington; MFA, Maryland Institute College of Art.

### **R.E. "TED" STANNARD JR.**

Associate Professor Emeritus of Journalism. BA, University of Washington; MA, Cornell University.

### **PETE S. STEFFENS**

Professor Emeritus of Journalism. BA, Harvard College; BA, MA, Balliol College, Oxford, England. (1972-1999)

### **G. EDWARD STEPHAN**

Professor Emeritus of Sociology. BA, San Francisco State College; PhD, University of Oregon.

### **KATHLEEN J. STEPHENS-KERNAN**

Associate Professor Emeritus of Library Sciences. BA, Western Washington State College; MLS, University of Washington.

### **WILLIAM STOEVER**

Professor Emeritus of Liberal Studies. BA, Pomona College; MDiv, Yale Divinity School; MPhil, PhD, Yale University.

### **WALTER F. SUESS (1991)**

Associate Professor Emeritus of Modern and Classical Languages. BA, Ruhr-Universität; MA (English), MA (German), California State University-San Francisco; PhD, University of California-Davis. (1991-2006)

### **WILLIAM C. SUMMERS**

Professor Emeritus of Environmental Science. BME, PhD, University of Minnesota.

### **KENNETH M. SYMES**

Professor Emeritus of English. BS, MS, Utah State University; PhD, University of New Mexico. (1967-2003)

## T

### **JAMES L. TALBOT**

Professor Emeritus of Geology. BA, University of Cambridge; MA, University of California-Berkeley; PhD, University of Adelaide.

### **DAVID E. TEMPLETON**

Professor Emeritus of Art. BFA, MA, University of Illinois; PhD, University of Minnesota. (1969-1996)

### **MARY TÉREY-SMITH**

Professor Emeritus of Music. BM, Liszt Academy of Music, Budapest; MA, University of Vermont; PhD, University of Rochester.

### **RICHARD W. THOMPSON**

Professor Emeritus of Psychology. BA, MA, PhD, Michigan State University. (1987-1997)

### **HUBERT N. THORESON**

Associate Professor Emeritus of Management. BS, Valley City State College; MEd, EdD, University of North Dakota.

### **ROBERT M. THORNDIKE**

Professor Emeritus of Psychology. BA, Wesleyan University; PhD, University of Minnesota. (1970-2007)

### **MARIAN J. TONJES**

Professor Emeritus of Educational Curriculum and Instruction. BA, MA, University of New Mexico; EdD, University of Miami.

### **JOHN TOWNER**

Professor Emeritus of Elementary Education. BS, MS, University of Wisconsin; PhD, University of Minnesota.



## V

**STEWART VAN WINGERDEN**

Associate Professor Emeritus of Education. BAEd, Western Washington State College; MA, Colorado State College; EdD, Washington State University.

**DOUGLAS L. VANDER YACHT**

Associate Professor Emeritus of Theatre Arts. BA, Western Washington State College; MA, Purdue University; PhD, The Ohio State University. (1970-1997)

**RICHARD F. VOGEL**

Associate Professor Emeritus of Engineering Technology. BA, MAT, Washington State University; DEd, Texas A&M University. (1971-1999).

## W

**DAVID J. WALLACE**

Professor Emeritus of Music. BM, University of Michigan; MM, University of Wisconsin; DMA, University of Rochester. (1987-2005).

**WILLIAM L. WALLACE**

Associate Professor Emeritus of Liberal Studies. BS, Appalachian State University; MA, PhD, Ohio University.

**ADA L. WALTER**

Assistant Professor Emeritus of Business Education and Economics. BS, Winthrop College; MBA, University of Denver.

**THOMAS E. WARD**

Professor Emeritus of Theatre Arts. BA, West Maryland College; MFA, New York University, School of Arts. (1977-2003)

**MARY W. WATROUS**

Professor Emeritus of Education. AB, University of Nebraska; MA, Gonzaga University; EdD, University of Washington.

**LOREN L. WEBB**

Professor Emeritus of Speech Pathology and Audiology. BS, University of California-Berkeley; MA, University of Redlands; PhD, University of Washington.

**HERBERT H. WEBBER**

Professor Emeritus of Geography and Environmental Social Sciences. BSc, PhD, University of British Columbia. (1970-2003)

**EVELYN M. WELLMAN**

Associate Professor Emeritus of Music. BA, MA, Western Washington State College.

**JOHN A. WEYH**

Professor Emeritus of Chemistry. BA, College of Great Falls; MS, PhD, Washington State University. (1968-2005)

**DONALD W. WHISENHUNT**

Professor Emeritus of History. BA, McMurry College; MA, PhD, Texas Tech University. (1991-2003)

**JOHN C. WHITMER**

Professor Emeritus of Chemistry. BS, University of Rochester; MS, PhD, University of Michigan. (1969-2004)

**MARK WICHOLAS**

Professor Emeritus of Chemistry. AB, Boston University; MS, Michigan State University; PhD, University of Illinois-Urbana. (1967-2007)

**JAMES W. WILKINS, JR.**

Associate Professor Emeritus of Psychology. AB, MA, Kent State University; PhD, Michigan State University.

**H. WILLIAM WILSON**

Professor Emeritus of Chemistry. BSc, University of Alberta; PhD, University of Washington.

**GEORGE E. WITTER**

Associate Professor Emeritus of Computer Science. BA, MA, Miami University.

**EVELYN C. WRIGHT**

Associate Professor Emeritus of English. BS, Illinois State University; MA, PhD, Northwestern University.

## Y

**MING-HO YU**

Professor Emeritus of Huxley College. BS, National Taiwan University; MS, PhD, Utah State University. (1969-1998)

## Z

**DAVID W. ZIEGLER**

Associate Professor Emeritus of Political Science. BA, Oberlin College; MA, PhD, Harvard University. (1967-2003)

**LINDA A. ZURFLUH**

Professor Emeritus of Educational Administration. BA, MA, Pacific Lutheran University; PhD, University of Washington. (1984-2003)

## FACULTY

## A

Abedi, Amir / Political Science  
 Abel, Troy / Environmental Studies  
 Acevedo-Gutierrez, Alejandro / Biology  
 Alexander, Marian L. / Library  
 Aller, Warren / Educational Administration  
 Alper, Donald / Political Science  
 Amiran, Edoh Y. / Mathematics  
 Amundson, Garth / Art  
 Anderson, Kathryn L. / Fairhaven  
 Anderson, Kristin L. / Sociology  
 Anderson, Peggy / Applied Research and Development Center/  
 Human Services  
 Anderson, Roger A. / Biology  
 Antil, Laurence / Special Education  
 Antholt, Sharron / Art  
 Anthony-Cahill, Spencer J. / Chemistry  
 Armstrong, Jeanne / Library  
 Ashcraft, Catherine / Secondary Education  
 Askari, Kaveh / English  
 Atneosen, Richard A. / Physics and Astronomy

## B

Babcock, Scott / Geology  
 Bach, Andrew J. / Geography and Environmental Social Sciences  
 Baharav, Eva / Communication Sciences and Disorders  
 Baker-Sennett, Jacquelyn / Human Services  
 Bajuk, Mike / Dance  
 Bajwa, Deepinder / Decision Sciences  
 Banister, Suzanne / Music  
 Barrett, W. Louis / Physics and Astronomy  
 Beasley, Bruce H. / English  
 Beisenherz, Paul / Elementary Education  
 Benson, Earl D. / Finance and Marketing  
 Berardi, Gigi / Geography and Environmental Social Sciences  
 Berg, Richard H. / Arts and Sciences  
 Bianco, Christopher / Music  
 Bingham, Brian L. / Environmental Science  
 Biswas, Bidisha / Political Science  
 Blickenstaff, Jacob / Secondary Education  
 Bodensteiner, Leo R. / Environmental Science  
 Bodman, Andrew / Geography and Environmental Studies  
 Borda, Emily / Science Education

## UNIVERSITY PERSONNEL

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Bornzin, Gary / Fairhaven College  
Bover, David / Computer Science  
Bower, John L. / Fairhaven College  
Boxberger, Daniel L. / Anthropology  
Bradley, Karen / Sociology  
Brand, Rob / Elementary Education  
Briggs, Roger D. / Music  
Brilla, Lorraine / Physical Education, Health and Recreation  
Broadhagen, Marion / Biology  
Brown, Nicole / English  
Brown, Richard / Theatre Arts  
Buck, Stephanie / Library  
Buckley, Patrick H. / Geography; Environmental Social Sciences  
Bulcroft, Kris / Sociology  
Bulcroft, Richard / Sociology  
Bunn, Andrew / Environmental Sciences  
Burton, Brian K. / Management  
Burtz, Randall / Physical Education, Health and Recreation  
Bussell, Mark E. / Chemistry  
Byrne, Christina A. / Psychology  
Byrtek, Michelle / Mathematics

### C

Caine, Dennis J. / Physical Education, Health and Recreation  
Cameron, Hazel / Library  
Campbell, Sarah K. / Anthropology  
Caplan-Auerbach, Jacqueline / Geology  
Carbajal, Brent J. / Modern and Classical Languages  
Carnel, Cher / Dance  
Carney, Joanne / Elementary Education  
Carroll, David / Elementary Education  
Cave, Linda M. / Mathematics  
Chalice, Donald R. / Mathematics  
Chalmers, Gordon / Physical Education, Health and Recreation  
Chan, Victor / Mathematics  
Chavez, Maria / Anthropology  
Chen, Paul / Political Science  
Clark, Douglas / Geology  
Clark, Timothy / Chemistry  
Clark-Langager, Sara / Canadian-American Studies  
Cochrane, Heather / Special Education  
Collamer, Barbara / Psychology  
Colby, Geraldine Hansen / Special Education  
Conton, Leslie / Fairhaven  
Copeland, Connie / Student Affairs Administration  
Coskie, Tracy / Elementary Education  
Costanzo, Susan / History  
Coughlin, Eileen / Adult and Higher Education  
Cridler, Juliet / Geology  
Cross, Sandra / Human Services  
Crowder, Kyle / Sociology  
Cunningham, Mick / Sociology  
Curgus, Branko / Mathematics  
Curley, David L./Liberal Studies  
Cvetkovich, George T. / Psychology

### D

Daffron, Sandra / Continuing College Education  
Dale, Carolyn / Journalism  
Daley, Christopher / Chemistry  
Danysk, Cecilia A. / History  
Darling, Rieko M. / Speech Pathology and Audiology  
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  
Demmert, William / Applied Research and Development Center  
Denham, Kristin / English  
Dennett, Nolan A. / Theatre Arts  
Derrington, MaryLynne / Educational Administration  
Devenport, Jennifer / Psychology  
Diehl, Peter D. / History  
Dietrich, Dawn Y. / English  
Dietrich, William / Environmental Studies  
Dillman, Steven H. / Technology  
Dinnel, Dale L. / Psychology  
Dodd, June / Instructional Technology  
Donnellan, Grant / Music  
Donovan, Deborah / Biology  
Donovan, Todd A. / Political Science  
Douglas, Kendra / Modern and Classical Languages, and Linguistics  
Downing, Thomas E. / Philosophy  
Duke, Shearleen / Journalism  
Dunn, Craig / Management  
Dupont, Brandon / Economics  
Durham, Yvonne / Economics  
Du Rocher Schudlich, Tina / Psychology

### E

Eaton, Marie D. / Fairhaven  
Eblen, Anna / Communication  
Edwards, Carol / Art  
Eerkes, Gary L. / Computer Science  
Emory, Steven R. / Chemistry  
Engebretson, David C. / Geology  
Englesberg, Paul / Educational Foundations  
Estrada, Lawrence / Fairhaven  
Etheridge, Harlan / Accounting  
Eurich, Susan Amanda / History

### F

Fabiano, Patricia / Prevention and Wellness Services  
Fast, Margaret / Library  
Fedorov, John / Fairhaven College of Interdisciplinary Studies  
Fein Berg, Seth /  
Feingold, David / Music  
Fewings, David R. / Finance and Marketing  
Fiero, Petra / Modern and Classical Languages  
Finlay, Janet / Psychology  
Fitzpatrick, Timothy / Music  
Fleishman, Steven / Engineering Technology  
Folk, Holly / Liberal Studies  
Foltin, Béla / Library  
Forgays, Deborah K. / Psychology  
Fox, Sheila / Special Education  
Freeman, Jeanne / Physical Education, Health and Recreation  
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  
 Germain, Roger / Theatre Arts  
 Ghali, Moheb A. / Economics  
 Giffen, Allison / English  
 Gilbertson, David / Accounting  
 Gilliam, Jeffrey P. / Music  
 Gleeson, Madge / Art  
 Globerman, Steven / Economics  
 Goebel, Bruce / English  
 Gogrof-Voorhees, Andrea / Liberal Studies  
 Goto, Stanford / Educational Leadership  
 Grady, Thomas / Engineering Technology  
 Graham, James / Psychology  
 Green, Gaye Leigh / Art  
 Greer, Deborah / Theatre Arts  
 Grimes, Michael / Anthropology  
 Grimm, Jeffrey / Psychology  
 Grote, Frederick W., Jr. / Psychology  
 Gruman, Diana / Psychology  
 Guelker-Cone, Leslie / Music  
 Guess, Carol / English  
 Gunewardena, Nandini / Human Services  
 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, Geraldine / Rehabilitation Counseling  
 Hansen, Julia / Economics  
 Hansen, Thor A. / Geology  
 Hardman, Pamela / English  
 Hardy, John T. (Jack) / Environmental Science  
 Harper-Arabie, Ruth / Environmental Science and Canadian-American Studies  
 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  
 Hayden, Davis C. / Psychology  
 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; Canadian-American Studies  
 Henniger, Michael L. / Elementary Education  
 Henrichs, Deborah / Physical Education, Health and Recreation  
 Henson, Steven / Economics  
 Hirsch, David / Geology  
 Hochstetler, Laurie / History  
 Hodges, Hart L. / Economics  
 Hoekstra, Nicole / Engineering Technology  
 Hoelscher, Karen J. / Elementary Education  
 Hoffman, Joan M. / Modern and Classical Languages  
 Hoffman, Steve / American Cultural Studies

Homann, Peter S. / Environmental Science  
 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  
 Hsu, Kathy / Accounting  
 Hsueh, Vicki / Political Science  
 Hua, Stella / Decision Sciences  
 Hudson, Hud / Philosophy  
 Hughes, Eileen / Elementary Education  
 Hutchinson, Penny / Dance  
 Hutton, Marguerite R. / Accounting  
 Hyatt, Keith / Special Education  
 Hyman, Ira E. Jr. / Psychology

**I**

Inverarity, James / Sociology  
 Israels, Chuck / Music

**J**

Jack, Dana C. / Fairhaven  
 Jagdish, Vinit / Economics  
 Janson, Carol / Art  
 Jantzen, Kelly J. / Psychology  
 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, Vernon D. / Political Science  
 Jongejan, Anthony / Instructional Technology  
 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  
 Keiper, Robert / Secondary Education  
 Keiper, Timothy / Instructional Technology and Secondary Education  
 Keller, Jennifer / Journalism  
 Kelley, Bridget / Special Education  
 Kennedy, Kathleen A. / History  
 Kim, Eugene Song / Finance and Marketing  
 Kim, Ilhyung / Decision Sciences  
 Kim, Jongwook / MBA  
 Kim, Jungsik / Fairhaven College of Interdisciplinary Studies, and American Cultural Studies  
 Kincaid, Susan / Human Services  
 King, Jeff / Psychology  
 King, Rosalie Rosso / Art/Engineering Technology  
 Kitto, Kathleen L. / Engineering Technology  
 Klein, Karen / Elementary Education  
 Klein, Kay / Elementary Education  
 Kleinknecht, Ronald A. / Psychology

## UNIVERSITY PERSONNEL

---

Knabb, Shawn / Economics  
Knutzen, Kathleen / Physical Education, Health and Recreation  
Koetje, Todd A. / Anthropology  
Kong, Sophie / Finance and Marketing  
Korsmo, John / Human Services  
Krieg, John / Economics  
Kriz, George S. / Chemistry  
Krogh, Suzanne L. / Elementary Education  
Knutzen, Kathleen / Physical Education, Health and Recreation  
Kuntz, Mark / Theatre Arts

### L

Laffrado, Laura / English  
Lambert, Michael Chuck / Special Education  
Lampman, Gary M. / Chemistry  
Landis, Wayne G. / Environmental Science  
Larner, Daniel M. / Fairhaven  
Larsen, Donald / Educational Administration  
Larson, Bruce E. / Secondary Education  
Larson, Kristen / Physics and Astronomy  
Lawrence, Molly / Secondary Education  
Lawson, Robert / Applied Research and Development Center/Human Services  
Lay, William H. / Educational Foundations  
Leaf, David S. / Biology  
Lee, EE Lin / Communication  
Lehman, Barbara / Psychology  
Lemm, Kristi / Psychology  
Leonard, Kevin A. / History  
Leonhardt, Eric C. / Engineering Technology  
Levy, Jason / Environmental Studies  
Lewis, Arleen C. / English  
Lewis, L. Floyd / Decision Sciences  
Liao-Troth, Matthew / Management  
Li, Ying / Physical Education, Health and Recreation  
Lindquist, Norman F. / Mathematics  
Lindsey, Billie / Physical Education, Health and Recreation  
Linneman, Scott / Geology  
Lippman, Louis G. / Psychology  
Livingston, Mary Morgan / Human Services  
Lobeck, Anne / English  
Lockhart, Julie A. / Accounting  
Lois, Jennifer / Sociology  
Lopresti, Robert / Library  
Lortz, James E. / Theatre Arts  
Loucky, James / Anthropology  
Lundeen, Kathleen / English  
Lynne, William / English

### M

McClanahan, Lauren / Secondary Education  
McCormick, Patrick F. / Art  
McDonald-Miszczak, Leslie / Psychology  
McDowell, Stephen / Mathematics  
McDuffy, Christine / Educational Administration  
McInnis, Raymond / Library  
McKell, Eric K. / Engineering Technology  
McLaughlin, John F. / Environmental Science  
McLean, Kate C. / Psychology  
McMurtry-Chubb, Teri / Fairhaven College of Interdisciplinary Studies, and American Cultural Studies  
Madsen, Leza (Elizabeth) / Library  
Mahoney, Kristin / English  
Mana, Michael / Psychology  
Mancuso, Susan K. / Adult and Higher Education

Mariz, George E. / History  
Markosian, Ned / Philosophy  
Mars, Lawrence W. / Special Education and Educational Administration  
Marshall, Robert C. / Anthropology  
Martin, LeaAnn / Physical Education, Health and Recreation  
Mathers-Schmidt, Barbara / Speech Pathology and Audiology  
Matthews, Geoffrey B. / Computer Science  
Matthews, Kyle / Theatre Arts  
Matthews, Robin A. / Environmental Science  
Mears, Derrick / Physical Education, Health and Recreation  
Medler, Michael / Environmental Studies  
Meehan, J. Michael / Computer Science  
Melious, Jean O. / Geography and Environmental Social Sciences  
Mendes, Sebastian / Art  
Merrill, Rick / Dance  
Metzger, Mary J. / English  
Meyer, David / Music  
Miles, John C. / Geography and Environmental Social Sciences  
Miles, Scott / Environmental Studies  
Miller, Barbara / Art  
Miller, Brenda / English  
Miller, Kate / Women Studies, and American Cultural Studies  
Miller, Matthew / Elementary Education  
Miner, Benjamin / Biology  
Miran, Jonathon / Liberal Studies  
Miran, Marie / History  
Mitchell, Robert J. / Geology  
Montoya-Lewis, Raquel / Fairhaven College of Interdisciplinary Studies and American Cultural Studies  
Mookherjee, Debnath / Geography and Environmental Social Sciences  
Moore, James E. / Physical Education, Health and Recreation  
Morris, Jason / Engineering Technology  
Morton, Todd / Engineering Technology  
Moskowitz, Steven M. / Engineering Technology  
Mottner, Sandra / Finance and Marketing  
Moulds, Cynthia / Women Studies  
Moulds, Lisa / Women Studies  
Moyer, Craig L. / Biology  
Muller-Parker, Gisèle / Biology  
Murphy, Dennis R. / Economics  
Murphy, Sean / Liberal Studies  
Myers, O. Eugene / Geography and Environmental Social Sciences

### N

Naylor, Michael / Mathematics  
Neem, Johann / History  
Nelson, David M. / Economics  
Nelson, George / Science Education and Physics and Astronomy  
Nelson, Karna L. / Special Education  
Nelson, Philip A. / Computer Science  
Newcomer, Jeffrey / Engineering Technology  
Nicholas, Trula / Human Services  
Nolet, Victor / Special Education  
Norman, Arlan / Chemistry

### O

Ohana, Chris / Elementary Education  
Olney, Thomas J. / Finance and Marketing  
Olscamp, Paul / Philosophy  
O'Murchu, Niall / Fairhaven College  
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**

Packer, Donna / Library  
 Pagh, Nancy / English  
 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  
 Pavia, Donald L. / Chemistry  
 Pearce, Scott / Liberal Studies  
 Peltier-Davis, Cheryl / Library  
 Perry, Tara / Communication  
 Peters, Kimberly / Communication Sciences and Disorders  
 Peterson, Andrea / Library  
 Peterson, Merrill A. / Biology  
 Phelan, Laurie / Elementary Education  
 Pierce, George / Adult and Higher Education  
 Pilgrim, Tim A. / Journalism  
 Piper, Paul / Library  
 Poon, Cecilia Siu-Wah / Library  
 Price, Kay / Special Education  
 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  
 Reimer-Reiss, Marti / Rehabilitation Counseling and Human Services  
 Remmel, Ethan / Psychology  
 Reynolds, Mary Ann / Accounting  
 Rice, Karen B. / Library  
 Richardson, John G. / Sociology  
 Richter, Wayne / East Asian Studies  
 Riddle Buly, Marsha / Elementary Education  
 Riggins, Ronald D. / Physical Education, Health and Recreation, and  
 Fairhaven College of Interdisciplinary Studies  
 Riemann, Andreas / Physics and Astronomy  
 Ritter, Harry R., Jr. / History  
 Ritter, Marian B. / Library  
 Rivera, Alicia Maria / English  
 Robinson, Leanne / Special Education  
 Robson, Leanna / Instructional Technology  
 Roehl, Thomas / Finance, Marketing and Decision Sciences  
 Roelofs, Matthew R. / Economics  
 Ross, Steven C. / Decision Sciences  
 Rossiter, David / Canadian-American Studies  
 Row, Brandi / Physical Education, Health and Recreation  
 Rowe, Dan First Scout / Fairhaven College  
 Rupaal, Ajit S. / Physics and Astronomy  
 Rutschman, Carla J. / Music  
 Rutschman, Edward / Music  
 Rybczyk, John M. / Environmental Sciences  
 Rystrom, David S. / Finance and Marketing

**S**

Safavi, Farrokh / Finance and Marketing

Sailors, William M. / Accounting  
 Salazar, Debra J. / Political Science  
 Sampaio, Christina / Psychology  
 Sanders, George D. / Accounting  
 Sandvig, J. Christopher / Decision Sciences  
 Sapin, Julia / Art  
 Sass, Mary / Management  
 Saunders, Kathy / Anthropology  
 Sattler, David / Psychology  
 Schaeffer, Christine / Secondary Education  
 Schermer, Elizabeth R. / Geology  
 Schleef, Linda / Special Education  
 Schiller, Preston / Canadian-American Studies  
 Schudlich, Tina du Rocher / Psychology  
 Schulze, Sandra / Biology  
 Schwartz, Raelynn / Communication  
 Schwede, Walter / Music  
 Seilo, Michael T. / Speech Pathology and Audiology  
 S'eiltin, Tanis M. / Fairhaven  
 Serrano-Moreno, José / Biology  
 Shelton, Brandy / Dance  
 Shen, Yun-Qiu / Mathematics  
 Sheppard, Shelby / Secondary Education  
 Shipley, Dawn / Linguistics  
 Shull, David / Environmental Science  
 Simone, Genét / Elementary Education  
 Singh-Cundy, Anu / Biology  
 Singleton, Sara / Political Science, and Canadian-American Studies  
 Singleton, William R. / Accounting  
 Skillman, Trish / Linguistics  
 Slentz, Kristine L. / Special Education  
 Smeins, Linda E. / Art  
 Smith, Bradley F. / Environmental Science; Geography and  
 Environmental Social Sciences  
 Smith, Kenton D. / Art  
 Smith, Peter / Library  
 Smith, Steven H. / Accounting  
 Smith, William E. / English  
 Sommer, Lesley / Music  
 Sparkman-Noble, Dionne / Dance  
 Spiegel, Paul / Chemistry  
 Springer, Mark C. / Decision Sciences  
 Stevens, Scott / English  
 Stevenson, Joan C. / Anthropology  
 Stewart, James E. / Physics and Astronomy  
 Stewart, Mart / History  
 Stickle, Beth / Special Education  
 Stoeber, William K. B. / Liberal Studies  
 Stoops, Robert F., Jr. / Liberal Studies  
 Storer, Paul A. / Economics  
 Stout, Karen Rohrbauck / Communication  
 Sucek, Christopher A. / Geology  
 Sue, David / Psychology  
 Suess, Walter F. / Modern and Classical Languages  
 Sula, Ozan / Economics  
 Sulkin, Stephen / Shannon Point Marine Center / Biology  
 Swett, Elizabeth / Human Services  
 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

## UNIVERSITY PERSONNEL

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Taylor, Audrey / MBA  
Teachman, Jay / Sociology  
Terich, Thomas A. / Geography and Environmental Social Sciences  
Thomas, Bob / Library  
Thompson, Roger R. / History  
Thorndike, Robert M. / Psychology  
Thorndike-Christ, Tracy / Special Education  
Tomas, Massimiliano / Modern and Classical Languages  
Tomlonovic, Kathleen / Modern and Classical Languages  
Trent, Carol / Biology  
Trimble, Joseph E. / Psychology/Educational Administration and Foundations  
Trueblood, Kathryn / English  
Truschel, Louis W. / History  
Tsunokai, Glenn / Sociology  
Tyran, Craig K. / Decision Sciences  
Tyran, Kristi / Management

### U

Underwood, John H. / Modern and Classical Languages, and Linguistics  
Ural, Saim / Computer Science  
Urso, Robert A. / Art

### V

Vajda, Edward J. / Modern and Classical Languages  
van Boer, Bertil H., Jr. / Music  
van Deusen, Nancy E. / History  
Vanderstaay, Steven / English  
Vassdal Ellis, Elsi M. / Art  
Vawter, Richard D. / Physics and Astronomy  
Vernacchia, Ralph A. / Physical Education, Health and Recreation  
Verner, Jane / Human Services  
Vohs, Rosemary / Elementary Education  
Vulic, Kathryn / English  
Vyvyan, James R. / Chemistry

### W

Wallin, David O. / Environmental Science  
Wang, Grace / Environmental Studies  
Wang, Jianglong / Communication  
Warner, Daniel M. / Accounting and Management  
Watt, Peggy / Journalism  
Webb, Sheila / Journalism  
Weir, Sara J. / Political Science  
Weiss, Rudolf / Modern and Classical Languages; Linguistics  
Whalley, Pamela / Economics  
Whitcomb, Dennis / Philosophy  
Wilhelm, Wendy J. / Finance and Marketing  
Williams, Don C. / Biology  
Williams, Lee / Human Services  
Williams, Loren / Chemistry  
Williams, Terrell G. / Finance and Marketing  
Wise, Christopher / English  
Woll, John W. / Mathematics  
Wolpow, Ray / Secondary Education  
Woods, Steven / Communication  
Wonder, Bruce D. / Management  
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 / Center for Geography and Environmental Sciences  
Zeine, Lina / Speech Pathology and Audiology  
Zhang, Jianying / Mathematics  
Zhang, Zhe George / Decision Sciences  
Zoro, Eugene S. / Music

## LIBRARIES

### Librarians

**BÉLA FOLTIN, JR.** (2001) University Librarian and Professor. BMus, MMus, MLS, University of Illinois-Urbana.  
**MARIAN ALEXANDER** (1970) Associate Professor. AB, Occidental College; MLS, University of California-Los Angeles.  
**JEANNE ARMSTRONG** (1997) Associate Professor. BA, University of Dayton; MA, Rosary College Graduate School; PhD, University of Arizona.  
**STEFANIE BUCK** (2004) Lecturer. BA, Iowa State University; MA, MLS, University of Hawaii.  
**HAZEL CAMERON** (2001) Associate Professor. BA, University of Victoria; MLS, MBA, University of British Columbia.  
**MARGARET FAST** (1997) Associate Professor. BA, Mills College; MA, University of British Columbia; MLS, State University of New York-Albany.  
**ROBERT LOPRESTI** (1987) Associate Professor. BA, Juniata College; MLS, Rutgers, The State University.  
**LEZA (ELIZABETH) MADSEN** (2002) Associate Professor. BA, Western Washington State College; MLS, University of Hawaii; MA, Stanford University.  
**DONNA E. PACKER** (1982) Associate Professor. BA, BIS, University of British Columbia; MBA, Western Washington 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.  
**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 2005 to June 2006, inclusive:

Master of Education	69
Master of Arts	92
Master of Science	75

Master of Music	7
Master of Business Administration	35
Master in Teaching	53
Bachelor of Arts in Education	246
Bachelor of Arts	2,321
Bachelor of Science	513
Bachelor of Fine Arts	5
Bachelor of Music	17
Total	3,443

*Recommended for certification to the State Superintendent for Public Instruction*  
— August 2005 to June 2006, inclusive:  
Residency Teacher Certificate ..... 461

# APPENDICES

The University's administrative rules regarding student conduct, use of University facilities, and others of general applicability can be found at [www.wvu.edu/policies/](http://www.wvu.edu/policies/).

## Appendix A

### WWU POLICIES ON EQUAL OPPORTUNITY/ NONDISCRIMINATION, AFFIRMATIVE ACTION, SEXUAL HARASSMENT, REASONABLE ACCOMMODATION

#### A. Introduction And Guiding Principles

As a university community, Western Washington University has a special obligation to all of its members to maintain teaching, learning and working environments which are conducive to the pursuit of knowledge. It is a community in which the academic endeavor is practiced with civility. The dignity and rights of all employees, students, visitors, and agents of the University are respected and preserved by this community.

In carrying out its mission, the University benefits from the ideas, contributions, and energies of all its members. Therefore, each member — whether staff, student, administrator, or faculty — has a responsibility and an obligation to respect the rights of others to express conflicting opinions. Adherence to standards of civility allows for reasoned discourse.

Western is committed to protecting the rights of its community members to engage in dialogue and express ideas in an environment which is free from harassment, discrimination and exploitation. The Western community will not tolerate these behaviors. At the same time, members of the community need to be able to distinguish between: 1) the need for and periodic duty to state disagreement with the ideas of others; and, 2) actions that constitute illegal discrimination and harassment.

The University policies and procedures which follow are intended to provide the community with specific directives regarding equal opportunity, nondiscrimination, affirmative action, employment recruitment and selection, sexual harassment, the accommodation of persons with disabilities, and nondiscrimination in applying anti-nepotism rules. The University is committed to resolving complaints of harassment and/or discrimination at the earliest and most informal level and shall adhere to principles of due process in all investigations and hearings.

The University is committed to fair treatment of individuals accused of violating these policies. Filing a false complaint is serious misconduct and may be subject to a range of sanctions, including written reprimand, termination or expulsion.

To carry out its commitment to these policies, the University shall maintain ongoing training programs. Such training will address each of the policies contained in this document, underlying rationale, and information related to prevention and complaint resolution. Members of the campus community are expected to participate in these training programs.

Members of the community are also guided in their relations by other ethical codes, laws, statements and policies, including but not limited to the Faculty Code of Ethics, the Faculty Handbook, the Student Rights and Responsibilities Code, Higher Education Personnel Rules, Collective Bargaining Agreements, the Exempt Professional Staff Handbook, the Washington State Code of Ethics, and executive orders from the governor.

Adopted by the Board of Trustees on April 12, 1996. Updated by the Equal Opportunity Center on August 13, 1999. Updated by the Equal Opportunity Center on August 23, 2001.

#### B. Dissemination Of Policies

The University's policies are disseminated to the University community in the following manner:

##### Internal Dissemination

- 1) All students are provided with copies of sections of these policies and procedures relevant to students through the Western Washington University General Catalog.
- 2) All new employees are provided with a copy of these policies and procedures during orientation. Faculty orientation is conducted by the Office of the Provost. The human resources department conducts orientation for new classified and administrative staff.
- 3) The policies, procedures and a review of associated supervisory responsibilities are given by the Equal Opportunity Center (EOC) to participants in supervisory training programs provided by that office.
- 4) The policies and procedures are included in the Faculty Handbook, the Exempt Professional Staff Handbook, and the Classified Staff Handbook.
- 5) Search committee chairs and/or employing officials are provided with a copy of the policies and procedures at the beginning of each recruitment process. The EOC also

meets with each search committee to provide information regarding its responsibilities under the policies.

- 6) Equal employment opportunity posters are displayed in conspicuous places throughout the University.
- 7) All bargaining unit agreements contain nondiscrimination statements and adhere to nondiscrimination policies and practices.
- 8) The policies and procedures are available 24 hours a day, 7 days a week, on the EOC's hotline at (360) 650-7704.
- 9) The policies and procedures are mailed to each employee and each University department or office when significant changes are made.

##### External Dissemination

- 1) All position announcements and advertisements for position openings contain a statement regarding the institution's commitment to equal opportunity and affirmative action.
- 2) The University's two 24-hour job telephone lines include a statement regarding the institution's commitment to equal opportunity and affirmative action.
- 3) All institutional contracts contain a nondiscrimination clause. The appropriate vice president is responsible for ensuring that the clause is included.
- 4) All promotional and application materials regarding employment opportunities, events, and program offerings are reviewed by the EOC.
- 5) Notification of institutional policy is provided to all vendors, subcontractors and suppliers with each contract that is accepted.

Adopted by the Board of Trustees on April 12, 1996. Updated by the Equal Opportunity Center on August 11, 1999.

#### C. Equal Opportunity/Nondiscrimination

**Preamble.** Discrimination on the basis of race, color, creed, religion, national origin, sex, age, disability, marital status, or status as a Vietnam era or disabled veteran is prohibited by federal and state statutes. Discrimination on the basis of sexual orientation is prohibited by University policy and governor's executive order. Among the laws upon which the University's equal opportunity/nondiscrimination policy is based are: 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 in Employment Act of 1967, the Vietnam Era Veteran's Readjustment Assistance Act of 1972, the Americans with Disabilities Act of 1990, the Civil Rights Act of 1991, the Veterans Employment Opportunities Act of 1998, and the Washington State Law Against Discrimination, Chapter 49.60 RCW.

**Policy Statement.** Western Washington University is committed to providing equal employment opportunity and prohibiting illegal discrimination. As the delegate of the Board of Trustees, the president of Western Washington University affirms that the institution shall:

- Develop, monitor and enforce University policies governing recruitment and selection to remove barriers to equal employment opportunity and prevent illegal discrimination;
- Ensure that promotion and hiring decisions are in accordance with the principles of equal employment opportunity;
- Administer personnel actions such as hiring, promotion, separation, compensation, benefits (within the limits of the law), transfers, layoffs, returns from layoff, University-sponsored training, education, tuition assistance, and social or recreational programs with fairness and equity, regardless of race, color, creed, religion, national origin, sex, age, disability, marital status, sexual orientation, or status as a Vietnam era or disabled veteran;
- Prohibit discrimination in the recruitment and admission of students, and in the operation of all University programs, activities and services;
- Cooperate with federal and state agencies in fulfilling its obligations under the laws of the United States and the state of Washington.

It is the responsibility of all members of the University community to ensure that commitment to equal opportunity and nondiscrimination is an integral part of WWU. This policy shall govern 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. The Board of Trustees pledges that every reasonable effort will be made to provide the resources necessary to implement this policy.

Adopted by the Board of Trustees on April 12, 1996. Revised by the President on December 7, 1998.

#### D. Affirmative Action

**Preamble.** As part of its commitment to equal opportunity, the Board of Trustees supports the principles of affirmative action as defined by the Office of Federal Contract Compliance Programs and the state of Washington. State and federal executive orders require the University to establish a compliance program and to report on the results of its affirmative action efforts in an affirmative action plan.

The Affirmative Action Program includes equal opportunity and affirmative action policies and methods for their dissemination, internal audit and reporting systems, procedures for program implementation, and identification of problem areas. In addition, the Affirmative Action Program calls for result-oriented actions designed to recruit, employ and promote qualified members of the following "affected" groups when they are underutilized in the work force: American Indians, Alaska Natives, Asians and Pacific Islanders, Blacks, Hispanics, women, persons over age 40, persons with disabilities, disabled veterans, Vietnam-era



veterans and other veterans who served on active duty during a war or campaign or expedition for which a campaign badge has been authorized.

The Affirmative Action Plan is a working document which identifies areas of underutilization in the work force, evaluates personnel actions and hiring practices, analyzes goal achievement, and serves as a basis for updating the Affirmative Action Program.

**Policy.** It is the policy of Western Washington University to develop and implement an effective and defensible Affirmative Action Program for the following affected groups: American Indians, Alaska Natives, Asians and Pacific Islanders, Blacks, Hispanics, women, persons over age 40, individuals with disabilities, disabled veterans, and Vietnam-era veterans and other veterans who served on active duty during a war or campaign or expedition for which a campaign badge has been authorized.

The University shall report annually the results of its Affirmative Action Program in a written Affirmative Action 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 equal employment opportunity.

The Board of Trustees pledges its commitment to affirmative action by:

- Delegating responsibility for promoting and enforcing the Affirmative Action Program to the president of the University.

The president shall carry out this responsibility by:

- Designating the executive director of the Equal Opportunity Center as the official responsible for preparation of the Affirmative Action Plan and overall implementation of the Affirmative Action Program.
- Delegating responsibility for ensuring the success of the Affirmative Action Program to other University employment officials, managers and supervisors.
- Ensuring that the resources necessary for the implementation of this policy remain a priority in the University budget.

### *Responsibility for Implementation of the Affirmative Action Program*

The president of the University has overall responsibility for promoting and enforcing the Affirmative Action Program. The executive director of the Equal Opportunity Center reports to the president, and has the authority to administer the Affirmative Action Program. The designated official's name, title, location, and telephone number will be included on all internal and external communications regarding the Affirmative Action Program.

The executive director of the Equal Opportunity Center is responsible for:

- Making the affirmative action policy available to all employees and the public;
- Maintaining discrimination complaint procedures;
- Facilitating the informal resolution of discrimination complaints;
- Receiving and investigating complaints of illegal discrimination and making recommendations for solutions;
- Serving as liaison between the University and the state and federal enforcement agencies regarding externally filed complaints and compliance reviews;
- 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;
- Monitoring employment recruitment processes, employee benefits, and working conditions for continual compliance with the requirements of antidiscrimination law;
- Monitoring compliance with equal opportunity regulations in programs and services provided to students and the public;
- Preparing the annual Affirmative Action Plan which measures progress, identifies problem areas, and sets goals;
- Preparing reports, statistics, and data which will delineate and quantify various aspects of the policy, and planning for internal analysis as required by federal and state agencies;
- Maintaining internal and external awareness of the existence and value of the Affirmative Action Program; and
- Developing and overseeing effective affirmative action/equal employment opportunity training programs.

Vice presidents at Western Washington University are responsible for ensuring the success of the Affirmative Action Program in their divisions. Specific responsibilities include utilizing the appropriate nondiscrimination clause in all contracts; monitoring subcontractors' compliance with federal and state nondiscrimination law when the law requires the University to act as monitor; and ensuring that employees participate in the University's affirmative action/equal employment opportunity training program.

Each vice president and the Office of the President will review annually, with the Equal Opportunity Center the effectiveness of the Affirmative Action Program in each operating unit under his/her authority.

All members of the campus community are charged with creating an atmosphere conducive to attracting and retaining members of protected groups and preventing harassment of employees. This charge includes cooperating in the development of temporary goals for employment and promotion of persons from underutilized groups and giving high priority to implementation of these goals and timetables; ensuring, along with search committee chairs and hiring officials, that recruitment

and employment guidelines are followed and that the required records — including those relating to tenure and promotion — are kept for at least three years in accordance with established records retention schedules.

Affirmative action efforts and results shall be a part of the evaluation of the performance of administrators and supervisors.

Adopted by the Board of Trustees on April 12, 1996. Updated by the president on August 11, 1999.

### *E. Sexual Harassment*

**Preamble.** Sexual harassment is a form of sex discrimination which is prohibited by Title VII of the Civil Rights Act of 1964, Title IX of the 1972 Education Amendments, and the laws of the state of Washington. When the University becomes aware of allegations of sexual harassment, it is bound by state and federal law to investigate those allegations, stop the harassment if it is found to exist, and take measures to ensure a working and learning environment that is free of sexual harassment.

**Policy.** Western Washington University is committed to providing a positive learning and working environment for its students and employees and will not tolerate sexual harassment. 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.

For the purposes of this policy, sexual harassment is defined as unwelcome sexual advances, requests for sexual favors, or other verbal or physical conduct of a sexual nature when:

- Submission to such conduct or activity is made either explicitly or implicitly a term or condition of an individual's employment or academic progress;
  - Submission to or rejection of such conduct or activity is used as the basis for employment or evaluation;
  - Such conduct or activity interferes with an individual's employment or educational advancement; or
  - Such conduct or activity creates an intimidating, hostile or offensive environment.
- Sexual harassment can occur between persons without regard to gender, age, appearance, or professional status.

The University is committed to providing all members of its community with education and training about the nature and consequence of sexual harassment, and procedures for handling complaints. Training is particularly essential for persons in supervisory roles who can face personal liability if they fail to take appropriate action when they become aware of instances of sexual harassment.

Retaliation against anyone reporting or thought to have reported sexual harassment is prohibited. Such retaliation is a violation of this policy and will be considered independently of whether a charge or informal complaint of sexual harassment is substantiated. Encouraging others to retaliate also violates this policy.

Individuals who believe they have been subjected to sexual harassment are encouraged to report incidents to the proper authorities, as outlined in the Discrimination Complaint Procedure (Appendix H, Section A). Such reports will be treated with respect and diligence.

Adopted by the Board of Trustees on April 12, 1996. Updated by the president on December 7, 1998.

### *F. Reasonable Accommodation Policy*

**Preamble.** Western Washington University is committed to the principles of reasonable accommodation, in conformance with provisions of the Americans with Disabilities Act (ADA) of 1990, the Federal Rehabilitation Act of 1974, and the Washington State Law Against Discrimination, Chapter 49.60 RCW. Reasonable accommodation applies to all aspects of employment and access to the University's educational programs, services and activities.

**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. Persons with disabilities who are covered under this policy include:

- Applicants or employees who, with or without reasonable accommodation, can perform the essential functions of a position;
- Students who, with or without auxiliary aids or removal of barriers, can meet the essential eligibility requirements of a program; and/or
- Individuals who wish to participate in University-sponsored events that are open to the public.

The University shall notify the public of its accommodation policy, the procedures for requesting an accommodation, and the options for addressing disputes related to reasonable accommodation.

Revised by the president on December 7, 1998. Updated by the Equal Opportunity Center on August 23, 2001. Updated by Human Resources and Equal Opportunity Services on April 15, 2003.

## Appendix B

### SEXUAL MISCONDUCT POLICY AND PROCEDURE

**Preamble.** Western is required to adopt policies and programs aimed at preventing

## APPENDICES

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 C, 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 Center.

### *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 Center; 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 Center shall be contacted to initiate this procedure if appropriate.

### *6. 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

**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 bulletin, 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 bulletin, 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 bulletin, 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 bulletin, *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 bulletin, *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 complainants 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

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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 bulletin 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

#### 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 Web site, 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.

### 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 University Librarian), 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 Policy Board shall send a written copy of its decision to the student, the faculty member, the unit head, 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 POLICY

**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 CRR 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

#### 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/Non-discrimination, 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 or a department within the colleges of Business and Economics, Fine and Performing Arts, Humanities and Social Sciences, Huxley, Sciences and Technology, 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

*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

## APPENDICES

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

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 executive director of the Equal Opportunity Center (EOC) has overall responsibility for assuring University compliance with nondiscrimination laws and regulations, and receives formal complaints.

The EOC 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 EOC 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 Center.* If resolution satisfactory to the complainant does not occur, the complainant may contact the next person in the administrative line or the EOC 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 EOC 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 EOC 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 EOC executive director. The complainant will submit a formal complaint form (available from the EOC) which will include a written statement describing the alleged discrimination. Upon receipt by the EOC, 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 EOC Executive Director, at his or her discretion, or upon written application to the EOC Executive Director by the complainant, respondent, or the unit Vice President. The Executive Director 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 EOC Executive Director 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 EOC 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 EOC Executive Director 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 EOC executive director 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 assistance.* The investigation will be conducted by the EOC. However, parties to the complaint may request that a representative of their constituent group be assigned to work with the EOC. Such representatives will be appointed by the Provost and trained by the EOC. (Faculty members appointed to assist in the investigation will be drawn from the membership of the Faculty Grievance Committee, subject to procedures in the *Faculty Handbook* Appendix E, III.B.C.D.)

Persons appointed to assist in an investigation may participate in the following manner:

- Assist the EOC executive director in the development and implementation of an investigative plan, including the development of questions that take into appropriate consideration issues of academic freedom and tenure; and
- Assist the EOC executive director throughout the investigative process in gathering information, analyzing data acquired during the course of the investigation, and developing the investigative report and findings. The EOC executive director and/or his/her designee(s) alone will conduct all personal interviews.

(6) *Investigation and report.* Within forty-five (45) working days after determining jurisdiction, the EOC executive director 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.

(7) *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 EOC. 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 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 EOC 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 EOC 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 EOC 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 EOC executive director, other written materials considered in the course of the investigation, the EOC executive director'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 EOC.

(2) *Records retention.* The investigative file will be retained in the Equal Opportunity Center 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

## APPENDICES

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 District 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 of Civil Rights  
2201 Sixth Avenue, Suite 900  
Seattle, WA 98121-1831  
Phone: (206) 615-2287  
TTY: (206) 615-2296

Office of Federal Contract Compliance Programs  
Regional Director, Region X  
71 Stevenson St., Suite 1700  
San Francisco, CA 94105  
Phone: (415) 848-6969

Adopted by the Board of Trustees on April 12, 1996. Updated by the Equal Opportunity Center on October 27, 1998. 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](http://drs@wwu.edu) or their Web site, [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 Web site 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 Web site 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 Web site 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 Nicole Goodman. She may be reached at (360) 650-7410 (voice) or (360) 650-7696 (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

### PARKING SERVICES

Parking Office and Visitor Information Drive-Thru location and hours: Parking and Services Office is located in the Campus Services Building at the intersection of Bill McDonald Parkway and 21st Street, at the south end of campus. Parking Office hours are 7:30 a.m. to 4:30 p.m. Monday-Friday. The Visitor Information Drive Thru is also located at the Campus Services Building. Hours are 7:15 a.m. to 8 p.m. Monday-Friday during fall, winter, and spring quarters when WWU is in session. During breaks between quarters and summer session, hours are 7:15 a.m. to 4:30 p.m. Monday-Friday. Closed on holidays and when the University is closed.

#### Parking

WWU is committed to supporting sustainable transportation options and reducing automobile-dependent transportation. The Sustainability Office offers information and assistance to help students find the transportation options that best fit their needs while attending Western Washington University. Parking space is limited. WWU is bordered by residential neighborhoods within easy walking distance, and is well served by public transportation. Western encourages all students, faculty, and staff to utilize the variety of transportation options available and minimize the use of motor vehicles.

Anyone using campus parking facilities is required to purchase and display a valid University parking permit on any motorized vehicle. To avoid costly parking tickets, drivers are encouraged to become familiar with the University parking and traffic regulations. Parking regulations are strictly enforced. Parking maps, regulations, and fees are available at the Parking Office.

#### Quarterly and Annual Parking Permits

Early application is necessary but does not guarantee a permit for all students who apply. Application forms for parking permits are online during summer for fall quarter, through the Parking Services web site, [www.ps.wwu.edu](http://www.ps.wwu.edu). 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 are sold at the parking office and the Visitor Information Drive-Thru. Contact the Parking Office at 650-2945 for a parking permit application or go to [www.ps.wwu.edu](http://www.ps.wwu.edu).

#### Parking for persons with disabilities

Parking access throughout the campus is available to those with state disabled permits. A WWU permit is also required at the same price as a regular permit. Accessibility guides to the WWU campus are available at the Visitor Information Drive-Thru and the Parking office. For further information, please call 360-650-2945.

#### Parking for visitors

Visitors to campus may park in metered or pay box spaces (with payment) or purchase a visitor permit at the Visitor Information Drive-Thru or the Parking Office during business hours. Call the Parking Office for information on arranging for guest parking. Pay boxes in lots except 6V are valid after 5 p.m. only. Pay boxes in lots 10G and 8G are valid after 7 p.m.

#### Temporary parking/loading and unloading

Employees or students who have an occasional need (such as loading equipment) to use their vehicle in areas of campus for which they do not have a permit, may obtain a short-term permit from Parking Services or the Visitor Information Drive-Thru, based on space availability. A 20-minute courtesy permit may be obtained at no charge.

*Parking meters* are located throughout campus for your convenience. Payment is required at meters all hours in all lots.

A pay box is located in lot 6V, located off Garden Street below the Viking Union. This lot is permitted by pay box pass only. Parking rates are reduced after 5 p.m. and on weekends.

#### Evening parking

After hours parking is available at a reduced rate of pay in some areas. Pay stations 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 5 p.m. to 7 a.m. or weekends. Disabled-accessible spaces in those lots require a state permit all hours. **Payment is required at all meters all hours.**

*Rates subject to change in 2007-2008. Rates do not include applicable sales tax.*



Parking permit fees	Quarterly total
Campus resident parking	\$82.31
Adjacent (C Zone) commuter permit	\$71.83
Peripheral (CR) resident permit	\$71.83
Carpool permit	\$53.60
Motorcycle parking	\$14.65

Rates subject to increase in 2008-2009.

Daily parking (7 a.m. to 5 p.m.)	\$2 per hour
Meter parking (all hours)	\$2 per hour
Motorcycle parking	\$2 per day
After 5 p.m. (use pay station)	\$1 per hour

### Transportation Alternatives

Transportation alternatives offer many personal and environmental benefits. Whatcom Transportation Authority (WTA) provides safe, high-quality, cost-effective, and accessible public transportation. A park and ride and campus shuttle service is provided from Lincoln Creek Park and Ride, convenient to Interstate 5 and a 10-minute bus ride to the center of campus. Other options include walking, bicycling, car pooling, or van pooling. For information, contact Western's Alternative Transportation program at 360-650-2945, parking@wwu.edu.

#### Bicycles

Bellingham is a featured bicycle destination, and the community supports bicycle transportation. Bicyclists in Bellingham and throughout Washington state are governed by the same traffic regulations as motor vehicles. With more than 800 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 Parking and Transportation Services. Bicycles can be registered at no charge with University Police at the Campus Services Building.

#### Viking Xpress bus pass

WWU students, faculty and staff are eligible to purchase the Viking Xpress bus pass. This pass provides unlimited rides on any WTA bus anywhere in Whatcom County and on the county connector bus to Mount Vernon/Skagit Station. The Viking Xpress bus can be purchased for the academic year or by individual quarter. A summer Viking Xpress is also available. The Viking Xpress bus pass is available only through WWU Parking and Transportation Services, not at other bus pass outlets. The Viking Xpress pass also entitles the bearer to discounts on goods and services at merchants in Bellingham and Whatcom County.

#### Western's evening shuttle (WEST shuttle)

An evening shuttle service (WEST) operated by University Residences is available seven nights per week from 7 to midnight. This route serves all of the campus residence halls, the library and Viking union, and the Sehome Village shopping mall.

#### WTA Route 90/Campus Express

The Campus Express route serves the off-campus park and ride lot at Lincoln Creek Transportation Center, at Lincoln Street, providing a convenient means for commuters to avoid the parking hassles on and near campus. Riders must pay cash fare of 75 cents per ride or use a Viking Xpress pass or a WTA bus pass.

#### Public transit

Whatcom Transportation Authority (WTA) offers WWU convenient service with multiple routes seven days a week. Routes serving Western connect with other routes at the downtown Bellingham Transit Station. WTA's Sunday service connects WWU with the Lincoln Creek Transportation Center, downtown Bellingham, Fairhaven, Fairhaven Station, Bellis Fair Mall, and Whatcom Community College and transit connections at Skagit Station in Mount Vernon. Evening service connects WWU those destinations until 10 p.m. six days a week. Easy to use bike racks are installed on every WTA bus. Cash fare is 75 cents per ride for persons 8-84 years or use the Viking Xpress bus pass. WTA monthly and annual passes are available to the public. For WTA route and schedule information, call 360-676-RIDE or connect with [www.ridewta.com](http://www.ridewta.com) (see Viking Xpress bus pass, above).

#### Persons with disabilities service

All WTA bus routes (except emergency backup vehicles) are wheelchair accessible. Transit service is available for those unable to access or use fixed route buses through Whatcom Specialized Transportation by calling 733-1144 or 354-3633 (TTY call same number).

## Appendix J

### SATISFACTORY ACADEMIC PROGRESS POLICY FOR FINANCIAL AID RECIPIENTS

The primary purpose of financial aid programs consists of helping students to successfully complete their degree or certificate programs. 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 selected 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 financial aid recipients is measured on a quarterly basis. Students failing to meet academic progress requirements for aid programs will be among the first to receive word that their academic goals are at risk. The Financial Aid office will inform students who find themselves 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. Although aid-suspended students may petition for financial aid reinstatement, reinstatement 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

You must meet the scholastic standards of the University, which expects an under-graduate student to maintain 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 undergraduate 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 nonaid recipients alike. To maintain financial eligibility, aid recipients are expected to successfully complete the minimum number of credits associated with the enrollment status for which aid was received. The following grades do not indicate successful completion of academic credit: F, Z, U, NP, K, W, I, X, an audited class or absence of a grade.

Nonaid recipients must successfully complete the minimum number of credits associated with their enrollment status to establish financial aid eligibility in a subsequent quarter. Enrollment status for financial aid purposes is determined as of the quarterly enrollment status lock date (generally the second Friday of the quarter).

If a review of a student's course work indicates a failure to meet minimum credit completion requirements, the student will be placed on financial aid probation or financial aid suspension, depending on the extent of the credit deficiency.

Students who request that the Financial Aid office 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 office 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 course work may count toward current quarter academic progress requirements. However, justification for repeating specific courses may be requested by the Financial Aid office at any time and a determination will be made as to the reasonableness of counting credits derived from repeated course work toward academic progress requirements for aid purposes. Aid recipients wishing to repeat course work while receiving aid are strongly advised to provide justification and obtain approval from the Financial Aid office prior to receiving aid for such course work.

Students who fail to meet satisfactory academic progress criteria for a given quarter will be placed on financial aid probation or suspension.

Credit Completion Requirements		
Enrollment Status	Undergraduate Students	Graduate Students
Full Time	12	8
Three-fourths time	9	6

Credit Completion Requirements		
One-half time	6	4
Less than one-half time	All credits attempted	N/A

### Maximum Timeframe 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. Students who reach or exceed the maximum allowable attempted credit limits are ineligible for financial aid. Western determines whether students have reached or exceeded their maximum timeframes by adding the number of credits they have attempted. Attempted credits are defined as all credits which appear on the transcript. These credits include repeated, failed, incomplete and transcribed transfer credits.

#### Undergraduate students

- May attempt up to 125 percent 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.

#### Graduate Students

- May attempt up to 125 percent of the number of credits required by their program. Graduate students are advised to limit their enrollment to the courses appearing on their Plan of Study. Taking additional course work may jeopardize continued financial aid eligibility under the Maximum Timeframe 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 maximum timeframe limit; b) provide the number of remaining credits needed to complete the degree or certificate; c) specify the quarter and year that the student plans to graduate; and d) include a graduation evaluation performed by the Registrar's Office.

#### Financial Aid Probation

Undergraduate students who have satisfactorily completed at least six 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 quarter, but 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 four credits but have not completed the minimum quarterly credit requirements associated with full-time enrollment status for which the aid was received will be placed on financial aid probation. Scheduled aid will continue to be disbursed for the following quarter, but 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 will be canceled and processing to calculate future aid eligibility will be put on hold until eligibility is regained.

Undergraduate students successfully completing fewer than six credits will automatically be placed on financial aid suspension.

Graduate students successfully completing fewer than four 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 financial 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 for aid reinstatement after having successfully completed a full-time quarter without the benefit of financial aid funding. The full-time credit load is 12 credits for undergraduate students and eight credits for graduate students.

Part-time students may contract with the Financial Aid office 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. It is possible that some funds 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 of record.

It is the student's responsibility to notify the Financial Aid Office if updated or corrected information becomes available that may re-establish their eligibility for financial aid.

### Withdrawals

Aid recipients who withdraw from all course work will lose their aid eligibility and may be required to repay 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. Aid recipients having unofficially withdrawn may be required to pay 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:

- The full-time minimum credit load for graduate students is nine credits, rather than the eight-credit minimum for federal and Washington state student aid programs. The full-time minimum credit load for undergraduates is 12 credits.
- Students must be in good academic standing (cumulative grade point average of 2.00 or above) to maintain Alaska loan eligibility.

You may petition for Alaska Student and/or Alaska Family Education loan reinstatement for a credit deficiency. Reinstatement is not guaranteed.

## Appendix K

### POLICY CONCERNING ALCOHOL AND OTHER DRUGS

#### 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.

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