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# President's Message

*It is my pleasure to welcome you to Western Washington University as we celebrate a centennial anniversary in 1999-2000. In these 100 years, WWU has grown from a small teachers college to a university that is one of the best regional public universities in the Northwest. The campus is beautiful, activities abound, the staff is friendly and helpful, and faculty members are excellent teachers and scholars. All of this adds up to an outstanding college experience at a modest price.*

*Western is a student-centered university. You will expand your interests and perspectives. We combine the academic distinction and personal attention of a smaller, private college and the choices and variety of a comprehensive university. We are committed to the notion that outstanding faculty scholarship and inspired teaching can and should go together.*

*You will learn a great deal here. But the most important knowledge you will acquire is the knowledge of how to learn, which will help you to continue your education for the rest of your life. Take the initiative to learn at Western, learn from the initiatives of others, and share your knowledge with the world beyond our doors.*

*I wish you well as you begin this academic journey and look forward to your participation in our Western community.*



Karen W. Morse  
President

***Western Washington University emphasizes excellence in undergraduate education and graduate programs. The University is large enough to offer a wide range of high-quality programs and small enough to focus its resources on individual students. Faculty, students and staff work closely together in a superb setting to pursue a university education and build career skills on the sound foundation of the arts, humanities, sciences and professional studies.***

The pages which follow suggest the extraordinary opportunities available to a Western student: facilities such as the Wilson Library, the Shannon Point Marine Center, state-of-the-art biology and chemistry equipment, the Science, Math and Science Education Learning Center, opened in 1996, the computer centers and the Performing Arts Center; distinguished programs as wide ranging as vehicle technology, music, environmental studies, journalism, business and education; architecture and art created by artists such as Noguchi, Caro, Judd and Bassetti. The University is situated on a forested hill above Bellingham Bay and the city with views of the San Juan Islands, Mount Baker, and the Canadian and Cascade mountain ranges.

The campus is a stunning blend of art and nature. It has been called "magic." Its visual power signals the power of

the educational opportunity offered to Western students. An accomplished faculty makes undergraduate education its primary mission. Western students engage in the great tradition of the arts and sciences, fostering values such as clarity of thought and expression, informed judgment, aesthetic sensibility, tolerance for ambiguity, a sensitivity to cultural differences and a sense of historical continuity. Upon these values Western students build for the future, choosing from a wide range of professional programs which foster the knowledge and skills demanded by today's careers.

Western serves the region through partnerships, research and community service activities. The University supports research on regional environmental issues such as water quality and hazardous waste disposal. The Center for Economic and Business Research forecasts economic trends for Northwest Washington and produces economic studies on the state and western Canadian provinces. The Vehicle Research Institute has gained international recognition for its research in automotive design, fuel economy, engine development and for its Viking car series.

While Western has evolved over the past century, the University continues to emphasize care for the individual student, commitment to academic excellence and dedication to community service.

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## THE UNIVERSITY

Western Washington University is located in Bellingham, a city of 58,000 in the northwestern corner of the state near the Canadian border. Its historical antecedent was the New Whatcom State Normal School, established by the legislature in 1893, which offered its first courses in the fall of 1899. From a normal school the institution evolved into a degree-granting institution in 1933, college of education in 1937, state college in 1961 and a university in 1977.

### ACADEMIC PROGRAMS AND DEGREES

Western Washington University is organized into a Graduate School and six undergraduate colleges: College of Arts and Sciences, College of Business and Economics, College of Fine and Performing Arts, Fairhaven College, Huxley College of Environmental Studies 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 and the sciences.

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 and Master of Science.

### EXTENSION PROGRAMS

See the *All-University* section in this catalog. All of Western's extension programs, credits and degrees meet the same requirements as regular Western unless otherwise noted.

### ACCREDITATION

The University is accredited by the Northwest Association of Schools and Colleges to offer work at the bachelor's and master's degree level. The following colleges and/or departments are also accredited: College of Business and Economics — AACSB-The International Association for Management Education, 600 Emerson Road, Suite 300, St. Louis, MO 63141-6762; Chemistry — American Chemical Society, 1155 Sixteenth St. N.W., Washington, D.C. 20036; Computer Science — Computing Sciences Accreditation Board, Inc., Two Landmark Square, Suite 209, Stamford, CT 06901; Music — National Association of Schools of Music (NASM), 11250 Roger Bacon Drive #5, Reston, VA 22090; Psychology (mental health and school counseling programs) — Council for Accreditation of Counseling and Related Educational Programs, 5999 Stevenson Avenue, Alexandria, VA 22304; Recreation — National Recreation & Parks Association, 2775 S. Quincy St., Suite 300, Arlington, VA 22206-2204; Speech Pathology — American Speech & Hearing Association, 10801 Rockville Pike, Rockville, MD, 20852-3279; Engineering Technology — Technology Accreditation Commission/Accreditation Board for Engineering & Technology, 111 Market Place, Suite 1050, Baltimore, MD

21202; Woodring College of Education — National Council for the Accreditation of Teacher Education (NCATE), 2010 Massachusetts Avenue N.W., Suite 500, Washington, DC 20036-1023, and the 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.

### ASSESSMENT

As part of an ongoing effort to assure the quality of the education received by its students, Western Washington University has instituted a comprehensive assessment program designed to measure student learning outcomes. 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 providing other academic performance indicators. The purpose of all such activities is to monitor 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 will be treated in the strictest professional confidentiality. Whenever those results appear in University assessment reports or other public documents, they will be presented anonymously and in aggregate fashion.

### 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 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 Energy, Environmental Protection Agency, Canadian Embassy, Readers' Digest, National Endowment for the Humanities, USDA Forest Service, American Chemical Society, National Park Service, U.S. Department of Defense, U.S. Small Business Administration, U.S. Air Force, NASA, Research Corps and agencies of the State of Washington.

The Bureau for Faculty Research was established to encourage and coordinate faculty research and creative scholarly endeavor throughout the University. The bureau assists the faculty in obtaining funds for development and research, and provides other services and funding in support of scholarly endeavors.

### ACADEMIC FACILITIES

The main campus and its 80 buildings occupy 190 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 over 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 650,000 volumes of books and periodicals, nearly 2 million units of microforms, and large collections of government documents, curriculum materials, sound recordings and videotapes. The collection includes 5,000 current journal subscriptions.

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, 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.

### *Computing Facilities*

Academic Technology and User Services provides consultation and software support, handouts and reference materials for computer users at WWU. Call (360) 650-3333 for detailed information.

Central equipment supporting academic computing includes a Sun Enterprise server running Solaris Unix operating system, Netware servers, and NT servers. E-mail, news, compilers, Web services and many other applications are available. All systems and labs at Western are networked together and connected to the Internet. A large group of dial-in modems provide remote access to these services.

Networked microcomputers are available to all students across campus, with general-purpose software available for both Windows and Macintosh environments. In addition, academic departments provide computer and software resources which are specific to the needs of students in their disciplines.

University Residences provides education and support to on-campus residents in their use of technology. Trained student staff provide support via phone, workshops and instructional handouts to help students in residence halls connect their computers and explore the resources of the Internet.

### *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. The collection includes large-scale works from the early '60s to the present day 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. An audiophone tour and a brochure are available to students and visitors who wish to learn about over 20 works integrated with the campus landscape and architecture. 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 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 from throughout the University. Only an hour's drive from the main campus in Bellingham, 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 the Huxley College of Environmental Studies, 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, the Minorities in Marine Science Undergraduate Programs, and the Science Education and Research for Undergraduates programs, all sponsored by the National Science Foundation.

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.

# UNIVERSITY CALENDAR

## 1999-2000 ACADEMIC YEAR

### Fall Quarter 1999

September 22 (Wednesday), 8:00 a.m. — Classes begin\*\*

November 24, Noon, to November 29, 8:00 a.m. — Thanksgiving recess

December 6-10 — Final examination week

December 11 (Saturday) — Commencement

### Winter Quarter 2000

January 3 (Monday) — Registration for new students

January 4 (Tuesday), 8:00 a.m. — Classes begin\*\*

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

February 21 (Monday) — Presidents Day Holiday

March 13-17 — Final examination week

March 18 (Saturday) — Commencement

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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.

*Spring Quarter 2000*

March 27 (Monday) —  
Registration for new students  
March 28 (Tuesday), 8:00 a.m. —  
Classes begin\*\*  
May 29 (Monday) —  
Memorial Day Holiday  
June 5-9 —  
Final examination week  
June 10 (Saturday) —  
Commencement

*Summer Quarter 2000*

June 20 to July 28 —  
Six-Week Session  
June 20 to August 18 —  
Nine-Week Session  
June 19 (Monday) —  
Registration  
June 20 (Tuesday) —  
Classes begin\*\*  
July 4 (Tuesday) —  
Independence Day Holiday  
August 19 (Saturday) —  
Commencement

SEPTEMBER 2000						
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# UNDERGRADUATE ADMISSION

Old Main 200, (360) 650-3440

<http://www.ac.wvu.edu/~admit/>

*Every effort has been made to provide accurate information regarding admission 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 postbaccalaureate undergraduate admission as well as readmission for undergraduate students returning to Western after an absence of one or more quarters (excluding summer). 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 demonstrated achievement, 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 postbaccalaureate applicants. International students must complete the International Student Undergraduate Application. Applicants for readmission as undergraduate or postbaccalaureate students must submit the Returning Student Application for Readmission. All applications must be accompanied by a non-refundable \$35 application fee.

Applicants to Western's Extended Programs must complete the Extension Undergraduate Application and submit it with a \$50 non-refundable application fee. International applicants to Western's extension programs must complete the Extension International Student Undergraduate Application and submit it with a \$50 non-refundable application fee. Applications are available at all extension sites.

Former Western extension program students returning to the same Western Washington University extension program to pursue a first bachelor's degree or postbaccalaureate study must complete the Extension Program Returning Student Application and submit with a \$35 non-refundable 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 15
- Spring Quarter — January 15
- Summer Continuing to Fall
  - Freshman — March 1
  - International students — March 1
  - All others — April 1

Western extension programs deadlines may vary. Please contact the specific program for information. See the *All-University* section in this catalog.

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 hand delivered in an official, sealed envelope. Transcripts must be received from all institutions attended, regardless of whether or not credit is desired.

Each admitted and readmitted student must confirm intent to enroll by submitting a non-refundable \$50 payment, which is applied to tuition and fees. 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 GPA, prerequisite course work, etc. Students should refer to the College sections of this catalog for specific major declaration requirements. Prior to course registration, new students participate in an orientation and academic advising session.

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 (STAR) program at (360) 650-3861.

The extension program sites offer informational visits for prospective students. For specific program information, see the *All-University* section in this catalog.

### 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 comprise 13.3 percent of Western's fall, 1997, enrollment, compared with 7.8 percent of Western's fall, 1990, student body.

### Students with Disabilities

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

## UNDERGRADUATE ADMISSION

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### *International Students*

Western's student body includes representation from more than 32 countries. In addition to meeting admission 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) or 213 (computer-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, though not required, is advisable as the exam scores can assist with the admission and advising process.

### *Intensive English Program*

For international students who have not reached Western's minimum TOEFL requirement but who meet other admission standards, the Intensive English Program (IEP) offers classes which help students improve their English language proficiency and prepare academically for university study. Conditional Admission, which allows IEP students to "bridge" into the university by enrolling in a limited number of credit classes, is available for advanced students, although admission to the IEP does not guarantee admission to the University. For more information, see the description under International Studies and Programs, or contact the IEP office at (360) 650-3755.

## FRESHMAN ADMISSION

The University welcomes applications from students who have earned a high school diploma or General Equivalency Diploma (GED) prior to enrollment. The most important criterion in the selection process is demonstrated academic achievement, including grade point average, quality and nature of course work, grade trends, SAT or ACT scores and Admissions Index. (See *Admissions Index* section.) Residency, special talent, multicultural experience and individual circumstances also are considered. Since all applications are reviewed on an individual basis, applicants are strongly encouraged to submit a personal statement with the application for admission.

Minimum freshman requirements include a 2.5 GPA, a 13 Admissions Index, 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, such as literature, 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 principles of technology 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, etc. 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, etc. Courses in color guard, drafting, fashion design, sewing, woodworking, etc. 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 15-credit minimum course requirements. Academic course work exceeding the minimum requirements 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.

\*Courses determined by a school district to be equivalent to one of the listed courses will be accepted if transcribed using the equivalent high school department designation and title or certified by the school district.

### *Admissions Index*

Developed by the Higher Education Coordinating Board of the State of Washington, the Admissions Index is a scale which helps to predict a student's probability for college success. The Admissions Index is used as a guide by all of the four-year public universities in the State of Washington, but is not the only factor considered. Cumulative GPA is approximately three times as important as test scores in determining the Admissions Index. When interpreting the Admissions Index, the Admissions Committee considers nature and difficulty of course selection.

### *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. College Board Advanced Placement Examination acceptable scores are listed in the *University Academic Policies* section of this catalog.

### *Admission Requirements for Home Schooled Students*

All freshman applicants need to supply Western with national standardized 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. Applicants may take either the American College Test (ACT) or the Scholastic Aptitude Test (SAT) to meet the standardized test score requirement. While not required, GED scores can be helpful in assessing the preparation of non-traditional applicants. Some of Western's admission core requirements are not tested by the ACT, SAT, or GED; thus the need for a detailed transcript.

### EARLY ADMISSION

Students who have demonstrated exceptionally strong academic records prior to high school graduation may be considered for admission. Contact the Director of Admissions for specific guidelines.

### TRANSFER ADMISSION

<http://www.ac.wvu.edu/~admit/tah>

In general, a transfer applicant is a student who has attempted college credit during the academic school year *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 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, multicultural experience, residency and space availability also may be considered.

Minimum requirements for transfer admission include a 2.0 cumulative transferable GPA as well as a 2.0 in the quarters prior to application review and enrollment. Students applying with fewer than 45 completed transferable quarter credits must also 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, etc. Students should refer to the College sections of this catalog for specific major declaration requirements. Prior to course registration, new students participate in an academic advising session.

### 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 in Western's *Transfer Adviser's Handbook* available at all public colleges and universities throughout the state and the *Western Washington University Transfer Planning Guide*, available from the Office of Admissions.

#### *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 90 quarter (60 semester) credits from two-year community or junior colleges. 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 90 credits at an accredited four-year institution (including at least 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

## UNDERGRADUATE ADMISSION

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- Study skills courses
- CLEP examination credit

### *Military credit*

Students may receive up to 30 credits for educational training based on American Council of Education (ACE) 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 non-transferable course work allowed under Inter-College Relations Commission (ICRC) guidelines.

### *Transfer of Associate Degrees*

Students who complete the Direct Transfer Agreement associate degree prior to initial enrollment at Western ordinarily will satisfy all of Western's General University Requirements. To be accepted in lieu of Western's GURs, the associate degree must meet Washington State's Inter-College Relations Commission (ICRC) guidelines and include at least 90 credits. The DTA degree must include 75 credits (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 advisers to ensure their curriculum choice follows the approved guidelines.

To meet Western's General University Requirements, 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.

## POSTBACCALAUREATE ADMISSION

Space for students wishing to pursue teaching certification or a second bachelor's degree is extremely limited, and therefore admission is quite competitive. Cumulative GPA, nature of previous course work, proposed program of study, residency and individual circumstances are considered. Many postbaccalaureate students will find their educational needs can be met through enrollment options offered through University Extended Programs. See the *All-University* section in this catalog.

Postbaccalaureate applicants interested in pursuing an initial teaching certificate must simultaneously apply to Woodring College of Education.

## READMISSION OF FORMER STUDENTS

Readmission priority is given to undergraduates pursuing a first bachelor's degree who interrupt their studies at Western for no more than one calendar year. Former students must submit a *Returning Student Application* and

meet all deadlines cited under *Application Deadlines and Procedures* section. 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*.

Postbaccalaureate applicants interested in pursuing an initial teaching certificate must simultaneously apply to Woodring College of Education.

Former Western extension program students returning to the same Western Washington University extension program to pursue a first bachelor's degree or postbaccalaureate study must complete the Extension Program Returning Student Application and submit it with a \$35 non-refundable application fee.

## EXTENSION ADMISSION INFORMATION

Western's general admissions requirements apply to all extension programs. Additional application procedures may be required. Extension program deadlines and application fees vary. For specific program information, see the *All-University* section in this catalog.

## 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 Office of Admissions 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 Office of Admissions each quarter.

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

## REGISTRATION

Office of the Registrar, Old Main 230, (360) 650-3430

<http://www.wvu.edu/CampusInfo/AdmRegInfo/RegOff.html>

Registration for each quarter is conducted in three phases using the touchtone registration system, RSVP (Registration for Students Via Phone):

- Phase I — A period of two to four weeks reserved for continuing and returning students, by appointment. (In fall quarter only, new transfer students also register in Phase I.)
- Phase II — A period before the start of classes when students can change their schedules and when new students register.
- 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 are contained in the annual *Timetable of Classes* and in the *Summer Bulletin*.

Summerstart, a special orientation and registration program for new 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 *Timetable of Classes*.

The student is responsible for ensuring that he or she has satisfied all prerequisites before registering for a course. A student who has registered for a course without satisfying prerequisites may be required 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, for 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 (a) by obtaining written permission from the course instructor, the department chair and the Registrar, and (b) by paying the late registration fee.

### EXTENSION REGISTRATION

Registration procedures for extension programs vary. Contact the appropriate program office for registration dates (see the *All-University 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 Office of Admissions 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 Fiscal Services, (360) 650-2865  
 http://www.ac.wvu.edu/~studentaccts/

At Western the various expenses of an undergraduate who is a resident of the State of Washington are about \$3,632 each quarter.

Approximate Quarterly Expenses, 1998-99

Tuition and Fees . . . . .	\$956*
Room and Board . . . . .	1,592
Books and Supplies . . . . .	230
Personal Expenses . . . . .	888

Below are actual costs of various expenses for several student categories. (Room and board and financial aid at Western are discussed in later sections of this catalog.)

\*Includes \$43.00 health services fee, \$30 building fee, and \$10 technology fee.

## TUITION AND FEES

Tuition and Fees are subject to change as the result of action by the State Legislature or the Board of Trustees.

See the Summer Session Bulletin for a description of summer fees, which usually differ from those of the academic year.

**By registering for classes, a student incurs a legal obligation to pay tuition and fees. This debt may be**

**canceled only if the student officially withdraws from the University before the quarterly deadline published in the Timetable of Classes.**

See *University Academic Policies* section of this catalog for an explanation of full-time status for such purposes as financial aid, athletic eligibility and veterans benefits.

### Auditors

Full fee-paying students (10 or more credits) may audit a course without an additional fee. Part-time students may audit courses by paying the auditor's fee of \$10 per credit.

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

### Self-Supporting Extension Tuition and Fees

*Woodring College of Education self-supporting courses:*

Undergraduate . . . . .	\$130 per credit
Graduate . . . . .	\$161 per credit

*Other self-supporting courses*

Undergraduate . . . . .	\$110 per credit
Graduate . . . . .	\$142 per credit
Independent Learning . . . . .	\$68 per credit
Workshops with credit as an option. . . . .	\$44 per credit

*Tuition and fees are subject to change.*

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

Schedule of Tuition and Required Fees 1999-2000											Amount per credit in excess of 18 credits
Classification	Per credit charge	Number of Credits									
		1-2	3	4	5	6*	7*	8*	9*	10-18*	
Resident <sup>1</sup> , General	91.40	182.80	274.20	365.60	457.00	633.40	724.80	816.20	907.60	999.00	81
Resident <sup>1</sup> , Graduate	146.40	292.80	439.20	585.60	732.00	963.40	1,109.80	1,256.20	1,402.60	1,549.00	135
Non-resident general	324.80	649.60	974.40	1,299.20	1,624.00	2,033.80	2,358.60	2,683.40	3,008.20	3,333.00	314
Non-resident graduate	445.60	891.20	1,336.80	1,782.40	2,228.00	2,758.60	3,204.20	3,649.80	4,095.40	4,541.00	434

\* Includes required fees: \$43.00 health services fee, \$30 building fee, \$10 technology fee.

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

1. 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
2. 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.
3. A student who is the spouse or a dependent of a person who is on active military duty stationed in the state. Such a student is classified as a resident for tuition purposes only and is not eligible for other benefits provided to residents.
4. 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.

Further information regarding residency classification and statutory exemptions from the requirement to pay non-resident 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.

**DESCRIPTION OF TUITION AND FEES**

**NOTE:** Fees are currently under review. Consult the Student Accounts office for the most up-to-date rates.

Tuition and fees are charged at the time a student registers for classes. Due dates are published in the annual Timetable of Classes. **Billing statements are mailed as a courtesy.** It is the student's responsibility to pay all current charges in full on or before the due date. Billing statements are available from the Student Accounts Office or the University Cashier.

Tuition is used for the construction of academic facilities. It is not used for either Housing and Dining System buildings or support of 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 (theatre, forensics, musical activities, intramural and intercollegiate activities, etc.).

The operations fee, with the state's general fund appropriation, is used to support the instruction, library, student services, administration and maintenance functions of the University.

For 1996-97, Western received approximately \$4,437 per resident undergraduate student and \$5,348 per resident graduate student from the state of Washington. This state allocation covered approximately 64 percent of the instructional cost of resident students. In addition, state-funded financial aid per student was approximately \$421 for undergraduate residents and \$259 for graduate residents. This information is provided in compliance with Washington State House Bill 1124.

1999-2000*			
	Tuition	Service & Activities Fee	Operations Fee
Res., General	\$32	\$113	\$769
Non-Res., General	\$126	\$113	\$3,009
Res., Grad	\$33	\$113	\$1,318
Non-Res., Grad	\$131	\$113	\$4,212

**MISCELLANEOUS SERVICE CHARGES**

*Orientation Fee\**

A mandatory fee of \$49.00 is charged to all newly matriculated students (not including extension or graduate students) upon registration for their first quarter of attendance. This fee is non-refundable.

*The following charges also apply to extension students and students doing off-campus internships:*

\* Pending approval by the Board of Trustees.

\*\* These published parking fees represent current fee structure at time of catalog revision. Contact Parking and Transportation Services for any possible changes, (360) 650-2945.

\*\*\*subject to Board of Trustees approval

*Health Services Fee\**

A mandatory fee of \$44.00 is charged per quarter to each student who registers for six or more credits. Extension program courses held off-campus are exempt. This fee is non-refundable after the sixth day of the quarter.

*Building Fee\**

A mandatory fee of \$31.00 is charged per quarter to each student who registers for six or more credits. Extension program courses held off-campus are exempt. This fee is non-refundable after the sixth day of the quarter.

*Technology Fee*

A mandatory fee of \$10 is charged per quarter to each student who registers for six or more credits. Extension program courses held off-campus are exempt. This fee is non-refundable after the sixth day of the quarter.

*Student Emergency Health Insurance*

Emergency coverage is available for students enrolled for six or more credits. A more comprehensive coverage, the Basic Health Plan, subsidized by the Washington State Health Care Authority, is also available to all students. Contact Student Health Services for details.

*Parking*

*(For parking and traffic regulations, see Appendix H.)*

	<i>Quarterly Total **</i>
Campus resident parking . . . . .	\$67.00
Adjacent (C zone) commuter permit . . . . .	56.00
Peripheral (CR) commuter/resident . . . . .	36.00
G-carpool permit . . . . .	46.00
C-carpool permit . . . . .	42.00
Motorcycle parking . . . . .	12.00

*Late Registration/Late Course Adds/Reinstatement*

A fee of \$10 is charged if a student registers after the fifth day of instruction in a quarter. A fee of \$5 is charged if a student adds a class after the fifth day of instruction. Either action requires written permission of the course instructor, department chair and Registrar.

Students who receive permission to be reinstated after being withdrawn for non-payment of tuition/fees are charged \$35 per week for each week after withdrawal.

*Special Examination Charges*

Course Challenge. . . . . \$25 per course

*Fees*

Baccalaureate degree . . . . .	\$21.63***
Master's degree. . . . .	21.63**
Placement service fee for student with prior degree who earns teaching certificate. . . . .	2
Initial teacher certificate . . . . .	20

(Fees for teaching certificates are set by the State of

Washington and are in addition to the degree application fees.)

### Transcripts

Requests should be submitted to the Registrar's Office one week in advance of need. A transcript will not be issued for persons who are indebted to the university.

Transcript Fee . . . . . \$5

### Other Special Fees

In certain instances the University may charge special fees for services which normal budgets may not fund, such as music practice room rentals, purchase of special laboratory and studio supplies. These fees are listed in the *Timetable of Classes*.

### When and How to Pay Tuition and Fees

A *courtesy* statement of account detailing tuition and related fees is mailed to the local address after Phase I registration approximately three weeks prior to the tuition and fee deadline and monthly thereafter. **It is the student's responsibility to pay tuition and fees before the payment deadline whether he/she receives a statement or not.** Billing statements are also available from the Student Accounts Office, Old Main 245, or University Cashier, Viking Union Plaza, on request. Payments are applied in due date order. Any previous unpaid bills (those due prior to the fee payment deadline) **must be paid in addition** to the new charges to insure full payment. In order to avoid being dropped from classes, registration charges must be paid in full and on time. If you add courses after your statement date, it is important to check with Student Accounts to determine your payment requirement. The registration fee deadline stated on the cover of the *Timetable of Classes* falls during the half-refund period. If the University cancels your registration for non-payment during this time, you are **still liable** for one-half of your tuition and all of your fees. Therefore, if you decide not to attend Western after you have registered it is important that you formally withdraw from the University through the Registrar as soon as possible to avoid incurring unnecessary fees.

1. Tuition and University housing payments may be made by:

- Mail — checks, VISA or Mastercard
- Fax — VISA or Mastercard
- In person — cash, check, VISA or Mastercard
- Financial Aid — loans, grants, waivers or scholarships

2. The AMS prepayment plan spreads the cost of tuition/fees and University Housing over a nine-month period running from July through March.

3. Books and supplies need to be purchased at the start of each quarter.

For more information contact Student Fiscal Services, Old Main 245, (360) 650-2865.

Financial aid, including scholarships, William D. Ford Direct Loans and Federal Perkins Loans, will be applied to any tuition and fees first. Then, financial aid will be applied toward any housing (contracted through WWU) bill that is

due within 30 days. Any remaining aid will be disbursed directly to the student by direct deposit to the student's bank account. Students who have not applied for direct deposit can pick up a check for the balance of financial aid funds at the Western Cashier's office from 9 a.m. to 4 p.m. Enrollment forms for direct deposit are available in Student Accounts (Old Main 245) or at the University Cashier, Viking Union Plaza. If financial aid does not cover the amounts owed to WWU, the student must pay the balance by the appropriate deadlines.

### REFUNDS OF TUITION AND FEES\*

In ordinary circumstances, a student who formally withdraws before the sixth day of instruction in a quarter receives full refund of tuition and fees, **except for the initial registration deposit and the orientation fee required of new students.**

A refund of one-half of tuition *only* is made to a student who withdraws on or after the sixth day of instruction, provided such withdrawal occurs within the first 30 calendar days following the first day of instruction. **No refund is given for the health services fee, building fee, technology fee or course fees on or after the sixth day of instruction.** After the 30th day, no refunds are granted. A statutory pro rata refund schedule is required for students who received Title IV federal financial aid. That refund policy is available in the Student Financial Resources office.

*Extension non-program refund policy follows:* a full refund is given if a class is canceled or your registration is not accepted. A full refund is given if you postmark a written refund request before the second class meeting. A 50 percent refund is given if your written refund request is postmarked before one-half of the class meetings have been held. No refunds are given after one-half of the class meetings. Refund requests for one-day classes must be made by telephone no later than one day before the class, and followed with a written request postmarked within one week of the initial phone call. Mail your refund request to the appropriate extension office.

*Extension program refund policy:*

**Full refund** — Through the fifth day of Western's (Bellingham campus) quarter or before the second class meeting, whichever is later.

**50 percent refund** — Same as regular Western date.

**No refund** — Same as regular Western policy.

*The Independent Learning refund policy* is that no refund will be made after 30 days from the date of registration. The \$15 registration fee is non-refundable. If assignments have been submitted, a prorated service fee is deducted from the refund.

See the *Summer Session Bulletin* for a description of the withdrawal deadlines and *refund policy*, which differ from those of the academic year.

### Change in Student Status

A student who has paid part-time tuition and fees and who adds courses bringing the total credits to 10 or more will pay the balance between what has already been paid and the full-time cost. It is the student's responsibility to request a new billing statement when a change in

\* See the *Summer Session Bulletin* for the refund policy of summer fees.

registration status results in an increase in tuition and fees. Statements are available at the Student Accounts office in Old Main 245 or at the Cashier in the Viking Plaza. A full tuition/fee-paying student who drops courses so 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 thereafter.

### *Financial Obligations*

Admission to or registration with the University, conferring of degrees and issuance of academic transcripts may be withheld for failure to meet financial obligations to the University. (WAC 516-60-006, filed 11/17/72.)

When a federal Perkins (formerly National Direct), William D. Ford Direct Loan, Joy Stokes or any federal loan has been disbursed to a student while attending the University, failure to appear for an exit interview before graduation or withdrawal or when credits are less than half-time constitutes failure to meet a financial obligation. ***Exit interviews are mandatory.*** The exit interview is intended to further the students understanding of their rights and responsibilities regarding their respective loans. Contact the Student Fiscal Services Loan Repayment Office at (360) 650-2943 to schedule an exit interview.

## REFUND POLICY

### *Tuition Refund*

The tuition refund policy of Western Washington University is established by the State of Washington and the Board of Trustees.

### **Policy Statement**

In ordinary circumstances, a student who withdraws before the sixth day of instruction in a quarter receives a full refund of tuition and fees, except for the initial registration deposit and orientation fee required of new students.

A refund of one-half of tuition *only* is made to a student who withdraws on or after the sixth day of instruction, provided such withdrawal occurs within the first 30 calendar days following the first day of instruction. ***No refund is given for the health services fee, building fee, technology fee or course fees on or after the sixth day of instruction.*** After the 30th day, no refunds are granted.

A statutory pro rata refund schedule is required for students who received Title IV federal financial aid. That refund policy is available in the Student Accounts Office.

Exceptions to the above policy are addressed by the Western Washington University Tuition/Fees Exception Petition Form. The form is available in the Student Accounts office.

**NOTE:** The first \$50 of tuition and fees paid by newly admitted students, whether paid as a separate deposit to accept an offer of admission or as a part of total fees at the beginning of a quarter, is non-refundable. The \$46.80 mandatory orientation fee which is charged to all newly matriculated students is also non-refundable.

## STUDENT FINANCIAL RESOURCES

Old Main 240, (360) 650-3470

<http://www.ac.www.edu/~sfr/>

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 will be receiving financial aid.

There are four types of financial aid programs briefly described below. Additional information is available in the office of Student Financial Resources.

### WHAT IS FINANCIAL AID

Financial aid is monetary assistance to help meet educational costs, including: tuition and fees, books and educational supplies, room and board, 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. Applications are evaluated to determine each student's relative financial need, and awards are made with careful adherence to federal, state and institutional guidelines. WWU students who enroll in an approved program of study abroad can be considered for financial aid (though not all aid types are available).

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 financial aid eligibility. Most grants are available only 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. WWU offers merit scholarships to entering freshmen, transfers and returning students in recognition of outstanding academic ability or talent.

Entering students who are National Merit Finalists are guaranteed a minimum of \$1,000 in scholarship funding per year for four consecutive years. Additional individual scholarships are available through University departments and colleges. Through the Multicultural Achievement Program Scholarship Award the University recognizes outstanding students who demonstrate a commitment to multicultural issues and activities in school or the community. A list of scholarships, with brief descriptions of eligibility requirements, is available in the Scholarship Center, Old Main 260, (360) 650-3471.

Students enrolled in or applying to extension programs should contact the Scholarship Center for specific eligibility requirements. Extension students may not be eligible for all scholarships offered through the Scholarship Center.

**Loans** for education generally have interest rates that vary (by program) between 5 to 9 percent for new loans. Some of the loans have the interest subsidized by the federal government. In some of the programs, payments may be deferred until after the student has left school. WWU participates in the Federal Perkins, Federal Direct and PLUS loan programs. The Perkins loan is targeted to undergraduate students with "exceptional need" who are dependent or independent and have children.

**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 a form of financial aid available to undergraduate and master's degree students with the highest need.

Work study jobs have a portion of the employee's salary subsidized by federal or state funds. This encourages employers to provide employment opportunities which otherwise might not be available. The University places a strong emphasis on providing quality work experiences for its students. Additional information is available in the Center for Student Work Experience, Old Main 285, (360) 650-3158.

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 Western's Center for Student Work Experience.

### HOW TO APPLY FOR FINANCIAL AID

To apply for financial aid, students must complete the Free Application for Federal Student Aid (FAFSA). Additional information may be requested.

Students who have attended a prior college or university may be required to submit a **financial aid transcript** from each school, *even if* they did not receive financial aid. Students may contact the financial aid office of their prior school and request that a **financial aid transcript** be sent to WWU.

**Students must notify in writing** the Student Financial Resources office at WWU if they have received financial aid at any other institution for the 1999-2000 academic year.

To be considered for priority funding for the 2000-2001 academic year, students must mail the FAFSA to the federal processor by February 15, 2000. Applications made after this date will be given consideration on a funds available basis.

### GENERAL ELIGIBILITY REQUIREMENTS FOR FINANCIAL AID

Students are eligible to be considered for financial assistance if they:

- ❑ Are a citizen or permanent resident of the United States.
- ❑ Demonstrate “financial need” for assistance as determined by the Free Application for Federal Student Aid and Western Washington University.\*
- ❑ Submit all required information and documentation, which may include financial aid transcripts from all prior schools. WWU generally relies on electronic transmission of financial aid transcript data, but federal records are not complete for some students and these students must request that the financial aid offices at their prior schools send a financial aid transcript to WWU.
- ❑ 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; 10 credit hours for full-time master’s degree candidates.
  - 6 credit hours for half-time undergraduates.
  - 5 credit hours for half-time master’s degree candidates.
  - Some students could possibly be eligible for limited amounts of assistance if they are enrolled less than half-time.
- ❑ Maintain satisfactory academic progress and have not already exhausted your 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.

### SUMMER FINANCIAL AID

Applicants for financial aid during summer quarter must meet the same eligibility requirements and submit the same application materials required during the preceding academic year (the Free Application for Federal Student Aid). In addition, the *Summer Financial Aid Addendum* is required. Financial assistance for summer quarter is usually limited to Pell Grant, Federal Direct Loans and PLUS loans. These programs are available only if the student applicant has not used his/her entire eligibility during the regular preceding academic year. The *Summer Financial Aid Addendum* will be available beginning mid-February from the Office of Student Financial Resources and in the *Summer Bulletin*.

Students wishing to be considered for financial assistance for summer quarter should contact Student Financial Resources regarding application deadlines and materials required for completion of an application.

### UNIVERSITY EXTENDED PROGRAMS

Financial aid may be granted for extension courses and programs. Contact Student Financial Resources for eligibility requirements and aid procedures. Fee reductions and tuition waivers are not applicable to self-supporting extension programs. Students enrolled in or applying to extension programs should contact the Scholarship Center for specific eligibility requirements. Extension students may not be eligible 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 5 graduate-level credits each quarter.

### FOR SHORT-TERM CASH-FLOW PROBLEMS

The Department of Student Financial Resources can assist in solving short-term cash-flow problems through a series of short-term loan programs.

#### *Emergency Loan*

Currently enrolled students may borrow up to \$100 for up to 28 days to solve minor cash-flow problems. Signature loans must be paid in full within 28 days.

#### *Institutional Loan*

Currently enrolled students may borrow up to \$600 for a maximum of 90 days. This loan requires a co-signer. The Institutional Loan must be repaid in 90 days. Students are encouraged to repay Institutional Loans as soon as possible since these loans are made from a revolving fund.

#### *State Short-Term Loan*

This loan is available to students who are residents of Washington and who are waiting for the first disbursement of their Federal Direct Loan. Students may borrow up to \$1,000 or the amount of the expected quarterly disbursement, whichever is lower, from the Short-Term Loan program. The Short-Term Loan must be repaid on receipt of the loan proceeds or within 30 days, whichever comes first.

Student Financial Resources 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 history of poor repayment of prior loans.

### WESTERN REPAYMENT POLICY

Overpayment occurs when a student has received more aid than is warranted. The most common reason for overpayment is full or partial withdrawal from classes by the student after financial aid has been received. When a student withdraws, the following procedure is followed:

- ❑ All aid is canceled for a student who fully withdraws from the University prior to aid disbursement. The student is not held to satisfactory progress requirements

\* Please refer to Student Financial Resources for an explanation regarding financial need, estimated cost of education at Western, student rights and responsibilities and a brief explanation of individual student aid programs.

for the quarter.

- A student who fully or partially withdraws from classes after aid is disbursed may be required to repay all or a portion of the aid disbursed.

Additional information on repayment requirements is available at Student Financial Resources and Student Accounts.

### VETERANS INFORMATION

Each veteran enrolling at Western for the first time on the G.I. 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 acceptable toward 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 (HECB/SAA) 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 last 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

*Edens Hall, (360) 650-2950*

<http://housing.wvu.edu/>

Western Washington University's residential system provides a great variety of living options. Program and live-in staff are committed to the development of a positive living environment that supports students in achieving their academic goals. All residence halls and apartments are coeducational by the floor, wing or suite. Assignments are made without reference to race, age, creed or national origin.

Students are not required to live in University residences. However, living in a residence hall or on-campus apartment is a unique experience which provides an opportunity to meet people and explore new ideas and ways of relating to others. It is an important part of the educational process in which students are encouraged to be involved in activities and programs and to assume individual and group responsibility.

Professional and student staff members provide supervision, personal advisement, conflict management and crisis intervention. They also assist residents in developing a sense of community in which students can feel "at home" while in residence at Western.

Numerous student leadership opportunities are available through Residence Life, including volunteer positions in hall government and committees as well as paid positions such as computer room coordinators and resident advisers. Western strongly encourages students to be active, involved citizens in the residential communities, since this enhances both the community and their own individual growth and development.

### UNIVERSITY RESIDENCE HALLS, APARTMENTS FOR SINGLE AND MARRIED STUDENTS AND DINING HALLS

With few exceptions, **residence hall rooms** are designed for occupancy by two persons. Each is furnished with single beds, mattresses and pads, desks, desk lamps, access to TV cable and local phone service, plus a wardrobe or closet. The occupant furnishes linens, towels, alarm clocks, telephone instruments and other personal necessities. Because of fire danger, electric open-element appliances are not permitted in student rooms.

Kitchenette and laundry facilities are provided in central areas. A recreation room, reception area, lounge, special study rooms, vending machines and **limited** storage space is provided in most halls. Some halls have bike racks, pool tables and other recreational facilities.

Regular **meal service** is provided in three locations — the Viking Commons, Ridgeway Dining Commons and the Fairhaven Dining Commons. Regardless of meal plan or residence, students may eat in any of the dining commons, although most tend to eat in the dining area nearest their residence hall. No meals are served during quarter break periods.

Birnam Wood, our **apartment complex**, consists of 132 two-bedroom apartments on a wooded, seven-acre site

near the campus. Each apartment has a living room, dining room, kitchen, outside deck, bath, storage area, with standard furnishings for four students, drapes, and wall-to-wall carpeting. Utilities are provided as well as television and FM cable service, and local phone service. Each apartment can accommodate up to four persons, or a family. A deposit is required from each person or family assigned to an apartment.

Reservations for space in residence halls and apartments are made by completing a housing application and returning it to the following address: Office of University Residences, Edens Hall, Western Washington University, Bellingham, Washington 98225-9195.

An assignment to a University apartment or residence hall does not guarantee a parking space or permit.

Space is limited, so apply immediately for admission to the University for the highest priority in housing assignment. ***You will receive your housing application and brochure when you are officially notified of admission to the University.***

No deposit is required with the Housing application, but one must be made when a housing agreement is signed. Space in a particular hall or apartment is assigned according to the date of the receipt of the application for admission to the University. Actual room assignments are based upon student responses to the roommate assignment questionnaire.

### *Deposits, Cancellations and Refunds*

Students applying for housing and later deciding they do not want accommodations must cancel their reservations by notifying the Office of University Residences in writing.

In accepting an assignment to a residence hall, each student agrees to the Room and Board Agreement and makes a security deposit. The security deposit will be retained by the University as a damage and/or reservation deposit as long as the student lives in the housing system.

Once the agreement is signed and the security deposit is made, cancellation of a reservation cannot be made without forfeiture of the deposit if cancellation is made after July 1. Cancellations made before July 1 will result in a refund of the entire deposit. The reservation deposit may be refunded by the director of University Residences if circumstances exist which are beyond the student's control.

The reservation deposit becomes a damage deposit during the term of the housing agreement. Charges for damage to or loss of University Residences' property which is assigned to the student's custody, damage to other University Residences property or outstanding normal charges will be billed to the student. If the amount of the damage or other charges exceeds the amount of the deposit, the student will be billed for the balance. The student's account will be cleared and a refund of the deposit made only after all housing and other University charges are paid in full.

## **COSTS**

The Trustees of Western Washington University set room-and-board rates and apartment rents. For a double room with the maximum meal plan, the 1999-2000 rate will be \$4,811. The room-and-board rate for a double room with the maximum meal plan was \$4728 for the 1998-99 academic year. Residence hall rates include room, food and utilities. Apartment rates are \$1,832 for a double with two persons and \$7,328 for a family in a two-bedroom apartment. Apartment rates do not include the cost for food service.

Housing rates increase each year. For the actual annual residence hall and apartment rates, contact the Office of University Residences, Western Washington University, Bellingham, Washington, 98225-9195, (360) 650-3744.

## **OFF-CAMPUS HOUSING**

The Off-Campus Housing Listing Service provides a means for students to find housing in the area. A board with posted listings is available to view in the Viking Addition, 6th floor. Listings may be made in person between the hours of 10 a.m. and 5 p.m. Monday through Friday.

## STUDENT AFFAIRS/ACADEMIC SUPPORT SERVICES

The services and programs delivered through Western's Division of Student Affairs/Academic Support Services are integral to the University's provision of opportunities for students to develop intellectually, emotionally, physically and socially. Assisting students as they seek to gain the fullest value from their university experience, the staff provides services through residence hall life, academic advising, tutoring, financial aid, student activities, new student and parent programs, counseling and health services, wellness programs, student support 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 VICE PRESIDENT FOR STUDENT AFFAIRS/DEAN FOR ACADEMIC SUPPORT SERVICES

*Old Main 390, (360) 650-3839*

This is the central administrative office for the Division of Student Affairs/Academic Support Services. The vice president/dean and staff provide leadership within the University to ensure that 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 continually listening to students regarding their concerns and aspirations.

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

### ACADEMIC ADVISING SERVICES

#### *Academic Advising Center*

*Old Main 380, (360) 650-3850*

<http://www.wwu.edu/~advising/>

The Academic Advising Center is a place where students can get help with their questions about academic policies and curricular choices. Peer advisers and professional staff clarify academic requirements and regulations, assist students with course selection and scheduling, and help students to effectively use the academic and support resources of the University.

One of the emphases of the Center is working with students who have not yet chosen a major. Students are assisted in exploring Western's curriculum and clarifying

their academic goals so that their eventual choice of a major is well-planned and rewarding. The services of the Center include:

- ❑ Advice concerning General University Requirements (GUR) and other pre-major concerns.
- ❑ Assistance with registering for classes.
- ❑ Help with choosing a major.
- ❑ Assistance with establishing and successfully implementing academic goals.
- ❑ Advising support for academically at-risk students.
- ❑ Math placement exam and writing proficiency requirement information.
- ❑ Explanation of scholastic standing policies: warning, probation, petitions for reinstatement.
- ❑ Course and University withdrawal information.
- ❑ Information for WWU students on GUR equivalents at Washington State community colleges.
- ❑ Referrals to appropriate resources such as the Writing Center or the Tutorial Center for work on specific learning and study skills.

The Academic Advising Center is located in Old Main 380 and is open Monday through Friday, 8 a.m. to 5 p.m. for drop-in questions. Appointments can be made by calling (360) 650-3850. Also visit our Web page.

#### *Tutorial Center*

*Old Main 387, (360) 650-3855*

<http://www.wwu.edu/~tutorctr>

The Tutorial Center is a free resource for students of Western Washington University. The tutors are peer undergraduates familiar with the textbooks and courses encountered at Western, and they work with students taking General University Requirement courses. The Tutorial Center provides a comfortable and open setting in which tutors help students develop their command of the subject material as well as overall academic ability.

Students who use the Tutorial Center services include academically strong students working to maintain an A or B grade as well as those students having difficulties passing a course. Through individualized student-centered tutoring, students determine what information to cover as well as the pace of the tutorial. This process allows students to discover successful academic strategies necessary for independent learning.

Tutoring is offered in a variety of formats including individual and small group sessions by appointment, and drop-in tutoring where no appointment is needed. The Center also provides study sessions before selected exams. Students seeking help with study skills such as time management, textbook comprehension, test preparation and note-taking can find qualified assistance at the Tutorial Center.

Specific services include the following:

- ❑ Individual and small group tutoring by appointment
- ❑ Drop-in tutoring for GUR math and science courses
- ❑ Study sessions for many GUR math courses
- ❑ Calculator workshops and GraphLink program

- ❑ Study skills workshops and tutorials
- ❑ Computer applications assistance
- ❑ Assistance in forming study groups
- ❑ Study area for individual and group study
- ❑ Referrals to other University resources

The Tutorial Center is open for tutoring from 9 a.m. to 4 p.m. Appointments can be made between 8 a.m. and 5 p.m. either in person or by phoning (360) 650-3855.

## ADMISSIONS

Old Main 200, (360) 650-3440

See the *Undergraduate Admissions* section of this Catalog.

## ATHLETICS

Carver Gym 100, (360) 650-3109

<http://www.ac.wvu.edu/~athletic/>

Intercollegiate athletics involve many students as participants and spectators. Men's sports include basketball, crew, cross-country, football, golf, soccer, and track and field; women's sports include basketball, cross-country, golf, soccer, track and field, crew, volleyball and fastpitch softball. The University Athletic Program is a member of the National Collegiate Athletics Association (NCAA) Division II. For further information contact the Athletic Office, Carver Gymnasium, (360) 650-3109.

## CAREER SERVICES CENTER

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

<http://www.wvu.edu/~careers>

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

### *Career Planning*

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

- ❑ Examine interests, abilities and values
- ❑ Identify their transferable skills
- ❑ Explore occupations and job market trends
- ❑ Relate career choices to educational programs

Specific assessment instruments include FOCUS (a computer career guidance system), the Strong Interest Inventory and the Myers-Briggs Type Indicator. Students are encouraged to use the center's workbook, "Mapping Your Road to Success," to chart their personal academic and career goals.

### *Internship/Cooperative Education Program*

Internship and cooperative education programs offer an opportunity 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 and cooperative education 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/cooperative education opportunities.

### *Career and Job Market Information*

The Center maintains a comprehensive Career Resource Library. Reference materials relate academic majors to career fields, provide information on employment conditions and list prospective employers and hiring organizations. Job listing binders contain announcements for current position openings in business, industry, government, non-profit organizations and education.

In addition, computer workstations with Internet access are available for student use and include the following software: Microsoft Word and Résumé Maker.

### *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** and subscribe to the Center's **Job Opportunity Bulletins** which are published on a weekly basis. 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.

### *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 non-discrimination statutes.

## COUNSELING, HEALTH AND WELLNESS SERVICES

Old Main 563, (360) 650-2926

<http://www.ac.wvu.edu/~chw/>

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

**Eligibility for services:** Students who have enrolled for six or more credits may access services of the Counseling Center and Alcohol and Drug Counseling and Assessment Services. In addition, services are available to students currently enrolled for six or more credits and who have paid the mandatory health services fee. These services include regular office visits to the Student Health Center and the Student Health Assessment and Information Center. (Extension program students who are enrolled in six or more credits and elect to pay the health services fee also may access the above). 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.*

### *Prevention and Wellness Services*

*Old Main 560, (360) 650-2993*

[http://www.ac.wvu.edu/~chw/prev\\_well.html](http://www.ac.wvu.edu/~chw/prev_well.html)

The goal of Prevention and Wellness Services is to help students learn that they have the greatest influence on their own state of well-being. Developing a healthy lifestyle means (a) learning how to reduce major health risks as a college student, (b) learning how to make responsible decisions for managing many common illnesses and injuries, and (c) learning when the services of a health-care practitioner are needed and how to access those services.

Prevention and Wellness Services offers free individual and group assessment, education, and outreach programs on how to reduce your risks for problems with alcohol and drugs, stress, eating problems, sexually transmitted diseases including HIV infection, sexual assault, and unhealthy relationships. Peer health educators, called "Lifestyle Advisers," are Western students trained in a four-credit University health education class to teach other students state-of-the-art techniques for reducing risk in critical health areas. Students who become Lifestyle Advisers receive valuable training from health-care professionals and an exceptional opportunity to do hands-on volunteer service in the field of disease prevention and health promotion.

SHAIC (Student Health Assessment and Information Center) is an innovative, student-powered prevention and self-care center that offers the students of Western access to low-cost, high-benefit prevention services, assessment, resources and referrals. The goal of SHAIC is to promote students' self-responsibility in their own health care. Staffed by one registered nurse and Peer Lifestyle Advisers, SHAIC offers rapid medical assessment and telephone consultation for common illness and injury, cold self-care,

anonymous HIV testing and education, stress management services, consultations on contraception, and a health resource library. SHAIC is located at High Street Hall, (360) 650-2961.

### *Alcohol and Drug Consultation and Assessment Services*

*Old Main 560, (360) 650-3642*

[http://www.ac.wvu.edu/~chw/alcohol\\_drug.html](http://www.ac.wvu.edu/~chw/alcohol_drug.html)

The use of alcohol and drugs at Western can have both immediate and long-term consequences for the user and those around her or him. These consequences include increased health risks, increased risk for poorer academic performance, accidents, forced and/or regretted sex, unacceptable social behavior and possible legal sanctions. Learning about the effects of alcohol and drugs, both on health and behavior, can help students make healthy decisions.

Alcohol and Drug Counseling and Assessment Services assist students whose health and behavior have been negatively impacted by alcohol and drugs. All professional services are confidential. Information may only be released to other professionals with the client's written consent. Services include:

- ❑ In-depth Alcohol/Drug Assessment: Comprehensive assessment of individual patterns of use, consequences and potential risks with specific personalized feedback designed to assist individual students to change their drinking/drug use patterns and related outcomes.
- ❑ Brief Alcohol/Drug Assessment: Brief assessment of alcohol/drug use and consequences; risk education and risk reduction strategies.
- ❑ Brief Counseling: Individual discussion of issues from alcohol/drug information and concerns about substance abuse by friends, family members, partners or roommates to personal impact assessment from alcohol/drug use by others, current or past.
- ❑ Referral to support, counseling or other treatment resources as needed.

### *Counseling Center*

*Old Main 540, (360) 650-3164*

<http://www.ac.wvu.edu/~chw/counselingctr.html>

Personal problems can interfere with school and life. The Counseling Center is here to provide 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, lack of direction. Test anxiety may lower scores on exams. 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 social workers is here to help you work through these problems in a caring and confidential environment. All counseling services are voluntary and free. All information gathered during the course of counseling is confidential.

In addition to individual counseling for most problems that arise for students, the Counseling Center also provides

groups 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 both in the Counseling Center and in SHAIC.

The Counseling Center prides itself on being able to provide brief therapy 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.

### *Student Health Center*

*High Street Hall 25, (360) 650-3400*

<http://www.ac.wvu.edu/~chw/shcenter.html>

The Student Health Center at Western provides for a broad range of care such as that you would find in a family practice physician's office. Our services include but are not limited to the following: sexually transmitted disease testing and treatment, immunizations (limited), contraceptive services, well physical exams, men's and women's health care, preventive medicine, monitoring of chronic illnesses, antigen injections (follow-up care), rapid lab tests (such as pregnancy tests), evaluation and referral for specialized conditions and evaluation/treatment of common illnesses. The Student Health Center is staffed by a team of physicians, nurse practitioners, registered nurses, medical assistants and health counselors.

The Center is open to students from 8:30 a.m. to 4 p.m. Monday, Tuesday, Thursday, and Friday and Wednesdays from 9:30 a.m. to 4 p.m.

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.

Also available is the Student Health Assessment and Information Center to help students take more responsibility for their own health. SHAIC (pronounced "shack") is staffed by a Registered Nurse and trained peer health educators. SHAIC's services include:

- ❑ Assessment/referral for medical concerns by a Registered Nurse
- ❑ Telephone consultation with Registered Nurse
- ❑ Peer-educator assisted health education in all major health topics
- ❑ Up-to-date books, articles, videotapes, audiotapes on major health issues
- ❑ "User-friendly" computer-assisted nutritional and stress assessment
- ❑ Smoking cessation information
- ❑ Cold self-care clinic
- ❑ Sexual health information center

SHAIC is located adjacent to the Student Health Center in High Street Hall.

The Student Health Center coordinates the provision of a student insurance policy at a reasonable cost to the student. The emergency/illness (i.e., life-threatening) and accident insurance policy is designed for students who do not already have health insurance coverage and is available

for all students currently enrolled for six or more credits. Sign-up time is during the registration period of each quarter. Brochures are available at the Registration Center, Cashier's Office and the Student Health Center. Payment is made at the Plaza Cashier. Another insurance option for Western students to consider is the comprehensive Washington State-subsidized Basic Health Plan. For more information about benefits and eligibility requirements, contact the Student Health Center. The Student Health Center strongly recommends that all students have some form of health insurance to defray the substantial costs associated with serious accidents and illness.

**NOTE:** With a commitment to the health and safety of all members of our campus community, WWU requires that all new 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 after January 1, 1968, when recipient was at least one year of age and *at least 30 days apart*, or medical proof of immunity to the disease. Any questions may be directed to the Student Health Center at (360) 650-3400.

### **NEW STUDENT PROGRAMS/FAMILY OUTREACH**

*Edens Hall 115, (360) 650-3846*

<http://www.ac.wvu.edu/~nspfonwvu/>

New Student Programs/Family Outreach provides programs and services to enhance the students' 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, quarterly transfer newsletter). 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 weekends (summer orientation programs, Fall Family Open House, Western Showtime Family Weekend).
- ❑ Referral to campus/community resources.

### **REGISTRAR'S OFFICE**

*Old Main 230, (360) 650-3430*

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

### **STUDENT FINANCIAL RESOURCES**

*Old Main 240, (360) 650-3470*

See the *Student Financial Resources* section of this catalog.

### **STUDENT SUPPORT SERVICES**

*Old Main 110, (360) 650-3844 (voice), (360) 650-3725 (TTY)*

Student Support Services is committed to providing

academic intervention and support programs as well as assistance regarding campus and administrative policies that enhance a positive university experience and student success. Integral to this mission is cultivation in an environment which actively promotes an appreciation for pluralism and cultural sensitivity. A quarterly newsletter, *Commitment*, informs students about resources and helpful information that are available through Student Support Services. The following services are offered:

### *Multicultural Retention and Support Programs*

<http://www.wvu.edu/CampusInfo/UnivSuppServ/MulSerCent.html>

The Multicultural Retention and Support Programs emphasize academic support and intervention through the First Alert Program, Registration Assistance Program, Multicultural Career Conference, and mentoring programs such as the AMIGOS, Staff and Community and Sister-to-Sister programs. Students are provided with one-on-one academic advising regarding course scheduling, choosing a major, academic probation, career advising, and transitional concerns. Academic support workshops, cultural awareness programs, and student diversity training are provided quarterly.

### *disAbility Resources for Students*

<Http://www.wvu.edu/CampusInfo/UnivSuppServ/DisStuServ.html>

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.

### *Student Assistance Services*

Student Assistance Services provides advice on academic and administrative policies, procedures and grievances, i.e., the Academic Grievance Procedure; approves leaves of absence for non-medical emergencies and personal crises; delivers emergency messages to students during class hours; provides information on the University and on community resources; and assists students in problem solving within the University system.

### *University Judicial Services*

University Judicial Services 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 insure respectful and lawful behavior, to enhance personal safety on campus, and to maintain our education 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 are available in the Student

Support Service Office and the Code is included as Appendix B of this catalog.

## UNIVERSITY RESIDENCES

*Edens Hall, (360) 650-2950*

See the *University Residences* section of this catalog.

## VIKING UNION/STUDENT ACTIVITIES

*Viking Union 202, (360) 650-3450*

<http://www.union.wvu.edu/>

## STUDENT ACTIVITIES

*Viking Union 202, (360) 650-3450*

The program of student activities at Western is designed to provide maximum opportunity for student participation in a wide range of co-curricular experiences. Student activities are in no sense incidental in the plans of the University; rather they 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 supplemental to, and often unavailable in, classroom situations.

Many student activities are initiated and administered by students themselves through the Associated Students. Students may 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 administrative 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 Drug Information, Legal Information and Sexual Awareness Centers; the Environmental Center; the Veterans Outreach Center; STRATA (older returning students); the A.S. Recycling Center; the Ethnic Student Center; Women's Center; the Lesbian/Gay/Bisexual/Transgender Alliance; the Peace Resource Center; and the A.S. Child Development Center.

### *Day-Care Facilities*

The Associated Students Child Development Center, a student/parent cooperative operated in Western's Fairhaven College buildings 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 winter and spring breaks. Children from two through five years of age may be enrolled. To join, members pay a membership fee. Quarterly fees are based on income and 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 higher rate.

### *FM Radio*

Operated by the Associated Students, KUGS broadcasts in stereo at 89.3 on the FM dial, as well as on cable 102.5 on campus and within Whatcom County. Student managers 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, managers and sportscasters.

### *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, rockclimbing, 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, cross-country 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.

### *Associated Students Productions*

From socializing to social issues, A.S. Productions is a student-run programming agency that brings to campus films, musical performances, art shows, and current events presentations. Programs range from coffeehouse concerts to national speakers and weekly films to large concerts.

### *Recreational Opportunities*

Recreational facilities available to the University community include Lakewood, a 10-acre site on Lake Whatcom, which is operated by the Associated Students, and offers sailing, canoeing, swimming, boating and picnicking. Conference and meeting facilities also are 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 Carver Gym.

### *Clubs and Organizations*

Clubs and student organizations offer involvement in a wide range of activities. Approximately 150 different organizations exist within the Associated Students, including groups such as the Swing Kids; Pre-Law Club, Badminton Club, WWU Triathlon Team, Circle K, Cesar Chavez Student organization, Western Animal Rights Network, Mid-East Dance Club, and Electronics Club. 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.

### *Viking Union*

As the community center of the campus, the Viking Union Complex 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 meeting rooms, lounges, a music listening room, outdoor equipment rental shop, bicycle repair facility, several food service areas, an information center/sundry sales shop, a cash machine, Creative Juices, Plaza Pizza, art gallery, games room, Vendors' Row, KUGS-FM, an activity center, a publicity center/print shop, cashier service and program areas. *A major renovation is planned to begin in winter 2000 and will result in the relocation of some offices and services.*

### *Associated Students Cooperative Bookstore*

Operated by the Associated Students on a cooperative basis, the Students' Co-op Store provides textbooks, class supplies and materials, computers, and convenience and sundry items for the University community. All textbooks are discounted, while specials afford even greater savings. Also housed in the store is a post office and a cash machine. Gift items and specialty services, such as film processing, are available.

### *Ethnic Student Center*

Located on the first floor of the Viking Union, the Ethnic Student Center contains offices for the African American Alliance, Afro-Caribbean Club, Native American Student Union, MEChA, Asian/Pacific Islander Student Union, Filipino American Student Association, International Club, Hui 'O Hawai'i, Japanese American Culture Club, Khmer Student Association, Lao and Thai Students Association, South Asian Cultural Association, and PRISM (multicultural/intercultural student organization). The Center also houses a coordinator/adviser, staff, meeting and lounge spaces, a reference library 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.

## **CAMPUS RECREATION**

*Carver Gym 101, (360) 650-3766*

The Office of Campus Recreation 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 non-credit exercise classes.

### *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 fund-raising 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, rugby, sailing, skiing, snowboarding, swimming, Tae Kwon Do, ultimate disc, men's volleyball, tennis, water polo, water skiing and wrestling.

### *Non-Credit Classes*

Instructional classes include aerobic dance, water aerobics, hip-hop dance, and yoga. All non-credit classes are taught by qualified student instructors and serve between 300 and 350 students, staff and faculty. The classes are designed with the individual differences of the student population in mind.

### *Open Recreation*

Areas of the Carver facility open on a daily basis for the University community include the weight room, pool, racquetball courts, aerobic center, four gymnasiums, seven athletic fields, one track and eight tennis courts. There is organized open recreation time for activities such as volleyball, badminton, table tennis, pickle ball, soccer and Ultimate Frisbee as well as racquetball challenge ladders. The pool is scheduled for lap, recreation, family and alumni swims throughout the week. The information center within the facility is set up to issue towels, lockers and equipment in exchange for a University I.D. card.

## **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, guest 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*

*College Hall 101, (360) 650-3870*

The forensics program provides opportunities for participation in local, regional and national competitions, including CEDA and NIET regionals and nationals. The Pi Kappa Delta National Forensics Honorary recognizes student achievement in tournaments ranging from novice to championship divisions. WWU's program enjoys a strong national reputation. Annual activities also include sponsoring several local events, including high school and college tournaments and appearances by CIDD international teams. All students are welcome to participate.

For more information, contact the Department of Communication, College Hall 101.

### *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, 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*

*College Hall 110, (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 Environmental Studies.*

### *Television*

*College Hall 103, (360) 650-3870*

A student-produced weekly TV news show and a daily headline news program carried on the cable system serving Bellingham provide experience in newsgathering, editing, scriptwriting, videotaping, studio production and on-camera performance. Credit is available through the Department of Communication.

### *Theatre Arts*

*Performing Arts 395, (360) 650-3876*

The theatre arts department 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.

# UNIVERSITY ACADEMIC POLICIES

## STUDENT RESPONSIBILITY FOR OBSERVING POLICIES

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

## 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 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.

<b>College Board Advanced Placement Examinations</b>			
<i>Department</i>	<i>Minimum Score</i>	<i>Subject Examination</i>	<i>WWU Courses/Credit</i>
Biology	3	Biology	Biology 101, 102 (8 credits)
Chemistry	3	Chemistry	Chemistry 121, 122 (10 credits)
Computer Science	3	Computer Science A or AB	Computer Science 140 (5 credits)
Economics	4	Micro Economics Macro Economics	Economics 206 (4 credits) Economics 207 (4 credits)
English	3-4	English composition and literature* or English composition and language	Minimum score of 3 earns 4 credits in Humanities. Score of 4 or higher earns 4 Humanities credits plus English 101 (4 credits)
History	3	U.S. History European History	History 103, 104 (8 credits) History 113 (4 credits)
Mathematics	3	Mathematics Calculus AB Mathematics Calculus BC	5 credits (satisfies Math GUR)
Physics	3	Physics C	Physics 121 (5 credits)
Political Science	3	American Government and Politics Comparative Government and Politics	Political Science 250 (5 credits) Political Science 291 (5 credits)

\* Students may receive credit for either test but not both.

- 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, Old Main 530, 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

*Timetable of Classes*, *Summer Bulletin* or by contacting University Extended 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*.

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 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 *Timetable of Classes*, the *Summer Bulletin* or by contacting University Extended Programs.

## PREREQUISITES

The student is responsible for ensuring that he or she has satisfied all prerequisites before registering for a given 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

An academic credit is a measure of the total time commitment required of a typical student in a particular course of study. Total time consists of three components: (1) time spent in class; (2) time spent in laboratory, studio, field work or other scheduled activity; (3) time devoted to reading, studying, problem solving, writing or preparation. One hour of credit is assigned in the following ratio of component hours per week devoted to the course of study: (1) lecture course — one contact hour for each one-hour credit (two hours of outside preparation implied); (2) laboratory or studio course — at least two contact hours for each one-hour credit (one hour of outside preparation implied); (3) independent study — at least three hours of work per week for each one-hour credit.

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 advisers.
- 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.

Extension program courses are offered at 10 contact hours per credit. The maximum credit load is 20 credits per quarter.

See the *Summer Bulletin* for load limits during the summer session.

## CORRESPONDENCE AND SPAN CREDIT

Correspondence credit earned through a fully accredited college or university, including Western's Independent Learning program and credit through Western's SPAN program, may be accepted toward the bachelor's degree up to a maximum of 45 credits. Enrollment in *only* correspondence courses does not qualify as continuing enrollment for WWU students. Contact the Office of Admissions for information regarding student status.

## AUDITORS

*Auditors* are persons who desire to attend courses without credit. Admission as an auditor requires prior approval of the instructor and registrar, as well as payment of required fees. Since auditors are not active participants, certain courses may not be audited (physical education activities, laboratory courses, studio courses, etc.). 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 and the *Summer Bulletin* for a description of audit fees.

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

## 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 at 10 credits and for 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.*

## 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 both the course instructor and the department chairperson. A special late-add fee is also charged (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.

## 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.

Non-medical leaves of absence are available through Student Support Services 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 Student Support Services.

## WITHDRAWAL FROM A COURSE

Course withdrawal prior to the end of the first week of the quarter is considered to be a change of initial registration and no grade of W results. Course withdrawal in the second week of the quarter results in a grade of W on the record. To withdraw from a course during the first two weeks of the quarter, a student must complete the transaction on RSVP (Registration for Students Via Phone).

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). Course withdrawal deadlines are published in the annual *Timetable of Classes* or *Summer Bulletin*.

A student who is unable to complete a course due to hardship may petition for a late course withdrawal after the stated deadlines. Hardship is considered to be an incapacitating injury or illness requiring extensive recuperation or a significant personal emergency such as death in the immediate family. Verification of the hardship is required. Petitions for a late course withdrawal on the

basis of hardship are available in the Academic Advising Center and must be submitted by the last day of the week prior to finals.

To withdraw from an extension program course, a student must file an Extension Programs Change Form through the appropriate program office. For specific program information, see the *All-University* section in this catalog.

For non-program course withdrawal, contact the appropriate extension office.

Students may drop an Independent Learning course at any time but there is no refund 30 days after registration.

**NOTE:** In the nine-week session of summer quarter, a student may drop a course after the second week, and until the sixth week, only if her or she has an unused annual withdrawal privilege. In the six-week session, a student may drop a course after the first week, and until the fourth week, only if he or she has an unused annual withdrawal privilege. Course withdrawal deadlines are published in the *Summer Bulletin*

## WITHDRAWAL FOR NON-PAYMENT

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 first \$50 of tuition and fees and the \$45 mandatory orientation fee are *never* refundable.

Students who fail to pay the full amount of tuition and fees by the stated deadline will be withdrawn from the University. In order to be reinstated after such withdrawal, a student must have permission of the Registrar and must pay the full amount of tuition plus a reinstatement fee of \$35 for each week beyond the withdrawal.

## WITHDRAWAL FROM THE UNIVERSITY

Formal withdrawal from the University, including an extension 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.

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 Academic Advising Center 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, no grades are issued for the quarter. A withdrawal date is posted to the permanent academic record.

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

Due to enrollment limitations, the University reserves the right to deny unlimited access to classes by students who make insufficient progress toward a degree. 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 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 *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.

See the *Summer Bulletin* for information on the scheduling of final examinations in summer session.

## 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), N.A.

### 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 *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 cannot be taken Pass/No Pass.

Courses graded satisfactory/unsatisfactory cannot be taken pass/no pass.

- ❑ To designate a course as Pass/No Pass students must submit a request at the Registrar's Office after registering for the course. They may change this designation by submitting the change to the Registrar's Office at any time through the fourth week of a quarter. For extension program courses, pass/no pass grading designation may be elected up to the end of the fourth week for regular quarter-long courses, or prior to the second class meeting for shorter courses.
- ❑ Prerequisites, work required and credit allowed 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 must be taken on the traditional A-F 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, etc.)

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 removes the K grade (completes the work agreed upon) during the next quarter. After one year, if the K has not been removed, it 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.)

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 C*.

### 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, etc. 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, English 101, the course that satisfies a student's writing proficiency requirement, professional education courses, the educational psychology courses required for teacher education programs and Continuing Certification courses.

### 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 grade average.
- 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.

The student who registers to repeat a course should file with the Registrar 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.

### Grade Reports

Within a few days after the end of each quarter the

Registrar sends a grade report to each student. Normally, grade reports are mailed to the student's permanent address. However, the student can request that they be mailed to a local address.

### 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 or post-baccalaureate 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 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.

Students in graduate programs are not eligible for 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 Arts and Sciences, College of Business and Economics, College of Fine and Performing Arts, Woodring College of Education, Huxley College of Environmental Studies, 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.

In order 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, etc.) 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 on that 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.

*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.

*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 enroll for Western courses, except for Summer Session courses, non-program extension courses through University Extended Programs, and for contract and correspondence courses through 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. 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 measure of academic aptitude, lapse of time since dismissal, change of major goals, nature of academic or other experience since dismissal or extenuating circumstances.

Petitions are due in the Academic Advising Center on April 1 for summer and fall quarters, October 15 for winter quarter and January 15 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 C* in this bulletin.

### **ACADEMIC GRIEVANCE POLICY**

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

### **STUDENT RECORDS POLICY**

For the complete text of this policy, see Appendix D 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

A student should expect to matriculate and graduate according to the general requirements in the catalog current at the time he or she enrolls. Students should expect to meet the specific requirements of the departments for majors and minors in the catalog current at the time they declare 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 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.

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 hardship may be occasioned.

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 Arts and Sciences, College of Business and Economics, Woodring College of Education, College of Fine and Performing Arts, Fairhaven College and Huxley College of Environmental Studies.

- **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 90 quarter (60

semester) credits from two-year community or junior colleges. 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.

- **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-).
- **General University Requirements** (see following section). These general requirements must be satisfied by all students except those enrolled in Fairhaven College, 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 grade of C- or better in a student's major or minor, supporting courses for majors and minors, English 101, professional education courses and the educational psychology courses required for teacher education programs.
- **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. **Note:** Students who reach 210 credits without graduating or submitting a degree application or plan of study will not be permitted to register.

## DEGREE PLANNING AND PROGRESS RECORD

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 BACHELOR'S DEGREE AND/OR INITIAL TEACHING CERTIFICATE

Degrees and/or teaching certificates 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. Teacher certification students must apply for their degree and/or teaching certificate no later than the last day of classes two quarters prior to their student teaching internship.

Complete instructions and deadlines are available in the Registrar's Office and through extension program offices where applicable.

### COMMENCEMENT

Formal commencement exercises for degree candidates are held each quarter on the Saturday following finals week. Commencement information is mailed to eligible students by the fourth week of their final quarter. 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 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.

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 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. Majors are not printed on the diploma but are listed on the transcript once the student graduates.

\* *Exception: The B.F.A. degree may be awarded to a student who has earned fewer than 45 additional credits since completing a B.A. degree, provided the student has earned at least 225 total credits.*

### MORE THAN ONE BACCALAUREATE DEGREE

A student may earn from Western only one of each type of degree offered (B.A., B.S., B.A. in Ed., B.F.A., B. Mus.).

#### *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-).

#### *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 TEACHING CREDENTIAL

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 B.A. in Ed. degree. Some programs allow

requirements for teaching credentials to be completed at the same time the B.A. or B.S. 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 B.A. in 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 page 42. English 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 students, who must take Fairhaven 101 and 208 or Fairhaven 301 and 208.
- Block B of the GUR communications requirement: to be completed with a grade of C- or better, prior to accumulation of 90 credits. See page 42 for details about the different departmental course offerings that will satisfy the 200-level writing requirement of Block B.
- Upper-division writing proficiency course requirement: to be completed, with a grade of C- or better, prior to graduation. Students must complete Block B 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.

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 *Timetable of Classes*.

### GENERAL UNIVERSITY REQUIREMENTS

The General University Requirements embody Western's belief that liberal education — education in breadth — is as important for informed and effective participation in contemporary life as specialized education. Accordingly, Western graduates not only complete a formal major in an academic or professional field, but they also devote a significant part of their study to courses in communication and critical analysis, humanities, social science, natural science, mathematics, and comparative, gender and multicultural studies. These General University

Requirements are WWU's way of ensuring that students have an opportunity to encounter the fields of the humanities: language, literature, philosophy, history and art; to become acquainted with the methods and subject matter of the natural and social sciences; to think about the values of their own and other cultures; to consider relationships among fields of knowledge; and to develop college-level skills in critical reading and thinking, effective communication and mathematics.

Western believes that liberal education enables people to lead fuller and more interesting lives, to perceive and to understand more of the world around and within themselves, and to participate more intelligently, sensitively and deliberately in shaping that world.

This belief reflects a long tradition in American higher education. In this tradition, the bachelor's degree includes specialized study, the *major*, together with study over a range of human inquiry, expression and accomplishment. This broader study helps people gain perspective on who they are and what they do in the world. It frees them from dependence on others for their view of the world. Thus, study of history provides a sense of one's place in the sweep of human experience and an independent window on world events. So also does study of cultures and societies other than one's own. Study of literature enables one to read with greater interest and enjoyment, because one is aware of the interplay of style, image and allusion that shapes literary art. So also with the graphic and musical arts. Study of philosophy and religion alerts one to various ways of understanding the nature and meaning of human existence, and to problems of knowing anything significant about such things. Acquaintance with methods and findings of natural and social sciences alerts one to the principal ways by which modern people understand the universe and themselves in it.

Broadly, the liberal education component of a bachelor's degree deals with issues of truth and falsity, with expressions of what is possible for humans to do and be, with things that bear on choices that we make about what in life we consider important. Baccalaureate education is not only about acquiring technical knowledge and skill. It also is about exploring broad human issues, expanding mental horizons, having ideas, developing critical perspective. Opportunity to do these sorts of things is a distinguishing mark of a baccalaureate curriculum. Having done them is an important part of what makes a *college education* as such, regardless of specialized subject, valuable to society and in the marketplace.

At Western, the General University Requirements are an important means for pursuing the *liberal education* component of a bachelor's degree, but not the only means. Every major concentration — whether technical, professional or liberal-arts — involves matters that are part of liberal education. That is, every major involves methods of attaining insight into reality and is an exercise in analysis and judgment. Every major field exists in conversation and competition with other, different, organized approaches to reality, and thereby raises questions of truth and value. At the completion of each undergraduate major, when one has learned its particular specialized subject and technique, one still confronts the problems about what is really true, what is truly valuable, and what is right to do — the characteristic problems of human life, and the broad subject of liberal education.

For these reasons, students should regard their major, the General University Requirements (GUR) and other courses that they may take at Western as related parts of an educational whole, rather than as competing parts. Students should be aware that, as undergraduates, they are involved in a unique opportunity which they are unlikely to have again: an opportunity to study and explore across a range of subject matter, to pursue intellectual and creative interests that they may have and to try out new ones, to find out what really interests them and what does not. The GUR is a vehicle for this exploration. But the listed GUR courses are only a selection from the much larger curriculum of the University. Major programs and elective courses outside the major and the GUR are also part of this opportunity.

### Transfer Credit to Satisfy GUR

Transfer students from Washington state community colleges may satisfy the GUR by taking courses listed in the Western Washington University *Transfer Advisers Handbook*, which is available at each community college.

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 credits to transfer from any combination of regionally accredited institutions, including no more than 90 quarter credits from two-year community or junior colleges. 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. A minimum of 90 credits must be earned from baccalaureate (four-year) institutions. Applicability of transfer credits toward majors is subject to departmental approval. A minimum of 45 credits must be earned at Western. Western allows a maximum of 135 credits to transfer from other institutions (including no more than 90 credits from two-year colleges).

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 credentials evaluated on a course-by-course basis to determine completion of the GUR.

**NOTE:** Certain programs may have admission standards which require the satisfaction 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.

The General University Requirements apply to all students in the College of Arts and Sciences, College of Business and Economics, College of Fine and Performing Arts, Huxley College of Environmental Studies and Woodring College of Education and in off-campus programs. Fairhaven College students should see the Fairhaven College section.

General University Requirements 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.

#### *Twelve-Credit Limit Per Department*

Twelve credits from one department is the maximum that may be applied toward the General University Requirements in the combined areas of Humanities, Social Sciences, and Comparative Gender and Multicultural Studies. The Department of Liberal Studies is exempt from the 12-credit maximum, but the 10-credit maximum for individual areas must be observed. Art and Art History are counted as one department.

#### *Grades in GUR Courses*

Courses which are to apply to General University

## GRADUATION REQUIREMENTS

Requirements must be taken on an A-F grading scale. They may not be taken with Pass/No Pass grading.

### *Components of the General University Requirements*

In issues that they address and in methods that they represent, the components of the General University Requirements intersect at many points. Together they represent the principal academic fields of the modern university and reflect the scope of liberal education.

**NOTE:** At the time of this catalog's publication, WWU was working to make substantial changes in the General University Requirements. These changes would involve an increase in the Communication and Critical Analysis block to include an additional sophomore level writing course. Students entering WWU prior to the effective date of the change would be allowed the option of completing their GURs by the requirements listed in the earlier catalog.

### COMMUNICATION AND CRITICAL ANALYSIS

The Communications requirement provides opportunity to develop the skills and techniques of articulate verbal expression and critical thinking. It is comprised courses that are primarily concerned with rhetoric, logic and style in written and spoken communication. Words are crucial tools of thought. Ability to use them to formulate and to express ideas clearly, coherently and persuasively is fundamental to a college education and to active participation in a democracy.

Complete both A and B.

All students must satisfy Block A of the Communication and Critical Analysis section of the General University Requirements prior to completion of 45 credits. All students must complete Block B of this requirement by the time they accumulate 90 credits.

A. (to be completed prior to the accumulation of 45 credits) ENGLISH 101, *Writing and Critical Inquiry* (4). This course must be completed with a C- or better. It will be waived for students demonstrating high English competency on college entrance exams.

B. (to be completed prior to the accumulation of 90 credits) One course from the following:

- ❑ ART HISTORY 275, Introduction to Writing and Critical Thinking (4)
- ❑ COMMUNICATION 101, Fundamentals of Communication (4); 235, Exposition and Argumentation (4)
- ❑ ENGLISH 201, Expository Writing (4); 202, Writing About Literature (4); 297 Writing in Context (5) [1998-2000 academic year only].
- ❑ FOREIGN LANGUAGE 103 (5) or 104 (5).
- ❑ JOURNALISM 207, Newswriting (3).
- ❑ PHILOSOPHY 107, Logical Thinking (3).

Communication Block B also may be satisfied by completing one of these sequences: Liberal Studies 121a, 122a, and 123a or Honors 103, 104, and 105.

### MATHEMATICS

(to be completed prior to the accumulation of 90 credits)

The Mathematics requirement provides a foundation in

quantitative concepts, expression and calculation in the form of algebra, computer science and formal logic.

Mathematics is the fundamental tool of the social and natural sciences and technology, and is employed in a wide range of academic and professional fields.

Competence in elementary mathematics, quantitative skills and logical thought are crucial components of a contemporary education.

Initial enrollment in elementary 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 mathematics requirement by accumulation of 90 credits.

Complete any one of the following options to meet the General University Requirement in mathematics:

- ❑ Math 102, Functions and Algebraic Methods, and Phil 102, Introduction to Logic.
- ❑ Complete one of the following courses: Math 107, 114, 115, 118, 124, 156, 157, 240, or any mathematics course for which one of these courses is a prerequisite, except Math 381 or 382.
- ❑ Computer Science 140 or 145.
- ❑ Math 381 and 382, Mathematics in Grades K-8. This satisfies the mathematics GUR *only* if the student completes a B.A. in Ed. elementary program.
- ❑ **NOTE:** An achievement test (test that shows *mastery of a subject*) is available in lieu of Math 102 or Math 114. Contact the Testing Center, Old Main 120, for details. Achievement tests may be attempted only once each; when passed they meet the corresponding General University Requirement, but do not result in academic credit and are not posted to the permanent record.

### HUMANITIES

The Humanities requirement provides an introduction to the subject matter, methods of inquiry and forms of expression of academic fields that treat language, literature, fine arts, history, philosophy and religion in the Western cultural tradition. The humanities study principal themes, issues and images concerning human beings and their place in the universe, as these have been shaped and expressed since ancient times, in thought, imagination and action.

From the courses listed below, the student must select a minimum of 20 credits distributed among at least three departments. No more than 10 credits may come from any one department. Art and Art History are counted as one department. Library courses cannot count as a third department.

Exceptions:

- Students may take all three sections of Liberal Studies 121, 122, 123 for a total of 15 credits and complete the Humanities GUR with a minimum of 5 Humanities credits from one or more other departments.
- Freshmen who complete all three sections of Liberal Studies 121a, 122a, 123a for a total of 15 credits will have satisfied Communication and Critical Analysis Block B, and may complete the Humanities GUR with

a minimum of 5 Humanities credits from one or more other departments.

- Students who complete all three sections of History 111, 112, 113 for a total of 12 credits may complete the Humanities GUR with 8 additional Humanities credits from two additional departments.
- Students who complete Honors 103, 104, 105 for a total of 12 credits will have satisfied Communication and Critical Analysis Block B, and may complete the Humanities GUR with 8 additional GUR Humanities credits from two additional departments.

Select a minimum of 20 credits from the following:

ART 109, Visual Dialogue (3)

ART HISTORY 220, Survey of Western Art History I (3); 230, Survey of Western Art History II (3); 240, Survey of Western Art History III (3).

CLASSICAL STUDIES 260, Masterworks of Ancient Greek Literature (3); 270, Literature of Rome and Its Empire (3); 350, Greek Mythology (3).

DANCE 231, Introduction to Dance (3).

ENGLISH 214, Introduction to Shakespeare (4); 215, Introduction to British Literature (4); 216, Introduction to American Literature (4); 238, Society Through its Literature (4); 270, Introduction to Language and Society (4); 281, Introduction to Global Literature: Classical and Medieval (4); 282, Introduction to Global Literature: Renaissance and Neoclassical (4); 283, Introduction to Global Literature: Romantic and Modern (4); 336, Literature of the Bible (4) (English 336 and Liberal Studies 335 may not both be taken for GUR credit).

FOREIGN LANGUAGES, any European foreign language (including Russian) course numbered 200 and above and involving actual instruction in the foreign language. (Advance placement credit may not be applied.)

HISTORY 103, Introduction to American Civilization (4); 104, Introduction to American Civilization (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); 199, Problems in Modern History (4); 267, Christianity in History (5); 347, European Intellectual History (5); 348, European Intellectual History (5).

JOURNALISM 190, Introduction to Mass Media (4).

LIBERAL STUDIES 121, The Western Tradition I: Ancient (5); 122, The Western Tradition II: Medieval (5); 123, The Western Tradition III: Modern (5); 121a, 122a, 123a, A Foundation for the Liberal Arts (15); 231, Introduction to the Study of Religion (4); 232, Myth and Folklore (4); 243, Art and Ideas (4); 332, Universal Religions: Founders and Disciples (4); 333, Religion in America (4); 335, The Biblical Tradition (4) (Liberal Studies 335 and English 336 may not both be taken for GUR credit).

LIBRARY 202, Research Paper (1) [does not count as third department].

MUSIC 104, The Art of Listening to Music (3); Music 105, Music in the Western World (3).

PHILOSOPHY 112, Introduction to Philosophy: Moral Issues (3); 113, Philosophy of Religion: Understanding Religion (3); 114, Introduction to Philosophy: Knowledge and Reality (3); 315, Introduction to Existentialism (3); 340, Philosophy of Science (3); 350, Political Philosophy (3)

(Philosophy 350 and Political Science 360 may not both be taken for GUR credit); 355, Aesthetics and the Philosophy of Art (3); 360, Society, Law and Morality (3).

POLITICAL SCIENCE 360, Introduction to Political Theory (5) (Political Science 360 and Philosophy 350 may not both be taken for GUR credit).

THEATRE ARTS 101, Introduction to the Art of the Theatre (3); 201, Introduction to the Cinema (3).

UNIVERSITY 103, various course titles (3).

## SOCIAL SCIENCES

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.

Course work must be distributed among at least three departments with no more than 10 credits from any one department. Library courses cannot count as a third department.

Select a minimum of 17 credits from the following:

ANTHROPOLOGY 102, Introduction to Human Origins (4); 201, Introduction to Cultural Anthropology (5); 210, Introduction to Archaeology (5).

CANADIAN-AMERICAN STUDIES 200, Introduction to Canadian Studies (5).

ECONOMICS 206, Introduction to Micro-Economics (4); 207, Introduction to Macro-Economics (4).

EDUCATIONAL ADMINISTRATION AND FOUNDATIONS 311, Global Issues and American Education (4).

ENVIRONMENTAL STUDIES 202, Environmental Studies: A Social Science Approach (3).

FAIRHAVEN 211, The American Legal System (5). (Only one of Fairhaven 211, Management 271, Political Science 311 may be taken for GUR credit.)

GEOGRAPHY 201, Human Geography (3); 312, Geography of the World Economy (4); 209, Geography and World Affairs (2).

JOURNALISM 340, The Press and Society (3).

LIBRARY 203, Research Paper (1) [does not count as a third department].

LINGUISTICS 201, Introduction to Linguistic Science (5); 204, Sociolinguistics (4).

MANAGEMENT 271, Law and Business Environment (4). (Only one of Management 271, Fairhaven 211 and Political Science 311 may be taken for GUR credit.)

PHYSICAL EDUCATION 201, Perspectives of Human Lifestyle and Wellness (3).

POLITICAL SCIENCE 101, Government and Politics in the Modern World (5); 250, American Political System (5); 271, International Politics: War and Peace (5); 272, International Politics: International Political Economy (5); 311, Jurisprudence (5). (Only one of Political Science 311, Fairhaven 211 and Management 271 may be taken for GUR credit.)

## GRADUATION REQUIREMENTS

PSYCHOLOGY 201, Introduction to Psychology (5); 310, Psychology and Culture (5).

SOCIOLOGY 201, Evolution of Society (5); 221, World Population Issues (5); 251, Society of Deviant Behavior (5); 255, Social Organization of Criminal Justice (5); 260, The Family in Society (5); 302, History of Social Thought (5).

UNIVERSITY 104, various course titles (3).

### COMPARATIVE, GENDER AND MULTICULTURAL STUDIES

This section of the GUR provides an introduction to civilizations of Asia, Africa, the Middle East and Latin America, to multicultural experience in North America and to gender studies. Acquaintance with the values and viewpoints of a variety of cultures and societal roles helps overcome provincialism, aids self-understanding and is an important element in an educated outlook on the contemporary world.

Select a minimum of 8 credits from the following:

AMERICAN CULTURAL STUDIES 202, The Native American Experience (3); 203, The Hispano/a-American Experience (3); 204, Introduction to the African-American Experience (3); 205, The Asian American Experience (3); 242, Introduction to the Lesbian, Gay, Bisexual Experience (3); 301, Comparative Cultural Studies (4).

ANTHROPOLOGY 103, The Non-Western World: Asia, Africa and the Americas (4); 104, American Mosaic: The Cultures of the United State (4); 353, Sex and Gender in Culture (4) (Anthropology 353 and Psychology 219 may not both be taken for GUR credit); 361, Native Peoples of North America (5); 362, Peoples of Asia (5); 364, Peoples of the Pacific (5); 365, Peoples of Latin America (5).

ART HISTORY 270, Survey of Asian Art: India, China, Japan (3).

DANCE 232, Movement and Culture (3).

EAST ASIAN STUDIES 201, The Cultures of East Asia: Political-Material Aspects (5); 202, The Cultures of East Asia: Religio-Philosophic and Literary Aspects (5); 210, Introduction to Nomadic Civilizations (4).

ENGLISH 227, Introduction to Gay and Lesbian Literature (4); 234, Introduction to African-American Literature (4); 235, Introduction to Native American Literatures (4); 236, Introduction to Asian American Literatures (4); 335, Post-Colonial Literatures (4); 338, Women and Literature (4).

FOREIGN LANGUAGES. Any non-European foreign language course numbered 200 and above and involving actual instruction in the foreign language. (Advanced placement credit may not be applied.)

GEOGRAPHY 321, Africa (3); 322, The Middle East (3); 323, South Asia (3); 324, East Asia (3); 326, Latin America (3).

HISTORY 261, Black History in the Americas (5); 273, Latin America: 1492 to 1824 (5); 274, Latin America: 1824 to the present (5); 275, The Indian in American History (5); 280, Introduction to East Asian Civilization (5); 285, Introduction to African Civilization (5); 286, Modern Africa (5); 287, Introduction to Islamic Civilization (5); 385, Pre-Colonial Africa (5); 387, History of the Jews (5).

INTERNATIONAL STUDIES 201, Introduction to Global

Studies (4).

LIBERAL STUDIES 271, Humanities of India (4); 272, Mythology/Religion and Society in China and Japan (4); 273, Artistic Expression and Society in China and Japan (4); 275, Humanities of Japan (4); 276, Humanities of Africa (4); 277, Humanities of China (4); 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 Contemporary Asian and African Literature (4); 373, Ideology and Experience in Contemporary Asia and Africa: Conservatives, Reformers, Revolutionaries (4); 378, Religion and Society in India (4).

LIBRARY 204, Research Paper (1)

MUSIC 205, Survey of Non-Western Musical Cultures (3).

POLITICAL SCIENCE 346, Politics of Inequality (5).

PSYCHOLOGY 219, The Psychology of Gender (4) (Psychology 219 and Anthropology 353 may not both be taken for GUR credit).

SOCIOLOGY 268, Gender and Society (5); 369, Minorities in America (5)

UNIVERSITY 105, various course titles (3).

WOMEN STUDIES 211, Introduction to Women Studies (4).

### NATURAL SCIENCES

The Natural Sciences requirement provides an introduction to the content and methods of the physical and biological sciences. These fields investigate natural phenomena, ranging from the origin of the universe to development of life forms to the structure of the atom. Their methods include direct and indirect observation, experimentation, and construction of theoretical models of natural systems.

Complete Option I **or** complete both A and B of Option II.

I. Complete one of the following sequences:

- BIOLOGY 101, 102, 384; **or** 201, 202, 203.
- CHEMISTRY 121, 122, 123.
- GEOLOGY 211, 212 and one of 214, 310, 316, or 340.

PHYSICS 114, 115, 116; **or** 121, 122, 123, and labs 131, 132, 133

II. Students are advised to complete the three courses in Section A before enrolling in the course in Section B. All students must complete two courses from Section A by the time they accumulate 90 credits, unless they complete one of the course-sequences in Option I.

A. One course from three of the four following areas:

- BIOLOGY 101, Introduction to Biology (4).
- CHEMISTRY 101, Chemical Concepts (4); 115, General Chemistry (5); 121, General Chemistry I (5).
- GEOLOGY 101, General Geology (4); 211, Physical Geology (5).
- PHYSICS 101, Physics for the Liberal Arts (4); 114, Principles of Physics I (5); 115, Principles of Physics II (5); 116, Principles of Physics III (5); 121, Physics with Calculus I (4) and 131, Physics with Calculus I Lab (1).

B. One additional course from Section A above or one course from the following list:

- ANTHROPOLOGY 215, Introduction to Biological Anthropology (5).
- ASTRONOMY 103, Astronomy for the Liberal Arts (4); 315, General Astronomy: Solar System (4); 316, General

- Astronomy: Stars (4).
- BIOLOGY 102, Biodiversity, Evolution and Systems (4); 140, Flowering Plants, Conifers and Ferns (3); 150, Marine Biology (3); 160, Foreign Chemicals and Natural Systems (3).
- CHEMISTRY 122, General Chemistry II (5); 123, General Chemistry III (4); 251, Elementary Organic Chemistry (5).
- COMMUNICATION SCIENCES AND DISORDERS 253, Speech and Hearing Sciences for the Liberal Arts (4).
- ENVIRONMENTAL STUDIES 101, Environmental Studies: A Scientific Approach (3); 204, The Oceans: Topics in Marine Science (3).
- GEOGRAPHY 203, Physical Geography (5).
- GEOLOGY 202, Plate Tectonics and Continental Drift (4); 212, Historical Geology (4); 214, Environmental Geology (3); 252, The Earth and Its Weather (4); 315, Minerals, Energy, and Society (4).
- PHYSICS 122, Physics with Calculus II (4); and 132, Physics with Calculus II Lab (1).

## ALL-UNIVERSITY PROGRAMS

Western Washington University is organized into six 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, colleges and school:

- ❑ Extended Programs
- ❑ Field Experience
- ❑ General Studies Major
- ❑ Honors Program
- ❑ International Studies and Programs
- ❑ Library Instruction
- ❑ Liberal Arts Option
- ❑ Post-Baccalaureate Professional Schools

Academic opportunities available through Western's All-University Programs are described below.

### EXTENDED PROGRAMS

*Dr. Ken M. Symes, Vice Provost for International and Extended Programs*

800 E. Chestnut, Suite 1C, (360) 650-2841

Extended Programs links the University to a diversity of lifelong learners by offering a variety of credit and non-credit educational opportunities. Courses are delivered through a variety of means, including technology media, correspondence, and traditional on-site, in-person delivery.

Contact individual programs for information. Visit our Web site at: <http://www.ac.wvu.edu/~extended/>

### *Independent Learning*

(360) 650-3650

Many people want to take university courses but cannot fit regular class attendance into their schedule. Western's Independent Learning program offers an alternative way to complete university credits without coming to campus. Students work at their own pace at home while following the guidance of a faculty-designed syllabus. The courses are open to anyone with a desire to learn. Enrollment begins at any time. A maximum of 45 credits may be applied toward completion of a degree at WWU. A program catalog is available describing each course, enrollment procedures and program policies.

**WWU students** may enroll in Independent Learning courses to earn credits to fulfill GURs, the writing proficiency requirement, electives, or courses required for their major if available.

**Non-Western students** are also eligible to take Independent Learning courses for professional development, personal enrichment and to apply credits toward a teaching certificate or a degree at another institution. In addition, individuals not currently enrolled at WWU may design independent study contracts in a special

area if a suitable instructor is available.

### *Institutes and Conferences*

(360) 650-6854

Individuals seeking non-credit professional and educational development opportunities through the University will find a variety of offerings through Institutes and Conferences:

**Workshops and courses** are designed to meet the educational needs of both employers and employees and can take place on campus or be tailored to a business or organization.

**Seminars** bring to campus, or to a central location, noted public speakers who share their expertise by conducting topical presentations.

**Conference Services** is active year-round in facilitating and planning professional conferences for groups and organizations. Services include fiscal management, registration, hospitality, printing, media equipment and support personnel.

**Institutes** provide professional renewal opportunities for individuals and groups in a campus-retreat setting.

**Youth Programs** are designed for the academic pursuits of youth in elementary, middle and high school. Participants live on campus while they explore the arts, humanities, computers, technology, science and more.

### *SPAN Program*

(360) 650-3650

Space Available to Non-matriculated students (SPAN) enables individuals not formally admitted to WWU to earn credit in classes at the Bellingham campus. SPAN registration is offered on a space available basis for fall, winter and spring quarters only.

### *Extension Programs*

The following degree, certificate and preparation programs are offered through Woodring College of Education, the College of Arts and Sciences, Huxley College of Environmental Studies and the Graduate School. For program information, contact the appropriate site listed below. For general information, call (360) 650-2841.

Self-supported extension programs are offered based on sufficient student enrollment. New program quarter start dates may change in order to ensure sufficient enrollment.

### **Adult Education**

This program features courses leading to a master's degree in adult education. The adult education degree is designed to prepare both entry-level and advanced practitioners for administrative or educational positions.

- Everett • Seattle

### **Electronics Engineering Technology**

This program, which leads to a Bachelor of Science degree, is TAC/ABET-accredited and prepares engineering technologists to understand and 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 in classroom instruction, laboratory and testing experiences.

- Seattle

**Elementary Teacher Education and Certification**

Transfer students may take a sequence of upper-division courses leading to a B.A. in Education and initial teaching certificate.\* For those with a baccalaureate degree, a sequence of courses is available leading to the initial elementary teaching certificate. Courses are offered late afternoons and evenings, allowing students to work toward the degree or certificate on a part-time basis.

- Bellingham • Everett • Oak Harbor • Seattle
- Silverdale

*\*The Seattle program offers a B.A. in Special Education/Elementary Teacher Certification.*

**Environmental Studies**

This program offers a bachelor’s degree in environmental studies which qualifies graduates to work with land-use planning agencies, federal and state agencies, consulting firms and other organizations. Internships, special projects and field study are included.

- Port Angeles • Bremerton

**Gerontology**

This one-year certificate program is designed to provide health care, human services professionals and others an opportunity to participate in an integrated, systematic and coordinated study of gerontology. Non-credit.

- Bellingham

**Human Services**

This major is an upper-division program leading to a B.A. degree. Curricular goals stress the continual interaction between theory and practice through purposeful integration of classroom concepts and internship placement experiences.

- Bellingham • Everett • Seattle • Silverdale

**Leadership**

This is an exceptional opportunity to develop and sustain the leadership skills you need to forge ahead in the face of organizational change. Designed as a certificate program with advanced training for organizational leaders and change agents, this program emphasizes the ability to lead, shift culture, and resolve conflict in a productive manner. Non-credit.

- Bellingham

**Management**

In this fast-paced, constantly changing world of business, it is crucial that managers are masters of a process that effectively capitalizes on the talents and skills of their employees. Especially designed for small businesses, this six-month certificate program will encompass all these issues in an interactive, experiential-based learning lab. Non-credit.

- Bellingham

**Project Management**

Designed to meet the ongoing need for expertise in small business and departmental project management, this nine-month certificate program is targeted to managers,

project leaders and other individuals responsible for managing projects, services, products and teams. Non-credit.

- Bellingham

**Rehabilitation Counseling**

The M.A. In rehabilitation counseling degree 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. This program is also delivered via technology.

- Seattle

**School Administration (Elementary, Secondary)**

This program offers an M.Ed. in school administration and/or post-master’s course work leading to Washington State Principal Certification (initial or continuing) or the Certificate of Advanced Study (CAS). The program is designed to prepare elementary and secondary school personnel to assume the leadership roles of the principal or vice principal.

- Seattle • Silverdale

**Secondary Teacher Education and Certification**

Students may take a sequence of upper-division and graduate courses leading to an initial teaching certificate and M.Ed. Most of the courses are offered in the evening, allowing students to work toward the certificate or degree on a part-time basis.

- Seattle

**Speech Pathology and Audiology**

The Department of Communication Sciences and Disorders offers a post-baccalaureate program for students interested in preparing for a graduate degree in the speech pathology/audiology field. The program is a four-quarter lockstep program beginning fall quarter; courses are taken sequentially through summer quarter.

- Bellingham

**Teaching English as a Second Language**

The Teaching English as a Second Language program at WWU offers a postbaccalaureate certificate. It is designed to prepare students who plan to teach ESL either in the U.S. or abroad, in public schools (with Washington State certification) or in private academies. Students in the program are trained in areas central to the profession and participate in a practicum providing actual classroom experience. This is a three-quarter lockstep program beginning fall quarter.

- Bellingham

**Technical Communications**

This non-credit certificate program features courses on technical writing, media relations, desktop publishing and visual presentations. It is designed both for professionals seeking to upgrade their communications skills as well as for those wishing to enter the field of technical communications. Non-credit.

- Bellingham

**Vehicle Design**

The Vehicle Research Institute (VRI) offers a

## ALL-UNIVERSITY PROGRAMS

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.

- Bellingham

### Web Page Design and Development

This nine-month, certificate program is especially targeted to those who need to acquire new knowledge and skills to be successful as the in-house expert on Web design, development and maintenance. Program participants will be able to construct a Web site from scratch, create a site that will be attractive and easy to navigate, develop dynamic and interactive Web pages through forms, and learn to use platforms typical of Internet service providers. Non-credit.

- Bellingham

## CONTACT INFORMATION

### Bellingham

Western Washington University, 800 E. Chestnut St.,  
Bellingham, WA 98225

- Elementary Teacher Education . . . . . (360) 650-3336
- Gerontology . . . . . (360) 650-6854
- Human Services . . . . . (360) 650-7487
- Leadership . . . . . (360) 650-6854
- Management . . . . . (360) 650-6854
- Project Management . . . . . (360) 650-6854
- Speech Pathology/Audiology . . . . . (360) 650-2841
- Teaching English  
as a Second Language . . . . . (360) 650-2841
- Technical Communications . . . . . (360) 650-6854
- Vehicle Design . . . . . (360) 650-2841
- Web Page Design and Development . . (360) 650-6854

### Bremerton

Olympic College, 1600 Chester Ave., Bremerton, WA  
98310

- Environmental Studies . . . . . (360) 478-4560

### Everett

Everett Community College, 801 Wetmore Ave.,  
Everett, WA 98201, (425) 339-3808

- Adult Education course work . . . . . (425) 257-1645
- Elementary Teacher Education  
and Certification . . . . . (425) 339-3810, X/11
- Human Services . . . . . (425) 257-1645

### Oak Harbor

Skagit Valley College, 1900 S.E. Pioneer Way,  
Oak Harbor, WA 98277

- Elementary Teacher Education  
and Certification . . . . . (360) 679-5352

### Port Angeles

Peninsula College, 1502 E. Lauridsen Blvd.,  
Port Angeles, WA 98362, (360) 417-6521

- Environmental Studies . . . . . (360) 417-6521

### Seattle

Center for Continuing Education in Rehabilitation  
6912 220<sup>th</sup> St. S.W. #105  
Mountlake Terrace, WA 98043

- Rehabilitation Counseling . . . . . (425) 774-4446

North Seattle Community College,  
9600 College Way North, Seattle, WA 98103-3599

- General Information . . . . . (206) 527-3600
- Electronic Engineering Technology . . . (206) 526-0165

Seattle Urban Center  
520 NE Ravenna Blvd., Seattle, WA 98115

- General Information . . . . . (206) 729-3285
- Human Services . . . . . (425) 257-1645
- School Administration . . . . . (206) 729-3278
- Secondary Education . . . . . (206) 729-3257
- Special Education . . . . . (206) 729-3257

South Seattle Community College  
6000 16<sup>th</sup> Ave., SW, Seattle, WA 98106-1499

- Adult Education & Elementary  
Teacher Certification . . . . . (206) 768-6703

### Silverdale

WWU Kitsap Center  
10600 Hillsboro Dr., NW, Silverdale, WA 98383

- Human Services . . . . . (360) 308-9386
- Elementary Teacher Education  
& Certification . . . . . (360) 308-0874
- School Administration . . . . . (360) 650-3708

## 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 and cooperative education 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.

## 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. Students who have earned a baccalaureate degree at Western cannot major in General Studies. A minor in General Studies is not offered.

### 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 advisers 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 adviser from each of the *areas* in which courses are taken. Students may select any faculty member at Western to serve as an adviser. A list of advisers is available in the Academic Advising Center, Old Main 380.

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 faculty advisers 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 faculty advisers. Major evaluation forms are available in the Registrar's Office, Old Main 230, or the Academic Advising Center, Old Main 380. 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; East Asian Studies; Economics; Environmental Social Sciences; Fairhaven College; Finance, Marketing, Decision Sciences; Geography; Journalism; Linguistics; Management; Physical Education, Health And Recreation; Political Science; Psychology; Sociology; Social Studies Education; Speech Pathology And Audiology; Women Studies; Woodring

College Of Education.

**Sciences.** Biology; Chemistry; Computer Science; Engineering Technology; Environmental Sciences; Geology; Mathematics; Physics And Astronomy; Science Education.

## THE HONORS PROGRAM

Western's Honors Program provides a challenging opportunity for undergraduate students of high academic attainment to realize their potential. Freshmen and transfer students are invited into the Honors Program on the bases of results on standardized tests, academic achievement, recommendations and interviews. 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, Miller Hall 228, (360) 650-3034, for more details.

### 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.

- ❑ Honors 103, The Western Traditions I (Humanities)
- ❑ Honors 104, The Western Traditions II (Humanities)
- ❑ Honors 105, The Western Traditions III (Humanities) (Completion of Honors 103, 104 and 105 completes Block B of the Communications GUR and 12 credits of Humanities GUR. Completion of Humanities GUR requires an additional 8 credits from another department.)
- ❑ Any *three* additional Honors GUR courses (100 and 200 level)

*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 (Non-departmental)*

**103 THE WESTERN TRADITIONS I (4)**

An interdisciplinary introduction to the humanities of the Western World from ancient times to the early Middle Ages. Emphasizes the study of literature, historical and philosophical writing, and the plastic arts in their historical contexts.

**104 THE WESTERN TRADITIONS II (4)**

An interdisciplinary investigation of the humanities of the Western World from the early nineteenth century to the present. Emphasizes the study of historical and philosophical writing, literature, the plastic arts and music in their historical milieu.

**105 THE WESTERN TRADITIONS III (4)**

An interdisciplinary introduction to the humanities of the Western World from the early nineteenth century to the present. Emphasizes the investigation of literature, philosophy, science, the plastic arts, and music in their historical and cultural contexts.

**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.

**251 PSYCHOLOGY (4)**

Examination of basic psychological processes utilizing results of research investigations.

**252 SOCIOLOGY (4)**

Basic problems and concepts in the study of society, social change and organization; human behavior in the family, education, religion, cities, social class, race, age, sex and the structure of society; sociology as science and as response to human problems.

**253 ANTHROPOLOGY (4)**

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 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; repeatable to 6)**

S/U grading.

**INTERNATIONAL STUDIES AND PROGRAMS**

The Center for International Studies and Programs serves to strengthen international activities at Western Washington University. The irrevocable ecological, economic and political interdependence of humanity makes global understanding an essential part of higher education today. The unique Pacific Rim and international border location of our university and the leadership of Washington state in global trade provide an imperative for internationalization on our campus. Key elements of Western's growing and comprehensive international efforts are international curricular development, expanded opportunities for direct international experience, linkage of study abroad to academic majors as well as future jobs, and establishing connections between international studies and U.S. multiculturalism.

The minor in International Studies is designed to provide knowledge, perspectives and skills basic to international competence. Students completing this minor will be well prepared for a variety of professional opportunities in an increasingly internationalized economy. As a value-added curricular option, the minor builds largely on existing courses across the colleges, and both complements and is concurrent with existing majors.

The course of study for the minor will be determined in consultation with the International Studies Advisers in the Department of Anthropology and the Department of Liberal Studies. For advisement on study abroad or international internships, contact International Programs and Exchanges, Old Main 530E, (360) 650-3298, fax (360) 650-6572.

*Minor — International Studies*

35 credits

- IS 201 and 499
- Completion of an approved international program or exchange consisting of at least 10 weeks in another country
- At least one foreign language course above 201 level; 100 level accepted for languages not commonly taught
- Additional credits from courses approved by the faculty advisers 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 courses to be completed on campus

*Courses in International Studies*

**201 Introduction to Global Studies (4)**

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

**215/315/415/515 (2-15)**

International internships, independent research projects, work experience approved by departments or colleges.

**301 Intercultural Encounters (1)**

Predeparture 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.

**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.

**Regional Studies**

In addition to the International Studies minor, students may pursue a major or minor focusing on the following regions of the world: Canadian-American Studies, East Asian Studies, and Latin American Studies. (Consult the index of this catalog for location of further information.)

- Asia University America Program
- China Teaching Program
- Intensive English Program
- International Programs and Exchanges

**Center for International Studies and Programs****Asia University America Program**

Asia University America Program (AUAP) is a specially designed English language and culture orientation program that has been integrated into the undergraduate curriculum of Asia University in Tokyo, Japan. During this five-month study-abroad program, students from Asia University attend AUAP courses at Western in ESL, American history, environmental science, and physical education. AUAP students earn credit from Asia University and are not matriculated at Western. Between 150 and 200 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:

- It offers 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.
- The AUAP provides training in intercultural communication and conflict resolution to other departments and programs on campus.
- It offers 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.
- Western students who share residence halls with AUAP students have an opportunity to interact with Japanese students on a daily basis in their halls and dining rooms.
- The AUAP offers Western students paid leadership positions, such as international peer advisers and curriculum assistants, that give valuable experience in an intercultural context, provide opportunities to develop international friendships, and assist in financing their education.
- The program offers cultural-exchange services to the

community, including programming in public schools throughout Whatcom County. The AUAP's "Japan in a Suitcase" and "Friends from Japan" programs introduce local elementary school children to Japanese language and culture and, most importantly, to international friendship.

- Western faculty and students can participate 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.
- The program offers Western students of Japanese the opportunity to develop their language skills through the language exchange program. Western and AUAP students both benefit from this hour-for-hour exchange of English and Japanese tutoring.

For more information on the Asia University America Program, contact the office at (360) 650-3922; by fax at (360) 650-6818; by e-mail at [auap@cc.wvu.edu](mailto:auap@cc.wvu.edu); or visit the AUAP Web site at <http://www.wvu.edu/~auap>  
China Teaching Program

The China Teaching Program (CTP) is a training and placement program for people interested in teaching English and other subjects, such as business and law, in China. Western's program is one of the largest secular programs of its kind in the United States. It attracts and selects strong applicants from many academic disciplines who go to China as representatives of Western Washington University and return with a heightened understanding of China.

The CTP is open to native speakers of English who hold college and university degrees. Participants attend a five-week pre-departure training session at Western, completing about 150 hours of class time. Western faculty are involved in program development for the training program and provide instruction in Chinese language, history, geography, philosophy, and culture. Participants who have had prior teaching experience and academic or firsthand knowledge of China may not be required to attend the summer training program.

For more information, call (360) 650-3753; fax (360) 650-2847; e-mail [ctp@cc.wvu.edu](mailto:ctp@cc.wvu.edu); or visit the CTP Web site at <http://www.wvu.edu/~ctp>

**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, as well as helping them to adapt socially and culturally to living in the U.S. The program emphasizes creating opportunities for Western students and IEP international students to interact, both in the classroom and through informal conversational situations.

While in the IEP, some international students apply to Whatcom Community College, while others enroll at Western through a provisional admission agreement with the undergraduate Office of Admissions or through SPAN, the space-available enrollment program administered by University Extended Programs.

The Intensive English Program is linked to academic areas

of the University in these ways:

- The advanced students may gain provisional 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 TESL certificate program by providing practicum experience, tutoring experience and employment opportunities for TESL 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 <http://www.wvu.edu/depts/iep/>

### International Programs and Exchanges

WWU offers a variety of study-abroad opportunities. The most popular are quarter and year-round programs in England, France, Germany, Italy, Japan, Greece, Chile, Spain, Ecuador, and Mexico. Designed to give students a complete international experience in the host country, each program includes numerous excursions to historical and cultural sites and a wide range of activities that complement formal classroom work. International Programs and Exchanges cosponsors semester and academic-year programs at universities in China, Japan, Vietnam, Austria, and 15 other countries. These feature intensive language study, international business, civilization and culture. Through its membership in the International Student Exchange Program (ISEP), WWU can provide year-long exchanges with over 105 universities in 30 countries. Students register at WWU before departure, carry normal course loads for the quarter (12-15 credits), and may receive financial aid.

International study courses within a department are normally assigned 137, 237, 337, or 437 numbers. Since special application and registration procedures are required for participation in education-abroad programs, students should consult with International Programs and Exchanges, Old Main 530E, well in advance of their planned quarter abroad. As program size is limited, early application is recommended.

Students may also receive credit for international study through (a) specialized programs sponsored by WWU departments or colleges, (b) programs sponsored by accredited U.S. colleges or universities, (c) studies at foreign universities, and (d) research, internships, or study arranged through departments and colleges by International Programs and Exchanges. WWU offers a minor in International Studies consisting of courses taken abroad, cross-cultural study, and related academic work in a variety of disciplines.

International Programs and Exchanges offers domestic as well as international exchange. The National Student Exchange (NSE) is a consortium of 150 colleges and

universities in 50 states and territories that allows students to study for a semester or year on exchange at resident tuition rates. Participants explore their academic interests at a host college while experiencing a different culture, geographical setting, and climate (there are member institutions in Alaska, Hawaii, Virgin Islands, Guam, and Puerto Rico).

Contact International Programs and Exchanges, Old Main 530E, (360) 650-3298, e-mail [ipewwu@cc.wvu.edu](mailto:ipewwu@cc.wvu.edu), or visit the homepage at <http://www.wvu.edu/~ipewwu>

WWU offers a wide variety of study abroad opportunities. The most popular are quarter and year-round programs in England, France, Germany, Italy, Japan, Greece, Chile, Ecuador and Mexico. Designed to give students a complete international 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. International Programs and Exchanges cosponsors semester and academic-year programs at universities in China, Japan, Vietnam, Austria and 15 other countries. These feature intensive language study, international business, civilization and culture. Through its membership in ISEP, WWU can provide year-long exchanges with 105 universities in 30 countries. Students register at WWU before departure, carry normal course loads for the quarter (12-15 credits) and may receive financial aid. International study courses within a department are normally assigned 137, 237, 337 or 437 numbers. Since special application and registration procedures are required for participation in foreign study programs, students should consult with the International Programs and Exchanges, Old Main 530B, well in advance of their planned quarter abroad. As program size is limited, early application is recommended. Students may also receive credit for foreign study through (a) specialized programs sponsored by WWU departments or colleges, (b) programs sponsored by accredited U.S. colleges or universities, (c) studies at foreign universities, and (d) research, internships or study arranged through departments and colleges by International Programs and Exchanges. WWU offers a minor in International Studies consisting of courses taken abroad, cross-cultural study and related academic work in a variety of disciplines.

International Programs and Exchanges offers domestic as well as international exchange. The National Student Exchange (NSE) is a consortium of 136 colleges and universities in 50 states and territories which allows students to study for a semester or year on exchange at resident tuition rates. Participants explore their academic interests at a host college, while experiencing a different culture, geographical setting and climate (there are member institutions in Alaska, Hawaii, Virgin Islands and Puerto Rico).

Contact International Programs and Exchanges, Old Main 530B, (360) 650-3298, or via e-mail at [pbruland@cc.wvu.edu](mailto:pbruland@cc.wvu.edu) for further information on study, travel and work abroad.

### LIBERAL ARTS OPTIONS

The Liberal Arts Options comprise a program for freshmen, based on five themes identified by the faculty as essential to an undergraduate education:

1. Analysis and Communication

2. Creative and Aesthetic Expression
3. Civilizations and Cultural Pluralism
4. Scientific and Mathematical Understanding
5. The Structure and Processes of Human Development

Courses reflecting these themes are offered as part of a Liberal Arts Options program involving small groups of freshmen in curricula based on four models:

1. Liberal Arts Clusters — two or three courses related to one or more themes tied together through a one-credit integrative seminar.
2. Liberal Arts Sequences — a set of courses, offered sequentially in two or three quarters, designed to probe one or more themes.
3. Liberal Arts Colloquia — a three-credit seminar on one theme.
4. Liberal Arts GUR Sections — special sections of GUR courses limited to 25 freshmen.

Clusters and sequences involve regularly scheduled courses that are designated as part of the Liberal Arts Options program. Credit for integrative seminars and colloquia is received through enrollment in:

### University

#### 102 Liberal Arts Option (1-3)

A colloquium, or an integrative seminar for a course cluster, focusing on one or more of the following themes: Analysis and Communication, Creative and Aesthetic Expression, Civilizations and Cultural Pluralism, Scientific and Mathematical Understanding, The Structure and Processes of Human Development.

#### 103 LIBERAL ARTS OPTION/HUMANITIES (3)

A colloquium approved for GUR credit in the Humanities category.

#### 104 LIBERAL ARTS OPTION/SOCIAL SCIENCES (3)

A colloquium approved for GUR credit in the Social Sciences category.

#### 105 LIBERAL ARTS OPTION/COMPARATIVE, GENDER, AND MULTICULTURAL STUDIES (3)

A colloquium approved for GUR credit in the Comparative, Gender, and Multicultural Studies category.

## POST-BACCALAUREATE PROFESSIONAL SCHOOLS

Admission to graduate professional schools requires a baccalaureate degree and is competitive. Early consultation with the relevant adviser and excellent academic work are crucial to success.

### Dentistry

Admission to the professional schools of dentistry is highly competitive; therefore, a pre-dental program should be planned with care. Electives should be relevant to dentistry, and every effort should be made to maintain high scholarship.

Since dental schools give valuable advice and information about admission standards and requirements, it is wise for pre-dental students to contact dental schools early in their program.

For further information contact the pre-dental adviser.

Adviser: Dr. John C. Whitmer, Department of Chemistry CB 243, (360) 650-3270, whitmer@cc.wvu.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 thought processes. Western's General University Requirements are intended to aid students in realizing these goals.

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.

Adviser: Dr. Eugene Hogan, Department of Political Science, AH 415A, (360) 650-2912, eughogan@cc.wvu.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 major area of interest 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. It should be noted that over half of those admitted to medical schools in the past several years have been biology majors. The MCAT must be taken at least one full year prior to the date of admission to medical school; normally it is taken in August at the end of the junior year.

Early consultation with the preprofessional adviser 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
- Biol 201
- English 101
- Math 124
- General University Requirements

Premed students should also seek advising in their major department.

Adviser: Dr. Joan Stevenson, Department of Anthropology, AH 316, (360) 650-4787, jcvstvn@cc.wvu.edu

### *Physical Therapy*

Admission to a school of physical therapy is highly selective. Students may be admitted to an undergraduate program at the junior, senior or post-baccalaureate level. The percentage of students admitted to a program without an undergraduate degree is very low. Also, many physical therapy programs are now only offered at the master's degree level and require the completion of a baccalaureate degree. Students may complete degrees in any subject area.

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). Students also may be required to submit scores from the Graduate Record Exam (master's only). These tests should be taken in the fall quarter of the application year.

Western's curriculum includes courses which prepare students for application to numerous programs in the country, including the University of Washington, Eastern Washington University and the University of Puget Sound. Students are advised to contact the program head at the institution of interest to obtain specific entrance requirements since these vary slightly between institutions.

Program information can be obtained from the American Physical Therapy Association home page at <http://www.apta.org>

Required courses for physical therapy programs:

- Biol 348, 349
- Chem 121, 122
- Physics 114, 115, 116
- Psych 201 plus an additional course

Additional courses highly recommended:

- Chem 123, 251
- Statistics
- Biol 201, 202, 345, 346
- Phys Ed 301, 302, 303, 485
- Psych 314, 316

Adviser: Dr. Kathleen Knutzen, Department of Physical Education, Health and Recreation, CV 107, (360) 650-3055, [knutzenk@cc.wvu.edu](mailto:knutzenk@cc.wvu.edu)

### **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 adviser listed below is also available to students.

The institution to which the student is transferring determines admission to the program and makes decisions regarding the transferability of credit. Catalogs from in-state institutions and assistance in clarifying transfer procedures are available in the Academic Advising Center.

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 mathematics, physical science, computer science and liberal arts 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 physics, mathematics, chemistry, computer science and English. 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.

Although the curriculum offers considerable freedom of choice, it does *not* guarantee admission to the College of Engineering at the University of Washington. If, at the end

of two years, students find their interest developing in a field outside science or technology, they can readily change to several non-science majors and graduate in two additional years. Similar options exist through the junior year for programs in science and technology. This flexibility is particularly advantageous to capable students whose abilities and interests span many fields.

*Introductory core courses*

- Chemistry 121, 122
- English 101
- Mathematics 124, 125, 204, 224, 226, 331
- Physics 121, 122, 123, 131, 132, 133, 223, 233 (the entire sequence of 121, 122, 123 and 223 should be

completed to minimize transfer problems)

- Computer Science 140

Chemical engineers should complete Chemistry 123, 351, 352, 353, 354, 355.

Check with the pre-engineering adviser for additional courses.

Students not prepared to take Mathematics 124 (Calculus) should enroll in a preparatory sequence, under advisement.

Program adviser: Dr. Leslie E. Spanel, Department of Physics/Astronomy, BH 152A, (360) 650-3820, [spanel@physics.wvu.edu](mailto:spanel@physics.wvu.edu)

## GRADUATE SCHOOL

*Dr. Moheb A. Ghali, Dean, Old Main 430, (360) 650-3170*

WWU is authorized by the State Legislature to award five graduate degrees:

- Master of Arts (M.A.)
- Master of Science (M.S.)
- Master of Education (M.Ed.)
- Master of Business Administration (MBA)
- Master of Music (M.Mus.)

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, which offers the MBA, is accredited by the International Association for Management Education (AACSB). 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 purpose of graduate study at WWU is to provide students with quality graduate offerings, accompanied by opportunities for research and professional development. Graduate programs are intended to prepare able students for career advancement and further study. The 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. The summer session on WWU's campus includes a number of special offerings for graduate study: intensive study, instructional and research seminars, professional seminars, and courses offered by visiting faculty. Refer to the University's Summer Bulletin for course offerings.

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 an initial or continuing teaching certificate should contact the Certification Office in the Woodring College of Education. Additionally, students should consult with the appropriate graduate program adviser and the Graduate Office.

### 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 decision made on their applications. Application forms are available from the Graduate School. A non-refundable application fee of \$35 (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 non-refundable 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. Admission to the Graduate School is limited to a single graduate program (see University Graduation Requirements section of this catalog for further discussion). Graduate School deadline dates are as follows, although many programs have earlier specific deadline dates and do not admit for all quarters (see discussion under specific programs):

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. International students should refer to the section below pertaining to international applicants for deadlines.

Official test scores must be received by August 1 for fall, November 1 for winter, March 1 for spring and June 1 for summer.

**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*

- A baccalaureate degree from regionally accredited U.S. college or university, 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.
- 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 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 Graduate School.) The letters must accompany the application; if confidential, they must be received in sealed envelopes, with the signature of the referee across the seal. The MBA program requires a résumé in lieu of references.
- Favorable review and recommendation of applications

by the graduate faculty in the program to which application is made.

- Graduate Record Examination (GRE) or other test scores. Applicants to programs through the Woodring College of Education and the MEd programs offered in Art and SciEd/Natural Science Education may submit scores from either the Graduate Record Examination (GRE) or the Miller Analogies Test (MAT). Applicants with advanced degrees applying to the MS-Environmental Science program and the MEd programs in Adult Education, Student Personnel Administration in Higher Education, and Exceptional Children do not need to submit scores. MBA applicants must provide the Graduate Management Admissions Test (GMAT), not the GRE, within the MBA program deadlines. Scores must be received in the Graduate School office by the program-specific deadline date; if no program-specific deadline date, then by the deadlines established by the Graduate School.

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 TA selection process.

Applicants are advised to plan for the paper/pencil GRE four to six months prior to the program deadline date. Registration for the paper/pencil GRE must be made approximately six weeks in advance of the test; scores are reported to the Graduate School office approximately six weeks after the test.

The GRE is also offered by computer and the GMAT is available only by computer. The computer-based test (CBT) substantially shortens the time frame for both registration and score reporting.

The MAT generally is offered monthly through the Western Washington University Office of Institutional Assessment and Testing (OIAT), (360) 650-3080.

Contact Educational Testing Service in Princeton, N.J. at (609) 771-7670 for further information about the GRE testing program. The GRE bulletin is also available at the Graduate School and Western's OIAT, (360) 650-3080. For information about the GMAT, contact 1-800-462-8669.

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 and taken within the last five years.

### *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.

### *Provisional Admission*

At times, 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 (HECB) 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.

### *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 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 do not need to submit scores from the TOEFL.

International students must submit official translations to English of all transcripts and diplomas. International students must file a satisfactory statement of financial responsibility and of sponsorship with the Graduate School. Current expenses are approximately \$23,000 for one academic year of study. An application for an international student cannot be processed unless accompanied by appropriate financial guarantee documentation. Complete application materials should be received from international students by January 1 for summer quarter admission and February 1 for fall quarter admission.

### **GRADUATE ASSISTANTSHIPS**

Graduate assistantships are available in limited number in nearly all graduate programs. Graduate assistants must meet or exceed all criteria for maintaining graduate status and make satisfactory progress toward the degree. Graduate students are limited to no more than the equivalent of six full-time quarters of service as graduate teaching assistants.

These assistantships are competitive. 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. Information about assistantships can be obtained from the Graduate School. To apply, submit the graduate assistantship application to the Graduate School. Some programs have specific due dates; see individual program description. TAs are required to be enrolled full time (see later section on *Academic Load* for details). Graduate students also are eligible for several types of financial aid; information can be obtained from the University's Office of Student Financial Resources.

If you have questions not answered here, contact the Graduate School office.

### **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 must contain at least 35 (if thesis) or 38 (if non-thesis) 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, etc.

It is further recommended that no more than 10 credits of directed independent study be applied toward the degree. A graduate student registering for a 500 course must develop a contract with the instructor, which is then reviewed and approved by the graduate program adviser. The student then follows established procedures for course registration. 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). Independent study is not designed for thesis-related work (e.g., survey of literature, library and data searches and thesis proposal writing).

Many programs require more than 45 or 48 credits for the basic requirement. Also, certain undergraduate deficiencies may add additional credit requirements to a particular Plan of Study. (See Plan of Study section that follows.)

For students who have taken a significant number of graduate level mathematics courses as undergraduates at WWU, and who as undergraduates were identified for admission to the Graduate School, the graduate program in mathematics requires only 36 500-level credits. Guidelines for this option are available from the department.

### TIME LIMITS

All requirements for the degree 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, and the graduate file is inactivated. Incomplete or inactive applications are kept on file in the Graduate Office for two years. 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 kept for 35 years.

### ACADEMIC LOAD

The maximum credit load for a graduate student is determined in consultation with the student's graduate program adviser, 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 will be considered full time by the Graduate School if enrolled for a minimum of two credit hours of continuous enrollment, thesis, or research. *However, for purposes of certain kinds of financial aid, or certain kinds of on-campus student employment, the definition is 10 credits because of state or other regulations. For purposes of loan deferment, the definition of full-time status may vary. Students should contact their lending agency for information.* Graduate assistants are governed by other regulations and should request a special information sheet from the Graduate

Office. All graduate teaching assistants must meet the Graduate School definition of full time.

### TRANSFER, EXTENSION, CORRESPONDENCE, WORKSHOPS

Course work taken prior to formal admission to a WWU master's degree program, whether at Western or another institution, can be considered for transfer credit if the criteria listed below are met. Credit taken at another 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; and meet all other stated program and Graduate School requirements. The request for transfer credit is submitted by the graduate program adviser and student for approval by the graduate dean.

Only certain continuing education courses from WWU can be applied toward a WWU master's degree. Such courses must meet the requirements and conditions expected of regular, approved graduate courses offered by the University. Approval of the courses must be obtained from the program adviser and the Graduate School (properly signed off on the student's Plan of Study).

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 check with the Graduate Office before 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 examination). Check the program descriptions that appear later in this catalog. 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 faculty members from the student's department or program. For a field project, the chair must be a regular faculty member from the student's department. Guidelines for the thesis and field project are available from the Graduate Office. 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 have information sheets available.

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, most

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.

Comprehensive examinations vary among programs. Students should consult their respective programs for information.

The comprehensive examination 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 adviser until all course work has been completed. Comprehensive examinations, if failed, may be repeated, but only if the graduate faculty of the particular program approves the student's request to repeat the examination.

## PLAN OF STUDY

During the first quarter of graduate study at WWU, the student and graduate program adviser 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 adviser and

submitted to the graduate dean for approval. Copies of the approved plan are sent to the student and adviser. Plans of study may be amended as necessary, upon the request of the student and program adviser and final approval of the dean. Plan of study and amendment forms are available in the Graduate School office.

## GRADES, GRADING, RETENTION

A maximum of 10 credits of C is allowed toward completion of the basic program (45 or 48 credits). 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; program 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. Master's degree students are not permitted to repeat courses to improve their GPA, but may be required by their department to retake 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

## Summary of Procedures for the Master's Degree

Detailed procedures form available from Graduate School or program adviser.

<i>Procedure</i>	<i>Responsibility of</i>	<i>Where submitted</i>	<i>When</i>
Application and Supporting Materials	Student	Graduate Office	Generally two to four months before term begins. Some programs require earlier due dates. Contact the Graduate School or department for information
Returning Student Application	Student	Graduate Office	At least two months prior to start of quarter
Registration	Student, Adviser	Department, if necessary, then Registrar	See the calendar in the front of this catalog.
Plan of Study	Student, Adviser, Graduate Office	Department, then Graduate Office	See preceding discussion of "Plan of Study."
Advancement to Candidacy	Adviser, Student	Department	See preceding discussion of "Degree Candidacy."
Approval of Thesis or Field Project Committee and Problem	Student, Adviser, Department, Graduate Office	Department, then Graduate Office	When thesis or field project is required, following advancement to candidacy, and prior to registration for 690a/b.
Submission of Thesis or Field Project	Student, Thesis/Field Project Committee	Department, then Graduate Office	At least four weeks before graduation. Obtain instructions from Graduate Office.
Comprehensive Exams	Student	Department	Contact department for information.
Application for Degree	Student	Graduate Office	See preceding discussion of "Awarding of the Master's Degree."

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. Such 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.

### SPECIAL REQUIREMENTS

Program descriptions in this catalog provide information about special requirements: statistics competency, language competency, sequence of particular courses, and so on. Most graduate programs provide information sheets about such special requirements; the student should request this information from the program adviser.

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 examination in the language. Each department will set 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.

### DEGREE CANDIDACY — AWARDING OF THE MASTER'S DEGREE

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. 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.

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 adviser (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 be advanced to candidacy before submitting the application for degree. Confer with your adviser if you have questions about your status or eligibility for advancement to candidacy. A student must also be enrolled for at least two credits during the quarter in which the degree is awarded or during the preceding (calendar) quarter. 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 College of Education, not the Graduate School, deals with the certification of K-12 teachers. Students interested in 4-12 certification, contact the Secondary Department, MH 306, (360) 650-3327. Students interested in Special Education P-12 certification, contact the Special Education Department, MH 320, (360) 650-3330.

### 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 adviser 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. The form for obtaining permission is available in the Graduate Office. Post-baccalaureate students may enroll for some 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 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.

### LIST OF DEPARTMENTAL PROGRAM ADVISERS

Adult Education (MEd) : Dr. Susan Mancuso, Dr. Violet Malone.  
Anthropology (MA): Dr. Daniel Boxberger.  
Art (MEd): Dr. Gaye Leigh Green.  
Biology (MS): Dr. David R. Morgan.  
Business Administration (MBA): Program Director.  
Chemistry (MS): Dr. David Patrick.  
Computer Science (MS): Dr. Michael Meehan.  
Elementary (MEd) : Dr. Melissa Rickey.  
English (MA): Dr. Laura Laffrado.  
Environmental Science (MS): Huxley College: Dr. Peter Homann, Chair, Graduate Program Committee.  
Exceptional Children (MEd): Dr. Ken Howell.  
Foreign Languages (MEd): Dr. John Underwood.  
Geography (MS): Dr. Patrick Buckley.

Geology (MS): Dr. Thor Hansen.  
 History (MA): Dr. Peter Diehl.  
 Human Movement and Performance: (MS)  
 Dr. Lorraine Brilla  
 Mathematics (MS): Dr. Edoh Amiran.  
 Music (MMus): Dr. Ed Rutschman.  
 Political Science (MA): Dr. Kristen Parris.  
 Psychology (MS): Dr. Ira Hyman.  
 Reading (MEd): Dr. Melissa Rickey.  
 School Administration (MEd): Dr. Marvin Klein.  
 School Counselor (MEd): Dr. Arleen Lewis.  
 Science Education (MEd): Dr. John Miller.  
 Secondary (MEd): Dr. Robert Keiper.  
 Sociology (MA): Dr. Carl Simpson.  
 Speech Pathology and Audiology (MA): Dr. Lina Zeine.  
 Student Personnel Administration in Higher Education (MEd): Dr. John Utendale.  
 Technology (MEd): Dr. Robert Raudebaugh.  
 Theatre (MA):

## Anthropology

*College of Arts and Sciences*

### GRADUATE FACULTY

Acheson, Julianna, PhD, political economy, peasants, nationalism, political ecology; Eastern Europe, Slovakia.  
 Boxberger, Daniel L., PhD, ethnohistory, maritime anthropology, economic development and social change, North American Indians, Northwest coast.  
 Campbell, Sarah, PhD, Pacific Northwest, prehistory and history, theory and methods.  
 Hammond, Joyce D., PhD, gender studies, visual anthropology, expressive culture, Pacific.  
 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, historical demography, anthropological genetics, human osteology, medical anthropology, European immigrants.  
 Young, Kathleen. PhD, gender, religion, ethnic relations; war and violence, the Balkans.

### M.A. — ANTHROPOLOGY, THESIS ONLY

Program Adviser: Dr. Daniel Boxberger, Arntzen Hall 320

#### 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 adviser.

#### Deadlines

Please see Graduate School deadlines, but preferred consideration for admission and teaching assistantships (TAs) 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.
  - General Test of the Graduate Record Examination
- Both the essay and the GRE are required for admission.

### Basic Requirements

- Anth 501 (5)
- Anth 502 (5)
- Anth 503 (5)
  - At least one course from each of the following areas:
    - Culture Region: Anth 460, 462, 463, 464, 465, 511 (3-5)
    - Methods: Anth 410, 428, 470, 506, 520, 527, 571, 580 (3-5) [Foreign language competency may substitute for the Methods requirement with approval from the program adviser. 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 431, 445, 472, 475, 484, 524, 525, 529, 540, 553, 581 (3-5)
- 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 cr 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*

### GRADUATE FACULTY

Antholt, Sharron, MFA, BFA, foundations.  
 Bereal, Edmond, alternative education, professional artist.  
 Crary, Laura, BFA, MA, PhD, art history.  
 de Almeida, Cristina, MA, MFA, graphic design.  
 Ellis, Elsi Vassdal, BS, MEd, PhD, graphic design/production.  
 Embrey, Robert E., BA, MA, MFA, photography.  
 Georgiades, Aristotle, BFA, MFA, sculpture.  
 Gleeson, Madge, BA, MAT, MFA, graphic design/illustration.  
 Green, Gaye Leigh, BA, PhD, art education.  
 Janson, Carol, BA, MA, PhD, art history.  
 Jaye, Cara, BFA, MFA, drawing.  
 Johnston, Thomas A., MFA, printmaking.

King, Rosalie, BS, MEd, PhD, foundations.  
McCormick, Patrick F., BFA, BA, MFA, ceramics.  
Naughton, Momi, BA, MA, art history.  
Newport, Mark, BFA, MFA, fabric and fibers.  
Smeins, Linda E., BFA, MA, PhD, art history.  
Smith, Kenton D., BFA, MA, MFA, graphic design.  
Urso, Robert, BA, MA, computer graphics.  
Vassdal Ellis, Elsi M., PhD, graphic design/production.

### APPLICATIONS

#### *Admission deadlines*

Please see Graduate School deadlines.

#### *Graduate Teaching Assistantship (TA) Deadlines*

Preferred consideration will be given to applicants who have complete files by March 1.

### M.Ed. — THESIS AND NON-THESIS

Program Adviser: Dr. Gaye Leigh Green, Fine Arts 117, phone (360) 650-3672

#### *Prerequisites*

- A balanced program of at least 50 credits in art.

The applicant is requested to submit:

- A 300- to 500-word statement of purpose indicating why he or she wishes to pursue graduate work. This statement should be sent to the Graduate School.
- A selected portfolio of art works (and/or color transparencies and color photos). The portfolio should be sent to the graduate program adviser, Department of Art, WWU. If the applicant plans to have art works returned by mail, be sure the size will be within the limits prescribed by the postal department.

The application will be reviewed by the department Graduate Program Committee for acceptance into the degree program.

#### *Specific Test Requirements*

- Graduate Record Examination — General Test or Miller Analogies Test.

#### *Basic Requirements*

- Edu 501, EdF 512, 513 (I and II:12)
- Art 582 (I and II:4)
- Art 690 (I:1-6)

#### *Other Requirements*

- Art History 501 (4), one course in history of art (4), and two studio courses Art 590 (5 each), each in a different medium (I and II:18)

#### *Electives in Specialization*

- Under advisement, students will develop an area of specialization. The fields from which to choose are broad: art education, art history, studio, education, arts education, psychology and philosophy, to name a few. The area must be determined by the end of the second quarter of course work (I:5-10; II:14). May include 10

credits Independent Study and 10 credits of 400-level courses **with prior approval**.

## Biology

*College of Arts and Sciences*

### GRADUATE FACULTY

Anderson, Roger A., PhD, animal physiology.  
Brown, Herbert A., PhD, vertebrate zoology.  
Donovan, Deborah A., PhD, marine physiological ecology.  
Fonda, Richard W., PhD, plant ecology.  
Leaf, David S., PhD, cell and developmental biology.  
Morgan, David R., PhD, systematic botany.  
Moyer, Craig L., PhD, evolutionary molecular microbiology.  
Muller-Parker, Gisèle, PhD, marine phytoplankton ecology.  
Parakh, Jal S., PhD, science education.  
Peele, Emily R., PhD, aquatic microbial ecology.  
Peterson, Merrill A., PhD, insect ecology.  
Pultz, Mary Anne, PhD, developmental and molecular genetics.  
Ross, June R. P., PhD, DSc, evolution and ecology of marine organisms.  
Schneider, David E., PhD, physiological marine ecology.  
Singh-Cundy, Anu, PhD, plant growth and development.  
Sulkin, Stephen D., PhD, invertebrate larval biology.  
Trent, Carol, PhD, molecular and developmental genetics.  
Williams, Don C., PhD, cellular and molecular biology.

### APPLICATIONS

#### *Deadlines*

For priority consideration, complete applications for fall admission must be received by February 1. Please see Graduate School deadlines for other quarters.

#### *Graduate Teaching Assistantship (TA) Deadlines*

Preferred consideration will be given to applications completed by February 1.

#### *Specific Application Requirements*

Graduate Record Examination, General and Biology Subject Tests. Applications must also include a written description of research interests and the identification of potential faculty advisers.

### M.S. — BIOLOGY, THESIS ONLY

Program Adviser: Dr. David R. Morgan, Biology Building 237

#### *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. Applicants are directed to the current requirements of the basic B.S. degree in biology for a summary of expected preparation for graduate work. All students must have completed upper-division courses in genetics, cell biology, ecology and biometrics.

## PROGRAM REQUIREMENTS

### *Requirements in Specialization*

- Thesis research: Biol 690 (12)
- Graduate courses in biology, selected under advisement and approved by the student's program committee (11)

### *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. (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 examination will be conducted by the advisory committee. Degree candidates will present a seminar based on the results of the thesis research at a regular department seminar. No credit hours will be given for the seminar.

## M.S. — BIOLOGY: MARINE AND ESTUARINE SCIENCE OPTION, THESIS ONLY

Curriculum Coordinators: Dr. Brian Bingham, Huxley College of Environmental Studies; Dr. David Schneider, Department of Biology

### *Prerequisites*

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

For full consideration, completed applications must be received by February 1. Applications should include a statement of interest and the identification of potential faculty advisers. For a complete list of participating faculty and their research interests, and for additional information, write to Shannon Point Marine Center, 1900 Shannon Pt. Rd., Anacortes, WA 98221.

The Marine and Estuarine Science option is a joint offering of the Department of Biology, Huxley College, and Shannon Point Marine Center. Students graduating from the program will have an understanding of coastal marine and estuarine environments, biota and topical management issues, and fundamental biological and chemical oceanographic processes. The curriculum requires a minimum of 45 credits of course work, including 12 credits of thesis research, and the completion of a thesis based on original research in an area of specialization relevant to the marine sciences.

## M.Ed. — NATURAL SCIENCE/SCIENCE EDUCATION

### *Biology Specialization, Thesis and Non-Thesis*

#### *Prerequisites*

An applicant is expected to have completed the equivalent of an undergraduate major in biology including at least one course in organic chemistry. The student also must have had Sci Ed 491 (or the equivalent). Any deficiencies in these requirements must be made up outside the credit hour requirements for the Master of Education degree.

For curriculum requirements, see Natural Science/Science Education section.

## Business & Economics

### GRADUATE FACULTY

Benson, Earl D., PhD, finance.  
 Bryce, Wendy J., PhD, marketing.  
 Burton, Brian K., PhD, business environment.  
 Fewings, David R., PhD, finance.  
 Garcia, Joseph E., PhD, organizational behavior.  
 Gilbertson, David L., PhD, auditing/financial accounting  
 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.  
 Hutton, Marguerite R., PhD, taxation.  
 Keleman, Kenneth S., PhD, organizational behavior.  
 Lewis, L. Floyd, PhD, management information systems.  
 Lockhart, Julie A., MS/CPA/CMA, managerial accounting.  
 Merrifield, David E., PhD, microeconomics/forecasting.  
 Murphy, Dennis R., PhD, managerial decisions/international finance.  
 Nelson, David M., PhD, macroeconomics/money markets.  
 Olney, Thomas J., PhD, marketing.  
 Ortega, William R., CMA/PhD, managerial accounting.  
 Pekoz, Erol A., PhD, business statistics.  
 Petersen, Lois E., EdD, business communications.  
 Plumlee, E. Leroy, DBA, business environment.  
 Reynolds, Mary Ann, PhD, accounting.  
 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.  
 Savey, Ronald N., MBA/CPA, accounting theory.  
 Senge, Stephen V., CMA, DBA, managerial accounting.  
 Sigler, Tracey H., PhD, organizational behavior.  
 Singleton, William R., PhD, taxation.  
 Sleeman, Allan G., PhD, economic theory/quantitative methods.  
 Springer, Mark, PhD, operations management.  
 Storer, Paul, PhD, economics.  
 Warner, Daniel M., JD, business law.  
 Weymark, Diana N., PhD, money/macro/international economics.  
 Williams, Terrell G., PhD, marketing.  
 Wonder, Bruce D., PhD, human resource management.

**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. Stephen V. Senge

Program Coordinator: Juliet A. Hadley

The College of Business and Economics is accredited by AACSB (The International Association for Management Education) at both the graduate and undergraduate levels.

*Applications and Admission*

The MBA curriculum offers three specific programs of study to meet the needs of different groups of students. Additional information on the regular full-time MBA, the accelerated full-time MBA, and the evening part-time MBA is available in the *College of Business and Economics* section of this catalog.

Applicants must have a bachelor's degree; however, that degree need not be in business or a business-related area. Applications are made to the Graduate School and must include an official application form, the results of the Graduate Management Admission Test, official transcripts of all previous college-level work and a resume showing work experience. Applicants from non-English speaking areas must include their scores on the Test of English as a Foreign Language (TOEFL).

THE MBA Admissions Committee reviews applications throughout the spring. The deadline for applications for fall quarter is May 1. International Students should apply by February 1 (see Graduate School section for international applicants).

See the MBA Program section under the College of Business and Economics in this catalog for more information about the program of study, basic requirements and course listings.

**Chemistry**

*College of Arts and Sciences*

**GRADUATE FACULTY**

Anthony-Cahill, Spencer J., PhD, protein folding, protein engineering.  
Bussell, Mark E., PhD, surface chemistry of catalytic and environmental processes.

Gerhold, George A., PhD, computer based instruction in chemistry.

King, Donald M., PhD, analytical chemistry, electrochemistry.

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

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

Miller, John A., PhD, K-12 curriculum development, conceptual learning.

Morse, Joseph G., PhD, metal-ligand relationships.

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, environmental biochemistry.

Russo, Salvatore F., PhD, structure and function of proteins and enzymes, physical biochemistry.

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

Weyh, John A., PhD, analytical chemistry, computer applications.

Whitmer, John C., PhD, physical chemistry, science education.

Wicholas, Mark, PhD, inorganic and organometallic chemistry.

Wilson, H. William, PhD, environmental analytical chemistry, spectroscopy.

**M.S. — CHEMISTRY, THESIS AND  
NON-THESIS**

Program Adviser: Dr. David L. Patrick

*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 351-3, Chem 461-3, and Chem 441 or Chem 471-3. A student with lower than B may be required to repeat that course as determined under advisement with the graduate program adviser.

*Specific Test Requirements*

Graduate Record Examination, General.

*Course Work Requirements*

- Thesis option: Chem 595 (2), 690 (12), plus 31 credits under advisement
- Non-thesis options:

Industrial Internship — Chem 501 (6), 595 (2), 694 (6-12), plus 34 credits under advisement

Community College Internship — Chem 501 (6), 595 (2), plus 34 credits under advisement and course work in AHE through the Community College Faculty Preparation Program

*Community College Internship Option for Master of Science Chemistry Students*

Students interested in pursuing a teaching career at a community college can obtain practical experience and training by participating as a community college intern in conjunction with studies leading to the M.S. degree in chemistry. This option stipulates course work over and above the 45 credits required for the M.S. degree and requires acceptance into the AHE Community College Faculty Preparation Program. Two years should be allotted for the completion of the community college internship option.

See Department of Adult and Higher Education's description of the Community College Faculty Preparation Program for further details.

*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 M.S. Thesis. Shortly after entering the program students select a faculty adviser based on their research interests and agree on a research problem. Under the guidance of their faculty adviser, students carry out the research program, and write and defend the thesis in a final oral examination.

### *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 M.S. 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 adviser.

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 adviser 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.

## **HUXLEY-CHEMISTRY DEPARTMENT COOPERATIVE PROGRAM**

The Huxley-Chemistry Department Cooperative Program is a joint program specializing in environmental chemistry. It is administered by both units and leads to an M.S. in Chemistry (Environmental Chemistry) or an M.S. in Environmental Science (Environmental Chemistry). Applicants must indicate which department they wish to be based in. The program emphasis is on the application of chemical principles, methods and concepts to the understanding and potential solution of environmental problems. Students are admitted to the cooperative program through acceptance by the Graduate School and by the environmental chemistry cooperative program coordinators (the chair of the Huxley College Graduate Program Committee and the graduate program adviser of the Chemistry Department). See Huxley College description of the M.S.-Environmental Science

(Environmental Chemistry) program.

## **M.Ed. — NATURAL SCIENCE**

### *Chemistry Specialization, Thesis and Non-Thesis*

Program Adviser: Dr. John A. Miller

### *Prerequisites*

Completion of an undergraduate teacher education major in chemistry. An evaluation of the undergraduate record will determine any deficiencies which must be made up outside the credit requirements for the Master of Education program.

For curriculum requirements, see listing under Natural Science/Science Education.

## **Communication Sciences and Disorders**

*College of Arts and Sciences*

### **GRADUATE FACULTY**

Apel, Kenn, PhD, language disorders in children and adolescents, counseling.

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.

McRandle, Carol C., PhD, audiology, aural rehabilitation, hearing science, auditory physiology, pediatric audiology.

Seilo, Michael T., PhD, audiology, aural rehabilitation, speech acoustics, speech perception.

Zeine, Lina, PhD, adult language disorders, voice/laryngectomy.

## **M.A. — SPEECH-LANGUAGE PATHOLOGY AND AUDIOLOGY**

### *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 speech-language pathology and/or audiology 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 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

Before acceptance into the speech pathology/audiology (SPA) graduate program, a student must have completed an undergraduate major in SPA or an equivalent professional core curriculum (see department's graduate coordinator for details). Grade point average (GPA) requirements are consistent with the Graduate School. The Graduate Record Examination (General) must be completed with a minimum score of 430 in each area. A one-page statement of purpose is also required. Please include which area you intend to pursue, speech-language pathology or audiology.

### Admission

Enrollment is limited to 30 graduate students per year.

### Deadlines

Completed applications are due by February 1. Admission is made for fall quarter only. The speech pathology/audiology program is a lock-step program which offers courses in sequence once a year beginning in the fall.

### Graduate Teaching Assistantship (TA) Deadlines

The teaching assistantship application is due on February 1.

### Speech-Language Pathology (minimum 62 credits for non-thesis; minimum 67 for thesis)

- Requirements:
  - Academic: CSD 502, 510, 515, 550, 551, 552, 552a, 553, 554, 555, 556, 557, 558, 575, 580#, 581\*, 582\*, 585, 586, 598a## or 599a###
  - CSD 690 thesis (6 credit minimum) or 691 (non-thesis option 1 or 3)
  - Comprehensive examination
- Electives
  - CSD 465, 548, 552b, 560, 564, 570, 598b##, 599b##, and other 400- and 500-level courses selected under departmental advisement

### Audiology and Aural Rehabilitation (minimum 73 credits for non-thesis; minimum 78 credits for thesis)

- Requirements
  - Academic: CSD 502, 551, 561, 562, 563, 564, 565, 566, 567, 568a-g, 570, 571, 572, 573, 574, 575, 577, 578, 579, 598a## or 599a##
  - CSD 690 thesis (6 credit minimum) or 691### non-thesis option (1 or 3)
  - Comprehensive examination
- Electives
  - CSD 465, 465a, 558, 564, 598b#, 599b#, and other

# Required for students intending to apply for Washington State CDS Certificate.

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

\*\* Although the internship courses (598a,b; 599a,b) are 8 credits each, only a total of 6 credits can apply toward the M.A. Degree (3 credits of 598a and 3 credits of 598b or 3 credits of 599a and 3 credits of 599b). The student registers for 8 credits per course.

\*\*\* Audiology students electing to take an Option II b (1 credit) are required to take a 2 credit elective in audiology/aural rehabilitation in order to meet graduation requirements.

400-and 500-level courses under departmental advisement

### Clinical Competence

In addition to meeting academic requirements, students specializing in speech-language pathology and audiology must demonstrate satisfactory competence in diagnostic and clinical practicums. 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.

### Comprehensive Examination and Thesis/Non-Thesis Oral Defense

A six-hour written comprehensive examination is required and covers the student's area(s) of specialization and graduate program up to the time of the examination. A minimum of 50 graduate credits must be completed before the comprehensive can be taken.

Further, there is an oral examination based on the thesis or non-thesis paper. For details regarding the comprehensive examination and oral defense, the student should consult the graduate coordinator.

### Accreditation

The Department of Communication Sciences and Disorders is accredited by the American Speech-Language-Hearing Association's Educational Standards Board (ESB) in both speech-language pathology and audiology and by the National Council for the Accreditation of Teacher Education.

### Professional Certification Requirements

All students seeking certification as a speech-language pathologist or audiologist (ESA-SLP/A) in the public schools in the State of Washington must successfully complete an internship in the schools in order to satisfy the Board of Education requirements. Further information about certification requirements may be obtained from the Internship Program director or the graduate adviser. Consult the certification division of the Office of the Superintendent of Public Instruction, Olympia, Washington.

The American Speech-Language-Hearing Association (ASHA) requirements for Certification of Clinical

Competence in Speech-Language Pathology or Audiology stipulate the completion of 350 clock hours of practicum, 250 of which must be obtained at the graduate level. The requirement is met by taking an appropriate number of practicum credits. Consult the department about specific requirements regarding clinical experience in the area in which the certificate is sought. Also, the student must have a minimum of nine hours of classwork and 35 clock hours in the minor area of study (speech-language pathology or audiology). Consult the *ASHA Membership and Certification Handbook* for details.

## Computer Science

*College of Arts and Sciences*

### GRADUATE FACULTY

Erkes, Gary L., PhD, computer graphics, scientific visualization, image processing.

Hearne, James W., PhD, distributed systems, artificial intelligence, computational linguistics.

Johnson, James Lee, PhD, database theory, VLSI design.

Jusak, Debra S., PhD, distributed systems, parallel systems.

Matthews, Geoffrey B., PhD, artificial intelligence, pattern recognition.

Meehan, J. Michael, PhD, distributed operating systems, parallel and scientific computing.

Menninga, Larry D., PhD, computer architecture.

Mobus, George, PhD, artificial intelligence, robotics, soft computing

Nelson, Philip A., PhD, parallel and distributed computing.

Osborne, Martin L., PhD, object oriented computing.

Ural, Saim, PhD, computer graphics, image processing, cryptography.

### M.S. — COMPUTER SCIENCE, THESIS AND NON-THESIS

Program Adviser: Dr. Michael Meehan, Bond Hall 320

#### *Prerequisites*

Students with a degree in computer science, engineering, mathematics, one of the natural sciences or other discipline 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. All students entering the program should have a thorough understanding of programming using a modern structured language, data structures, algorithms and mathematics. In particular, the entering student should have completed the equivalent of Math 124, 125, 204, and 226, CS 140, 145, 211, 241, 310, 311 and 341. Please refer to the Mathematics and Computer Science sections of this catalog for descriptions of these courses.

Admission to graduate study does not guarantee admission to all graduate courses offered in computer science; it may be necessary for students to take certain prerequisite courses (see Computer Science section of this catalog for details). Subject to approval of the program adviser, up to 10 credit hours of 400-level courses may be applied toward the M.S. degree.

#### *Admission Deadlines*

Please see Graduate School deadlines.

#### *Graduate Teaching Assistantship (TA) Deadlines*

Preference will be given to applicants who have complete files by May 1.

#### *Program Requirements*

Both thesis and non-thesis degree options require a total of 50 credit hours. The thesis option requires 38 credit hours of courses and 12 credits of thesis. The non-thesis option requires 42 credits of courses and 8 credits of project.

#### *Common Core*

The requirements of both degree options include a core of seven courses selected from four subject areas. These seven courses must be selected to include at least one 500-level course in each area and at least two courses in three of the areas.

#### *Core Areas*

- Theory of Computation: CS 401, 405, 501, 505
- Software: CS 440, 441, 450, 460, 520, 525, 530, 535, 538
- Hardware/Computer Systems Organization: CS 420, 555, 560, 561, 565, 566
- Computing Methodologies: CS 402, 430, 439, 480, 570, 573, 578, 580, 585

#### *Course Work*

##### *Thesis Option*

- Common Core (25-28)
- Electives (10-13)
- Thesis (12)
- Total (50)

##### *Non-Thesis Option*

- Common Core (25-28)
- Electives (14-17)
- Project (8)
- Total (50)

In addition to the standard program, the department also offers two graduate concentrations, one in scientific applications and a second in internetworked computing.

#### *Graduate Concentration in Scientific Applications*

Computers have aided scientists in all disciplines by discovering and revealing important details hidden within massive collections of data. Collaboration with scientists will require students trained in data analysis, scientific visualization and interpersonal communication with practicing scientists.

This concentration in scientific applications, in addition to the general graduate school and departmental requirements, requires CS 535 and CS 580, additional graduate courses of a supporting nature, attendance at a biweekly seminar devoted to scientific applications, and a thesis or project in the area of scientific applications. Supporting courses include, but are not limited to, CS 402, CS 502 and CS 573. On a case by case basis, supporting courses from other scientific departments will be considered.

### *Graduate Concentration in Internetworked Computing*

The Internet has grown at an extraordinary pace, and insinuated itself into many areas of life that were previously untouched by computing. Given developments in technology and legal changes that expand the number of participants who can provide services via network technology, there is no reason to suppose that this trend will stop. The union of computing and network technology, now a worldwide phenomenon that is social as well as technical, has a long future ahead of it.

The concentration in internetworked computing, in addition to the general graduate school and departmental requirements, requires CS 565 and CS 566, additional supporting courses (see department for details), attendance at a biweekly seminar and a thesis or project in the area of internetworked computing.

A student who does not select one of the two concentrations will have a M.S. program that is tailored according to the general requirements and the student's background and career intentions. See the Computer Science portion of this catalog for descriptions of specific courses. Inquiries about the M.S. in computer science should be addressed to the Department of Computer Science. Internet inquiries can be addressed to meehan@cs.wvu.edu. Admission to the program is through the Graduate School.

## Education

### *Woodring College of Education*

Antil, Laurence, PhD.  
 Atkinson, Charles M., EdD.  
 Blackwell, Leslie, EdD.  
 Bradley, Darcy, PhD.  
 Dallas, Lee A., EdD.  
 Davidson, Marcia, PhD.  
 Gibney, Teresa, PhD.  
 Fox, Sheila L., PhD.  
 Harwood, Angela, PhD.  
 Henniger, Michael, PhD.  
 Hoelscher, Karen, EdD.  
 Howell, Kenneth W., PhD.  
 Jongejan, Anthony, PhD.  
 Kasprisin, Lorraine, PhD.  
 Keiper, Robert W., EdD.  
 Keiper, Timothy, PhD.  
 Kim, Robert H., EdD.  
 Klein, Marvin, PhD.  
 Krogh, Suzanne L., PhD.  
 Larson, Bruce, PhD.  
 Malone, Violet M., EdD.  
 Mancuso, Susan, EdD.  
 Marrs, Lawrence W., PhD.  
 Myhre, Oddmund, PhD.  
 Nolet, Victor, PhD.  
 Pinney, Robert H., EdD.  
 Rickey, Melissa, EdD.  
 Riner, Phillip, EdD.  
 Slentz, Kristine L., PhD.  
 Towner, John C., PhD.  
 Utendale, John F., EdD.  
 VanderVelde, Philip B., PhD.  
 Wayne, Kathryn, PhD.  
 Wolpow, Ray, PhD.  
 Zurfluh, Linda, EdD.

## COMMON REQUIREMENTS

### *Admission*

Students' applications are first reviewed by the Graduate School before consideration for admission to a specific program. Contact the graduate program adviser for information about specific test requirements for admission. Test requirements: Graduate Record Examination (GRE) or Miller Analogies Test (MAT). Consult program adviser for recommended test.

### *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.

### *General Education Comprehensive Exam*

Master of Education students in Option II are required to complete a comprehensive examination. The format, timeline and criteria are defined by specific departments. For procedures, students should see their graduate advisers.

### *Second Master's Degree*

Enrollment must be for a single M.Ed. program. Students who have earned an M.Ed. may apply for admission to another M.Ed. 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 adviser for details.

## M.Ed. — ADULT EDUCATION

*Department of Adult and Higher Education*

## GRADUATE FACULTY

Jongejan, Anthony, PhD.  
 Malone, Violet M., PhD.  
 Mancuso, Susan, EdD.  
 Utendale, John F., EdD.

Program Advisers: Dr. Violet M. Malone, Miller Hall 314B, (360) 650-7318, vmalone@wce.wvu.edu (campus-based students)

Dr. Susan Mancuso, Miller Hall 309, (360) 650-6552, smancuso@wce.wvu.edu (extension students)

### Program Goals

The Adult Education program is designed to prepare both entry-level and advanced practitioners for work with adults in any institution which sponsors educational, social or human services activities. Upon graduation, competence is expected in such areas as leadership, curriculum development, programming, project management, training and development, lifelong learning and adult teaching.

Generally, graduates are employed in continuing education departments of colleges and universities; social, health and human services agencies; volunteer service agencies; non-structured institutions; community-based organizations; and in government, business and industry.

Students may, under advisement, select elective courses focusing on adult teaching and learning; human services administration; instructional design and multimedia development; management/leadership; human resources management; and rehabilitation counseling.

Course work is available at most Woodring College of Education regional centers and the main campus in Bellingham.

The program design allows for part-time study. All students must complete at least one field experience.

Completion time for the program is a minimum of one year. Average completion time is two years.

### Admission

Applications are accepted on the basis of fulfilling Graduate School admission requirements and establishing that the applicant's professional goals are consistent with the goals of the program.

### Admission Requirements

- ❑ Graduate School requirements
- ❑ Graduate Record Examination (GRE) or Miller Analogies Test (MAT) scores (no test scores are required if applicant holds an advanced degree)
- ❑ Current personal résumé
- ❑ A 300- to 500-word typed statement of purpose
- ❑ A personal interview may be requested
- ❑ Computer competence is expected

Please collect all admission materials, then forward the packet directly to the Graduate School, Old Main 430.

### Program Options

- ❑ Option I: Thesis — 49 credits
  - Core Requirements: Edu 501, AHE 575, 576, 577, 578 [20]
  - Field Experience Requirements: AHE 592g (2-6) and/or AHE 592e, (2-6) [4-9]
  - Thesis Requirement: AHE 690 [6-9]
  - Electives selected from courses in Adult and Higher Education, Educational Foundations, Instructional Technology, and other areas under advisement [11-19]
- ❑ Option II: Non-Thesis — 49 credits
  - Core Requirements: Edu 501, AHE 575, 576, 577, 578, 599 [21]

- Field Experience Requirements: AHE 592g (2-6) and/or AHE 592e (2-6) [4-9]
- Comprehensive Examination
- Electives selected from Adult and Higher Education, Educational Foundations, Instructional Technology and other areas under advisement [19-24]

## M.Ed. — STUDENT PERSONNEL ADMINISTRATION IN HIGHER EDUCATION (thesis, non-thesis)

*Department of Adult and Higher Education*

Program Adviser: Dr. John F. Utendale, Miller Hall 314A, (360) 650-2977, utendale@wce.wvu.edu

### GRADUATE FACULTY

Mancuso, Susan, EdD  
Utendale, John, EdD

### Program Goals

The Student Personnel Administration program prepares professionals for work in student affairs in higher education. The program emphasizes the development of competence in the areas of student development theory and practice, leadership and management, and organizational development. Further, it addresses abilities necessary to manage current and persistent problems facing student affairs and higher education.

The program of studies and supervised experiences meet the guidelines of the Council for Advancement of Standards for Student Services/Development programs (CAS preparation standards). The generic skill building, 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.

Some flexibility for program completion is possible. Each option requires a three-quarter in-depth internship. Option I includes seven credits of thesis research (I:7). Option II requires a two-credit readings course plus a five-credit student affairs research project (II:7). Total graduation requirements are listed below.

### Admission

Graduate School admission plus a bachelor's degree and relevant experience are required. Criteria include appropriate academic background and achievement, evidence of interpersonal communication skills, and commitment to a process of self-awareness and personal/professional development. Each program cycle begins with summer quarter enrollment. Requirements include:

- ❑ Application reviews begin in March
- ❑ Personal résumé
- ❑ A 300- to 500-word typed statement of purpose
- ❑ Graduate Record Examination (GRE) or Miller Analogies Test (MAT) scores (no test scores are required if applicant holds an advanced degree)
- ❑ Personal interview with admissions committee (April)
- ❑ Computer competence is expected
- ❑ Previous teaching experience is *not* required

Please collect all admission materials, then forward the packet directly to the Graduate School, Old Main 430.

### Requirements

- ❑ Core courses — Edu 501, AHE 555, 556, 557a, 557b, 557c, 558, 599 (2), plus AHE 581 (2) (I and II: 30)
- ❑ Research — AHE 690 (I:7); AHE 691 (II:5)
- ❑ Internship — AHE 592f (I and II: 14)
- ❑ Electives — selected under advisement (I and II: 3)
- ❑ Comprehensive examination

### Graduation Requirements

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

## MA — REHABILITATION COUNSELING

*Department of Adult and Higher Education*

Program Adviser: Please contact the Department of Adult and Higher Education, Miller Hall 311, (360) 650-3190, for information regarding application deadline dates.

### Program Goals

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 limitations 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 consulting firms, and universities, among other organizations. Students in graduate rehabilitation counseling programs typically have undergraduate degrees in psychology, sociology, nursing or some other area of human services. Rehabilitation counseling is a dynamic, exciting field with excellent employment opportunities in both the public and private sectors.

Course work is offered in the Seattle area and through distance learning formats. Most class meetings are in the early evening in order to accommodate students who may be working. All students must complete a practicum and internship as part of their program requirements. Graduates of the program are eligible to apply for the credential of certified rehabilitation counselor.

### Admission

- ❑ Graduate School admission requirements
- ❑ Current professional résumé
- ❑ 300-500 word typed statement of purpose
- ❑ A personal interview
- ❑ Computer competency is expected

Admission materials can be obtained from, and should be returned directly to, the Graduate School at Old Main 430.

*Requirements (Option II, non-thesis only; minimum 70 credits)*

- ❑ Core requirements: Edu 501 (4), AHE 518 (3), statistics course under advisement (3-5) [10-12]
- ❑ Requirements in specialization: AHE 582, 583a, 583b, 584, 585, 586, 587, 588, 589 (27)
- ❑ Field experience/internship: AHE 592e (5); 592h (20) [25]
- ❑ Electives: Selected electives under advisement (8-10)

### Community and Technical College Faculty Preparation Program (Certificate Program)

A special certificate designed to prepare graduate students for community college faculty positions is offered through the Department of Adult and Higher Education of Woodring College of Education. Admission to the program is selective. Students are qualified to apply provided they have completed — or have nearly completed — a discipline-based graduate degree. The program includes 12 credits of classroom study followed by a teaching internship (8 credits) in a community college. At present, the program begins summer session, with the internship scheduled for one quarter during the academic year. Application materials and further information can be obtained by contacting the chair, Department of Adult and Higher Education, MH 309, (360) 650-3190.

## M.Ed. — ELEMENTARY

*Department of Elementary Education*

### GRADUATE FACULTY

Blackwell, Les, EdD.  
Bradley, Darcy, PhD.  
Davidson, Marcia, PhD.  
Henniger, Michael, PhD.  
Hoelscher, Karen, EdD.  
Krogh, Suzanne L., PhD.  
Myhre, Oddmund, PhD.  
Rickey, Melissa, EdD.  
Riner, Phillip, EdD.  
Towner, John C., PhD.

The department offers a M.Ed. in Elementary Education with a number of concentrations. Admission is through application to the Graduate School. At this time all master's degree programs require a valid teaching certification. Currently programs utilize a cohort approach where students begin as a group and complete a carefully sequenced program with various concentrations. A cohort in literacy education is currently being offered. Check with the department office for other cohort programs.

Students seeking Professional Certification under the provisions of the Washington Administrative Code (WAC) are accommodated in a special cohort group sponsored by the WCE PEAB and the Department of Elementary Education. Check with the department office for applicability and availability.

The department offers students two options for the master's degree: Option I includes a thesis and a minimum of 45 credits of course work. Option IIa requires a comprehensive examination and/or a seminar paper and a minimum of 48 credits of course work. Option IIb is a Teaching/Research program which leads to initial certification and a master's degree. Option IIb is not accepting students at this time.

In addition to a variety of concentrations to the M.Ed. in

Elementary Education, the department offers two specialization programs. Specialization programs in Early Childhood Education and in Native American Education provide a specific sequence of courses with an intense focus of the issues and knowledge in their corresponding areas.

**Concentration in Literacy:** This concentration is designed for certificated teachers who are interested in additional study in literacy learning and teaching. The fixed sequenced courses and field-based projects are designed to foster collaboration and collegiality among the participants and elementary education faculty. Currently this concentration is offered as a cohort program with a time span of six academic quarters. Courses are offered in a non-traditional venue which includes summer and weekend classes. Courses offered under the elective requirement are: EEd 538, 583, 584, 589, 592e, 596b (4 cr each). Contact the Elementary Education Office at (360) 650-3336 (MH 251) or the program adviser, Dr. Melissa Rickey at (360) 650-6533.

**Concentration in Assessment:** Currently this program is not accepting new students. This concentration is designed for teachers holding a current Washington teaching certificate and who are earning Professional Certificate status. This cohort program offers courses in a mixture of time venues and is designed to focus the student on professional growth using systematic assessment procedures to guide the teaching and learning process. Contact the Elementary Education office at (360) 650-3336 (MH 251).

#### Admission Requirements

- ❑ Graduate School requirements
- ❑ Official test scores from either the GRE or MAT
- ❑ Statement of purpose

#### Courses

- ❑ Option I: Thesis [for certificated teachers] (45 credits)
  - Edu 501; EdF 512, 513 (12)
  - EEd 521, 533, 535, 690 (16-21)
  - Electives by advisement (12-17)
- ❑ Option II(a): Seminar Paper [for certificated teachers] (48 credits)
  - Edu 501, EdF 512, 513 (12)
  - EEd 521, 535, 539 (12)
  - Electives by advisement (24)
- ❑ Option II(b): Teaching/Research (48 credits)
  - Edu 501; EdF 512, 513 (12)
  - EEd 521, 535, 539, 591 (28)
  - Electives by advisement (8)
  - Plus all requirements for teacher certification

**NOTE:** Students seeking initial certification must also be admitted to the Woodring College of Education teacher preparation program through the Education Admissions Office, Miller Hall 206E, (360) 650-3378. For these students, obtaining certification to teach is separate from the awarding of the master's degree. The Certification Officer of the Woodring College of Education determines eligibility for certification; the Graduate School awards the M.Ed. It is possible to be awarded certification prior to completion of all degree requirements for the M.Ed. degree. The M.Ed. degree, however, will be awarded *only* upon completion of all requirements for both certification and the M.Ed. Degree. Currently this program is not accepting new students.

#### *Specialization in Early Childhood Education with the Elementary M.Ed.*

Currently this program is not accepting new students.

This is available only for certificated teachers.

- ❑ Option I: Thesis (45 credits)
  - Edu 501; EdF 512, 513 (12)
  - EEd 533, 535, 690 (16-21)
  - EEd 569a or 518b, 569b or 531a, 569c or 530, electives (12-17)
- ❑ Option II: Seminar Paper (48 credits)
  - Edu 501; EdF 512, 513 (12)
  - EEd 518, 521, 525, 526 (16)
  - EEd 690 (6-9)
  - Electives by advisement (8-11)

#### *Specialization in Native American Education with the Elementary M.Ed.*

Currently this program is not accepting any new students.

This is available only for certificated teachers.

- ❑ Option I: Field project only (45 credits)
  - Edu 501, EdF 512, 513 (12)
  - EEd 518, 521, 525, 526 (16)
  - EEd 690 (6-9)
  - Electives by advisement

## M.Ed. — READING

### *Department of Elementary Education*

Currently the M.Ed. Reading program is not accepting any new students.

Advisement and course work are available for developing a remedial reading teacher specialization. Option I requires a thesis and 45 credits minimum; Option II requires a seminar paper, comprehensive examination and 48 credits minimum.

Graduate Program Adviser: Dr. Melissa Rickey, Miller Hall 307, (360) 650-6533.

### *Prerequisites*

Teaching certification, teaching experience.

### *Admissions*

- ❑ Graduate School requirements
- ❑ Official test scores from either the GRE or MAT
- ❑ Statement of purpose

### *Courses*

- ❑ Option I: Thesis (45 credits)
  - Edu 501, EdF 512, 513
  - EEd 484, 584, 586, 589, 594e or 562, 594f or 568, 690
  - Electives by advisement
- ❑ Option II: Seminar Paper (48 credits)
  - Edu 501, EdF 512, 513
  - EEd 484, 584, 586, 589, 594e or 562, 594f or 568, 539, 691
  - Electives by advisement
  - Comprehensive examination

## M.Ed. — SCHOOL ADMINISTRATION

*Educational Administration*

### GRADUATE FACULTY

Blackwell, Leslie, EdD.  
Gibney, Terresa, PhD.  
Jongejan, Anthony, PhD.  
Keiper, Timothy, PhD.  
Klein, Marvin, PhD.  
Marrs, Lawrence W., PhD.  
Myhre, Oddmund, PhD.  
Zurfluh, Linda, EdD.

### *Elementary, Secondary, Instructional Technology*

Program Advisers:

On-campus: Dr. Marvin Klein, Miller Hall 204C, (360) 650-3829, mklein@wce.wvu.edu

Program Manager: Judy Gramm, Miller Hall 204A, (360) 650-3708, gramm@wce.wvu.edu

Seattle Urban Center: Dr. Linda Zurfluh, (206) 729-3279, lzurfluh@wce.wvu.edu

Instructional Technology: Dr. Les Blackwell, Miller Hall 202, (360) 650-3387, lblack@wce.wvu.edu.

### *Program Goals*

The School 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.

### *Admission*

- ❑ Course background appropriate to level of specialization
- ❑ Three years (540 days) of successful teaching for administrator candidates
- ❑ Application for admission to Graduate School
- ❑ 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
- ❑ Two-page or 500-word essay titled "Why I Want to Pursue a Career in Administration"
- ❑ An interview with a program adviser 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 comprehensive tests in the Foundations area and in the specialization. Option III is a minimum of 54 credits of course work, including six (6) credits of EdAd 556a,b,c,d and the comprehensive tests in Foundations.

Credit requirements in the three options will be indicated by a Roman numeral designation for the program option followed by the required number of credits. For example, I:6 means six credits are required in the Option I alternative.

### *Basic Requirements*

- ❑ Edu 501, EdF 512, 513 (I, II and III:12)

### *Requirements in Specialization*

- ❑ EdAd 541, 543, 552 (I, II and III:12)
- ❑ EdAd 556a,b,c,d (III:6)
- ❑ EdAd 690 or IT 690 (for instructional technology students) (I:9)

### *Electives in Specialization*

- ❑ Emphasis in specialized field(s): law, negotiations, finance, personnel, systems management and instructional technology (I:13-19; II:22-28; III:18-24)

### *Electives in Related Areas*

- ❑ Selections under advisement from supporting disciplines, e.g., political science, economics (I, II and III:0-6)

### *Principal's Initial Certificate*

Candidates for the Washington State Initial Principal's Certificate shall have completed at least three years (540 days) of certificated teaching experience, a valid Washington State teaching certificate and a master's degree in school 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 completed at least three years (540 days) of certificated teaching experience, have a valid Washington State teaching certificate, and have a master's degree in a field other than school 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. Candidates for the initial certificate must pass an exit examination as prescribed in WAC 180-78-193-194.

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

### *Principal's Standard/Continuing Certificate*

For the Washington State Standard/Continuing Principal's Certificate, candidates must complete a continuing education program (through SBE-approved college/university) or 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

\* it is recommended that instructional technology students not pursuing administrative certification take IT 550 instead of EdAd 543

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 School Administration office, Miller Hall 204A.

## PROFESSIONAL CERTIFICATE PROGRAMS

### *Certificate of Advanced Study*

A specialized post-master's degree program at the sixth-year level is offered to a limited number of teacher candidates. The Certificate of Advanced Study in School Administration is designed to allow for individual attention and guided use of research and field projects as its primary vehicle for systematic investigation of topics relevant to public school administrators.

A more detailed description of this program is available from the School Administration Office, Miller Hall 204A, (360) 650-3708.

## M.Ed. — SECONDARY EDUCATION

*Department of Secondary Education*

### GRADUATE FACULTY

Dallas, Lee A., EdD, science education.  
Harwood, Angela, PhD, middle school.  
Keiper, Robert, EdD, graduate adviser.  
Keiper, Timothy, PhD, instructional technology.  
Larson, Bruce, PhD, social studies.  
Pinney, Robert H., EdD, curriculum and instruction.  
Wolpow, Ray, PhD, literacy.

### *Department of Secondary Education*

Graduate Adviser: Dr. Robert Keiper, Miller Hall 306D, (360) 650-3986, bkeiper@wce.wvu.edu

The Secondary Education graduate faculty offer the general M.Ed. degree in Secondary Education with specializations in:

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

and in the following concentration:

- Professional Certification

### *Prerequisites*

Candidates must meet the admission requirements of the Graduate School (see page 56) as well as the following department requirements:

- Graduate Record Examination,\* General Test, with an overall score of 1500; or
- Miller Analogies Test, with a score of 45;
- Statement of career goals which includes highlights of experiences working with adolescents, as such will be given consideration in the selection process.

\*GRE preferred. Of the three testing categories, the verbal score often most accurately indicates applicant's potential

for success in this program, therefore this score is weighted more heavily than the other two.

**Certified teachers** with two years of successful teaching experience in grades 7-12 may apply for admission to the High School Curriculum and Instruction, Instructional Technology, Middle School Curriculum and Instruction, and Native American specializations and Professional Certification concentration. Candidates are admitted to these specializations summer quarter only.

Candidates for the **Teacher Certification** specialization 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 Teacher Certification specialization leads to a recommendation to the Office of the Superintendent of Public Instruction for State of Washington teacher certification. Teacher Certification Candidates must sign the "Student Conduct Requirements and Agreement" form, complete the Washington State Patrol fingerprint check and the sexual harassment prevention education workshop. It is possible to be awarded certification prior to completion of degree requirements; normally, the M.Ed. degree will be awarded *only* upon completion of all requirements for Washington State certification and the degree.

### *Graduate Study Options*

Students may choose to complete a thesis (**Option I**) with a program of at least 45 credits OR may choose to complete comprehensive exams and/or a seminar paper with a program of at least 48 credits (**Option II**).

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

#### *Master's with certification*

Fall quarter . . . . . April 1  
Winter quarter . . . . . October 1  
Spring quarter . . . . . January 15

#### *Master's for certified teachers*

Summer quarter . . . . . April 1  
*Seattle program (summer quarter only)\** . . . . . March 1

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

#### **Common requirements** (all programs):

- Edu 501, EdF 512, 513 (12 cr)

#### **Requirements by program:**

- Certified teacher specializations
  - High School Curriculum and Instruction, Option I or II
  - Middle School Curriculum and Instruction, Option I or II
    - Sec 580, 582, 690 (Option I: 1-9) or 691 (Option II-4) (9-17 cr)
    - Electives under advisement (16-24 cr)
  - Instructional Technology — Option II only
    - Sec 580, 582, 691; IT 461, 550 (19 cr)
    - Electives under advisement (17 cr)
  - Native American (Option I only)
    - Sec 580, 531, 533, 690 (16-21 cr)
    - Electives under advisement (12-17 cr)

- Certified teacher concentration
  - Professional certification
    - Sec 580, 582, 690 (Option I:1-9) or 691 (Option II:4)
    - Electives under advisement (16-24 cr)

**Note:** Teachers who select this concentration, under advisement, enroll in elective courses focusing on assessment and evaluation, under the above described program specializations.

- Teacher Certification specialization (Option II only)
  - SEC 531, 532, 533, 691 (16 cr)
  - Electives under advisement (20 cr)
  - Courses required for certification
    - Electives (8 cr)
    - Semester internship (24 cr)

## M.Ed. — EXCEPTIONAL CHILDREN

*Department of Special Education*

### GRADUATE FACULTY

Antil, Laurence, PhD, special education.  
 Atkinson, Charles M., EdD, special education.  
 Fox, Sheila, PhD, special education.  
 Howell, Kenneth W., PhD, special education.  
 Marrs, Lawrence, PhD, special education.  
 Nolet, Victor, PhD, special education.  
 Slentz, Kristine L., PhD, special education.

Graduate studies in Special Education are designed to accommodate students who are seeking a master's degree in special education and who may or may not be endorsed to teach special education. Course work is available for those seeking the special education endorsement along with the master's degree. Advisement may be obtained by contacting the Department of Special Education office at Miller Hall 320, (360) 3330. Principal Graduate Program adviser: Dr. Kenneth Howell.

The Special Education graduate advisers are: Dr. Victor Nolet, Miller Hall 322A, (360) 650-7578, e-mail: vnolet@wce.wvu.edu; Dr. Kristine Slentz, Miller Hall 318B, (360) 650-3724, e-mail: krister@wce.wvu.edu; or Dr. Kenneth Howell, Miller Hall 318C, (360) 650-3971, e-mail: howell@wce.wvu.edu.

This program is generally reserved for certified teachers who are already endorsed to teach special education. Individuals without endorsement may, on occasion, be admitted to this program upon demonstration of compelling interest in advanced study focusing on exceptional education. Students interested in obtaining a teaching certificate and/or special education endorsement, as explained below, may also be admitted.

**NOTE:** Enrollment in special education graduate programs is limited.

### *General Admission Requirements*

For those already certified and endorsed to teach special education:

- application to the Graduate School
- undergraduate degree from an accredited university
- Graduate Record Examination, General Test or Miller Analogies Test

- GPA of 3.0 or better on the last 60 semester/90 quarter credits
- Three letters of recommendation
- a statement of purpose for applying to the program
- a statement of related personal goals
- a personal interview

Applications will be reviewed by the Graduate School and the exceptional children graduate faculty. There are additional application requirements for those seeking a teaching endorsement in conjunction with the M.Ed. (See below.)

### *Program Requirements*

Students may choose to complete one of two degree options. Option I requires a minimum of 45 credits and a thesis (SpEd 690). Option II requires a minimum of 48 credits, a comprehensive examination, and a research seminar (SpEd 691). Information on the thesis and comprehensive exam requirements can be obtained in the special education office.

An endorsement to teach in special education may be added to either of these options by taking a sequence of additional credits as explained below.

For M.Ed. students already certified and endorsed in special education, there are only 22 credits of required core content and from 18 to 24 elective credits.

- 12 credits of Graduate Foundation Courses — required for both Options I and II
  - Edu 501, EdF 512, 513
- 10 credits of Exceptional Children Master's Block — required for all Exceptional Children graduate students (both Options I and II). Courses in this block should typically be taken only after endorsement to teach special education or completion of student teaching (if it is required in the student's Plan of Study):
  - SpEd 562a, 563, 567.
- If the student is following Option I:
  - SpEd 690 (6 cr)
- If the student is following Option II:
  - comprehensive examination, and SpEd 691 (4 cr)

Programs will include (depending on the choice of Option I or II) a number of electives. This will allow the student to design his or her program according to particular interests (such as early childhood special education, instructional technology, or evaluation). Electives will also be taken to raise program totals to 45 or 48 hours, depending on the option selected. Early Childhood courses are popular electives and may also be used by students wishing to pursue an endorsement in Early Childhood Special Education (ECSE). These courses are:

- SpEd 569a, 569b, 569c

M.Ed. core special education classes may not be offered more than once a year. Students should pay close attention to the schedule of course offerings by their department when planning their program.

### **M.Ed. Plus Endorsement**

This program is designed for students who are not already endorsed in special education and wish to pursue an endorsement along with their M.Ed. Certification to teach is a prerequisite to endorsement. Those who are not currently certified to teach in Washington will be required to complete a sequence of certification courses in addition

to the courses required for endorsement. The endorsement program has additional admission requirements, will require the taking of additional credits, and has additional completion requirements.

Students admitted to the M.Ed. plus endorsement may not receive a M.Ed. until they have completed all endorsement courses.

**NOTE:** Enrollment in special education graduate and endorsement programs is limited.

### General Admission Requirements

Master's students wishing to add endorsement to their program must also be admitted to the Woodring College of Education teacher preparation program. Applications will be reviewed by the Graduate School and the Exceptional Children Graduate advisers listed above.

The application material must include:

- an application to the Graduate School
- undergraduate degree from an accredited university
- Graduate Record Examination, General Test or Miller Analogies Test
- GPA of 3.0 or better on the last 60 semester/90 quarter credits
- three letters of recommendation

In addition the following materials must be submitted by the applicant to the Graduate School:

- The Washington Administrative Code, Section 180-75-082, requires applicants for teacher certification in Washington to give evidence of "good moral character and personal fitness." This is accomplished by completing and submitting the "Woodring College of Education Student Conduct Requirements and Agreement" form. This form is available from the Teacher Education Admissions office, Miller Hall 206E, (360) 650-3378.
- An essay addressing each of the following:
  - The applicant's past experience related to working with disabled children or youth.
  - Why the applicant is interested in pursuing a master's degree program in Special Education.
  - Why the applicant is seeking endorsement to teach in Special Education.
- An interview (over the phone or in person) by one or more special education graduate advisers. This interview will focus on:
  - The alignment of the student's personal goals and the program's focus and mission.
  - The applicant's potential for, and commitment to, completing the full endorsement and master's program.
  - The applicant's potential for, and commitment to, employment in the field of special education.

After you have made application, please contact Pam Hamilton at (360) 650-3330 to schedule an interview with one of the graduate program advisers.

### Endorsement Program Requirements

**NOTE:** Obtaining an endorsement to teach special

education is separate from the awarding of the master's degree. The application for an endorsement requires candidates to answer several questions dealing with sexual offenses, drug and alcohol offenses, and any other prior police records. The Certification Officer of the Woodring College of Education determines eligibility for certification; but the Graduate School awards the M.Ed. Certification may be awarded prior to completion of the entire M.Ed. program. *However*, for students electing to add an endorsement in special education to their M.Ed. program, the M.Ed. degree will be awarded *only* upon completion of all requirements for both an endorsement in special education and the M.Ed. degree. Depending on the student's prior course work the Endorsement Plus Master's program may require up to 80 credits.

- Students seeking initial teaching endorsement plus a master's degree will typically only have the option of taking comprehensive exams and SpEd 691.
- Students seeking endorsement to teach special education begin the program by taking a block of special education endorsement courses (including student teaching). These must be completed *prior* to taking the required M.Ed. core special education classes (SpEd 562a, 563, 567) and SpEd 690 or 691.
- Students who are not certified to teach in the State of Washington will begin their program by taking a block of certification courses.
- To meet Washington State initial certification requirements some undergraduate course work will be required of students seeking certification. Students who are already endorsed to teach in another area (e.g. Elementary Education or Secondary Education) may not need to take this course work (see an adviser). These courses, or their equivalents, should be completed prior to beginning Special Education M.Ed. course work. They include:
  - Psych 316
  - HEd 455 or SpEd 463c
  - IT 344 and IT 444 or IT 544b
  - Effective teaching competency (see Special Education graduate adviser)
  - Multicultural competency (see Special Education graduate adviser)
- Students who are already endorsed to teach in another area (e.g., Elementary Education or Secondary Education) may not need to take this course work (see an adviser)
- Core endorsement requirements (not in sequence — see a Special Education graduate adviser).
  - SpEd 460
  - SpEd 460a
  - SpEd 462b
  - SpEd 465a
  - SpEd 465b
  - SpEd 465c
  - SpEd 465d
  - SpEd 466a
  - SpEd 468 or 565
  - SpEd 469a or 568
  - SpEd 469b
  - SpEd 498a or 498b or 498c or 598

- One or more of the following: SpEd 463a, 463b, 463c, 463d
- EdF 512
- Additional courses for those seeking endorsement in Early Childhood Special Education
  - SpEd 569a
  - SpEd 569b
  - SpEd 569c

**NOTE:** It is possible for teachers currently endorsed in another area to earn endorsement in Special Education without being admitted to an M.Ed. or undergraduate program. This is referred to as a post-baccalaureate program. The spaces in these non-degree certification programs are extremely limited and the post-baccalaureate program should not be confused with those leading to a university degree. Contact Dr. Charles Atkinson, Miller Hall 318a, (360) 650-3331, e-mail: atkinson@wce.wvu.edu for advisement.

## Engineering Technology

*College of Arts and Sciences*

### GRADUATE FACULTY

Kitto, Kathleen, MSME  
 Raudebaugh, Robert A., EdD  
 Seal, Michael, EdD  
 Oslapas, Arunas, MFA

### M.Ed. — TECHNOLOGY EDUCATION

Program Adviser: Dr. Robert A. Raudebaugh, Ross Engineering Technology 204

The M.Ed. degree in technology education has been designed to meet the needs of teachers (one year of teaching in industrial arts or technology education is a prerequisite) who wish to convert an industrial arts program to technology education or to expand and/or improve an existing technology education program. It consists of a blend of hands-on activities and pedagogy which should provide teachers with both the technical skill and curricular knowledge to be able to implement similar activities in their classrooms.

The Engineering Technology Department has been allowed considerable influence over the required education courses as well, gearing that content to the unique needs of technology teachers. The program will be conducted on a cohort group basis. Teachers will not be allowed to take the course work independent of the group. A new group will be formed every two years as needed.

- *Summer One*
  - Edu 501; ETec 592g, 592e, 517 (12)
- *Academic Year One*
  - ETec 593, 500 (12)
- *Summer Two*

- Tech 592a, 592n; EdF 512, 513 (12)
- *Academic Year Two*
  - ETec 691; ETec 594 (12)

## English

*College of Arts and Sciences*

### GRADUATE FACULTY

Barthold, Bonnie, PhD, African & African-American literature, literary theory, studies in the novel, comparative literature, film studies.  
 Beasley, Bruce, PhD, creative writing (poetry), American literature.  
 Cary, Meredith, PhD, English and Irish fiction, women's fiction.  
 Dietrich, Dawn, PhD, modern drama, performance studies, film studies, science and literature, postmodern theory.  
 Geisler, Marc, PhD, Renaissance literature and culture, literary theory, politics and literature.  
 Goebel, Bruce, PhD, English education, American literature, children's and young adults' literatures.  
 Guess, Carol, MFA, creative writing (fiction, nonfiction, poetry), lesbian and gay studies.  
 Halme, Kathleen, MFA, creative writing, poetry.  
 Hemley, Robin, MFA, creative writing (fiction and non-fiction).  
 Johnson, Nancy, PhD, children's literature, English/language arts education.  
 Kanhai, Rosanne, PhD, minority literatures, women's literature, feminist theory and criticism.  
 Laffrado, Laura, PhD, American literature, children's literature, gender studies.  
 Lippi-Green, Rosina, PhD, linguistic theory, sociolinguistics, language ideology, critical language studies, creative writing.  
 Lobeck, Anne, PhD, linguistics, literary theory, gender studies.  
 Lundeen, Kathleen, PhD, British Romanticism, critical theory, poetry.  
 Lynne, William, PhD, American literature, African-American literature, cultural studies.  
 Metzger, Mary Janell, PhD, early modern literature and culture, critical theory, women's literature.  
 Paola, Suzanne, MFA, creative writing, women's studies, poetry.  
 Park, Douglas, PhD, eighteenth-century British literature, English novel, rhetoric.  
 Purdy, John L., PhD, contemporary American literature, Native American literatures, contemporary poetry.  
 Qualley, Donna, PhD, composition theory and pedagogy, English education, critical literacy, feminist theory.  
 Smith, William E., Shakespeare, British Renaissance studies, composition and rhetoric.  
 Symes, Ken, PhD, literature, rhetoric, nonfiction.  
 VanderStaa, Steven, PhD, English education, creative writing (non-fiction), and linguistics.  
 Wise, Christopher, PhD, comparative literature, third world and postcolonial, African and Middle Eastern literature.  
 Yu, Ning, PhD, American literatures, science and literature.

### M.A. — ENGLISH, THESIS AND NON-THESIS

Program Adviser: Graduate Program Office, Humanities 327, (360) 650-3232

The M.A. 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.

### Deadlines

Applications for the following academic year must be *complete* — all materials on file — by March 1 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 normally for fall quarter.

### Graduate Teaching Assistantship (TA) Deadlines

An application for a teaching assistantship should be submitted with the application for admission.

### Supporting Materials

Normally the department expects a verbal score of at least 500 and a strong analytic score on the Graduate Record Exam, General Test. Candidates must also provide a 750-word personal statement of background and intention and a writing sample: for admission to creative writing, 20 to 30 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

### Creative Writing (Thesis)

#### Core Requirements

- Eng 501, 20 credits in creative writing (fiction, drama, poetry, non-fiction 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.

### Credits

Courses are routinely taken at the 500 and 600 levels. With the permission of the graduate adviser, a student may count up to a maximum of 10 credits in 400-level 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 examination 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 examination 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 graduate studies secretary.

## Environmental Studies

### Huxley College of Environmental Studies

- Center for Environmental Science
- Center for Geography and Environmental Social Sciences

## GRADUATE FACULTY

Bach, Andrew J., PhD, physical geography, geomorphology, soils and weathering, water resources.  
 Berardi, Gigi, PhD, human geography, resources management.  
 Bingham, Brian L., PhD, invertebrate biology, marine ecology, experimental design.  
 Bodensteiner, Leo R., PhD, fisheries biology, aquatic ecology.  
 Buckley, Patrick H., PhD, economic and development geography, quantitative methods.  
 Cancilla, Devon A., PhD, environmental chemistry, environmental toxicology, chemical ecology.  
 Hardy, John T., PhD, environmental toxicology, global climate change, biological oceanography.  
 Homann, Peter S., PhD, biogeochemistry, soil sciences, forest ecology.  
 Landis, Wayne G., PhD, environmental toxicology and population biology.  
 Matthews, Robin A., PhD, freshwater ecology, aquatic toxicology, statistical ecology.  
 Mayer, J. Richard, PhD, aquatic ecology, water chemistry, agricultural sciences.  
 McLaughlin, John F., PhD, terrestrial ecology, population biology, conservation biology.  
 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.  
 Mookherjee, Debnath, PhD, comparative urbanization, regional development and planning.  
 Myers, O. Eugene, PhD, environmental education and communication, human development and the environment.  
 Robbins, Lynn A., PhD, social impact assessment, human ecology, environmental policy.  
 Smith, Bradley F., PhD, global environmental policy, sustainable development.  
 Sulkin, Stephen, PhD, invertebrate biology, larval ecology.  
 Summers, William C., PhD, marine ecology, oceanography, fisheries, coastal management.  
 Terich, Thomas A., PhD, shoreline processes, urban and regional planning.  
 Wallin, David O., PhD, terrestrial ecology, forest ecosystems.  
 Webber, Herbert H., PhD, marine biology, estuaries, sampling design and data analysis.

## M.S. — ENVIRONMENTAL SCIENCE, THESIS ONLY

Program Adviser: Dr. Peter S. Homann, Environmental Studies Center 437

The M.S. 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.

### *M.S. Specializations*

Environmental Science program specializations are:

*Freshwater Ecology.* This specialization focuses on the study of physical, chemical and biological processes in freshwater systems, including lakes, streams and watersheds.

Specialization courses: Envr 502, 503, 522, 529, 530a, 530b, 533, 534, 538, 544, 559

*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: Envr 502, 503, 533, 555, 556, 557, 558, 559, 590

*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: Envr 502, 503, 507, 533, 535a, 535b, 536, 539, 542, 544, 562, 590, 592; Geog 510, 535, 552

Marine and Estuarine Science. See the Huxley College Cooperative Graduate Program options on the following page.

### *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.

### *Specific Test Requirements*

For all options: Graduate Record Examination, General Test. However, applicants with advanced degrees are not required to submit GRE scores.

### *Application*

Students will be admitted into the M.S. in environmental science program fall quarter only. To be considered for a graduate teaching assistantship, applicants must have their application materials submitted by February 1. The Graduate Program Committee 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 is limited, all applicants are strongly encouraged to submit application materials by February 1.

An application for admission into the M.S. 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 M.S. degree.

### *Program Requirements*

Forty-five credits minimum, including: Envr 501 (4); 12 credits or more under advisement from within one of the areas of specialization; 17 or more elective credits from Huxley or other colleges at WWU; and 12 credits of Envr 690a (thesis). Ten credits or less of approved 400-level course work may be included in the program. No more than four elective credits of Envr 595 (Teaching Practicum) may be used toward the M.S. degree in environmental science.

For further information, write or consult the chair, Graduate Program Committee.

## M.S. — GEOGRAPHY, THESIS

Program Adviser: Dr. Patrick Buckley, Arntzen Hall 222, (360) 650-4773, fax (360) 650-7702, e-mail setsuko@wwu.edu

### *Program Goals*

The focus of the M.S. 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.

### *M.S. Tracks*

Geography program tracks are:

□ *Resource Geography Track.* This track

is designed for students who wish to pursue careers in areas such as Resource Conservation and Management, Regional Development and Environmental Policy, or Earth Surface Processes.

- *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.
- *Education in Environmental Management Track*. Study of how education influences human interaction with environmental systems. Emphasis is on education as an approach to achieving environmental management goals in settings ranging from cities to wildlands.

### 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 if they have basic background in the discipline or are prepared to take additional courses (under advisement) to substitute for this.

### Admission Deadline

For fall term admission, priority will be given to applications received by February 1. Applications for graduate assistantships should be submitted with the graduate school application. For admission in other quarters see Graduate School deadlines.

### Additional Information

In addition to the required materials of the Graduate School, applicants are required to submit a one- to two-page statement of purpose indicating why they wish to pursue graduate work in geography at Western Washington University.

### Program Requirements

45 credit minimum

Core Requirements (22 credits)

- Geog 501 (3)
- Geog 521 or 522 (3)
- Geog 551 (4)
- Geog 690 (12)

Tracks:

*Resource Geography*

- Geog 510 (5)
- 18 credits under advisement

*Education in Environmental Management*

- Envr 571 (4)
- Envr 575 (4)
- 15 credits under advisement

### 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 adviser and Graduate School, can come from elsewhere.

### Qualifying Test Requirements

The qualifying examination should be completed by the end of the third quarter of residency, before advancement to candidacy. The graduate faculty will examine the student's knowledge of the relevant subject matter. Relevant subject matter in this context will include both the student's knowledge of the broader scholarly field as well as specific theoretical and empirical content of his/her intended thesis or practicum.

### Special Skills Competency

Demonstrated competence in special skills must be met in the following areas:

- Statistics competency demonstrated by completion of a statistics course at the intermediate level.
- Cartographic competency demonstrated by completion of a junior level or above course in cartography, GIS or remote sensing.

Or, in cases where unique skills, such as foreign language competency, are needed to perform a thesis project, a coherent series of courses may be taken to meet the requirement. This option requires written permission from both the student's thesis adviser and the program adviser.

## COOPERATIVE GRADUATE PROGRAM OPTIONS

### *M.S. — Environmental Science (Environmental Chemistry), Thesis Only*

Program Advisers: Dr. J. Richard Mayer, Huxley College; Graduate Program Adviser, Chemistry Department

Huxley College of Environmental Studies and the Department of Chemistry administer a cooperative program leading to the M.S. in environmental science (environmental chemistry specialization) in Huxley College or the M.S. in chemistry (environmental chemistry specialization) in the Department of Chemistry. Emphasis is on application of chemical principles, methods and concepts to the understanding and potential solution of certain environmental problems. Applicants must indicate which department they wish to be based in.

Students pursuing an M.S. degree through this cooperative program will take course work approved by their research adviser and include courses from Huxley College, the Department of Chemistry and other units of WWU. Credits for a master's degree must total a minimum of 45 credits and will include a thesis. The student's Plan of Study shall include at least 12 credits of thesis research in Huxley College or the Department of Chemistry.

Undergraduate and transfer course limitations are the same as those for the environmental science M.S. program.

The thesis committee will be chaired by the research adviser, who is chosen by the student from the graduate faculty of either unit, and at least two additional faculty. The make-up of the thesis committee must be approved by the student's research adviser and the Graduate School.

Applicants seeking admission through the Department of Chemistry (M.S. in chemistry/environmental chemistry specialization) must meet prerequisite requirements outlined in the Chemistry section of this catalog.

Applicants seeking admission through Huxley College (M.S. in environmental science/environmental chemistry specialization) must meet prerequisite requirements for the M.S. in environmental science and must complete Envr 501 (4).

### *M.S. — Environmental Science (Marine and Estuarine Science), Thesis Only*

Curriculum Coordinators: Dr. Brian Bingham, Huxley College of Environmental Studies; Dr. David Schneider, Department of Biology

The marine and estuarine science option is a joint offering of Huxley College, the Department of Biology and the Shannon Point Marine Center. Students graduating from the program will have an understanding of coastal marine and estuarine environments, biota and topical management issues, and fundamental biological and chemical oceanographic processes. The curriculum requires a minimum of 45 credits of course work, including 12 credits of thesis research, and the completion of a thesis based on original research in an area of specialization relevant to the marine sciences. Students matriculated through Huxley College must complete Envr 501 (4) and Biol 505 (1) and select 12 credits of specialization in marine and estuarine science from the following list:

Envr 502, 503, 522, 533, 534, 538, 542; Biol 503, 508, 545 (when marine topic)

#### *Prerequisites*

Students matriculated through Huxley College must meet the prerequisites for admission described in the "M.S. — Environmental Science, Thesis Only" option.

For full consideration, completed applications must be received by February 1. Applications should include a statement of interest and the identification of potential faculty advisers.

For a complete list of participating faculty and their research interests, and for further information, write to Shannon Point Marine Center, 1900 Shannon Pt. Rd., Anacortes, WA 98221 or visit the Marine and Estuarine Science home page at <http://www.wvu.edu/~mesp>.

## **Geology**

*College of Arts and Sciences*

### **GRADUATE FACULTY**

Babcock, R. S., PhD, geochemistry, petrology.  
Clark, D.H., PhD, glacial geology.  
DeBari, S.M., PhD, petrology, science education.

Engebretson, D. C., PhD, tectonics, paleomagnetism.  
Field, J.J., PhD, geomorphology.  
Hansen, T.A., PhD, paleontology.  
Housen, B.A., PhD, geophysics.  
Mitchell, R.J., PhD, groundwater hydrology, environmental geology.  
Schermer, E. R., PhD, tectonics, structural geology, geochronology.  
Suczek, C. A., PhD, stratigraphy, sedimentary petrology, tectonics.  
Wodzicki, A., PhD, economic geology, geochemistry.

#### **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.

### **M.S. — GEOLOGY, THESIS AND FIELD PROJECT**

Program Adviser: Dr. Thor A. Hansen, Environmental Studies Center 240, (360) 650-3581

#### *Program Description and Goals*

The Geology Department offers an M.S. degree with a thesis and 45 credits of course work suitable for students wishing any of the geological specialties that can be supervised by its graduate faculty. The alternative, an M.S. degree field project option with 48 credits of course work and a summer field project, is for environmental geology graduate students; it is a more highly structured program and is designed to be completed in a year.

#### *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. Preparation for entry into the geology graduate program requires the following courses: physical geology, stratigraphy or historical geology, crystallography and mineralogy, geomorphology, structural geology, petrology, a recognized geology field course, one year of chemistry, one year of calculus-based physics, and one year of calculus (or two quarters of calculus plus one of either calculus-based statistics or an approved math-based computer course such as Geology 446 or 448). Students who have not completed these courses before entering the geology M.S. 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 M.S. degree. Because course loads in the M.S. field project program preclude more than one or two additional courses, students must have completed all but one or two of the background courses listed above before entering the program.

#### *Specific Test Requirements*

Graduate Record Examination, General

#### *Deadlines*

Thesis Option:

Complete applications are due by May 1.

Field Project Option:

Applications are due by January 31, but later applications may be considered up to March 31 if space is available.

### *Graduate Teaching Assistantship (TA) Deadlines*

If you wish to be considered for a teaching assistantship position, your application and supporting materials must be on file by January 31.

### *Supporting Material*

Material in support of the student's applications should include a statement of the student's background and purpose in addition to GRE scores, reference letters, official transcripts and a statement as to whether the candidate is applying for the thesis option or the non-thesis option.

### *Program Requirements*

#### *Course Work — Thesis Option*

45 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 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.

#### *Course Work — Field Project Option*

48 credits; 38 or more credits of graduate-level courses (500 level) and no more than 10 from 400-level courses.

### *Required Courses*

- Geol 447, 513, 530, 562, 570, 572, 573, 579 or under departmental advisement

### *Electives*

- 9 credits from Geol 446, 540, 542, 543, 555, 561, 574, 575, and Envr 522, 529, 536; or under departmental advisement

## **M.Ed. — NATURAL SCIENCE**

### *Earth Science Specialization, Thesis and Non-Thesis*

Program Adviser: Dr. John Field

Completion of an undergraduate major in earth science or geology. Undergraduate majors in chemistry, physics, physical science, geography, general science or biology may also be eligible provided the specific requirements below have been met.

The following courses or their equivalents must be completed: Geol 211 (5), 212 (4), 306 (6), 310 (5), 407a

(4); Chem 121 (5) and 122 (5); Physics 114 (4) and Astron 315 (3) or 219 (5); Math 115 (4); plus an additional 13 credits in chemistry, physics, math or biology. Any deficiencies in these requirements may be made up outside the credit hour requirements for the Master of Education degree.

For curriculum requirements, see Natural Science/Science Education section.

## **History**

### *College of Arts and Sciences*

## **GRADUATE FACULTY**

Costanzo, Susan E., PhD, Russian/Soviet, Europe.  
 Danysk, Cecilia A., PhD, Canada.  
 De Lorme, Roland L., PhD, 20th-century American history, American West, Pacific Northwest.  
 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.  
 Gally, Alan, PhD, colonial and revolutionary America, American South to 1865.  
 Helfgott, Leonard M., PhD, modern Middle East and modern Europe.  
 Horn, Thomas C. R., PhD, early modern Europe, Renaissance and Reformation.  
 Jimerson, Randall C., PhD, archives and records management, 19th-century U.S.  
 Kaplan, Edward H., PhD, Chinese history.  
 Kennedy, Kathleen A., PhD, U.S. women's history, political history.  
 Leonard, Kevin A., PhD, US West.  
 Mariz, George E., PhD, European intellectual history, Great Britain.  
 Ritter, Harry R., PhD, modern Europe, historiography.  
 Stewart, Mart A., PhD, 19th-century U.S., Civil War and Reconstruction, Environmental.  
 Truschel, Louis W., PhD, African history.  
 van Deusen, Nancy E., PhD, Latin America.  
 Whisenhunt, Donald W., PhD, U.S., 1930s.  
 Wright, Diana E., PhD, Japan.

## **FIELDS OF STUDY**

- Archives and Records Management
- African History
- British History
- Medieval History
- Middle Eastern History
- Modern European History (1500 to the present, including Russia)
- United States History
- Canadian History
- Latin American History

### *Graduate Teaching Assistantship (TA) Deadlines*

Date for receipt of graduate teaching assistantship applications is May 1 for all program specializations. Contact the Graduate School for application forms.

## **M.A. — HISTORY, THESIS AND NON-THESIS**

For further information, contact departmental office, Humanities 278, (360) 650-3429.

### *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.

### *Program Options*

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

#### *Option I (Thesis): Basic Requirements*

- ❑ Hist 501 (4)
- ❑ Hist 690a,b,c [thesis] (12)
- ❑ Four reading or writing seminars\* (16)
- ❑ Elective courses (13)

#### *Option II (Non-Thesis): Basic Requirements*

- ❑ Hist 501 (4)
- ❑ Four reading seminars\* (16)
- ❑ Two writing seminars. Students in the non-thesis option may satisfy the requirement for 8 credits in writing seminars by completing Hist 590w or other scheduled writing seminars or a combination of 590w and another writing seminar.\* (8)
- ❑ Elective courses (20)

\* Reading and writing Seminars: Reading seminars revolve around reading and discussion of special topics; shorter written exercises such as exploratory or bibliographical essays may be assigned, but not major papers. Writing seminars are extensions of reading seminars in which students write major research papers based on previous preparation in a reading seminar.

### *Fields of Study*

Students are required to complete at least two courses in each of two fields of study. One course in each of the selected fields must be a graduate-level seminar.

### *Electives*

To complete a program in either Option I or II, electives may be chosen, in consultation with the graduate adviser 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 adviser).

### *Language Requirement*

The foreign language requirement may be met in one of two ways: by taking an examination 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 taken within five years of acceptance into the graduate program, or, where appropriate and with departmental permission, a demonstrated competence in mathematics, statistics, or computer programming.

## GRADUATE PROGRAM IN ARCHIVES AND RECORDS MANAGEMENT

Program Adviser: Dr. Randall Jimerson, Humanities 261, (360) 650-3139, jimerson@cc.wvu.edu

The Department of History offers an interdepartmental graduate program leading to the degree of Master of Arts in history with a concentration in archives and records management. The program has been revised in response to the "Guidelines for the Development of a Curriculum for a Master of Archival Studies Degree," adopted by the Society of American Archivists in 1994. The program is offered in cooperation with the Washington State Archives — Northwest Region and the Center for Pacific Northwest Studies. Students complete an internship at a cooperating archives or records management program, which provides practical experience in professional work. Internships have been available in recent years in governmental, business, academic and historical organizations and agencies throughout the Pacific Northwest and in other regions of the country. Two years are usually required to complete this degree.

### *Prerequisites*

A baccalaureate degree from an accredited U.S. college or university, or an equivalent degree from a foreign university, with a minimum of 25 credits in history or an allied field, and a grade point average of 3.00. For further information on admission requirements and procedures, contact the program director.

#### *Basic Requirements*

- ❑ Hist 501 (4)
- ❑ Hist 595 (6)
- ❑ Hist 594 (4)
- ❑ Hist 596 or 598 (4)
- ❑ Hist 568 (4)
- ❑ Hist 599 a and b (20)
- ❑ Hist 690a,b,c (12)
- ❑ Three reading or writing seminars in history (12)
- ❑ Elective courses (8)

### *Electives*

Electives, including courses in archives, records management, political science, business administration, or library science, as well as in history, should be chosen in consultation with the program adviser.

### *Thesis Requirement*

A thesis is normally required, although in special circumstances a field project may be substituted. Thesis topics involving the history of archives administration and records management, or an emerging problem in these disciplines, are encouraged.

### *Other Requirements*

Language requirements are identical to those required for the regular M.A. in history. In addition, courses in this program require computer literacy and application of computer skills.

### 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 and who complete the following course work:

- Hist 595 (6)
- Hist 594 (4)
- Hist 596 or 598 (4)
- Hist 599a and b (20)
- One of the following: Hist 567; 568; 598 or 596 (4)

Students with a master's degree in a field other than history should complete Hist 501 (4).

## Mathematics

College of Arts and Sciences

### GRADUATE FACULTY

Amiran, Edoh Y., PhD, differential geometry, smooth dynamical systems.

Averbakh, Igor, PhD, operations research, discrete applied mathematics.

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

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

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

Hartsfield, Nora, PhD, graph theory.

Jewett, Robert I., PhD, harmonic analysis.

Johnson, Jerry L., PhD, mathematics education.

Levin, Richard G., PhD, numerical analysis (numerical linear algebra).

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

Read, Thomas T., PhD, ordinary and partial differential equations.

Reay, John R., PhD, combinatorial geometry and convexity.

Schreiber, Sebastian J., PhD, biological modeling, dynamical systems.

Shen, Yun-qiu, PhD, nonlinear differential equations, numerical analysis.

Verosky, John M., PhD, mathematical physics, differential equations, differential algebra.

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

Ypma, Tjalling J., DPhil, numerical analysis.

### M.S. — MATHEMATICS, PROJECT WITH THESIS OPTION

Program Adviser: Dr. E. Y. Amiran, Bond Hall 220, (360) 650-3487

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.

### ADMISSION

#### Prerequisites

To be eligible for admission to the M.S. 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 140 or Math 207, and two 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 adviser will, in consultation with the student, specify the conditions to be satisfied by the student in order to fully qualify for the program.

#### Specific Test Requirements

Graduate Record Examination, General Test.

#### Admission Deadline

Please see Graduate School deadlines.

#### Graduate Teaching Assistantship (TA) Deadlines

Preferred consideration will be given to applicants who have complete files by May 1.

### PROGRAM REQUIREMENTS — THESIS OR NON-THESIS OPTION

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:

- Math 502, 503, 560, 564, 566
- Math 523, 525, 527, 528, 539, 562
- Math 535, 542, 545, 570
- Math 510, 511, 573, 575.

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.

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 quarter of study.

### OTHER REQUIREMENTS

#### Qualifying Examination for Candidacy

Each student must pass a qualifying examination before being advanced to candidacy.

### *Advancement to Candidacy*

Students are advanced to candidacy when they have demonstrated a reasonable likelihood of completing their program. They must 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 examination.

Students are recommended for candidacy by the Graduate Committee. The student is responsible for initiating this action when he or she considers the conditions met.

### *Project*

Every student is required to complete a project (Math 691). The project will involve both an oral examination 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 adviser 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 adviser. 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.

## Modern and Classical Languages

*College of Arts and Sciences*

### **M.Ed. — FOREIGN LANGUAGE EDUCATION, NON-THESIS ONLY (ALL SPECIALIZATIONS)**

This program is not currently accepting new students. For further information, contact the department.

## Music

*College of Fine and Performing Arts*

### GRADUATE FACULTY

Briggs, Roger D., PhD, composition, orchestra.  
Després, Jacques, piano, keyboard pedagogy, theory, performance studies.  
Friesen, John, DMA, cello.

Gilliam, Jeffrey, MMus, piano accompanying, theory.  
Guelker-Cone, Leslie, DMA, choral music, conducting.  
Israels, Charles, BA, jazz studies, ensembles, string bass, electric bass.  
Morris, Jack, MMus, opera, voice, vocal pedagogy, diction.  
Rutschman, Carla J., PhD, music history and literature, musicology, music education, lower brass  
Rutschman, Edward R., PhD, music theory, musicology, graduate program adviser, theory/analysis, counterpoint, music history.  
Schwede, Walter, MMus, violin.  
Térey-Smith, Mary, PhD, music history and literature, musicology, analysis, Collegium Musicum.  
Van Boer, Bertil H., PhD, musicology.  
Wallace, David, DMA, conducting, instrumental music, percussion, bands.  
Zoro, Eugene S., MMus., ear training, woodwind pedagogy, clarinet, chamber music.

### MASTER OF MUSIC, THESIS ONLY

Program Adviser: 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.

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 as well as 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 as well as 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.

### *Basic Requirements for All Concentrations*

- ❑ Music 541, 542, 543, 544 [select three] (12)
- ❑ Music 503 (4)
- ❑ Music 532 and 533 (6)
- ❑ Music 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

### Composition Concentration

- Music 534 (12)
- Electives (5)

### History and Literature Concentration

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

### Performance Concentration

Elect one of the following courses in each of three quarters:

- Music 540, 574, 575, 578, 581, 583 or any approved 400-level or 500-level course(s) (6)
- Music 511, 512, 513, 514, 515, 518 or 576 (9)
- Electives (2)

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

- Conducting Studies (9-17)
  - Music 501 and 502; and Music 519 or 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): Music 541, 542, 543, 544, 550, 531, 534 and approved 400-level and/or 500-level course(s)
- Applied Music (0-9)
  - Music 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: Music 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) Music 531, 534, 541, 542, 543, 544, 550, or any approved 400-level or 500-level course(s)
- Applied Music (0-9)
  - Music 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 M.Mus. 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. The Subject Test is required as a condition for advancement to candidacy for the Master of Music degree.

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

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

## Natural Science/Science Education

College of Arts and Sciences

### GRADUATE FACULTY

Dallas, Lee A., EdD, secondary education.  
 DeBari, Susan, PhD, geology.  
 Donovan, Deborah, PhD, biology.  
 Field, John, PhD, geology.  
 Miles, John, PhD, Huxley College of Environmental Studies.  
 Miller, John A., PhD, chemistry.  
 Morse, Joseph G., PhD, chemistry.  
 Myers, O. Eugene, PhD, Huxley College of Environmental Studies.  
 Parakh, Jal S., PhD, biology.  
 Stewart, James E., PhD, physics.  
 Whitmer, John C., PhD, chemistry.

### M.Ed. — NATURAL SCIENCE/SCIENCE EDUCATION

Head Program Adviser: Dr. John A. Miller with advisement in specialized areas by area advisers.

Biology: Dr. John A. Miller

Chemistry: Dr. John A. Miller

Earth Science: Dr. John Field

General Science, Physical Science: Dr. John A. Miller

Elementary Science: Dr. John A. Miller

Environmental Studies: Dr. John Miles

### Program Goals

A single philosophy underlies all options available to a teacher or other education specialist seeking an M.Ed. in science education at WWU. The program encourages persons to pursue their area of interest in science plus develop their own background and ideas in a manner that makes them better educators in their own teaching situation. Graduate students are expected to develop creative projects that will aid their own teaching and then implement the projects with the guidance and advice of the program adviser and other teachers.

The following goals reflect the philosophy of our M.Ed program:

- Educators will develop, with the aid of the adviser, a unique program designed to enhance their teaching competencies while at the same time assuring they have input from other teachers through interaction with professors and fellow students.
- Teachers will carefully reconsider and modify their own philosophy of teaching science and goals as a foundation for making curricular choices if they are truly considering the needs of their own students, rather than being mainly concerned with covering subject material.
- Teachers will develop a wide range of curricula and other project materials that are of value to their own teaching situation.

### Prerequisites

Students applying for admission to the natural science/science education M.Ed. program are normally expected to have a teaching certificate and have completed at least one year of teaching in the K-12 system prior to the quarter they will enter the program. Exceptions are made on a case-by-case basis for those applicants having other types of teaching experience or other specific positions for which this degree program would provide obvious benefits. See also the prerequisites to specific areas of specialization.

### Admission

In addition to the Graduate School required materials for admission, each student is required to submit a statement of personal career goals and reasons for seeking admission to the M.Ed. in natural science/science education.

### Basic Requirements (all programs)

- Edu 501, EdF 512, 513 (12)
- Sci Ed 501, 513 (7)

### Specific Test Requirements

Graduate Record Examination, General, or Miller Analogies Test.

### Areas of Specializations

*Secondary Programs:* Biology, Chemistry, Earth

Science, General Science, Physical Science, Environmental Studies

*Elementary Programs:* Elementary School Science, Environmental Studies

Prerequisites and requirements specific to the various areas of specialization are given below.

### Secondary Programs

*Biology Specialization, Thesis (I, 45 credits) or Non-Thesis (II, 48 credits)*

Program Adviser: See Dr. John A. Miller

#### Prerequisites

An applicant is expected to have completed the equivalent of an undergraduate major in biology including at least one course in organic chemistry. The student also must have had Sci Ed 491 (or the equivalent). Any deficiencies in these requirements must be made up outside the credit hour requirements for the Master of Education degree.

- Requirements in specialization
  - Biol 690 or Sci Ed 690 (I:6-9)
  - Sci Ed 598 (II:6)
  - Electives: Courses selected under advisement (I:17-20, II:23)

*Chemistry Specialization, Thesis (I, 45 credits) or Non-Thesis (II, 48 credits)*

Program Adviser: Dr. John A. Miller

#### Prerequisites

Completion of an undergraduate teacher education major in chemistry. An evaluation of the undergraduate record will determine any deficiencies which must be made up outside of the credit requirements for the Master of Education program.

- Requirements in specialization
  - Sci Ed 580 or 590 (I and II:2-5)
  - Sci Ed 690 (I:6)
  - Sci Ed 598 (II:6)
  - Electives: Courses selected under advisement (I:15-18, II:18-21)

*Earth Science Specialization, Thesis (I, 45 credits) or Non-Thesis (II, 48 credits)*

Program Adviser: Dr. John Field

#### Prerequisites

Completion of an undergraduate major in earth science or geology. Undergraduate majors in chemistry, physics, physical science geography, general science or biology may also be eligible provided the specific requirements below have been met.

The following courses or their equivalents must be completed: Geol 211 (5), 212 (4), 306 (6), 310 (5), 407a (4); Chem 121 (5) and 122 (5); Physics 114 (4) and Astron 315 (3) or 219 (5); Math 115 (4); plus an additional 13 credits in chemistry, physics, math or biology. Any deficiencies in these requirements may be made up outside the credit hour requirements for the Master of Education degree.

- Requirements in specialization
  - Geology field course (I and II:5-10)
  - Geol 690 or Sci Ed 690 (I:6-12)
  - Sci Ed 598 (II:6)

- Electives selected under advisement (I:4-15, II:13-18)

*General Science, Physical Science specialization: Thesis or Field Project (I,45 credits) or Non-Thesis (II,48 credits)*

Program Adviser: Dr. John A. Miller

#### *Prerequisites*

Students should at minimum have a secondary teaching certificate with endorsement in one or more of the natural sciences. A bachelor's degree in a science field is highly desirable.

- Requirements in specialization
  - Sci Ed 690a or 690b (I: 6-12)
  - Sci Ed 580a or 590 (II: 4-5)
  - Electives: Courses selected under advisement from astronomy, biology, chemistry, geology, environmental studies, physics, science education, secondary, elementary, or instructional technology. Specialization in physical science will include 5-15 credits in chemistry and 5-15 credits in physics. (I: 14-20; II: 24-27)

### *Elementary Programs*

#### *Prerequisites*

An applicant should be a practicing elementary school teacher. Applicants should have completed two quarters of science methods courses and the natural science education sequence with grades of B or better. The natural science education sequence normally is considered to consist of one course in each of the science areas (biology, chemistry, earth science and physics).

The curriculum resource specialty is designed to prepare teachers to take a leadership role in science education as well as increasing their competence to teach science.

*Elementary School Science Specialization: Thesis or Field Project (I,45 credits) or Non-Thesis (II,48 credits)*

- Requirements in specialization
  - Courses selected under advisement from Sci Ed 500, 517 series, 582, 583, 584, 592, 593, 594, Geol 414a and 414b having a science content basis (I or II: 12)
  - SciEd 690a or 690b (I: 6-12)
  - SciEd 580 (II: 4-5)
  - Electives: Courses selected under advisement from science education, secondary, elementary, instructional technology, biology, chemistry, geology or physics and related fields (I:0-8; II:3-17)
- Additional requirements for curriculum resource specialist
  - Sci Ed 511, 512 (I or II:6-9)

### *Elementary and Secondary Programs in Environmental Studies*

Program Adviser: Dr. John Miles

#### *Prerequisites*

An applicant should be a practicing public school teacher or be teaching in an educational enterprise with a focus on environmental or outdoor education. The applicant should have completed a minimum of a natural science education sequence with grades of B or better. Each applicant's background will be examined to determine if one or more additional courses, besides those prescribed for the

master's degree, are needed to remove deficiencies in background preparation.

*Elementary or Secondary, Thesis or Field Project (I,49-59 credits) or Non-Thesis (II,49-59 credits)*

- Requirements in specialization
  - Envr 571 (4)
  - Envr 690a or 690b or Sci Ed 690a or 690b (I: 6-12)
  - Envr 598 and/or SciEd 598 (II: 6-12)
- Electives: courses selected under advisement from natural science, education, and include at least 10 credits in environmental studies or geography (I or II: 20-24)

## Physical Education, Health and Recreation

*College of Arts and Sciences*

### GRADUATE FACULTY

Brilla, Lorraine, PhD, exercise physiology/nutrition.  
Caine, Dennis, PhD, lifespan motor development/sports injury epidemiology/pedagogy.  
Chalmers, Gordon, PhD, motor control/learning.  
Clumpner, Roy, PhD, socio-cultural aspects of physical education/pedagogy.  
Knutzen, Kathleen, PhD, biomechanics/kinesiology.  
Martin, LeaAnn, PhD, pedagogy/elementary physical education/curriculum.  
Vernacchia, Ralph, PhD, psychology of sport/sociology of sport/motor learning.

#### Adjunct Faculty

Brown, Daniel, MD, cardiology/rehabilitation.

### M.S. — HUMAN MOVEMENT AND PERFORMANCE, THESIS

Program Adviser: Dr. Lorraine Brilla, CV 26  
(360) 650-3056

#### *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.

#### *Prerequisites*

Physical education major/minor or equivalent courses from the exercise science, socio-cultural and professional activity areas. If a student does not have a major or minor, the equivalent courses consist of the following: three courses from the exercise science area (PE 301, 302, 303, 307, 485, 490), two courses from the socio-cultural area (PE 308, 309, 310, 407, 409), and two general activity classes

(PE 102, 103, 113, 120, 122, 136, 139, 154, 167, 168, 208). 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 psychology: Psych 201; one class from Psych 311, 312, 313, 314, 315, 316; and one class from Psych 321, 322, 323, 324, 325, 326.

### *Admission*

The maximum number of students enrolled into each area is limited.

### *Deadlines*

Please see Graduate School deadlines.

### *Graduate Teaching Assistantship (TA) Deadlines*

Preferred consideration will be given to applicants who have complete files by April 15.

### *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*

46-50 credits

Exercise Science (50 credits)

Sport Psychology (46 credits)

- Basic Requirements: PE 506, 520, 690 (13-16)

#### *Exercise Science*

- Requirements: PE 510, 513, 540, 543, 544; Psych 513 (24)
- Electives: select 10-13 credits of 500-level courses under advisement. Recommended courses are: PE 502, 507, 511, 520, 533, 541, 546, 592; Psych 512

#### *Sport Psychology*

- Requirements: PE 541, 542, 551, 592; Psych 511 (19)
- Electives: select 12-15 credits of 500-level courses under advisement. Recommended courses are: PE 502, 507, 511, 513, 533, 540, 543, 544, 546; Psych 502, 504, 512, 513, 521, 524, 526, 527, 528 (14)

## Political Science

*College of Arts and Sciences*

### GRADUATE FACULTY

Alper, Donald K., PhD, American politics, political process, Canadian politics.

Donovan, Todd A., PhD, American politics, state and local, methodology.

Foisy, Maurice H., PhD, political theory, policy, methodology.

Hogan, Eugene J., PhD, public law.

Hoover, Kenneth R., PhD, political theory, comparative public policy, ideology.

Johnson, Vernon D., PhD, comparative politics, development in the Third World.

Miner, Ralph E., PhD, public policy and administration, political economy.

Parris, Kristen D., PhD, comparative politics, Chinese politics, East Asian studies.

Rutan, Gerard F., PhD, comparative politics, political theory, national intelligence and security studies.

Salazar, Debra J., PhD, environmental politics, public policy, American politics

Weir, Sara J., PhD, public policy, American politics, women and politics.

Ziegler, David W., PhD, international relations, political economy.

## M.A. — POLITICAL SCIENCE, THESIS AND NON-THESIS

Program Adviser: Dr. Kristen D. Parris, Arntzen Hall 422

The Political Science Department offers a thesis and a non-thesis option leading to the Master of Arts degree in political science. The thesis option is offered for the student who wishes to do advanced research in a particular area.

Students may specialize in public policy. This specialization is designed primarily for students planning or having careers in the public service and for others whose careers involve considerable participation in the public policy process.

Students also may specialize in the environmental policy program, which is jointly offered with Huxley College of Environmental Studies (see next section). This specialization is intended for students interested in developing a cognate program involving one field of study (of the four offered) in political science and a field in environmental policy-making studies.

### *Admissions and Prerequisites*

Students with a bachelor's degree who meet the requirements of the Graduate School and who show evidence of strong academic performance and scholarly potential are invited to apply. Admissions preferences are 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 and social science methodology. Admissions are approved by the departmental Graduate Committee. Any deficiencies must be made up early in the program before the student is advanced to candidacy.

To ensure consideration for fall quarter, complete applications must be received by February 1. Please include a two-page statement of purpose with the application materials requested by the Graduate School.

### *Specific Test Requirements*

Graduate Record Examination, General Test.

### *Financial Aid*

A number of teaching assistantships are available — apply by February 1. Contact the Student Financial Resources office for further information regarding financial aid.

### *Degree Requirements*

#### *Basic Requirements*

- Pol Sci 501, 502

- Pol Sci 690 [thesis option]

*Thesis Option* (minimum 45 credits)

Courses are selected under advisement from 400- or 500-level courses (a candidate must complete at least 35 hours in courses available only for graduate students). The candidate is required to take the basic course in two of the following fields of concentration. The candidate must take additional 500-level political science courses in their major field and at least one additional 500-level course in their minor field, under advisement.

- Public Policy: Pol Sci 503
- Comparative Government: Pol Sci 505
- American Politics: Pol Sci 540
- Political Theory: Pol Sci 560

An oral defense of the thesis proposal and of the completed thesis is required.

*Non-Thesis Option* (minimum 48 credits)

Courses are selected under advisement from 400- to 500-level courses (a candidate must complete at least 38 hours in courses available only to graduate students). A candidate is required to take the basic course in two of the following fields of concentration. A candidate is required to take additional courses in their major field, under advisement.

For the non-thesis option, written and oral comprehensive exams in a major and minor field (see list following) are required.

- Public Policy: Pol Sci 503
- Comparative Government: Pol Sci 505
- American Politics: Pol Sci 540
- Political Theory: Pol Sci 560

*Public Policy, Non-Thesis Specialization* (minimum 48 credits)

- Pol Sci 501, 502, 503, 510, 521, 524 or 525, 540, 550. Upon approval of graduate adviser, one other political science 500-level course may be used as a substitution.
- Electives selected under advisement from 400- to 500-level courses in political science, economics, psychology, sociology, education, business administration, and Huxley College of Environmental Studies
- Written and oral comprehensive examination in public policy field only

## M.A. — POLITICAL SCIENCE (ENVIRONMENTAL STUDIES), THESIS AND NON-THESIS

Curriculum Coordinators: Dr. Debra Salazar, Political Science, Arntzen Hall 415; Dr. Lynn A. Robbins, Huxley College, Arntzen Hall 232

The political science/environmental studies curriculum is a joint offering of the Political Science Department and Huxley College of Environmental Studies.

### *Admissions and Prerequisites*

Prerequisites are the same as for the M.A. in political science program with additional consideration given to applicants who have a background in environmental studies, natural science or a related field. To ensure consideration for fall quarter, complete applications must

be received by February 1. Admission decisions for the political science (environmental studies) program normally will be made no later than March 15.

Students must complete the following requirements for the M.A. in political science/environmental studies:

*Thesis Option* (minimum 45 credits)

- Required courses: Pol Sci 501, Political Science as a Discipline [5]; Pol Sci 502, Research Techniques [5]; Pol Sci/Envr 524, Environmental Politics and Policy [3] (13)
- One political science field from among four offered by the department (American politics, public policy, comparative politics, political theory); students will be required to complete the core course plus at least one other 500-level course in the field (8-10)
- Interdisciplinary environmental studies field to be constructed by the student in consultation with environmental studies option adviser; must include three environmental courses
- Thesis may be completed as Pol Sci 690 or Envr 690a [9]; an oral defense of the thesis is required
- Electives to total 45 credits minimum

*Non-Thesis Option* (minimum 48 credits)

- Same as above except for thesis but will include additional 12 credits of course work (at least 1 course in each field; selected in consultation with environmental studies adviser)
- Comprehensive exam in the political science field (exam will include an applied section on environmental policy studies)

## Psychology

*College of Arts and Sciences*

### GRADUATE FACULTY

Byrne, Christina, PhD, women's issues, violence against women, psychological trauma.  
 Carmean, Stephen, PhD, perception, thinking, communication.  
 Crain-Thoreson, Catherine, PhD, educational psychology, linguistics.  
 Cvetkovich, George, PhD, social psychology, environmental and population psychology.  
 Dinnel, Dale L., PhD, educational psychology, cognition, problem solving.  
 Elich, Peter J., PhD, educational, human learning, developmental.  
 Forgays, Deborah K., PhD, family interactions, Type A personality, women's issues.  
 Grote, Frederick W., Jr., PhD, social development in children, early experience, child psychology and social issues.  
 Hayden, Davis C., PhD, counseling psychology, counseling process research, computer simulations, family therapy.  
 Hayes, Susanna, PhD, school counseling, cross-cultural counseling, training and consultation with human services organizations.  
 Hyman, Ira, PhD, cognitive psychology, social psychology, repressed memories.  
 Khan, Saera, PhD, social cognition, stereotypes, intergroup discrimination.  
 Kleinknecht, Ronald A., PhD, behavior therapy, fear/anxiety, health psychology.  
 Lewis, Arleen C., PhD, school counseling, educational psychology, clinical.  
 Lippman, Louis G., PhD, learning, verbal learning.  
 Lippman, Marcia Z., PhD, cognitive development, psycho-linguistics, day care.  
 Lonner, Walter J., PhD, cross-cultural psychology, tests, counseling.

McDonald-Miszczak, Leslie, PhD, adult development and aging, successful aging.  
 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.  
 Miller, Laurence, PhD, experimental psychology, operant conditioning, psychological themes in films.  
 Ottaway, Scott, PhD, cognition and memory, computational models of cognition, statistics.  
 Prim, Merle M., PhD, sub-human primate behavior, physiological psychology, sensory, comparative.  
 Shaffer, Ronald W., PhD, learning, perception, phenomenology.  
 Sue, David, PhD, clinical community counseling, Asian-American issues, sex therapy.  
 Thompson, Richard W., PhD, physiological, comparative, psychopharmacology, history and systems.  
 Thorndike, Robert M., PhD, multivariate statistics, measurement, assessment of intelligence.  
 Trimble, Joseph E., PhD, social, cross-cultural.

**M.Ed. — SCHOOL COUNSELOR, THESIS AND NON-THESIS**

Program Adviser: Dr. Arleen Lewis, Miller Hall 266

The M.Ed. school counseling program prepares professional counselors for employment in educational settings and is designed for those students intending to apply for the state certificate in guidance and counseling at the elementary and secondary levels. Certification as a public school teacher is not required for admission to the program. The school counseling program is accredited by the Council for the Accreditation of Counseling and Related Educational Programs (CACREP).

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

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 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 statements of personal commitment, letters of reference and interviews where possible.

*Prerequisites*

Courses in general psychology, research methods in psychology or education, and psychology of learning, or a background in professional education.

*Specific Test Requirements*

Graduate Record Examination, General, required; subject in Psychology recommended.

*Course Requirements (83 credit minimum)*

- Psych 502, 504, 531, 532, 551, 553, 554, 555, 556, 557, 558, 560, 561, 564, 565 (I and II:47)
- Edu 501, EdF 512, 513 (I and II:12)
- Psych 570 [4-9], 670 [18-21] (I and II:24-30)

- Psych 690 [for those students taking the thesis option] (I:1-6)

*Written Examinations*

Each student is required to write an area comprehensive examination; for information contact the program adviser. Each student also is required to write a general education comprehensive exam; information is available from the Woodring College of Education.

**M.S. — PSYCHOLOGY, THESIS ONLY**

Program Adviser: Dr. Ira Hyman, Miller Hall 266

*Curriculum*

The M.S. in psychology has two curricular branches — general psychology and mental health counseling. Each program requires the completion of a thesis. Particular curriculum requirements for each program are listed below. However, the following information applies to both the general 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. A course in the history or systems of psychology or in philosophy of science is also recommended.

**General Psychology:** General psychology, statistics through inference, and a course in the history and systems of psychology or the philosophy of science. 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. A laboratory course in psychology is strongly recommended.

*Specific Test Requirements*

Graduate Record Examination, General, required; Subject in Psychology recommended.

*Admissions Procedures*

Applicants are reviewed for admission to the M.S. programs in psychology by the curriculum committee corresponding to the curriculum applied for (i.e., general 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 (for mental health counseling) or personal statement (for general). 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.

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 M.S. 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.

## **M.S. IN PSYCHOLOGY — GENERAL PSYCHOLOGY CURRICULUM**

Curriculum Coordinator: Dr. Laurence Miller, Miller Hall 266

The graduate curriculum leading to an M.S. degree in general psychology is designed to provide basic and fundamental knowledge of the various aspects of experience and behavior. This goal is accomplished through required courses in foundational areas of psychology, statistics and research design, and measurement. Required seminars, thesis work and elective courses in psychology and related areas complete the curriculum.

Students in the 60-credit general psychology curriculum must complete the core course requirements: 501, 502, 503, 504, 505, 510, 511, 512, 513, 583 and 690. In addition, students in the general psychology curriculum must complete four seminars from among the following: 520-532, as well as 6 elective credits under advisement.

A concentration offered within the general psychology curriculum is Measurement, Evaluation and Statistical Analysis (MESA). In addition to the course requirements for students in the general curriculum (Psych 501-505, 510-513, 583, 690, plus seminars), students will take the following psychology courses: 515, Multivariate Analysis (3); 516, Advanced Research and Evaluation Design and Data Analysis (3); 514, Topics in Quantitative Psychology

(3-6); and 530, Seminar in Measurement (3). A thesis on an appropriate topic is also required. Additionally, students will take other electives under advisement and appropriate course work in computer science, depending on prior experience.

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

## **M.S. IN PSYCHOLOGY — MENTAL HEALTH COUNSELING CURRICULUM**

Curriculum Coordinator: Dr. Davis Hayden, Miller Hall 266

This two-year (91-credit) curriculum is designed to prepare students for careers in the field of mental health. The mental health counseling program is accredited by the Council for the Accreditation of Counseling and Related Educational Programs (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.

Students in the mental health counseling curriculum must complete the core course requirements for the M.S. psychology program (501 or 503, 502, 504, 510, 511, 512, 583, 690). In addition, the following courses must be completed: Psych 531, 532, 553, 555, 557, 558, 560, 561, 564, 565, 570, 670.

## **Sociology**

*College of Arts and Sciences*

### **GRADUATE FACULTY**

Bradley, Karen, PhD, stratification, gender, organizations, political sociology.

Bulcroft, Kris, PhD, gerontology, family, research methods.

Crowder, Kyle D., PhD, urban sociology, social demography, stratification; family.

Gauthier, Anne, PhD, family sociology, demography, life-course analysis.

Inverarity, James, PhD, law, research methods, theory, criminology.

Mahoney, E. R., PhD, sexual behavior, research methodology, social psychology.

Richardson, John (Chair), PhD, chair; historical sociology, education, theory.

Savolainen, Jukka, PhD, crime, deviance, family sociology, demography.

Simpson, Carl, PhD, survey research, applied sociology, education, self in society.

Stephan, G. Edward, PhD, theory, demography.

Teachman, Jay D., PhD, families and public policy, social inequality, urban communities, population and development, demographic methods, social statistics.

Tedrow, Lucky, Adjunct Faculty, social and historical demography, computer applications.

### For further information:

Contact: Dr. James Inverarity, Graduate Adviser, Department of Sociology, Western Washington University, Bellingham, WA 98225-9081, (360) 650-3006. The Department of Sociology is not accepting applications for the 1999-2000 academic year. The department anticipates admitting students beginning fall 2000. Please contact the adviser for information.

### M.A. — SOCIOLOGY, THESIS ONLY

The M.A. in sociology emphasizes research. A significant proportion of the program involves students directly in the sociological research process, and required courses emphasize both content and methods.

Sociology M.A. students will develop particular expertise in at least one content area within the field of sociology. In coordination with core courses, students will work with one or more faculty content area advisers for the duration of the M.A. program. Students are expected to select one of the areas in which the sociology faculty specialize. Thesis research will be conducted in the student's content specialization and under the direction of the content area adviser.

The areas of specialization open to students may vary slightly from year to year. The department will provide prospective students with a listing of these areas.

The program is structured so that it can be completed in four quarters. Students are admitted only in fall quarters. The fall, winter and spring courses are taken in sequence for four-quarter M.A., and constitute full-time work. The fourth quarter, in which the thesis is completed and defended, is conducted entirely as independent tutorial. Students are not required to complete within one year, but it is possible to do so and the department encourages students to do so.

Students considering an eventual application to Western's Sociology master's program are encouraged to consult early with the department to receive advisement on ways to coordinate undergraduate and graduate studies. While there is no need to do so, seeking early advisement can help ensure that students will be able to complete the program in one year.

### *Specific Entrance Requirements*

In addition to meeting graduate school requirements and deadlines, applicants must submit a sample of written work and an essay of not more than 500 words indicating reasons for wanting to do graduate work in sociology and describing major interests within sociology.

### *Deadlines*

The department 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 is limited, all applicants are strongly encouraged to submit application materials by February 1.

### *Prerequisites*

A bachelor's degree, normally in sociology, and departmental approval. To apply, students must have a minimum of 20 quarter hours of upper-division sociology courses, including theory, research methods and statistics. Students admitted with limited background in sociology will be required to complete selected undergraduate courses in addition to the M.A. program.

### *Requirements*

Most courses in the sociology M.A. curriculum are required and must be taken in sequence. The required core includes two theory courses, 501 and 504; three research methods courses, 505, 515 and 563; and 12 credits of thesis work. At least 15 credits of elective content seminars are arranged in consultation with the graduate adviser. Up to 8 elective credits may be taken from other departments if approved by the Sociology department graduate adviser. Program totals 45 credits (minimum).

Procedures such as advancement to candidacy and the thesis defense, as well as a listing of available content/thesis areas, are included in the *Guide to Graduate Study in Sociology*, available through the department.

## Theatre Arts

*College of Fine and Performing Arts*

### GRADUATE FACULTY

Kuntz, Mark, MFA  
Leverett, Jr., H. Victor, MA  
Lortz, James, MFA  
O'Reilly, Maureen, MFA.  
Taylor, Lee H., MA.  
Ward, Thomas, MFA.

### M.A. — THEATRE

Two options lead to the M.A. degree. The thesis (Option I — 45 credits minimum) is offered for the student primarily interested in research and planning to enter a Ph.D. program or pursue other advanced academic training. It is also appropriate in some instances (e.g., directing, playwriting) as training for professional performance. Option II (48 credits minimum) is typical for the student pursuing a career as a professional performer or as a teacher.

Students are admitted to the summer/fall terms only.

### Prerequisites

An undergraduate major in theatre or approval by graduate adviser. A personal interview may be required as well as evidence of applicant's qualifications.

### Specific Test Requirements

Graduate Record Examination, General Test.

### Core Requirements

All candidates must take the following:

- ThA 501 (4)
- ThA 522 (4)
- Two courses from ThA 528a,b,c,d,e (6)
- ThA 570 (4)

### Requirements in Specialty

Courses are offered in six specialties. The first course in each specialty (italicized) is called the "key course" in that specialty.

- Acting
  - *560*, 561, 690 (i) or 691 (ii) and 595 (ii), and one key course outside specialty
- Creative Education
  - *550*, 551, 690 (I) or 691 (I) and 595 (II) and one key course outside specialty
- Design/Technical Theatre
  - *511*, 512, 690 (I) or 691 (II) and 595 (II), and one key course outside specialty
- Directing
  - *571*, 572, 690 (I) or 691 (II) and 595 (II), and one key course outside specialty
- Dramatic Literature and Criticism
  - Three additional courses (beyond core) from *528a,b,c,d* or *e*, 690 (I) or 691 (II) and 595 (II), and one key course outside specialty
- Playwriting
  - *585*, *586*, 690 (I) or 691 (II) and 595 (II), and one key course outside specialty

Key courses outside specialty are selected under advisement.

### Electives

Electives will be selected under advisement. No more than 10 credits of course work at the 400 level may be applied to the M.A. degree. No more than six credits of Theatre Arts 500 (Independent Studies) may be applied to the M.A. degree unless special approval is granted in advance by the graduate program adviser.

### Language Requirement

Demonstrate a reading knowledge of an appropriate foreign language or related studies as approved by adviser.

In most instances knowledge of the subject matter and techniques of an allied discipline prove a valuable research or performance tool for the student as a substitute for the language requirement. The department may require, in lieu of a language, the satisfactory completion of additional course work (beyond the basic 45-48 credits required for the M.A. degree) in a collateral discipline. The course work shall be at the highest level for which the student qualifies according to the offering department and must be approved in advance by the graduate adviser.

### Comprehensive Examination

After admission to candidacy, at a time agreed upon by the candidate and the graduate program adviser, the student will take a comprehensive written and oral examination demonstrating a broad competence in the theatrical and dramatic disciplines and a more detailed knowledge in the student's specialty.

## Faculty/Student-Designed Programs

### M.A., M.S., M.Ed.

At times students and faculty are able to develop special programs that are more interdisciplinary than the master's programs described in this catalog. In each instance this requires a plan of study that has been worked out by a group of faculty and an individual student and thereafter has been approved by the University's Graduate Council. At least two or more graduate disciplines must be involved.

Programs of this type are restricted by several factors: current offerings which can provide a basis for the individual program; availability of appropriate faculty for special assignment; the applicant's academic preparation and ability; and the internal logic, or relationship of the elements of the proposed program. Each case is considered on its merits.

For candidates who are currently enrolled as graduate students no more than 15 credits of course work (completed by the end of the quarter the petition is approved) can apply toward the designated program.

Detailed information can be obtained by contacting the Graduate Office. Ask for *Fact Sheet*:

*Faculty/Student-Designed Programs*. Procedures for applying are contained in the *Fact Sheet*.

## COLLEGE OF ARTS AND SCIENCES

*Dr. Peter J. Elich, Dean*

The College of Arts and Sciences, Western's largest academic division, contains 20 departments offering more than 50 major programs at both bachelor's and master's degree levels. Students may select majors in the traditional disciplines of the humanities, social sciences and natural sciences, and a variety of professional and applied areas. In addition, there is available a variety of interdisciplinary programs, and students may design their own majors through a program managed by the Department of Liberal Studies.

The College offers its undergraduate students a three-component liberal education: first, a program of education-in-breadth through *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, interdisciplinary, professional, pre-professional or vocational *major* designed to prepare students for post-graduate careers or advanced courses of study; and third, a choice of *elective courses* which can help satisfy the student's curiosity about any of the multitude of subjects which the University's curriculum embraces.

The aim of such a liberal education is not only to prepare students for the special roles they will take on as baccalaureate graduates but also to help students acquire characteristics which distinguish educated persons. Thus, the faculty of the College, as a community of teachers and scholars, hope 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 basic tools of literacy and mathematics; and who have acquired levels of information about the worlds of man and nature in the past and present sufficient for responsible citizenship and for the enjoyment of civilized society.

### *Academic Programs Leading to Undergraduate and Graduate Degrees*

American Cultural Studies . . . . .	BA
Anthropology . . . . .	BA, BA/Ed, MA
Anthropology/Biology . . . . .	BA
Biology . . . . .	BA, BS, MS
Biochemistry/Cellular & Molecular Biology . . . . .	BS
Biology/Chemistry . . . . .	BA/Ed
Biology/Mathematics . . . . .	BS
Canadian-American Studies . . . . .	BA
Chemistry . . . . .	BA, BS, MS
Chemistry/Mathematics . . . . .	BA/Ed
Chemistry/Physics . . . . .	BA/Ed
Classical Studies . . . . .	BA
Communication . . . . .	BA, BA/Ed
Communication/English . . . . .	BA/Ed
Community Health . . . . .	BS
Computer Science . . . . .	BA/Ed, BS, MS
Earth Science . . . . .	BA/Ed
Earth Science/General Science . . . . .	BA/Ed
East Asian Studies . . . . .	BA
Electronic Engineering Technology . . . . .	BS

English . . . . .	BA, BA/Ed, MA
English/Theatre . . . . .	BA/Ed
English: Writing Concentration . . . . .	BA
Environmental Engineering Geology . . . . .	BS
General Science . . . . .	BA/Ed
Geology . . . . .	BA, BS, MS
Health Education . . . . .	BS
History . . . . .	BA, BA/Ed, MA
Humanities . . . . .	BA
Industrial Design . . . . .	BS
Industrial Technology . . . . .	BS
Journalism . . . . .	BA
Manufacturing Engineering Technology . . . . .	BS
Mathematics . . . . .	BS, BA/Ed, MS
Mathematics/Computer Science . . . . .	BS
Modern and Classical Languages (French, German, Spanish) . . . . .	BA
(French, German, Spanish) . . . . .	BA/Ed
(French, German, Spanish) . . . . .	M/Ed
Natural Science . . . . .	M/Ed
Philosophy . . . . .	BA
Physical Education . . . . .	BA, BA/Ed, MS
Physics . . . . .	BS
Physics/Computer Science . . . . .	BS
Physics/Mathematics . . . . .	BA/Ed
Political Science . . . . .	BA, BA/Ed, MA
Political Science/Economics . . . . .	BA
Psychology . . . . .	BA, BA/Ed, M/Ed, MS
Psychology-Industrial . . . . .	BA
Recreation . . . . .	BA
School Counseling . . . . .	M/Ed
School Health Education . . . . .	BA/Ed
Science Education . . . . .	M/Ed
Social Studies . . . . .	BA/Ed
Sociology . . . . .	BA, BA/Ed, BS, MA
Speech Pathology & Audiology . . . . .	BA, MA, BA/Ed
Student-Faculty Designed Major . . . . .	BA, BA/Ed, BS
Technology Education . . . . .	BS, M/Ed

### *Majors and Minors*

In addition to the General University Requirements 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 advisers 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 Arts and 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 usually consists largely of courses that meet the General University Requirements, 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. Robert Marshall . . . . . Anthropology  
Biology
- Dr. Mark L. Wicholas . . . . . Chemistry
- Dr. Anna Eblen . . . . . Communication
- Dr. Michael Seilo . . . . . Communication Sciences  
and Disorders

- Dr. Debra Jusak . . . . . Computer Science
- Dr. Kathleen Kitto . . . . . Engineering Technology  
English
- Dr. Thor Hansen . . . . . Geology
- Dr. George E. Mariz . . . . . History
- Dr. Floyd McKay . . . . . Journalism
- Dr. William Stoever . . . . . Liberal Studies
- Dr. Tjalling Ypma . . . . . Mathematics
- Dr. Ron Riggins — Interim Chair . . . . . Modern & Classical  
Languages
- Dr. Phillip Montague . . . . . Philosophy
- Dr. Kathleen Knutzen . . . . . Physical Education, Health &  
Recreation
- Dr. Leslie Spanel . . . . . Physics/Astronomy
- Dr. Eugene Hogan . . . . . Political Science
- Dr. Ronald A. Kleinknecht . . . . . Psychology
- Dr. Jay Teachman . . . . . Sociology

**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 *Timetable of Classes*, the Summer Bulletin or by contacting University Extended Programs.



## 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 as well as 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, Lawrence Estrada, Miller Hall 175 or Fairhaven College 330.

### BACHELOR OF ARTS

#### *Major — American Cultural Studies*

70 credits

*Core Requirements* 40-42 credits

- ❑ AmSt 301, 499
- ❑ Three courses from AmSt 202, 203, 204, 205, 242 or 297
- ❑ Two courses from the social sciences, selected under advisement from Anth 104; Soc 201 or 369; Geog 201; Pol Sci 101 or 250; Fair 210f
- ❑ One course from Hist 261, 275, 362, 369, 417d or 462
- ❑ Two courses from Eng 234, 235, 236, 327, 341, 408, 420, 422, 424 or 425
- ❑ One course from Art Hist 331 or 360 (plus prerequisites); or Music 202 or 205 or Dnce 232

*Individualized Program of Study* 28-30 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 or 242
- ❑ AmSt 301
- ❑ One course from Eng 234, 235, 327 or 341
- ❑ One course from Hist 261, 275, 362, 462 or 417d

*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 program in Native American studies is designed to give students an in-depth background on Native American culture and traditions. The minor is recommended for those students who plan to teach, research, work with, administer to or expand their knowledge about Native American populations within the United States. The program is interdisciplinary and will allow students to combine the minor concentration with an appropriate major designation.

For more information, contact Dr. John Purdy, coordinator of the Native American studies minor concentration, or Dr. Lawrence J. Estrada, director of American cultural studies.

*Core Courses* 19-21 credits

- ❑ AmSt 202, 301
- ❑ Anth 361 or 462
- ❑ Eng 235
- ❑ Hist 275

*Related courses* 4-6 credits under advisement, such as Eng 420, Fair 357 or 455

#### *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 as well as 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. Ning Yu, 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 each of the two categories listed below:

- Contextualizing Asian America
  - Eng 335, 425
  - Hist 462
  - Soc 369
- Focusing on Asian America
  - Eng 327c
  - Fair 310, 320
- 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. Ning Yu.

### *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, as well as to explore the GLBT contributions to shaping U.S. History, culture literature, and politics.

For more information, contact Dr. Greta Gaard, coordinator of the GLBT Studies minor concentration or Dr. Lawrence J. Estrada, director of the American Cultural Studies.

*Core courses* 15 credits

- AmSt 242/Fair 219: The Gay, Lesbian, Bisexual [Transgendered] Experience (3 cr)
- Eng 327/Fair 322: GLBT Literatures (4 cr)
- Hist 265: Lesbian and Gay Experience in American History (4 cr)
- AmSt 301: Comparative Cultural Studies (4 cr)

*Related courses* 10 credits

- Anth 353: Sex and Gender in Culture (4 cr)
- Hist 465: History of Sexuality (4 cr)
- Fair 313: GLBT Issues in Education (4 cr)
- ThA 428: Major Dramatists: Gay and Lesbian Literatures (3 cr)
- PolSci 421: Lesbian/Gay/Bisexual Transgendered Politics (5 cr)

- Fair 314: Science and Stories of GLBT Health (4 cr)
- 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.

### *Teaching Endorsement*

Completion of the major in American cultural studies together with the program requirements for social studies education, secondary, can lead to endorsement in social studies at the secondary level. See the Social Studies Education Program section of this catalog.

Students considering this option should first confer with the director of this program.

## COURSES IN AMERICAN CULTURAL STUDIES

*Courses numbered X37; X97; 300, 400; 417, 445 are described on page 31 of this catalog.*

### **202 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 impact native indigenous populations.

### **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 Fairhaven 218.

### **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.

### **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.

### **242 THE LESBIAN, GAY, BISEXUAL EXPERIENCE (3)**

The development of the lesbian, gay, bisexual community in the United States, with emphasis on identity formation, historical and sociological influences and the effects of encounters between gay cultures and the larger American cultural context. Also offered as Fair 219.

### **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.

### **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 SPECIAL PROBLEMS/SENIOR RESEARCH SEMINAR (4)**

Prereq: AmSt 301 and senior status. Research designed to demonstrate the student's competence in working with the tools of the discipline. An approved AmSt 417 seminar may substitute for AmSt 499.

# 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 because it focuses intensely on non-Western cultures. 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** is the "cultural anthropology" of the human past. It 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, emphasizing the diversity of world languages and non-verbal human communication.

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 Human Relations Area Files complete to 1991 for those pursuing cross-cultural and culture-area research. Linguistic specializations available include Mongolian, Chinese and Japanese.

Degrees offered are the B.A. and the B.A. in Education. In addition a combined anthropology/biology B.A. or B.S. 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 B.A. 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 B.A. or B.S. 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
- Biol 201, 202, 203
- Anth 201, 210, 215
- Physics and calculus

## ANTHROPOLOGY FACULTY

ROBERT C. MARSHALL (1985) Chair and Associate Professor. BA, Youngstown State University; PhD, University of Pittsburgh.  
 JULIANNA ACHESON (1998) Assistant Professor. BA, University of Maine; MA, PhD, University of Arizona.  
 DANIEL L. BOXBERGER (1983) 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.  
 JOYCE D. HAMMOND (1984) Professor. BA, MA, Brown University; PhD, University of Illinois.  
 LINDA AMY KIMBALL (1976) Professor. BSEd, MA, PhD, The Ohio State University.  
 TODD A. KOETJE (1997) Assistant Professor. BA, University of Washington; MA, State University of New York, Binghamton; PhD, University of Tennessee.  
 JAMES LOUCKY (1989) Associate Professor. BA, Haverford College; MA, PhD, University of California, Los Angeles.  
 JOAN C. STEVENSON (1979) Professor. BA, University of Washington; MA, PhD, University of Wisconsin-Milwaukee.  
 KATHLEEN YOUNG (1996) Assistant 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 A.A. degree curriculum in community college, or those transferring without attaining the A.A. degree, or those entering as freshmen who are interested in the anthropology/biology major should seek advisement as soon as possible. Anthropology/biology B.A. or B.S. 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. (Please take human anatomy and physiology if it is offered.)

## BACHELOR OF ARTS

### Major — Anthropology

65 credits

#### Cultural 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 335, or another basic statistics course under departmental advisement

#### Topical Skills

- Anth 420 or 470 or 471 or 427 or 480 or 495 (where appropriate an internship, practicum or archaeological methods course may be substituted under advisement)

#### Specialized Topics Component

- At least one course from the following: Anth 330, 351, 353, 424, 429, 431, 453, 475, 480, 481, 482, 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.

### 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.

### 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 major requirements
- 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 420, 427, 470
- Elective credits in anthropology to complete the 65-credit anthropology major requirement
- 12 credits of supporting courses in the sciences or mathematics selected under advisement. Strongly recommended courses include: Geol 310, 316, 413, 415, 442 or 447; Geog 330, 351, 352, 432, 433 or 452

### Combined Major — Anthropology/Biology

86 credits including 20 in supporting courses; Biology Phase II status required for admission into 300- and 400-level biology courses for biology majors.

- Chem 121, 122, 123 and 251 (or 351, 352, 353)
- Biol 201, 202, 203, 321, 348, 349
- Anth 335 or Biol 340 or Math 341
- Anth 201, 210, 215
- 10 credits in anthropology under advisement
- 8 credits of biology under advisement; Psych 316 and 326 are also suitable alternatives.

Program advisers: R. Anderson, biology, and J. Stevenson, anthropology. Students should also consider the human biology concentration in the Biology Department with a minor in anthropology.

## BACHELOR OF SCIENCE

### Combined Major — Biology/Antropology

110 credits

Basic requirements: supporting courses 34-36 credits; Biology Phase II status required for admission into 300- and 400-level biology courses for biology majors.

- Chem 121, 122, 123
- Chem 351 and 352 (or 251 only with approval of adviser); Chem 353 and 354 recommended
- Physics 114, 115; 116 recommended (or Physics 121, 122, 123, 131, 132, 133)
- Math 124

Basic requirements: Biology 15 credits

- Biol 201, 202, 203

Basic requirements: Anthropology 15 credits

- Anth 201, 210, 215

Breadth requirements: 12 credits

- Biol 321, Biol 325 or Anth 350, Biol 340 or Anth 335

Depth requirements: 25 credits

- Biol 348, Biol 349 or 467
- Biol 490 or Anth 423
- One of the following: Anth 308, 424 or Biol 410

Electives: Biol 319 or 323, 322 or 324, 345, 384 or 382, 485, 408, 410, 465, 467, Anth 308, 424; other electives under advisement

Program Advisers: R. Anderson, Biology, and J. Stevenson, Anthropology

## BACHELOR OF ARTS IN EDUCATION — ELEMENTARY OR SECONDARY EDUCATION

*Major — Anthropology*

45 credits

- 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, 482

Students in elementary education must also complete the elementary education professional program. Completion of this major program for elementary education studies leads to a supporting endorsement in anthropology.

Students in secondary education must also complete the specific program requirements for social studies education, including the social studies minor. See the Social Studies Education Program section of this catalog. Completion of this major/minor program leads to a teaching endorsement in anthropology and in social studies.

## GRADUATE STUDY

For a concentration leading to the Master of Arts degree, see the Graduate School section of this catalog.

## COURSES IN ANTHROPOLOGY

*Courses numbered X37; X97; 300, 400; 417, 445 are described on page 31 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 DEVELOPMENT OF ANTHROPOLOGY (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.

### 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 PaleoIndians of North America, their paleoenvironments and the cultural sequences leading to the historic peoples of the New World north of Panama. Mesoamerican and Mississippian cultures, those of the Southwest and the Woodland Archaic.

### 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.

### 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 (4)

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.

### 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. 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 (3)**

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.

**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, etc.) and how to aid the crime investigator.

**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.

**427 ETHNOHISTORY: RESEARCH AND ANALYSIS (5)**

Prereq: Anth 201 and 301. Reconstruction of the past of human groups through the utilization of primary written sources.

**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.

**448 INTERMEDIATE ANTHROPOLOGICAL LINGUISTICS (5)**

Prereq: Anth 348 and junior standing in anthropology or Linguistics 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 IN "THIRD WORLD" SOCIETIES (4)**

Prereq: 15 credits at the 300 level in anthropology or related discipline (WS 211, Anth 353 highly recommended) or permission of instructor. Women's familial, economic, religious and political roles in selected "third world" or "developing" societies. Different theoretical perspectives for explaining women's roles.

**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 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 (4)**

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.

**460 CULTURE AND SOCIETY OF JAPAN (4)**

Prereq: two classes from Anth 201, 362, East Asian 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, pre-history 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 (including Taiwan), Korea and Japan with emphasis on their distinctive cultures and societal structure.

**465 PEOPLES OF MEXICO AND CENTRAL AMERICA (4)**

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.

**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; a paper and log 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 ETHNOHISTORY (5)**

Prereq: introductory course in anthropology. This course is partly classroom-based and partly field-based. Explores specific problems of ethnohistory by examination of the literature, use of primary sources and interviews with knowledgeable individuals. Field trips to repositories and important historical sites are an integral part of this course.

**475 INTERNATIONAL MIGRATION (4)**

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.

## 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.

## 482 PSYCHOLOGICAL ANTHROPOLOGY (4)

Prereq: Anth 201 and upper-division status or permission of instructor. Examination of interface of culture and human behavior as revealed in socialization, expressive behavior, mental health, conflict and social change.

## 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.

## 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.

## Graduate Courses

*Courses numbered 500; 517; 545; 597 are described on page 31 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 CONTEMPORARY THEORY IN ANTHROPOLOGY (5)

Prereq: graduate status in the anthropology program or permission of instructor. Issues relating to contemporary orientation in cultural and social theory; 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 instructor. 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.

## 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.

## 527 SEMINAR IN ETHNOHISTORY (5)

Prereq: graduate status in the anthropology program or permission of instructor. Reconstruction of the past of human groups with particular attention to ethnohistory and its relation to archaeological and ethnological records. Emphasis on Northwest aboriginal groups.

## 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.

## 529 POLITICAL ANTHROPOLOGY (3)

Prereq: graduate status in the anthropology program or permission of instructor. Advanced cross-cultural examination of the principles on which order is legitimated to experience an analysis of circumstances under which it is not, to include societies with and without agencies monopolizing intrasocietal violence.

## 535 PROFESSIONAL ANTHROPOLOGY PRACTICUM (5)

Prereq: graduate status in the anthropology program or permission of instructor. Practical experience in professional activities other than direct research and teaching. Students prepare and present talks for public and professional audiences. Proposal writing and budget preparation; professional ethics and responsibility.

## 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 IN "THIRD WORLD" SOCIETIES (4)

Prereq: graduate status in the anthropology program or permission of instructor. Women's familial, economic, religious and political roles in selected "third world" or "developing" societies. Different theoretical perspectives for explaining women's roles. Graduate research paper.

## 571 FIELD WORK 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.

## 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.

## 595 TEACHING IN THE SOCIAL SCIENCES (3)

Prereq: Anth 501 or equivalent in political science or sociology. Examination of conceptual frameworks and techniques for teaching social science subjects at the high school and community college levels. Also offered as Pol Sci 595 and Soc 595.

## 690 THESIS (1-12)

Prereq: formal advancement to candidacy for the M.A. in anthropology. S/U grading. Repeatable to a maximum of 12 credits.

## 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 on an area of interest, 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 <http://www.ac.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. Students in many of the advance 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

Western Washington University has recently completed construction of three new buildings for the sciences: Biology, Chemistry, and the Science, Math and Technology Education Center. In 1995, the Department of Biology moved into a new four-story building that features teaching labs, research labs, environmental control rooms, a seawater lab, an *in vitro* lab, image analysis labs, darkrooms, computer labs and multimedia lecture halls. A new 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

RICHARD W. FONDA (1968) Chair and Professor. BA, Duke University; MS, PhD, University of Illinois.  
 ROGER A. ANDERSON (1994) Assistant Professor. BS, University of Minnesota; MA, University of California, Riverside; PhD, University of California, Los Angeles.  
 HERBERT A. BROWN (1967) Professor. BA, University of California, Los Angeles; PhD, University of California, Riverside.  
 DEBORAH A. DONOVAN (1998) Assistant Professor. BSc, MSc, University of California, Davis; PhD, University of British Columbia.  
 DAVID U. HOOPER (1998) Visiting Assistant Professor. BA, Middlebury College; PhD, Stanford University.  
 DAVID S. LEAF (1991) Associate Professor. BS, University of Washington; PhD, Indiana University.  
 DAVID R. MORGAN (1993) Associate Professor. BS, MS, Mississippi State University; PhD, University of Texas.  
 CRAIG L. MOYER (1997) Assistant Professor. BS, MS, Oregon State University; PhD, University of Hawaii.  
 GISELE MULLER-PARKER (1990) Associate Professor. BS, State University of New York at Stony Brook; MS, University of Delaware; PhD, University of California, Los Angeles.  
 JAL S. PARAKH (1966) Professor. BS, Osmania University, India; MS, University of Florida; PhD, Cornell University.  
 EMILY R. PEELE (1990) Professor. BA, University of North Carolina, Greensboro; MSPH, University of North Carolina, Chapel Hill; PhD, University of Georgia.  
 MERRILL A. PETERSON (1997) Assistant Professor. BS, University of Washington; PhD, Cornell University.  
 MARY ANNE PULTZ (1993) Assistant Professor. BA, PhD, Indiana University.  
 JUNE R. P. ROSS (1967) Professor. BSc, PhD, DSc, University of Sydney, Sydney, Australia.  
 DAVID E. SCHNEIDER (1966) Professor. BS, Bates College; PhD, Duke University.  
 ANU SINGH-CUNDY (1996) Assistant Professor. BSc, MSc, Delhi University, Delhi, India; PhD, Cornell University.  
 CAROL TRENT (1989) Associate Professor. BS, Indiana University; PhD, Massachusetts Institute of Technology.  
 DON C. WILLIAMS (1968) Professor. BA, Chico State College; MA, PhD, University of California, Davis.

#### Research Associates

GEORGE H. CZERLINSKI. BS, University of Hamburg; MS, Northwestern University; PhD, University of Göttingen.  
 SUSANNE M. JAMES. BA, California State College, Bakersfield; MA, PhD, University of California, Riverside.  
 FREDERICK M. RHOADES. BA, Swarthmore; MS, Oregon State University; PhD, University of Oregon.  
 SALLIE G. SPRAGUE. AB, Middlebury College; BA, University of North Florida; MS, PhD, University of Massachusetts.

#### Adjunct Faculty

STEPHEN SULKIN. AB, Miami University; MS, PhD, Duke University.

### MAJOR CONCENTRATIONS IN BIOLOGY

We strongly recommend that biology majors own a personal computer, which will provide a powerful tool for analyzing data and preparing reports for their classes.

Many of our students have either IBM-compatible or Macintosh computers, with word processing, spreadsheet, graphing and statistical capabilities. Although Western has several computer labs available for all students, these labs are heavily used. Access to your own personal computer would facilitate completion of assignments.

## The B.S. 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 adviser to organize an appropriate program of study. The B.S. 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 B.S. degree is based on a strong core of biology courses and supporting courses in chemistry, physics and mathematics. The B.S. degree has a number of different emphases: botany, cellular, ecology, evolution, general biology, secondary teaching, marine biology and zoology.

An interdisciplinary B.S. Major, Cellular and Molecular Biology/Biochemistry is offered with the Chemistry Department. Two combined B.S. Majors are also offered: Biology/Anthropology and Biology/Mathematics. More specific information about the B.S. Program is available in the Biology Office.

## The B.A. 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 B.A. degree in biology. The number of required courses in the B.A. 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 B.A. degree in biology may wish to combine their interest in biology with a focus of course work in other areas such as history or political science. Combinations of these sorts are particularly valuable to those interested in environmental science. Focusing course work in other disciplines, such as art, economics, philosophy, physical education, psychology or speech are also beneficial to students pursuing a B.A. degree in biology. The combined B.A. in biology/anthropology is available to students whose interests span these two disciplines.

## TEACHING CAREERS IN BIOLOGY

Students wishing to teach in the Washington public schools should complete the certification program in the Woodring College of Education, 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 B.S. degree with the

secondary teaching emphasis. The state of Washington requires students receiving teaching certification to obtain two endorsements for a Continuing Certificate. By completing Geology 211 and 212, biology students may also receive the *science* endorsement. Those who wish endorsements in both biology and chemistry should consider the B.A. in Education program in biology/chemistry.

Students planning to teach biology at the college level are advised to complete a B.S. in biology and to continue graduate work leading to a master's or doctoral degree.

## DECLARING A MAJOR

The Department of Biology maintains a program of advisement; students interested in any major or pre-professional program in biology should consult the Department of Biology as early in their university careers as possible. Early advisement will ensure appropriateness and proper sequence of courses. Those interested in biology as a major, contact the department office in Biology Building 315 to complete the paperwork in person.

## PREREGISTRATION COURSE REQUEST FORMS

The majority of biology courses require students to complete a preregistration course request form to be eligible for an add code. These forms are available in October, January and May in the Biology office.

## TRANSFER STUDENTS

Washington Community College transfers account for about 40 percent of Western's students. Transfers are especially welcome in the biology programs; however, smooth transition, optimum progress and completion of a bachelor's degree in four years can be accomplished only if the transfer fulfills specific requirements before entering Western.

Satisfaction of lower-division requirements for biology majors may be met by one of the following (A or B):

A. Complete all requirements for an A.A. degree **and** be sure to include:

- mathematics through one quarter of calculus, **and**
- a year sequence in general chemistry, **and**
- a year sequence in biology for majors: cellular, animal, and plant biology

B. Complete all of the following sequences; 90 credits; without an A.A.:

- 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 biology for majors: cellular, animal and plant biology

Students are strongly advised to have taken the science sequences in A or B above by the time they have completed 90 credits of college course work at Western or at their transfer institution. Students must expect that a bachelor's degree in biology will require **a minimum of two years of course work after completing a year of biology.** The most efficient and academically most sensible

curriculum for a biology major will include enrollment in two science or math courses and one or more non-science courses for each of 12 quarters.

### MID-PROGRAM CHECKPOINT

Students seeking to complete a B.S. 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 201, 202, 203; Eng 101; Math 124; 18 additional credits from the non-science section of the GUR.

Major omissions from this list will make it difficult or impossible to complete this degree within two additional years.

### BACHELOR OF ARTS

#### Major — Biology

Supporting courses plus 55 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, 251
- Required core courses: Biol 201, 202, 203; Biol 321, 325, 384 and one of the following: Biol 382, 432, 442
- Upper-division biology courses approved by faculty adviser

Program Adviser: See department chair

#### Combined Major — Biology/Anthropology

86 credits including 20 in supporting courses; Biology Phase II status required for admission into 300- and 400-level biology courses for biology majors.

- Chem 121, 122, 123, and 251 (or 351, 352, 353)
- Biol 201, 202, 203, 321, 348, 349
- Anth 335, or Biol 340
- Anth 201, 210, 215
- 10 credits in anthropology under advisement
- 8 credits in biology under advisement; Psych 316 and 326 are also suitable alternatives

Program Advisers: R. Anderson, Biology, and J. Stevenson, Anthropology.

### BACHELOR OF ARTS IN EDUCATION

#### Combined Major — Biology/Chemistry

105-106 credits; Biology Phase II status required for admission into 300- and 400-level biology courses for biology majors.

- Chem 121, 122, 123, 333
- Option a: Chem 251, 461, 462, and Chem 371 or Biol 319, 324
- Option b: Chem 351, 352, 353, 354, 471, 472 and 473 or 474
- Biol 201, 202, 203, 321, 322, 325, 326, 432
- Biol 384 or 442
- Sci Ed 491 and 492

- Math 124, 125 (for Option a)
- Physics 114, 115, 116 (or Physics 121, 122, 123, 131, 132, 133)

Program Advisers: D. Donovan, J. Parakh

**NOTE:** This major meets the requirements for Washington state teaching endorsements in both biology and chemistry. Depending on options chosen, the overall student program may involve more than 180 credits.

This major must be accompanied by the professional preparation program in secondary education.

##### 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.

### BACHELOR OF SCIENCE

Complete all sections. (Note that a diploma granted under this major will indicate "Bachelor of Science"; official transcripts will indicate the area of depth.)

#### Major — Biology

110 credits

*Basic Requirements:* Supporting Courses 34-36 credits; Biology Phase II status required for admission into 300- and 400-level biology courses for biology majors.

- Chem 121, 122, 123; required prior to admission to Biology Phase II (General Science majors take Chem 251 instead of Chem 123)
- Chem 351 and 352 (or 251 only with approval of adviser); Chem 353 and 354 recommended
- Physics 114, 115; Physics 116 recommended (or Physics 121, 122, 123, 131, 132, 133)
- Math 124

*Basic Requirements:* Biology Phase I, 15 credits

- Biol 201, 202, 203 required prior to admission to Biology Phase II. Students should apply for Phase II status in the last quarter of the Biology 200 series.

*Breadth Requirements:* Biology Phase II, 15 credits

- Biol 321, 325, 340, 432; Biol 319 or 323

*Depth Requirements:* 20 credits or more

Four or more courses from one of the following areas of emphasis. Must include at least two laboratory courses. Although Biol 400, 417, 445 and 497 are not listed in any area of emphasis, they may be suitable electives **under advisement**.

Faculty area advisers are responsible for informing students of required courses and recommended electives for completion of the area of depth. Faculty advisers are also responsible for final approval upon completion of the degree program, and for assisting students in career advisement in their selected areas.

- Botany Emphasis
  - Required core: Biol 326, 452, 479
  - Electives: Biol 322, 404, 415, 450, 451, 453, 454, 455, 470

Faculty Advisers: Fonda, Morgan, Singh-Cundy

- Cellular Emphasis
  - Required core: Biol 319 or Biol 323 (or 471 and 472); Biol 324 (or 475), 345, 482; and two of the following: Biol 322, 346, 494
  - Electives: Biol 322, 346, 451, 470, 473, 475, 478, 479, 483, 484

Faculty Advisers: Leaf, Peele, Pultz, Trent, Williams

- Ecology Emphasis
  - Required core: Biol 326, 403 or 479
  - Electives: Biol 402 or Envr 430a,b; Biol 403, 404, 405, 407, 410, 415, 434, 454, 462, 465, 479; Envr 429, 435a&b

Faculty Advisers: Anderson, Fonda, Peele, Peterson, Schneider

- Evolution Emphasis
  - Required core: Geol 211, 212; Biol 324, and one of the following: Biol 434, 436, 438, 439
  - Electives: Geol 316; Biol 434, 436, 438, 439, 452, 454, 460, 465, 469, 482
  - Faculty Advisers: Brown, Morgan, Moyer, Peterson, Ross, Williams

- General Biology Emphasis
  - Selected upper-division courses

Faculty Advisers: Assigned Faculty

- Secondary Teaching Emphasis
  - Required core: Biol 322, 324, 326, 384 (or 442), 499; Geol 211, 212; Sci Ed 491, 492
  - Electives: Upper-division courses under advisement

Faculty Adviser: Donovan, Parakh

- Marine Biology Emphasis
  - Required core: Biol 326, 406, 407, 456, 460; Geol 211
  - Electives: Biol 403, 405; Biol 419 (or Chem 333 or Envr 361a&b); Envr 326, 421a&b, 430a&b, 433a&b

Faculty Advisers: Donovan, Moyer, Muller-Parker, Peele, Ross, Schneider

- Zoology Emphasis
  - Electives: Biol 322, 326, 403, 407, 410, 460, 462, 463, 465, 467, 469

Faculty Advisers: Anderson, Brown, Donovan, Peterson, Ross, Schneider

*Completion Requirements:* 4 credits or more

- Students select one from each of the following options. Prerequisites for undertaking completion requirements include senior standing and written permission. Grading convention: A-F or S/U.
- One of the following: Biol 442, 496, 498, 499

*Elective selected with approval of adviser*

- Upper-division biology, or appropriate courses from anthropology, chemistry, geology, environmental studies, math/computer science, physics

### *Interdisciplinary Major — Cellular and Molecular Biology/Biochemistry*

109 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 201, 202, 203, 319, 321, 322, 340, 345, 346, 470, 471, 472, 473, 474, 475
- Chem 121, 122, 123, 333, 351, 352, 353, 354
- Math 124, 125
- Physics 121, 122, 123, 131, 132, 133

This program is specifically designed for students who seek employment or graduate study in cellular biology, molecular biology, or biochemistry.

Faculty Advisers: Leaf, Peele, Trent, Williams

### *Combined Major — Biology/Anthropology*

110 credits

Basic requirements: Supporting courses 34-36 credits; Biology Phase II status required for admission into 300- and 400-level biology courses for biology majors.

- Chem 121, 122, 123
- Chem 351 and 352 (or Chem 251 only with approval of adviser; Chem 353 and 354 recommended)
- Physics 114, 115; Physics 116 recommended (or Physics 121, 122, 123, 131, 132, 133)
- Math 124

Basic requirements: Biology 15 credits

- Biol 201, 202, 203

Basic requirements: Anthropology 15 credits

- Anth 201, 210, 215

Breadth requirements: 12 credits

- Biol 321, Biol 325 or Anth 350, Biol 340 or Anth 335

Depth requirements: 25 credits

- Biol 348, Biol 349 or 467
- Biol 432 or Anth 423
- One of the following: Anth 308, 424, Biol 410
- Electives: Biol 319 or 323, 322 or 324, 345, 382, 384 or 442, 410, 465, 467, 478, Anth 308, 424; other electives under advisement.

Program Advisers: R. Anderson, Biology, and J. Stevenson, Anthropology.

### *Combined Major — Biology/Mathematics*

109 credits; Biology Phase II status required for admission into 300- and 400-level biology courses for biology majors.

- Biol 201, 202, 203, 321, 323, 325
- Biol 432 or 442
- Math 124, 125, 204, 224, 331, 341, 342, 432; Comp Sci 140 (or Math 207); plus 12 credits of approved electives from math, math/computer science, or computer science
- Chem 121, 122, 123; Chem 251
- Physics 121, 122, 131, 132

Faculty Adviser: see department chair

### *Minor — Biology*

30 credits

- Supporting courses: Chem 121, 122, 123
- Required core courses: Biol 201, 202, 203 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

Courses numbered X37; X97; 300, 400, 417, 445 are described on page 31 of this catalog.

### 101 INTRODUCTION TO BIOLOGY (4)

Prereq: Math 102 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. Laboratory included.

### 102 BIOLOGICAL DIVERSITY: EVOLUTION AND SYSTEMS (4)

Prereq: Math 102 or higher; Biol 101 strongly recommended. 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 laboratory included.

### 150 MARINE BIOLOGY (3)

Prereq: Biol 101. Recognition, life history, ecological relationships, and distribution and evolutionary trends of representative organisms.

### 160 FOREIGN CHEMICALS AND NATURAL SYSTEMS (3)

Prereq: one course from biology and chemistry. An elementary treatment of the effect and mechanism of action of such currently encountered substances as pesticides, food additives, hallucinogenic drugs and conventional drugs (alcohol, tobacco and coffee).

### 201 GENERAL BIOLOGY I (5)

Prereq: Chem 121, 122. Concurrent enrollment in Chem 123 recommended. Structure and function of biomolecules and cells. Mendelian and molecular genetics, membrane structure and function, photosynthesis and respiration, prokaryotes and early evolution of life. **Note:** Preregistration through Biology Office in previous quarter before deadline.

### 202 GENERAL BIOLOGY II (5)

Prereq: Biol 201. Study of the many ways that animals and protozoans perform their basic organismal functions and cope with varying environmental conditions. Examination of phylogenetic and organ system diversity. Dissection of animals is required in this course.

### 203 GENERAL BIOLOGY III (5)

Prereq: Biol 201. An introduction to the biology of plants, algae and fungi with an emphasis on evolutionary trends, ecological adaptations and physiology of land plants.

### 319 CELL BIOLOGY (3)

Prereq: Biol 201, 202, 203 or written permission; Chem 351 or 251. Cell structure and function: topics include recombinant DNA techniques, protein function, gene expression, membrane structure and function, protein sorting, secretory pathway, signal transduction, cytoskeleton, and cell cycle.

### 321 GENETICS (4)

Prereq: Biol 201, 202, 203. Survey of classical, molecular and population genetics illustrated by prokaryotic and eukaryotic organisms such as bacteria, fungi, fruitflies, nematodes and humans.

### 322 GENETICS LAB (2)

Prereq: Biol 321 or concurrent. Experimental exploration of the fundamentals of eukaryotic and prokaryotic genetics using the nematode *Caenorhabditis elegans* and the bacterium *Escherichia coli*.

### 323 CELL AND MOLECULAR BIOLOGY (3)

Prereq: Biol 201, 202, 203; Chem 351 and 352 or 251. Cell organelle

structure and function, membrane phenomena, energy utilization and production, cellular biosyntheses, control of cellular activities.

### 324 METHODS IN MOLECULAR BIOLOGY (3)

Prereq: Biol 319 or 323 (or concurrent). An introduction to basic molecular techniques commonly used in phylogenetic, microevolutionary and ecological studies.

### 325 ECOLOGY (3)

Prereq: Biol 201, 202, 203. 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 201, 202 and 203. The design of biological experiments and appropriate statistical analysis of experimental data. Calculator required.

### 345 FUNDAMENTALS OF MICROBIOLOGY (3)

Prereq: Biol 201, one quarter organic chemistry. Cell structure, metabolism, evolution and ecology of prokaryotes.

### 346 MICROBIOLOGY LAB (2)

Prereq: Biol 201, one quarter organic chemistry; concurrent enrollment in Biol 345. Techniques of general microbiology, including isolation, culture, enumeration and identification of prokaryotes.

### 348 HUMAN ANATOMY AND PHYSIOLOGY (5)

Prereq: Biol 101. 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.

### 349 HUMAN PHYSIOLOGY (5)

Prereq: Biol 348 or 202; Chem 115 or higher. A comprehensive introduction to the study of integrated functions of cells, organs and organ systems in humans.

### 382 SOCIOBIOLOGY (4)

Prereq: Junior standing in the behavioral or biological sciences, and one of the following: Biol 101, 201, or Anth 215; or permission. 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.

### 384 BIOLOGY AND SOCIETY (4)

Prereq: Biol 101 or equivalent; junior standing. Recent developments in biology and their impact on the individual and on society; emphasis on potential effects on individual values and social implications of selected developments in such areas as behavior control, genetic alteration and organ replacement.

### 403 PHYSIOLOGICAL ECOLOGY OF ANIMALS (5)

Prereq: Biol 202 and 325 or written permission. 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 203, 325 and 326. Ecology of plant communities, interpretation of vegetation pattern, and plant ecophysiology.

### 405 MICROBIAL ECOLOGY (4)

Prereq: Biol 325; course work in microbiology strongly recommended. 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: one year each of college chemistry and biology; Physics 114. Introduction to chemical, physical, geological and biological oceanographic subdisciplines. Sampling methods and analytical techniques applied to local marine areas.

## 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 202, 325 or written permission. 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.

## 415 FIRE ECOLOGY (4)

Prereq: Biol 325, 404, and permission of instructor. Consideration and discussion of the literature of fire ecology; emphasis on the basic concepts of fire as a natural environmental factor, and on the role of fire in the vegetative formations in North America.

## 419 WATER QUALITY (5)

Prereq: Biol 325, 326. Investigation and discussion of water quality issues, emphasis on the chemical composition of natural waters, aquatic pollution, and water and wastewater treatment. Laboratory and field exercises focus on standard methods of water quality analysis. Offered alternate years.

## 432 PRINCIPLES OF ORGANIC EVOLUTION (4)

Prereq: Biol 321. Principles, patterns, processes and mechanisms of evolution in the organic world. Was Biol 490 in previous catalog.

## 434 POPULATION BIOLOGY (5)

Prereq: Biol 321, 325. Exploration of the attributes of natural populations, including distribution, abundance, and genetic variation, and the processes that influence those attributes. Computer simulations, laboratory studies of genetic variation, and group discussions of published research will complement the lecture. Offered alternate years.

## 436 MOLECULAR PHYLOGENY AND MICROBIAL DIVERSITY (5)

Prereq: Biol 345, 346 or written permission. 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.

## 438 BIOCHEMICAL AND CELLULAR EVOLUTION (3)

Prereq: Biol 319 or 323. An examination and detailed consideration of the kinds of evidence at the cellular and molecular level which support evolutionary theory. 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.

## 442 HISTORICAL AND PHILOSOPHICAL PERSPECTIVES OF BIOLOGY (5)

Prereq: 20 credits in science, 15 in biology. The origins and development of biology as a science viewed in historical and philosophical perspective; the interaction of biology and society. Was Biol 485 in previous catalog.

## 450 PLANT ANATOMY (5)

Prereq: Biol 203. 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 203. 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 203. 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 203; coreq: 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.

## 454 PLANT EVOLUTION (4)

Prereq: 25 credits in biology, permission of instructor, Biol 452 or 432 recommended. Application of modern experimental methods to the study of plant evolution. Offered alternate years.

## 455 ECONOMIC BOTANY (3)

Prereq: Biol 203. The agricultural, medicinal, industrial and folk uses of plants and plant products. Offered alternate years.

## 456 ALGAE (5)

Prereq: Biol 203. 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.

## 460 INVERTEBRATE ZOOLOGY (5)

Prereq: Biol 201, 202. Evolutionary relationships of invertebrate animals, including anatomy, physiology, classification, development and ecology.

## 462 ENTOMOLOGY (5)

Prereq: Biol 202. 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 202 or equivalent. Evolution of morphological adaptations of birds, classification, distribution; annual cycle including migration, breeding and population dynamics; laboratory study, field trips.

## 465 VERTEBRATE ZOOLOGY (5)

Prereq: Biol 202, 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 (5)

Prereq: Biol 202. An examination of the physiological functions of the organ systems in each of the major vertebrate classes. In laboratory, students will learn to use and apply research techniques in the study of a variety of vertebrates.

## 469 COMPARATIVE VERTEBRATE ANATOMY AND EMBRYOLOGY (5)

Prereq: Biol 202. Morphological adaptations, developmental anatomy and evolution of organ systems in vertebrate animals. Laboratory study of adults and embryos of shark, frog, chicken, cat and pig.

## 470 CELL AND TISSUE CULTURE (3)

Prereq: Chem 123, one quarter organic chemistry or concurrent enrollment; 15 credits in biology; Biol 203 recommended; or permission. Principles and basic techniques for in-vitro culturing and manipulation of cells and tissues of plants and animals.

## 471, 472 MOLECULAR BIOLOGY AND BIOCHEMISTRY (3 ea)

Prereq: Biol 201; Chem 123, 353 (or concurrent); Chem 333 recommended; 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 non-target 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 203; 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 (2)**

Prereq: Biol 321; Biol 319 or 323 or 471. 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. Was Biol 492 in previous catalog.

**483 SEMINAR IN DEVELOPMENTAL BIOLOGY (1)**

Pre- or coreq: Biol 482. Seminar course that investigates the current experimental analysis of animal and plant development. Emphasizes discussions and presentations of research papers. Was Biol 493 in previous catalog.

**484 DEVELOPMENTAL BIOLOGY LABORATORY (3)**

Pre- or coreq: 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. Was Biol 494 in previous catalog.

**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.

**499 BIOLOGY RESEARCH (1-5)**

Prereq: Phase II in biology and permission of instructor; completion of department's request form in the preceding academic quarter. A complete research project conducted either independently or as part of a group, working under the tutelage of a biology professor. Repeatable to 8 credits.

**Graduate Courses**

*Courses numbered 500; 517; 545; 597 are described on page 31 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.

**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.

**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.

**554 PLANT EVOLUTION (4)**

Prereq: 25 credits of biology and permission of instructor (Biol 432 and 452 recommended). Application of modern experimental methods to the study of plant evolution.

**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, 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 (2)**

Prereq: graduate standing and permission of instructor. Previous or concurrent enrollment in Biol 495/595. Laboratory investigations of the genetic, cellular and molecular control of development, focusing on invertebrate model systems.

**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 TEACHING PRACTICUM (1-3)**

Prereq: permission of instructor. Intended for the student who wants experience in teaching a biology course of his/her choice. Repeatable to 6 credits. 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 adviser. Research contributing to a graduate degree program. Graded "K" until thesis completed. Repeatable. S/U grading.

## CANADIAN-AMERICAN STUDIES

The Canadian-American studies major and minor are designed to expand the knowledge of Canada and the understanding of Canadian-American relations and problems.

The major and minor are designed to accomplish several things. The body of information and understanding of Canada and U.S. relations with Canada is desired by firms, agencies and individuals who do business in Canada or with Canadians, and is an asset when combined with another major. Examples include the combination with international business, marketing, transportation, geography and other specialties for employment in firms doing business in Canada or with Canadians. Political scientists, sociologists, biologists and others employed by government agencies at the local, state and federal level will find the program of substantial value. The major also is designed for the individual who wishes to be knowledgeable about Canada and things Canadian. Canadian-American studies has a strong interdisciplinary orientation.

Opportunities for study in British Columbia and Québec are available.

For program advisement, contact D.K. Alper, director, phone (360) 650-3728, fax (360) 650-3995, Canada House 201, e-mail: canam@cc.wvu.edu.

### PARTICIPATING CANADIAN-AMERICAN STUDIES FACULTY

DONALD ALPER, Canadian-American Studies Director. Department of Political Science. Canadian politics/government.

ROBERT BALAS, Department of Modern and Classical Languages. Twentieth century French literature, technology and multimedia materials.

BONNIE BARTHOLD, Department of English. Canadian literature. LOUISE-MARIE BOUCHARD, Department of Modern and Classical Languages. Québec studies.

DANIEL BOXBERGER, Department of Anthropology. First Nations, Native Peoples and natural resources.

SARAH CAMPBELL, Department of Anthropology. Pre-history of the Northwest coast.

SARAH CLARK-LANGAGER, Western Gallery Director.

CECILIA DANYSK, Department of History. Canadian history.

JAMES DEAN, Kaiser Professor of International Business, Center for International Business, international business.

ANNE GAUTHIER, Department of Sociology. Comparative demography, family policy.

GARY GEDDES, Distinguished Professor of Canadian Culture, Canadian-American Studies. Department of English, Canadian literature and the arts.

ANNE GEORGE, Department of Modern and Classical Languages. Twentieth century Francophone literature.

STEVEN GLOBERMAN, Ross Distinguished Professor of Canada-United States Business and Economic Relations, College of Business and Economics. Canadian economy.

ANTHONY GULIG, Canadian-American Studies. First Nations, environment, Canadian/American West.

LYLE HARRIS, Department of Journalism. Cross-border journalism.

MARY ANN HENDRYSON, Department of Economics. Canadian economic history, cross border economic relations.

CAROL JANSON, Department of Art. Art history.

ROBERT LOPRESTI, Wilson Library. Canadian government information.

GEORGE MARIZ, Department of History, Honors Program Director. Britain, British Empire, European intellectual.

JEAN MELIOUS, Center for Geography and Environmental Social Sciences. Canadian environmental policy and law.

DAVID MERRIFIELD, Department of Economics, Center for Economic and Business Research Director. Regional economic forecasting.

ROBERT MONAHAN, Professor Emeritus, Center for Geography and Environmental Social Sciences. Canadian geography.

DONNA PACKER, Wilson Library. Information resources.

NANCY PAGH, Department of English. Canadian literature.

KRISTEN PARRIS, Department of Political Science. East Asia-Canada immigration.

LYNN ROBBINS, Center for Geography and Environmental Social Sciences. International environmental policy.

DEBRA SALAZAR, Department of Political Science. Forest policy, political economy.

LINDA SMEINS, Department of Art. History of architecture, visual culture.

PAUL STORER, Department of Economics. Canadian economic policy, macroeconomics, labor economics.

ANN YOW, Department of Journalism. Cross-border journalism.

### BACHELOR OF ARTS

#### *Named Professorships*

Dr. Gary Geddes . . . Distinguished Visiting Professorship of Canadian Culture

Dr. Steven Globerman . . . . Ross Distinguished Professorship of Canada/U.S. Business and Economic Relations (position is in the College of Business and Economics)

#### *Canadian-American Studies Major*

50 credits

- ❑ Core Courses: Can-Am Studies 200, 401, 402; Eng 415; French 101 (or equivalent), 201 or 202; Geog 328; Hist 277; Pol Sci 406
- ❑ Select additional credits from the following to complete the major: Anth 361, 411, 462; Art Hist 490; Can-Am Studies 400; Econ 364, 365; Envr 465, 469; French 305, 401, 405, 450; Hist 390 (topics vary by quarter), 477, 478, 499; Journ 460; Pol Sci 301

#### *Minor*

30 credits

- ❑ Can-Am Studies 200; Geog 328; Hist 277; Pol Sci 406
- ❑ 12 additional credits under advisement from Anth 361, 411, 462; Can-Am Studies 400, 401, 402; Art Hist 490; Econ 364, 365; Eng 415; Envr 465, 469; French 101, (or equivalent), 201 or 202, 280, 305, 401, 405, 450; Hist 390 (topics vary by quarter), 477, 478, 499; Journ 460; Pol Sci 301

### COURSES IN CANADIAN-AMERICAN STUDIES

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:**

*Courses numbered X37; X97; 300, 400; 417, 445 are described on page 31 of this catalog.*

**200 INTRODUCTION TO CANADIAN STUDIES (5)**

A basic interdisciplinary course of studies covering the major physical, historical and socio-political aspects of Canada.

**401 RESEARCH PROBLEM IDENTIFICATION AND DEVELOPMENT (3)**

Prereq: Can-Am Studies 200, 15 credits of core courses. Directed research on a problem or in an area of interest.

**402 RESEARCH ANALYSIS AND WRITING (3)**

Prereq: Can-Am Studies 401. Analysis and writing of the research findings in Can-Am Studies 401. A writing proficiency course.

## CHEMISTRY

The Department of Chemistry offers undergraduate degree programs in chemistry and biochemistry. American Chemical Society accreditation is available to B.S. 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. 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 Ph.D. 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 Ph.D. degree, and most have had post-doctoral experience before coming to Western. The department offers an active undergraduate research program, and students are encouraged to undertake a research project in the senior year.

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.

MARK WICHOLAS (1967) Chair and Professor. AB, Boston University; MS, Michigan State University; PhD, University of Illinois.

SPENCER J. ANTHONY-CAHILL (1997) Assistant Professor. BA, Whitman College; PhD, University of California, Berkeley.

MARK E. BUSSELL (1990) Professor. BA, Reed College; PhD, University of California, Berkeley.

GEORGE A. GERHOLD (1969) Professor. BS, University of Illinois; PhD, University of Washington.

DONALD M. KING (1966) Associate Professor. BS, Washington State University; PhD, California Institute of Technology.

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.

JOHN A. MILLER (1966) Professor. BS, Oregon State University; PhD, Iowa State University.

JOSEPH G. MORSE (1993) Professor. BS, South Dakota State College; MS, PhD, University of Michigan.

DAVID L. PATRICK (1996) Assistant Professor. BS, University of California, Davis; PhD, University of Utah.

DONALD L. PAVIA (1970) Professor. AB, Reed College; MS, PhD, Yale.

GERRY A. PRODY (1984) Associate Professor. BS, PhD, University of

California, Davis.

SALVATORE F. RUSSO (1968) Professor. BA, Wesleyan University; PhD, Northwestern University.

JAMES R. VYVYAN (1997) Assistant Professor. BS, University of Wisconsin, Eau Claire; PhD, University of Minnesota.

JOHN A. WEYH (1968) Professor. BA, College of Great Falls; MS, PhD, Washington State University.

JOHN C. WHITMER (1969) Professor. BS, University of Rochester; MS, PhD, University of Michigan.

H. WILLIAM WILSON (1966) Professor. BSc, University of Alberta; PhD, University of Washington.

### 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.
- ❑ Close student-faculty contact and relatively small classes.
- ❑ Direct access to modern laboratory equipment and instrumentation.
- ❑ Opportunity for research work at the junior/senior level under the direction of a faculty adviser.

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 (first year)
- ❑ One year of organic chemistry, one year of college physics and one quarter of analytical chemistry (second year)
- ❑ One year of physical chemistry (third year)

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 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 a B.S. program in chemistry and, with the Biology Department, a B.S. program in biochemistry/cellular and molecular biology.

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 & Marketing
- Computer Sciences
- Technical Writing (Journalism)
- Environmental Sciences
- Secondary School Teaching

*Bachelor of Arts in Education.* This program provides several program emphases (chemistry-biology, chemistry-mathematics, and chemistry physics). Although requirements within these options differ in detail, the three programs are similar enough that the prospective teacher need not choose among them until the sophomore or junior year. Successful graduates are qualified to teach in their areas of concentration at the middle school or high school level. Prospective teachers with qualifications in more than one area will have a distinct advantage in seeking such positions. Detailed descriptions of each of these degree programs and course descriptions are given below.

## BACHELOR OF ARTS

### Major — Chemistry

86 credits

- Chem 121, 122, 123, 333, 351, 352, 353, 354, 355, 434, 441, 461, 462, 463, 464
- One year of college physics and Math 124, 125, 224

### 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, 371 (or 471)

To obtain minor approval, a minimum of four credits of those required must be taken in chemistry at Western Washington University.

### Teaching Endorsement

Students planning on careers as high school teachers must take Sci Ed 491 and 492 plus the secondary education program in addition to the Bachelor of Arts degree. 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 201, 202, 203 and Geol 211, 212.

## BACHELOR OF ARTS IN EDUCATION

### Combined Major — Chemistry/Mathematics — Secondary

87-88 credits plus supporting courses in physics

This major meets the requirements for Washington state teaching endorsements in both chemistry and mathematics.

- Chem 121, 122, 123, 461, 462, 463
- 10-12 credits in chemistry to include a minimum of five credits in organic chemistry under departmental advisement
- Math 124, 125, 224
- Math 204, 209 or 341, 302, 331, 360, 483
- CS 140 or Math 207
- Sci Ed 491, 492
- Supporting courses: one year of college physics (recommended sequence is Physics 121, 122, 123, 131, 132, 133)
- Math 419 recommended as writing proficiency course

### Combined Major — Chemistry/Physics — Secondary

78-80 credits plus supporting courses

This major meets the requirements for Washington state teaching endorsements in both chemistry and physics.

- Chem 121, 122, 123
- Chem 461, 462, 463
- 10-12 credits in chemistry including five credits in organic chemistry under departmental advisement
- Physics 121, 122, 123, 131, 132, 133, 223, 233, 331, 341
- 11 credits in physics under departmental advisement
- Sci Ed 491, 492
- Supporting courses: Math 105, 124, 125, 224

### Combined Major — Chemistry/Biology

See the Biology Department section of this catalog.

### Teaching Endorsement

The BA/Ed degrees above require completion of the Secondary Education Certification Program in the Department of Educational Curriculum and Instruction. Recommendation for teaching endorsement in chemistry normally requires completion of one of the above majors with a grade point of 2.50 or better in the chemistry 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.

## BACHELOR OF SCIENCE

### Major — Chemistry

110 credits

- Chem 121, 122, 123, 333
- Chem 351, 352, 353, 354, 355
- Chem 434, 441, 461, 462, 463, 464, 465
- Supporting courses: Physics 121, 122, 123, 131, 132,

- 133; Math 124, 125, 224, and 204 or 331
- Advanced electives with prior departmental approval in chemistry, biology, geology, computer science, physics and mathematics to total 110 credits including above required courses. A maximum of 6 credits total in Chem 400, 401 and 498 can be counted toward the ACS-certified Bachelor of Science degree.

**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 outlined below:

*First Year*

Chem 121, 122, 123; Math 124, 125, 224

*Second Year*

Chem 333, 351, 352, 353, 354, 355; Math 204 or 331; Physics 121, 122, 123, 131, 132, 133

*Third Year*

Chem 434, 441, 461, 462, 463, 464, 465

*Fourth Year*

Electives (see above)

*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 201 (or the equivalent). 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.

110 credits

*Biochemistry Emphasis*

(For cellular and molecular biology emphasis, see the Biology Department section of this catalog.)

- Biol 201, 202 or 203, 319, 321, 345, 346
- Chem 121, 122, 123, 333, 351, 352, 353, 354, 467, 468, 471, 472, 473, 474, 475
- Math 124, 125, 224
- Physics 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 outlined below:

*First Year*

- Chem 121, 122, 123; Math 124, 125, 224

\* Students not prepared for calculus should begin with Math 114 or 115.

*Second Year*

- Chem 351, 352, 353, 354; Biol 201, 202 (or 203), 345, 346; Physics 121, 122, 123, 131, 132, 133

*Third Year*

- Chem 333, 471, 472, 473, 474, 475; Biol 319, 321

*Fourth Year*

- Chem 467, 468; 3 credits of electives

## DEPARTMENTAL HONORS

A chemistry major who wishes to graduate with honors in chemistry must complete a one-year program of research, culminating in two quarters of 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

*Courses numbered X37; X97; 300, 400; 417, 445 are described on page 31 of this catalog.*

### 101 CHEMICAL CONCEPTS (4)

Prereq: Math 102. 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. Laboratory included.

### 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. Laboratory included.

### 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. Laboratory included.

### 251 ELEMENTARY ORGANIC CHEMISTRY (5)

Prereq: Chem 115 or 121. Reactions, nomenclature and uses of carbon compounds; an abbreviated course in organic chemistry primarily for persons not requiring the Chem 351-354 series.

### 308 INTRODUCTION TO POLYMER CHEMISTRY (3)

Prereq: Chem 115 or 121, 251, Tech 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 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.

### 371 ELEMENTARY BIOCHEMISTRY (5)

Prereq: Chem 251. Outlines of structures and metabolisms of carbohydrates, lipids, proteins, and nucleic acids; biochemical functions of vitamins, hormones, and some co-enzymes; basic properties of enzymes. Laboratory.

### 401 PROJECT IN CHEMISTRY (1-3)

Prereq: 23 credits in chemistry courses appropriate for the major; an overall 3.0 GPA in chemistry courses; permission of instructor. Individual projects under supervision. Written report required. Repeatable for credit. S/U grading.

### 405 INTENSIVE WRITING IN BIOCHEMISTRY (1)

Prereq: Chem 471 (or concurrent). Concentrated study of a topic associated with biochemistry or bio-organic chemistry. Students are required to write a substantial expository paper. Writing proficiency course. Open to biochemistry majors only.

### 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 466, 471.

425i Immunology. Prereq: Chem 473 or Biol 473.

425m Organometallic Chemistry. Prereq: Chem 441.

425p Computers in Chemistry. Prereq: Chem 461 or 467 or Physics 331 or concurrent or permission of instructor.

425q Atmospheric Chemistry. Prereq: Chem 333 and 463 (or 466).

425r Surface Chemistry. Prereq: Chem 463 or permission of instructor.

425s Protein Engineering. Prereq: Chem 471.

425t Virology. Prereq: Chem/Biol 473.

### 434 INSTRUMENTAL ANALYSIS (4)

Prereq: Chem 333; 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 non-metallic elements.

### 454 ORGANIC SPECTROSCOPY (5)

Prereq: Chem 123, 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 lecture/lab course in advanced techniques in nuclear magnetic resonance, including Fourier transformation, multiple pulse sequences, relaxation time measurements, gated decoupling, polarization transfer, pulse sequences and two-dimensional NMR experiments.

### 461, 462, 463 PHYSICAL CHEMISTRY (4,4,3)

Prereq: one year of college physics, Math 224 or concurrent, 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 and 461; coreq: 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; coreq: Chem 463. An integrated approach to inorganic synthesis and physical measurement. Includes formal report writing.

### 467, 468 BIOPHYSICAL CHEMISTRY (4 ea)

Prereq: Math 224; one year of college physics; Chem/Biol 471. Chem 467 prerequisite to Chem 468. Biophysical experimental methods and theory, including classical and statistical thermodynamics bonding, basic quantum mechanics, ligand binding, spectroscopy, transport processes, and enzyme kinetics.

### 471, 472 BIOCHEMISTRY AND MOLECULAR BIOLOGY (3 ea)

Prereq: Chem 123, 353 (or concurrent), and Biol 201; 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, 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 required. May be repeated once. See Chemistry Department for information. S/U grading.

### 498 RESEARCH PROJECT IN CHEMISTRY (6: 3 in each of two successive quarters)

Prereq: 23 credits in chemistry courses appropriate for the major; an overall 3.0 GPA in chemistry courses; permission of instructor. Investigation of a problem under departmental supervision. The project must extend over a minimum of two quarters with credit granted after the presentation of an oral report and submission of an acceptable written report. S/U grading.

## Graduate Courses

Courses numbered 500; 517; 545; 597 are described on page 31 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 for credit.

### 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 for credit.

**511 ADVANCED LABORATORY METHODS (1-3)**

Prereq: Chem 463. Specialized laboratory on a conference basis for a particular area of interest. Repeatable for credit.

**534 INSTRUMENTAL ANALYSIS (4)**

Prereq: Chem 333, 461 or concurrent, permission of instructor. Principles of chromatographic, spectrochemical and electrochemical methods of analysis.

**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. Laboratory work included.

**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 Physics 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.

**564 ATMOSPHERIC CHEMISTRY (3)**

Prereq: Chem 333 and 463 (or 466) and permission of instructor. A review of the physical and chemical characteristics of the atmosphere, with emphasis on chemical kinetics.

**565 SURFACE CHEMISTRY (3)**

Prereq: Chem 463 or permission of instructor. Physical chemistry of solid surfaces. Examples drawn from heterogeneous catalysis and environmental chemistry.

**573 ENZYME CHEMISTRY (3)**

Prereq: Chem 463 or 466, 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/Biol 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.

**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 adviser. 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.

# COMMUNICATION

Communities thrive through the effective exchange of ideas and information. In order to promote lively, ethical exchanges, the Department of Communication has these educational objectives: (1) to teach effective communication that nurtures civil discourse and encourages 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.

Departmental courses in interpersonal/organizational and public/mass communication represent major interests in the communication discipline; an intercultural focus distinguishes the program. The department offers a **Bachelor of Arts** in communication and **Bachelor of Arts in Education**.

## COMMUNICATION

Communication graduates qualify for a variety of careers. The entire communication field is growing rapidly with increased diversification of employment opportunities.

A strong attention to research and writing provides students with skills needed for entry-level positions in organizational training and development, public relations, marketing, electronic media and other information-oriented occupations. The program emphasizes broad-based communication in professional roles rather than vocational/technical production skills. Some graduates use the degree as a basis for further academic work leading to advanced degrees in such professions as law, ministry, social or health sciences.

The department sponsors several undergraduate activities. These include a nationally recognized program in debate and forensics; Communication Club; peer advising; electronic media activities; and an opportunity to develop teaching skills as a tutor in the Fundamentals of Speech program. These activities enable students to develop competencies in realistic settings outside the classroom. The department internship program provides a culminating experience for seniors approaching the job market.

## COMMUNICATION EDUCATION

Education students may choose a communication major designed for elementary or secondary levels. Graduates with the Bachelor of Arts in Education at the secondary level find that the most common assignment is one involving not only communication but English as well. An interdisciplinary major in communication/English is offered as preparation for this type of assignment. It is expected that the prospective teacher will seek admission to the Woodring College of Education and then select a communication program to accompany Woodring's educational-preparation program.

## COMMUNICATION FACULTY

ANNA EBLEN (1986) Chair and Professor. BA, Duke University; MA, University of West Florida, PhD, University of Oregon.  
ROBERT BODE (1992) Associate Professor. BS, University of South

Dakota; MA, University of South Dakota; PhD, University of Oregon.  
MICHAEL KARLBERG (1997) Lecturer. BA, University of California; MA, Simon Fraser University.  
KELLY MCDONALD (1997) Assistant Professor. BA, Pacific Lutheran University; MA, PhD, University of Kansas.  
JIANGLONG WANG (1989) Associate Professor. BA, Fudan University; MA, PhD, Northwestern University.

## MID-PROGRAM CHECKPOINT

A student seeking to complete a B.A. degree in communication 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.

- ❑ Comm 101 or 235 or 312 **and** Comm 220 (with a B or better)
- ❑ Lib Sci 125 or Lib 201
- ❑ Two or more 200-level communication courses
- ❑ Substantial progress in GUR requirements

## DECLARATION OF MAJOR

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 for portfolios approved fall quarter, 1997, was 3.03. Intercultural communication experience, service learning experience, seniority at Western, and the overall quality of the portfolio also will be considered.

- ❑ Complete the following with a B or better: Comm 101 or 235 or 312 and Comm 220.

The department has established the following policy for declaring a communication major. On Friday of the second week of classes each quarter, students will submit a portfolio of their work. The department will review portfolios and announce the names of successful applicants at the end of the fourth week of each quarter. 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 college work, work experience, recreational and avocational activity, internships, awards and honors, and public service activities.
- ❑ Two samples of academic work including the student's best research paper or, if not available, significant written work represented in a collegiate assignment.
- ❑ 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 petition requesting a specific list of courses from outside the department comprising 25 credits. (See recommended lists of departmental course options available in the Communication office, College Hall 103.)

**BACHELOR OF ARTS**

*Major — Communication*

70 credits

Students contemplating a major in communication are encouraged to register as pre-majors with the Communication Department, College Hall 103.

- Satisfy departmental requirements for declaration of major
- Complete the following: Comm 398, 498 and Lib Sci 125 or Library 201
- Select 27 credits of departmental courses. (Obtain recommended course list from departmental office.)
  - At least one course from two of the following: (1) Comm 224, 327, 420, 416; (2) Comm 230, 235, 331, 435, 416; (3) Comm 240, 241, 340, 416.
  - 12 of the 27 credits must be upper-division
  - A total of not more than six credits from the following list may be applied to the 27 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. A student may petition to choose a group of courses comprised of 25 credits approved at the time of declaration.

*Minor — Communication*

25 credits

- Comm 101 or 235 or 312 and Comm 220
- Five courses, at least one of which is upper-division, under advisement, from the following: Comm 224, 230, 235, 240, 241, 325, 327, 331 or other upper-division courses, when space is available.

*Minor — Interdisciplinary*

The Department of Communication participates in offering an interdisciplinary minor listed under the Department of Computer Science, *Internet Resources Creation and Management*. Please see *Minors* in Computer Science for a complete description.

**BACHELOR OF ARTS IN EDUCATION**

*Declaration of Major*

Students must be accepted into the appropriate Woodring College education program before applying for a Communication or Communication/English major concentration. 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 or Secondary*

50 credits

This major meets the requirements for a supporting endorsement in speech for Washington state certification.

- Maintain a GPA of 2.75 for all college work
- Satisfy departmental requirements for declaration of

major

- Complete the following:
  - Comm 327, 224 and a debate component (Comm 235, unless used to satisfy departmental major requirement, or Comm 236, or Comm 456s)
  - Comm 454 or 455
  - 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

Students who apply for a Bachelor of Arts in Education — Communication — Secondary are advised to take an additional endorsement. Opportunities for timely student teaching placement and employment are enhanced with an additional endorsement.

*Minor — Communication Education*

32-33 credits

This sequence provides a supporting endorsement in speech for Washington state teacher certification.

- Comm 101 or 312, 331
- Comm 224
- Comm 235, 236 (3 credits)
- Comm 327
- 12 credits in communication courses selected under departmental advisement

This minor must be accompanied by the professional preparation program in education.

*Interdisciplinary Major Concentration — Communication/English*

89 credits

Completion of this major will lead to primary endorsements in speech and English when taken in combination with a professional education program.

*Communication*

40 credits

- Maintain a GPA of 2.75 for all college work
- Satisfy departmental requirements for declaration of major
- Complete the following:
  - Comm 327, 224 and a debate component (Comm 235, unless used to satisfy departmental major requirement, or Comm 236, or Comm 456s)
  - Comm 454 or 455
  - Select 17 credits of departmental courses, under advisement. (Obtain recommended list from departmental office.) Ten of the 17 credits must be upper-division. A total of not more than six credits from the following may be applied to the 17 credits: Comm 236, 300, 339, 400, 436, 450, 451, 459

*English*

49 credits

See the English Department section of this catalog.

## 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 departmental adviser.

In addition, one of the following must be completed: (1) two years of a foreign language, (2) two years of participation in college forensics, or (3) three courses to demonstrate competency in quantitative and/or qualitative research skills.

## COURSES IN COMMUNICATION

*Courses numbered X37; X97; 300, 400; 417, 445 are described on page 31 of this catalog.*

### 101 FUNDAMENTALS OF SPEECH (4)

Functional approach to effective communication; application of principles to practical problems in speech. Teacher education sophomores (or above) are advised to take Comm 312 unless Comm 101 is needed to satisfy their GUR requirements.

### 220 SURVEY OF COMMUNICATION (5)

Survey of human communication focuses on communication concepts and principles ranging from intrapersonal to interpersonal, group, organizational, rhetorical, intercultural, international and mass communication.

### 224 SMALL GROUP PROCESSES (4)

Exploration of the dynamics of human interaction in small group settings. Group tasks include the development of problem-solving skills, utilizing topics of current interest.

### 230 SURVEY OF RHETORIC (4)

Survey of major rhetorical theories from ancient Greece to the 20th century. Emphasis will be placed on contemporary communication scholars.

### 235 EXPOSITION AND ARGUMENTATION (4)

Theory and practice of principles of reasoned discourse as applied to public discussion of controversial issues.

### 236 INTERCOLLEGIATE FORENSICS (1-3)

Debate, extemporaneous and impromptu speaking, and interpretive reading and other phases of forensics. Repeatable to 6 credits.

### 238 HIGH SCHOOL FORENSIC INSTITUTE: EXPOSITION AND ARGUMENTATION (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.

### 240 THEORIES OF MASS COMMUNICATION (3)

Introduction to contemporary theories of mass communication. Course is theory based and reading-intensive. Course examines diverse social, political and economic influences on the mass media, as well as diverse influences of the mass media on society, politics and the economy.

### 242 AURAL WRITING (3)

Prereq: Comm 241 and Journ 104. Principles and practice of writing in aural style, including public service announcements, commercials, news, educational and corporate/instructional programs.

### 312 CLASSROOM COMMUNICATION (3)

Prereq: junior status; intended for teacher education students. Communication principles and applications to assist prospective teachers in the development of their individual speech skills and to prepare them to meet the communication needs of their students.

### 318 PROFESSIONAL COMMUNICATION (3)

Prereq: junior status; open to non-communication majors. Theory and practice in job interview, small group problem-solving discussion, public discussion and public speaking.

### 325 INTRODUCTION TO INTERCULTURAL COMMUNICATION (4)

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 THEORY AND PRACTICE OF INTERPERSONAL COMMUNICATION (4)

Prereq: junior status. Theory and practice of communication in dyads and small groups. Focus on competencies identified by interpersonal communication research: competencies include listening, conflict and negotiation, non-verbal behavior and relationship development.

### 331 ADVANCED PUBLIC SPEAKING (3)

Prereq: Comm 101, 235 or 312. 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 (3)

Primary course objective is technological literacy — gaining skills and experience for working with emerging communication technologies. Students will engage in a range of experiential assignments using various emerging technologies. Secondary objective is technology critique.

### 398 RESEARCH METHODS IN COMMUNICATION (4)

Prereq: Comm 220; junior status; departmental majors only. Survey of research methods, qualitative and quantitative, utilized in the field of communication. Focus will be on the rationale for, and the application of, particular methods.

### 416 TOPICS IN COMMUNICATION (3-4)

Prereq: senior status; departmental majors only. 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 to a maximum of 12 credits.

### 420 THEORIES OF HUMAN COMMUNICATION (4)

Prereq: junior status; departmental majors only. Special topics in human communication including systems theory, information theory, theories of signs, and theories of meaning and thinking.

### 425 ISSUES IN INTERCULTURAL COMMUNICATION (4)

Prereq: Comm 325. 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; junior status; departmental majors only. In-depth examination of theory and practice in interpersonal communication. Normally offered alternate years.

### 428 ORGANIZATIONAL COMMUNICATION (4)

Prereq: one of the following: Comm 220, 327, 420; departmental majors only. 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 RHETORICAL CRITICISM (4)

Prereq: Comm 230; senior status; departmental majors only. Survey of major theorists and theories of rhetorical criticism and applications to the understanding of contemporary public discourse. Normally offered alternate years.

### 435 PRINCIPLES OF PERSUASION (4)

Prereq: Comm 235; departmental majors only. Study of principles that influence attitudes and opinions in persuasive situations. Normally offered alternate years.

### 436 ADVANCED FORENSICS AND DEBATE (1-3)

Prereq: 6 credits in Comm 235 and/or 236. Emphasis on intercollegiate debate with opportunity for experience in

## COMMUNICATION

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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.

### **442 VIDEO WORKSHOP (2)**

Prereq: Written permission of instructor. Recommended prior to registration Journ 104, Comm 350 or have previous video experience. Production of the University's cable television show, *Western View*. Course will include 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.

### **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 SPEECH METHODS FOR THE ELEMENTARY TEACHER (3)**

Prereq: junior status. Methods of utilization of the speech arts in the elementary classroom. Normally offered alternate years.

### **455 TEACHING SPEECH IN THE SENIOR HIGH SCHOOL (3)**

Prereq: 15 credits in communication. Exploration and critique of methods and materials used in teaching public address, interpersonal and small group communication, and extracurricular speech activities.

Normally offered alternate years.

### **456a,b,c HIGH SCHOOL DEBATE COACH WORKSHOPS (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 adviser; 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; complete 24 credits in communication; permission of instructor. Supervised independent research on an advanced topic, leading to a substantial research paper.

### **498 COMMUNICATION: ETHICS (4)**

Prereq: senior status; departmental majors only. 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.

# COMMUNICATION SCIENCES AND DISORDERS

## THE DISCIPLINE

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 speech-language pathology and/or audiology 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 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.

Students who major in allied professional programs and are interested in speech, language and hearing development and wish to understand the nature of communication disorders should consider the speech-language pathology and audiology undergraduate minor curriculum.

## DEGREE PROGRAMS

The Department of Communication Sciences and Disorders offers both the Bachelor of Arts and the Master of Arts degrees. The Bachelor of Arts degree program offers a graduate and non-graduate track. The graduate track is considered to be a pre-professional degree which could make the student eligible for the graduate program in SPA. The non-graduate track is an option for students who do not intend to pursue graduate studies in the profession. For the bachelor's degree, a minor area of study of 25 credits or more is required. The minor must be approved by the student's academic adviser. Suggested areas include biology, business, education, psychology, or sociology. Individually designed minors are permissible with faculty approval.

The Master of Arts degree is a professional degree and facilitates certification at both the state and national level. A student may specialize in either speech-language pathology or audiology at the master's level.

Due to the clinical requirements of the program, enrollment in the undergraduate and graduate major may be limited.

A post-baccalaureate graduate preparation program is offered for those with an undergraduate degree in a field other than speech pathology/audiology. The four-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 complete the Extension Undergraduate Application. Extension admission and registration information is available from University Extended Programs, (360) 650-2841.

**NOTE:** Enrollment in this 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 Educational Standards Board (ESB) in both speech-language pathology and audiology and by the National Council for the Accreditation of Teacher Education.

## CERTIFICATION IN SPEECH-LANGUAGE PATHOLOGY/AUDIOLOGY

Two types of professional certification are available: state certification (Speech/Language Pathologist or Audiologist, ESA-SLP/A), which is mandatory for public school employment in Washington State; and national certification from the American Speech-Language Hearing Association (Certificate of Clinical Competence: Speech-Language Pathology, CCC-SLP; Audiology, CCC-A), which is often necessary for employment in most situations. Consult the department for additional information.

## ACADEMIC AND CLINICAL COMPETENCY

Not everyone is suited to work with clients in the clinical fields of speech-language pathology and audiology even though they 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 any students who appear to have personality traits that would prevent them from being successful in the discipline.

For further information, contact the department chair, phone (360) 650-3885, <http://www.wvu.edu/~spa>.

## COMMUNICATION SCIENCES AND DISORDERS FACULTY

MICHAEL T. SEILO (1970) Chair and Professor. BS, Northern Michigan University; MA, University of Arizona; PhD, Ohio University.

(Audiology, aural rehabilitation, speech acoustics, speech perception).

KENN APEL (1989) Professor. BA, MA, San Diego State University;

PhD, Memphis State University. Undergraduate adviser;

(speech-language pathology, language/literacy disorders in children and adolescents, counseling).

RIEKO M. DARLING (1995) Associate Professor. BS, MS, PhD, The

Florida State University. Transfer adviser (audiology), undergraduate

adviser, National Student Speech-Language-Hearing Association

Chapter adviser; director, Aural Rehabilitation Clinic. (audiology/aural

rehabilitation, geriatric audiology, amplification systems, central

auditory processing disorders).

BARBARA MATHERS-SCHMIDT (1991) Associate Professor. BA, Lewis

and Clark College; MS, Portland State University; PhD, University of

Washington. Undergraduate adviser (speech-language pathology,

fluency disorders, neuromotor speech disorders, research

methodology, and speech science).

CAROL C. McRANDLE (1975) Professor. BS, University of Minnesota,

Duluth; MS, PhD, Purdue University. Director, Audiology Clinic.

(Audiology/hearing science, pediatric audiology, auditory physiology.)

Coordinator, graduate studies, 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, adult language disorders, voice/laryngectomy).

**Clinic Staff**

ANNA CHAMBERLIN (1998) Audiology Clinic Supervisor. BA, MA, Western Washington University (audiology).  
 CANDACE K. GANZ (1982) Director, Speech-Language Clinic. BA, MA, University of Kansas; EdD, Seattle University. Speech-Language Pathology Clinic adviser (speech-language pathology/infant behavior and development).  
 JILL K. HUNT-THOMPSON (1977) Speech-Language Pathology Clinic Supervisor. BA, MA, Western Washington State College.  
 GEORGETTA LILLEY (1988) Speech-Language Pathology Clinic Supervisor. BS, MEd, California State College (speech-language pathology).  
 KATHRYN NETHERY (1998) Audiology Clinic Supervisor. BA, MA, Western Washington University (audiology).  
 JANICE A. SMITH (1989) Intern Coordinator. BS, University of Washington; MS, Idaho State University.

**Adjunct Faculty**

ROBERT EMIL HECHT. BS, University of Washington; MD, University of Washington School of Medicine.  
 GARY K. JOHNSON. BA, Pacific Lutheran University; MD, University of Washington School of Medicine.  
 DAVID LIPSCOMB. BA, MA, University of Redlands; PhD, University of Washington.  
 FRANK WILSON. BS, Bowling Green State University; PhD, Northwestern University.

**DECLARATION OF MAJOR**

Students interested in majoring in speech-language pathology and audiology must make initial application with the Department of Communication Sciences and Disorders. At that time an adviser will be assigned.

The Department of Communication Sciences and Disorders offers two different tracks leading to a bachelor's degree. The first track, the *graduate track*, is for students who intend to apply for graduate school within the profession. Undergraduate students must be graduate track to take CSD 458a, 458b, and 462. The second track, the *non-graduate track*, is for students who intend to complete their studies in speech pathology/audiology at the bachelor's level. For either track, a minor in another major is required.

Before officially being accepted into the graduate track, students *must meet the following two criteria*: documented overall college GPA of 3.0 and an earned B- (GPA 2.70) or better in CSD 351, 352, 354 and 356; non-graduate track students do not take CSD 458a, 458b, and 462, so they will need to substitute an equivalent number of credit hours in order to meet the requirements of the undergraduate degree in CSD.

**BACHELOR OF ARTS**

*Major — Speech-Language Pathology and Audiology*

58 credits

- CSD 351, 352, 353, 354, 356, 361, 371, 372, 373
- CSD 450, 451, 454, 457, 458a\*, 458b\*, 462\*, 463
- Electives under departmental advisement
- Required minor

\* For graduate track only.

*Minor — Speech-Language Pathology and Audiology*

25 credits

(A minimum of 25 credits. More than 25 credits recommended.)

- CSD 351, 352, 354, 356, 371
- Electives from CSD 253, 353, 361, 372, 373, 451, 463, 465

**GRADUATE STUDY**

For a concentration leading to the Master of Arts degree, see the Graduate School section of this catalog.

**COURSES IN SPEECH-LANGUAGE PATHOLOGY AND AUDIOLOGY**

*Courses numbered X37; X97; 300, 400; 417, 445 are described on page 31 of this catalog.*

**253 SPEECH AND HEARING SCIENCES FOR THE LIBERAL ARTS (4)**

Basic concepts of speech production, speech acoustics, hearing and speech perception.

**351 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.

**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)**

Normal speech and language acquisition; its impact on the developing child; origins and growth of symbolic processes, developmental norms; factors influencing learning of language and speech.

**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 351, 352, 356. Phonological development, symptomatology, etiology and therapy for articulation disorders.

**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 language-learning impaired children.

#### **454 DISORDERS OF FLUENCY (3)**

Prereq: CSD 351. Characteristics of stuttering behavior; current theories of etiology; principles and practices of therapy; cluttering as a related disorder.

#### **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.

#### **458a 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. Writing proficiency course.

#### **458b LAB: BEGINNING CLINICAL PRACTICE IN SPEECH-LANGUAGE THERAPY (1)**

Prereq: CSD 458a, 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 458a and 458b 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.

#### **464a,b,c CLINICAL PRACTICE IN AURAL REHABILITATION (2 ea)**

Prereq: CSD 458a,b, 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.

#### **465 BEGINNING SIGN LANGUAGE (3)**

Introduction to the theory and practice of (pidgin) sign language.

#### **465a INTERMEDIATE SIGN LANGUAGE (2)**

Prereq: CSD 465. Continued theory and practice of (pidgin) sign language.

#### **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.

#### **468a,b,c CLINICAL PRACTICUM IN AUDIOLOGY (2 ea)**

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.

#### **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 develop clinical competencies in 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 31 of this catalog.*

*Admission to Graduate School or special permission required. See the Graduate School section of this catalog.*

#### **502 BEHAVIORAL RESEARCH IN SPEECH PATHOLOGY AND AUDIOLOGY (3)**

Introduction to empirical research design, statistics; basic methodology

applied to current research in communication and speech.

#### **510 ORGANIC DISORDERS (3)**

Prereq: CSD 450, 458b or equivalent, or permission of instructor. A survey of speech disorders; identification, classification, and fundamentals of therapy for cerebral palsied and cleft palate individuals.

#### **515 SEMINAR: PHONOLOGY (4)**

Prereq: CSD 373 and graduate status. Current topics and issues on normal 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 SPA 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.

#### **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 normal 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)**

Prereq: CSD 454 or equivalent. Critical analysis of recent research findings relating to stuttering and cluttering disorders; chief rationale for therapy and evaluation of therapy procedures and results.

#### **555 SEMINAR: SCHOOL-AGE LANGUAGE-LEARNING AND DISORDERS (3)**

Prereq: CSD 451, 553. Current topics and issues on normal 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 disfunction. 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.

## **559 SPEECH-LANGUAGE PATHOLOGY PRACTICUM (2)**

Prereq: permission of instructor. Must be completed with a grade of B- or better.

## **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 or permission of instructor. Study of basic auditory correlates and audiometric procedures.

## **562 ADVANCED AUDIOLOGY II (3)**

Prereq: CSD 462, 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 458a,b, 463 and a minimum of 25 hours of documented speech-language pathology/audiology and rehabilitation observations and permission of instructor. 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.

## **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.

## **568a,b,c,d,e,f,g 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.

## **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. 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. 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.

## **576 HEARING IMPAIRED IN THE EDUCATIONAL SETTING (3)**

Prereq: bachelor's degree in education or speech pathology/audiology. This course will introduce 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.

## **577 PEDIATRIC AUDIOLOGY (3)**

Prereq: CSD 371, 462, 568a 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, 568a 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; particular attention to documentation.

## **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.

## **592 ADMINISTRATION OF SPEECH-LANGUAGE AND HEARING PROGRAMS (3)**

Students enrolling must be within two quarters of program completion. Analysis of program funding; administrative structures within schools, hospitals and clinics. A project report is required.

## **596 SUPERVISION IN COMMUNICATION DISORDERS (3)**

Prereq: permission of instructor. Perspectives of the supervisory process. Theories, practices and techniques from this and other disciplines serve as a basis for discussion, implementation and evaluation. Lab required.

## **598a,b INTERNSHIP IN THE PUBLIC SCHOOL SETTING (8 ea)**

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 adviser or clinic director. Supervised off-campus experience providing

opportunities to develop and demonstrate clinical competence in an approved school setting. Placement is dependent upon availability of suitable site. (Only 3 credits of the 8 for either a or b are applicable toward the M.A. degree — see “Requirements in Specialization.”) S/U grading.

**599a,b INTERNSHIP IN THE MEDICAL SETTING (8 ea)**

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 adviser or clinic director. Supervised off-campus experience providing opportunities to develop and demonstrate clinical competence in an approved clinical setting. Placement is dependent upon availability of suitable site. (Only 3 credits of the 8 for either a or b are applicable toward the M.A. degree — see “Requirements in Specialization.”) S/U grading.

**690 THESIS (1-9)**

**691 NON-THESIS OPTION (1 or 3)**

Writing based on research or clinical projects. This report to be used to help satisfy the non-thesis requirement.

## 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.

A computer is a versatile tool, capable of everything from computing a company's payroll or processing insurance claims and premiums, to guiding an airplane or producing a complex movie animation. Its versatility is achieved by changing the instructions, called software or programs, that tell the computer what to do, which has the effect of transforming the computer into a different tool.

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 (1) algorithms and data structures (ways to organize instructions and information efficiently), (2) programming languages (specific methods of delivering instructions to computers), (3) software methodology and engineering (processes to develop software and ways to organize groups of instructions), (4) databases and information retrieval, and (5) 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, and formal methods. Members of the department are also involved in collaborative projects with local industry and other academic units.

### PROGRAMS AND CAREER OPPORTUNITIES

The Department of Computer Science offers two undergraduate degree programs, a Bachelor of Science degree which is accredited by the Computing Sciences Accreditation Board, a Bachelor of Arts in Education degree, and cooperates with Departments of Mathematics and Accounting to offer joint majors. The department also offers an interdisciplinary minor in Internet resource creation and management, which provides technical and communication background necessary for developing and maintaining Web pages. The two bachelors degrees share a common core of courses, emphasizing software development skills obtained through (1) the study of concepts and (2) practice with current industry tools.

### BACHELOR OF SCIENCE

Through the Bachelor of Science degree, students are prepared for graduate study or careers in industry as systems analysts and/or designers. Systems analysts assess the needs of a project for computer hardware and software, and 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 students with Bachelor of Science degrees in computer science.

Graduates often begin their careers as computer programmers. Programming is a creative process spanning a wide range of various kinds of expertise that is heavily influenced by the application for which the programs or software are being developed. This phenomenon gives rise to programmers of varying degrees of capability and knowledge. 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.

### BACHELOR OF ARTS IN EDUCATION

This degree prepares the student to teach computer science in secondary schools and is required for an endorsement. An understanding of the knowledge, techniques, and skills that make up computer science is necessary.

### MINOR IN INTERNET RESOURCE CREATION AND MANAGEMENT

Students with this minor are prepared to be Internet content providers. This minor is intended to complement degrees in disciplines outside computing, providing the ability to publish and maintain material on the World Wide Web. It is anticipated that this minor will enhance a student's standing in applications to entry-level positions and to increase the marketability of their major degree. The curriculum for this minor adapts to changes in Internet technology.

### COMPUTER SCIENCE FACULTY

DEBRA S. JUSAK (1988) Chair and Associate Professor. BA, State University of New York at Potsdam; MS, University of Connecticut; PhD, University of California, Irvine.  
 GARY L. EERKES (1985), Associate Professor. BA, MS, Western Washington State College; MS, Washington State University; 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.  
 GEOFFREY B. MATTHEWS (1985), Professor. BA, University of California; MA, PhD, Indiana University.  
 MICHAEL MEEHAN (1996) Assistant Professor. BS, Birmingham-Southern College; MS, PhD, University of Alabama, Huntsville.  
 LARRY D. MENNINGA (1970), Associate Professor. BA, University of Iowa; MA, MS, PhD, University of Washington.  
 GEORGE MOBUS (1994) Assistant Professor. BA, University of Washington; MBA, San Diego State University; PhD, University of North Texas.  
 PHILIP A. NELSON (1987), Associate Professor. BS, Pacific Union

College; MS, University of California, Davis; PhD, University of Washington.

MARTIN L. OSBORNE (1977), Associate Professor. BA, Hamilton College; MA, University of Oregon; PhD, Oregon State University. SAIM URAL (1979) Associate Professor. BS, MS, PhD, Middle East Technical University, Ankara.

## FACILITIES

The department has a number of general and special purpose laboratories that support the computer science program. The four general purpose labs contain both PC-Pentium/Windows platforms and Sun workstations running Unix in an X-windows environment. Most computer science classes use these laboratories for their programming and other homework needs. Additionally, there are three special purpose labs containing: (1) Motorola 68000 systems using cross-development tools to develop systems-level software for device handling, (2) 486 machines running NETBSD, a version of Unix, which support a class in network programming, and (3) PC-Pentium computers running Windows NT, which are used for the development of Web-based applications and advanced level object-oriented software. In addition, the University maintains a large Unix facility and several PC laboratories that the department uses to support lower-division courses.

## DECLARING A MAJOR

### BACHELOR OF SCIENCE

Students must apply for admission to the major by completing a form in the department office, Bond Hall 302. When a student is accepted as a major, she/he is assigned a faculty adviser. Students who have not yet been accepted as majors should seek advice in the department 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.

### BACHELOR OF ARTS IN EDUCATION

Students must complete a program of studies in professional education, including student teaching to obtain an initial teaching certificate. Students should seek formal admission to the appropriate program in education early in their careers at Western and consult with an adviser in instructional technology. It is strongly recommended that this program be taken in conjunction with another endorsable one. Please consult the catalog section for the Instructional Technology Program of the Woodring College of Education. To obtain a teaching endorsement in computer science students must complete the Bachelor of Arts degree with a minimum grade point average of 2.50 in the required courses.

## 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

- One or two C++ classes
- A year sequence chosen from Chem 121, 122, 123; Physics 121/131, 122/132, 123/133; Geol 211, 212

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
- CS 140, 145, 211, 241
- The supporting science sequence (choice of biology, chemistry, geology, physics, or engineering technology)

## INFORMATION

Department of Computer Science, Bond Hall 302, Western Washington University, Bellingham, WA 98225-9062. Please direct questions to the departmental office: The phone is (360) 650-3805, and you may correspond by e-mail to csdept@cc.wvu.edu.

## BACHELOR OF SCIENCE

### Major — Computer Science

100 credits plus 6-8 credits of science beyond the GUR science requirement.

- CS 140, 145, 211, 241, 310, 311, 320, 341, 345, 401, 405, 410, 420, 425, 430, 460, 496
- Math 124, 125, 204, 226, 341
- Math-CS 375
- 12 credits chosen from CS 400, 402, 415, 416, 417, 439, 440, 450, 465, 480, Math-CS 335, 435, 475, 476, of which a maximum of 4 credits may be from CS 400 or 494.
- A supporting sequence chosen from: Biol 201, 202, 203; Chem 121, 122, 123; Geol 211, 212, and one of Geol 310, 314, 318, 352; Physics 121/131, 122/132, 123/133; ETec 271, 272, 371
- Two additional courses of a supporting nature, each chosen by one of the two methods: (1) a course in the same discipline as the supporting sequence chosen above, but of a higher level (ETec 273, 274 count as a higher level than listed ETec sequence); or (2) a course from a different discipline than the supporting sequence chosen above, but restricted to the list above.

### Minor — Computer Science

38-39 credits

- CS 140, 145, 211, 241, 311, 341, 345
- Math 124 or 157
- Two upper division computer science courses

**BACHELOR OF ARTS IN EDUCATION***Major — Computer Science Education*

74-76 credits

- CS 140, 145, 211, 241, 310, 311, 320, 341, 345, 405, 425
- Math 124, 125, 204, 341
- IT 444, 452, 453
- Two courses chosen from CS 401, 410, 420, 430, 440, 450, 460, 465, 480

*Minor — Computer Science Education*

35 credits

- CS 140, 145, 211, 241, 311, 341, 345
- IT 444, 452, 453

**COMBINED MAJORS**

The Department of Computer Science 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 department section of the General Catalog.

Mathematics/Computer Science: See Mathematics department section of the General Catalog.

**MINOR***Minor — Internet Resource Creation and Management*

24-26 credits

- CS 112, 202, 302, 303
- Comm 318
- Either Eng 302, 402 or Journ 207, 309

**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**

*Courses numbered X/37; X97; 300, 400; 417, 445 are described on page 31 of this catalog.*

**101 PERSONAL COMPUTERS (3)**

Study of personal computers. Microcomputer organization; hardware options; software options; relationship among hardware, operating system and application software; hands-on experience with standard packages, such as word processing and spreadsheets; windowing environments. Laboratory.

**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, cultural exchange and worldwide collaboration. Basic principles of effective site organization.

**113 INTRODUCTION TO INTERNET RESOURCE CREATION (3)**

Prereq: CS 101, 102 or equivalent knowledge of computing/Internet. 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.

**140 COMPUTER PROGRAMMING I (4)**

Prereq: Math 102 or equivalent. 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. Laboratory.

**145 COMPUTER PROGRAMMING II (4)**

Prereq: CS 140; Math 115 or 118. Advanced features of an object-oriented language: recursion, multidimensional arrays, binary file I/O, and advanced types including pointers and classes. Introduction to object-oriented analysis and design. Programming is required in implementation of concepts. Laboratory.

**202 BASIC INTERNET RESOURCES (4)**

Prereq: CS 112 or equivalent. Principles and technologies required to produce and distribute Internet (World Wide Web) content, with a focus on site architecture and client-side dynamic pages; an introduction to server-side processing.

**211 DISCRETE STRUCTURES AND FUNCTIONAL PROGRAMMING I (4)**

Prereq: CS 140; Math 115 or 118. Elementary logic (truth tables, propositional calculus), proofs, sets (tuples, relations, functions), induction, inductively defined sets (lists, strings, trees, graphs). Programming using a functional language is required in implementation of concepts. Laboratory.

**241 DATA STRUCTURES I (4)**

Prereq: CS 145; Math 124 or 157. Lists, stacks, queues, binary trees, sets, recursion, sorting/searching algorithms, abstract data types. Algorithm analysis. Object-oriented analysis, design, and programming are emphasized. Programming is required in implementation of concepts. Laboratory.

**302 ADVANCED INTERNET RESOURCES (4)**

Prereq: CS 202 or equivalent. Principles and technologies required to produce and distribute Internet (World Wide Web) content, with a focus on server-side processing; cgi and Active Server Pages and database interfaces; security issues; current tools and standards.

**303 PRACTICUM IN NET RESOURCE MANAGEMENT (3)**

Prereq: CS 302 and either Eng 302 or Journ 207. Group project in the creation and management of an Internet site; web server installation; use of a variety of site management tools.

**310 COMPUTER ARCHITECTURE I (4)**

Prereq: CS 145. Introduction to computer architecture; data representation; instruction set architecture of a typical computer; assembly language programming.

**311 DISCRETE STRUCTURES AND FUNCTIONAL PROGRAMMING II (4)**

Prereq: CS 211; Math 124 or 157. Predicate logic, combinatorial logic, formal languages (deterministic finite automata, regular expressions, context-free languages), recursive functions, methods of formal analysis of algorithms, the Church-Turing thesis. Programming using a functional language is required in implementation of concepts.

**320 COMPUTER ARCHITECTURE II (4)**

Prereq: CS 241, 310. Introduction to digital logic; combinatorial and sequential circuits; input/output; interrupts, peripheral device interfaces and programming.

**341 DATA STRUCTURES II (4)**

Prereq: CS 241. Hashing, general trees, search trees, graphs, strings/pattern matching, file organizations (direct, indexed, sequential), external sorting techniques, storage allocation structures. Programming is required in implementation of concepts.

**345 PROGRAMMING PROJECT (3)**

Prereq: CS 311, 341. Programming projects integrating the experiences of CS 241-341 and CS 211-311. Software methodology and engineering. Student reports and presentations. Was CS 324 in previous catalog.

**401 FORMAL LANGUAGES AND AUTOMATA (3)**

Prereq: CS 311. Formal languages, grammars, automata.

**402 ARTIFICIAL INTELLIGENCE (3)**

Prereq: CS 311. Introduction to knowledge representation and search. Possible application areas include natural language, perception, learning and expert systems.

**405 DESIGN AND ANALYSIS OF ALGORITHMS (3)**

Prereq: CS 311, 341; Math 226. Derivation of time and space complexity of algorithms. Typical algorithms investigated include sorts, graph traversals, string matching. Algorithm paradigms: divide and conquer, greedy algorithms, backtracking, branch and bound. Discussion of NP-completeness. Correctness proofs of algorithms.

**410 PROGRAMMING LANGUAGES (3)**

Prereq: CS 345. Introduction to the structure of programming languages; syntax and semantics; properties of algorithmic languages; special purpose languages.

**415 INFORMATION SYSTEMS I (3)**

Prereq: CS 341. Examination and development of computerized information systems such as client/server and database systems. Techniques for the analysis, design and implementation of such systems. The software development environment for the course attempts to keep pace with current trends.

**416 INFORMATION SYSTEMS II (3)**

Prereq: CS 415. Continuation of CS 415.

**420 COMPUTER ARCHITECTURE III (3)**

Prereq: CS 311, 320, 341. Basic processor design: arithmetic logic unit, datapath, control alternatives, pipelining; memory organizations: cache memory, virtual memory; input/output and interfacing; comparative architectures. Student reports.

**425 HISTORICAL AND SOCIAL ASPECTS OF COMPUTING (3)**

Prereq: CS senior status. Historical development of computing machines and concepts; social implications of computers.

**430 DATABASE THEORY (3)**

Prereq: CS 311, 341. Data models and their access languages. Design issues: ER diagrams, functional dependency analysis, normalization. Database programming.

**439 COMPUTER MODELING AND SIMULATION (3)**

Prereq: CS 311, 341. Basic concepts of dynamic modeling and system simulation, design and methodology of simulation models, model validation, simulation languages, application to decision making.

**440 SOFTWARE ENGINEERING I (C++/Windows) (3)**

Prereq: CS 311, 341. Examination of the general concerns and techniques of software engineering. Programming in C++. Mastery of the Windows programming interface. Object-oriented analysis and design techniques.

**450 COMPILER THEORY AND DESIGN (4)**

Prereq: CS 345, 410; CS 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 (4)**

Co- or prereq: CS 420. Principles of operating systems; concurrent processes; resource management; process management; file systems; protection.

**465 COMPUTER NETWORKS (3)**

Prereq: CS 311, 341. Network architecture and design, physical networks, network protocols, network management, systems level and user-level programming.

**480 COMPUTER GRAPHICS (4)**

Prereq: CS 345; Math 204; Math-CS 375. Overview of the hardware, software, and techniques used in computer graphics; raster display devices; input devices; display files, 2D and 3D transformations; windowing, clipping; simple surface rendering.

**494 PROFESSIONAL WORK EXPERIENCE (4)**

Prereq: 30 credits in computer science, including CS 345; 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 Department of Computer Science for information. S/U grading.

**496 SENIOR PROJECT (4)**

Prereq: Completion of senior evaluation. Software development

project requirement specifications, design, implementation, testing, and documentation. Students will be required to take the ETS Major Field Test in Computer Science. Twenty percent of the grade will be based upon this score.

**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 Graduate section of the General Catalog.*

**501 COMPLEXITY THEORY (4)**

Prereq: CS 401 or equivalent. Topics selected from models of computation, decidability, reducibility, the time-space hierarchy, non-determinism, the polynomial hierarchy, and parallel complexity.

**505 PARALLEL COMPUTATION (4)**

Prereq: CS 401, or equivalent. 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: CS 401, 450, 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: CS 460 or equivalent. Topics from interprocess communication, resource management, security, distributed operating systems, process models for distributed systems, real-time operating systems, formal models applicable to operating systems.

**530 ADVANCED DATABASE THEORY (4)**

Prereq: CS 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.

**535 EMPIRICAL METHODS (4)**

Prereq: CS 345. Introduction to the examination of empirical data. Design of experiments, analysis of data and understanding of results. In particular, computer systems and software are examined from an empirical perspective.

**538 OBJECT ORIENTED COMPUTING (4)**

Prereq: CS 440 or equivalent experience. The principles and practice of object-oriented software development. Exploration of research topics in object-oriented systems chosen from areas of current interest.

**555 ADVANCED COMPUTER ARCHITECTURES (4)**

Prereq: CS 420 or equivalent. Memory hierarchy organization and management, pipelining, multi-processors, new architectures.

**560 VERY LARGE SCALE INTEGRATION (4)**

Prereq: CS 420 or equivalent. Design of VLSI circuits. Physical technologies. Modeling tools. Silicon compilers. Chip simulations.

**561 VLSI DESIGN PROJECT (4)**

Prereq: CS 560 or equivalent. Design of digital circuitry appropriate for VLSI chip layout. Includes chip fabrication and testing when resources are available.

**565 COMPUTER COMMUNICATIONS NETWORKS (4)**

Prereq: Permission of instructor. Topics from digital communications technologies, media access control, local area networks, network architectures, networking protocols, inter-connections and routing, performance, security, and industry standards.

**566 PRACTICUM IN SOFTWARE MANAGEMENT (3)**

Prereq: Graduate standing. Advanced exercises in the theory and practice of large software systems; installation, continuous management and modification of software, with an emphasis on software that is not commercially supported.

### **570 ARTIFICIAL INTELLIGENCE (4)**

Prereq: permission of instructor. Advanced topics in artificial intelligence. Possible areas include knowledge representation, LISP or PROLOG, search strategies, heuristics, goal refinement, theorem proving, and symbolic problem solving.

### **573 COMPUTATIONAL LINGUISTICS (4)**

Prereq: graduate status, or permission. 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.

### **578 CRYPTOGRAPHY (4)**

Prereq: graduate status or permission. Selected topics from number theory; simple, homophonic, polyalphabetic substitution ciphers; product ciphers, DES; exponentiation ciphers; knapsack ciphers; key management.

### **580 ADVANCED COMPUTER GRAPHICS (4)**

Prereq: CS 480 or equivalent. Three-dimensional concepts, shading techniques, curves and surfaces, ray tracing, radiosity, texture mapping, fractals.

### **585 IMAGE PROCESSING (4)**

Prereq: graduate status or permission. Digital image fundamentals, image transforms, image enhancements, image restoration, image encoding, representation and description.

### **690 MASTER'S THESIS (1-12)**

Prereq: appointment of thesis advisor and committee. S/U grading.

### **691 MASTER'S PROJECT (1-8)**

Prereq: appointment of project advisor and committee. Software/hardware project for non-thesis option. S/U grading.

## 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, Kathleen Tomlonovic, (360) 650-3836, e-mail: ktomlvic@cc.wvu.edu.

### PARTICIPATING FACULTY

KATHLEEN TOMLONOVIC, Director. Modern and Classical Languages. Chinese language and culture; traditional and modern literature.  
 SANDRA BREITENBACH, Modern and Classical Languages. Chinese linguistics.  
 PATRICK BUCKLEY, Geography. Geography and economics of Japan.  
 JAMES HEARNE, Computer Science. Chinese philosophy, Chinese science, East Asian language computing.  
 EDWARD KAPLAN, History. Ancient and medieval Chinese history, Chinese economic history.  
 ROBERT KIM, Education. Korean language, literature and culture.  
 LINDA AMY KIMBALL, Anthropology. Anthropology, Southeast Asia, linguistics, traditional Chinese, archaeoastronomy of Central Asia.  
 ROBERT MARSHALL, Anthropology. Japanese business culture, economy and politics of Japan.  
 JOHN McCLENDON, Fairhaven College. Modern politics and history in Japan, China and the Pacific Rim.  
 DEBNATH MOOKHERJEE, Geography. Cultural geography, urbanism, East and South Asian geography.  
 EILEEN MOMILANI NAUGHTON, Art. Asian art, art of the Pacific Rim.  
 KRISTEN PARRIS, Political Science. East Asian politics.  
 SCOTT PEARCE, Liberal Studies. Medieval Chinese history.  
 WAYNE RICHTER, Wilson Library. Mongolian language.  
 HENRY G. SCHWARZ, History and East Asian Studies, Emeritus. Mongolian and modern Chinese history, minorities of Northern China.  
 MASSIMILIANO TOMASI, Modern and Classical Languages. Japanese language and culture, modern Japanese rhetoric and literature.  
 EDWARD J. VAJDA, Modern and Classical Languages. Central Asian and Siberian languages and history.  
 JIANGLONG WANG, Communications. Intercultural communications.  
 DIANA WRIGHT, History. Premodern 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.

\* A student faculty major administered by Liberal Studies pending final approval from Higher Education Coordinating Board.

### BACHELOR OF ARTS

#### Major — East Asian Studies\*

60 credits

- Two years of Chinese or Japanese language (Mongolian or Korean by special arrangement)
- East Asian Studies 201, 202 and 302
- Either East Asian Studies 367 or 368 or Hist 372
- 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 Asian Studies 201 and 202
- Either East Asian Studies 367 or 368 or Hist 372
- 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

Courses numbered X37; X97; 300,400; 417,445 are described on page 31 of this catalog.

#### 201 THE CULTURES OF EAST ASIA: POLITICAL-MATERIAL ASPECTS (5)

The political, economic and social aspects of the evolution of civilization in China, Japan, Korea and Mongolia from earliest times to the present. Also taught as Hist 280.

#### 202 THE CULTURAL HISTORY OF EAST ASIA (5)

An introductory survey of the cultural histories of China, Japan, Korea, and Mongolia with emphasis on the philosophical, religious and aesthetic aspects.

#### 210 INTRODUCTION TO NOMADIC CIVILIZATIONS (4)

An introductory survey of the art, architecture, languages, literature, music, peoples and religions of Northern and Central Asia.

#### 302 METHODS AND MATERIALS IN EAST ASIAN STUDIES (3)

Prereq: East Asian Studies 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. Also taught as Hist 499 (selected sections only).

#### 311 TRADITIONAL KOREA (4)

Prereq: Hist 280 or East Asian 201. A general survey of Korean history before 1876.

#### 313 EARLY INNER ASIA (4)

Prereq: East Asian 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 Asian 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 Asian 201 or 202 or 210 or Anth 364 or permission of instructor. An examination of the socio-political and cultural history of both pre-modern and modern Tibet.

### 367 CHINESE LITERATURE IN TRANSLATION (5)

Prereq: East Asian 201 or 202 or Chinese 103 or Liberal Studies 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 Asian 201 or 202 or Liberal Studies 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)

### 465 PEOPLES OF INNER ASIA (3)

Prereq: East Asian 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 region's 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: From Yao to Mao: History of Chinese Statecraft

Hist 371: The Chinese Economy from Stone Age to Mao's Age

Hist 372: Sages, Scribes and Scribblers: Chinese Intellectual History

Hist 374: History of Pre-modern Japan

Hist 375: History of Modern Japan

Hist 480: Ancient and Early Imperial China

Hist 481: Imperial China from the Fall of Han to Mid-Ch'ing

Hist 482: China from Late Ch'ing to the Present

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: Mythology, Religion and Society in China and Japan

Lbrl 273: Artistic Expression 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

Art History 270: Survey of Asian Art: India, China and Japan

Art History 471: Cultural Contacts: The Pacific Rim

### Languages and Literature

Asian Literatures in Translation: East Asian Studies 367, 368

Chinese 280: Traditional Chinese Characters

Chinese 360: Business Chinese

Chinese 380: Chinese Culture through Film and Literature

Chinese 390: Introduction to Chinese Language and Linguistics

Japanese 280: Kanji

Japanese 330a: Japanese Culture through Film, Modern

Japanese 330b: Japanese Culture through Film, Classical

Japanese 330c: Japanese Culture through Film, Literature

Eng 236: Introduction to Asian-American Literature

### 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

Fair 312: Pacific Rim Studies

Geog 324: East Asia

Geog 423: The Pacific Rim

Pol Sci 307: East Asia

Pol Sci 430: Modern Chinese Politics

Pol Sci 431: Modern Japanese Politics

## TUTORIALS AND STUDY ABROAD

The Center for East Asian Studies also offers tutorials in advanced Chinese and Japanese. Elementary and intermediate Mongolian (15 credits) are taught summers at Inner Mongolia University.

Study Abroad: Students are encouraged to spend up to one year in a program, including Asia University, Tokyo; Tsuda College, Tokyo; Inner Mongolia University, Hohhot; Seoul Woman's University, Seoul; or Foreign Studies University, Beijing. Numerous other study abroad programs such as CIEE and CET provide opportunities for study in Beijing, Shanghai, Nanjing and Taipei.

# ENGINEERING TECHNOLOGY

The Department of Engineering Technology offers six challenging programs that prepare graduates for technical and professional careers in industry and 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 laboratories where students apply the theory learned in lectures to solve practical problems as well as 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, USWest, Nike, Korry Electronics, etc. 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 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

KATHLEEN L. KITTO (1988) Chair and Professor. BS, MSME, Montana College of Mineral Science and Technology.

STEVEN H. DILLMAN (1993) Associate Professor. BS (chemical engineering), Rice University; PhD (chemical engineering), University of Washington.

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) Assistant Professor. BSME, MSME, University of Minnesota, Institute of Technology.

DAVID S. KELLEY (1998) Assistant Professor. BS, MS, University of Southern Mississippi; EdD, Mississippi State University.

ERIC K. MCKELL (1997) Assistant Professor. BSME, MSMFE, Brigham Young University.

TODD MORTON (1988) Associate Professor. BSEE, MSEE, University of Washington.

STEVE MOSKOWITZ (1984) Associate Professor. BEE, MEE, Rensselaer Polytechnic Institute.

JEFFREY L. NEWCOMER (1998) Assistant Professor. BS, Meng, MS, PhD (mechanical engineering), Rensselaer Polytechnic Institute.

ARUNAS P. OSLAPAS (1991) Associate Professor. BFA, Montana State University; MFA, University of Illinois.

ROBERT A. RAUDEBAUGH (1988) Professor. BS, MA, Northern Arizona University; EdD, Arizona State University.

MICHAEL SEAL (1968) Professor. BEd, University of British Columbia; MEd, Western Washington State College; EdD, Texas A&M University.

DAVID WERSTLER (1986) Associate Professor. BSME, Purdue University; MSME, Colorado School of Mines; MBA, Xavier University; Registered Professional Engineer.

## Adjunct Faculty

ROBERT HOLLINGSWORTH (1988). BA, Drake University; MBA, University of Oregon.

INDLE G. KING (1987). BA, MA, University of Washington.

## DECLARATION OF MAJOR

Students who intend to complete one of six majors should declare the major early and obtain advisement from a department adviser so that a program of study can be planned. Engineering technology programs require courses that also fulfill GUR requirements (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 110, 271, 272, 273, 274, 371, 372, 375
- ❑ Math 114, 115 or 118, 124, 125
- ❑ Physics 121/131, 122/132, 123/133 or 114, 115, 116
- ❑ Comm 101, CS 140, Eng 101 and 302
- ❑ 8 credits technical electives, 5 credits other GURS

### Manufacturing Engineering Technology

- ❑ ETec 110, 111, 220, 222, 223, 224, 225
- ❑ Math 115 or 118, 124, 125
- ❑ Physics 121/131, 122/132, 123/133 or 114, 115, 116
- ❑ Chem 115, CS 140, Comm 101, Eng 101
- ❑ 20-24 credits other GURS

## Plastics Engineering Technology

- ETec 110, 111, 220, 223, 224, 225
- Math 115 or 118, 124, 125
- Physics 114, 115
- Chem 121 and 251, CS 140, Comm 101, Eng 101
- 25-30 credits other GURs

## Industrial Design

- ETec 110, 111, 214, 215, 216, 223, 231
- Math 115 or 118, Mgmt 271
- Physics 114, 115
- Art 110, 120, 130, 190 plus additional art courses (with advisement)
- Art History 240, 270
- Other GURs (with advisement)

## Industrial Technology — Industrial Graphics

- ETec 110, 111, 214, 215, 220, 223
- Math 114, 115 or 118
- CS 140
- Chem 115
- Physics 114, 115
- Acctg 240, Mgmt 271, Econ 206
- Minimum of 24 credits GURs

## Industrial Technology — Industrial Supervision

- ETec 110, 111, 220, 223
- Math 114, 115 or 118
- CS 140
- Chem 115
- Physics 114, 115
- Acctg 240, Mgmt 271, Econ 206
- Minimum of 32 credits GURs

## Industrial Technology — Vehicle Design

- ETec 110, 111, 201, 220, 223, 280, 281
- Math 114, 115 or 118, 124
- CS 140
- Chem 115
- Physics 114, 115
- Acctg 240, Mgmt 271, Econ 206
- Minimum of 22 credits GURs

## Technology Education

- ETec 110 plus 5 of the following: ETec 111, 218, 220, 223, 231, 280, 333, 351
- Math 114, 115 or 118
- Supporting courses (with advisement) in chemistry, physics, computer science
- Completion of GUR
- For junior status, student must have full admission to the Woodring College of Education.

## VEHICLE DESIGN

A post-baccalaureate professional development certificate program in vehicle design is offered for students with an undergraduate degree in engineering or technology. 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 Dr. Mike Seal. Upon referral, students need to complete the Extension Undergraduate Application. Extension admission and registration information is available from University Extended Programs, (360) 650-2841.

## 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.

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 option technical core, plastics core, breadth/depth core for technology education) is required for graduation.

## 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 offers all four years of the Bachelor of Science degree program in electronics engineering technology on campus in Bellingham. The last two (junior/senior) years are also offered in the evening, off campus in North Seattle. On-campus students complete a structured sequence of courses averaging 16-17 credits per quarter over a period of four academic years, whereas off-campus students complete the junior and senior years of the program by taking 8-9 credits per quarter over three calendar years. Certain community colleges within the state have established two-year associate degree transfer programs with Western that satisfy all of the prerequisites for the junior year. Students transferring to Western from one of these programs or students having obtained equivalent backgrounds elsewhere may begin the junior year of the program either on campus or off campus.

Students desiring to begin studies in EET on campus should follow the normal admissions procedure of the University. Students desiring to attend the off-campus program need to complete the Extension Undergraduate Application. Extension admission and registration information is available from University Extended Programs, call (360) 650-2841 or at the off-campus program sites. University enrollment quotas do not apply at the off-campus programs.

Both the on-campus and off-campus components of Western's electronics engineering technology program in Bellingham and North Seattle are accredited by the Technology Accreditation Commission of the Accreditation Board for Engineering and Technology (TAC/ABET).

**Major — Electronics Engineering Technology**

150 credits

*Electronics Core:* 98 credits

- ETec 110, 271, 272, 273, 274, 371, 372, 373, 374, 375, 376, 378, 379, 405, 455, 457, 471, 474, 475, technical electives

*Supporting Courses:* 52 credits

- Mathematics — 24 credits: Math 114, 115 or 118, 124, 125, 321
- Physics — 15 credits: Physics 114, 115, 116 or 121, 122, 123, 131, 132, 133
- Communications — 9 credits: Eng 302, Comm 101, communications elective
- Computer Science — 4 credits: CS 140

Total credits for the Electronics Engineering Technology degree, including additional GUR requirements, equal 199.

**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.

The number of majors accepted into the junior and senior professional practice series of courses is limited to 12 juniors and 12 seniors through a yearly portfolio review in June. Portfolio review requirements include completion of the following classes: Math 115 or 118; Physics 115; ETec 110, 111, 214, 215, 216, 231, 311, 411; a minimum of five studio Art courses (Art 110, 120, 130, 201 and 220 recommended); one Art History course; a maximum of 90 credits remaining to graduate; a portfolio consisting of seven pieces or projects. A computer with specific software is strongly recommended for the senior year.

**Major — Industrial Design**

138 credits

*Industrial Design Core:* 47 credits

- ETec 110, 111, 214, 215, 216, 223, 231, 301, 311, 323, 411

*Professional Practice Series:* 30 credits

- ETec 314a, 314b, 314c, 414a, 414b, 414c

*Supporting Courses:* 61 credits

- Art 110, 120, 130, 190, 201, 220, 230, 270, 290
- Art History 240, 270
- Math 115 or 118
- Physics 114, 115
- Mgmt 271
- FMDS 380

**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 some technical area. Areas of specialization within the major include the vehicle design program of the Vehicle Research Institute, engineering graphics, industrial supervision and/or specialization by advisement. Graduates of this program hold management positions throughout the Northwest.

**Major — Industrial Technology**

108 credits

*Core Courses:* 73 credits

Required of all IT majors:

- ETec 110, 111, 220, 223, 327, 333, 351; Math 114, 115 or 118; Chem 115; CS 140; Physics 114, 115; Econ 206; Acctg 240; Mgmt 271; electives by advisement (4 credits)

*Specialization:* 35 credits

Complete one of the following specializations with guidance from a departmental adviser:

- Industrial Graphics: ETec 305, 307, 311, 313, 322, 323, 411, 8 credits of electives
- Industrial Supervision: ETec 322, 327, 328, 423, FMDS 380, Mgmt 301, 460, 463, 465, 2 credits of electives
- Vehicle Design: ETec 280, 281, 311\*, 322\*, 334, 380, 381\*, 382, 400(1), 480, 484, 486, 489; Math 124
- Specialization by advisement

**Minor — Industrial Technology**

25 credits

Courses to be selected under departmental advisement.

**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

\* *Optional.*

years by carrying 16-17 credits per quarter in a prescribed sequence of courses.

The manufacturing engineering technology degree program is accredited by the Technology Accreditation Commission of the Accreditation Board for Engineering and Technology (TAC/ABET).

## Major — Manufacturing Engineering Technology

145 credits

*Manufacturing Core:* 86 credits

- ETec 110, 111, 220, 222, 223, 224, 225, 322, 324, 326, 327, 328, 333, 351, 352, 354, 420, 421, 423, 424, technical electives (10 credits)

*Supporting Courses:* 59 credits

- Mathematics, 18 credits: Math 115 or 118, 124, 125, 240
- Computer Science, 4 credits: CS 140
- Management, 8 credits: Mgmt 460, 463
- Physics, 15 credits: Physics 121, 122, 123, 131, 132, 133
- Chemistry, 5 credits: Chem 115
- Communication, 9 credits: Comm 101, Eng 302, ETec 422

Total credits for the Manufacturing Engineering Technology degree, including additional GUR requirements, equal 194.

Careful selection of elective courses may qualify the manufacturing engineering technology graduate for entry into the Master's in Business Administration degree program. Consult with adviser.

## Option — Plastics Engineering Technology Option in Manufacturing Engineering Technology

142 credits

*Technical Core:* 88 credits

- ETec 110, 111, 220, 223, 224, 225, 322, 324, 326, 327, 333, 334, 335, 336, 337, 351, 421, 423, 424, 433, 434, 435, 436, technical electives (4 credits)

*Supporting Courses:* 54 credits

- Mathematics, 18 credits: Math 115 or 118, 124, 125, 240
- Physics, 10 credits: Physics 114, 115
- Chemistry, 13 credits: Chem 121, 251, 308
- Communications, 9 credits: Comm 101, Eng 302, ETec 422
- Computer Science, 4 credits: CS 140

**NOTE:** Physics 116 is recommended but not required if natural science GUR is otherwise completed.

Total credits for the Plastics Engineering Technology Option in Manufacturing Engineering Technology degree, including additional GUR requirements, equal 196.

## PLASTICS ENGINEERING TECHNOLOGY

The plastics engineering technology program prepares students for productive, professional careers in the plastics industry. The technical curriculum is built upon a firm base of mathematics, physics, chemistry and materials technology, and provides extensive coverage of polymeric

materials and processing methods. Practical experience in design, control analysis, processing, testing 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 16-17 credits per quarter in a prescribed sequence of courses.

## Major — Plastics Engineering Technology

140 credits

*Plastics Core:* 86 credits

- ETec 110, 111, 220, 223, 224, 225, 322, 324, 333, 334, 335, 336, 337, 351, 423, 424, 433, 434, 435, 436, technical electives (12 credits)

*Supporting Courses:* 54 credits

- Mathematics, 18 credits: Math 115 or 118, 124, 125, 240
- Physics, 10 credits: Physics 114, 115
- Chemistry, 13 credits: Chem 121, 251, 308
- Communication, 9 credits: Comm 101, Eng 302, ETec 422
- Computer Science, 4 credits: CS 140

**NOTE:** Chemistry 122 and 123 are recommended but not required if natural science GUR is otherwise completed.

Also note that completion of Physics 116 (in addition to the required Physics 114 and 115) will also satisfy the natural science GUR.

Total credits for the Plastics Engineering Technology degree, including additional GUR requirements, equal 194-198 depending on courses taken to fulfill the natural science GUR.

## TECHNOLOGY EDUCATION

The teacher preparation program has been offered for over 80 years and is a traditional strength at Western. This program prepares teachers of technical subjects for the junior and senior high schools and has been approved by the Office of the Superintendent of Public Instruction. Most graduates also meet the certification requirements for vocationally approved programs.

This major must be accompanied by the professional preparation program in secondary education in order to receive a recommendation for State of Washington certification. Students may complete the "teacher certification" program that is offered by the Department of Secondary Education as 1) a part of the undergraduate BS degree, or as 2) a post-baccalaureate program, or as 3) a part of the Masters in Education degree.

## Major — Technology Education

84-88 credit minimum plus supporting courses

- Breadth Requirement: 31-34 credits as follows: ETec 110, 212, 213, and five of the following courses — ETec 111, 218, 220, 223, 231, 280, 333, 351
- Depth Requirement: 15 credits in engineering technology, of which 10 must be at 300-400 level
- Professional Block: 15 credits — ETec 391, 488, 491, 493, 494, 496

- Supporting Courses: 21-24 credits — one approved course from each of the following: physics, chemistry, computer science, plus precalculus I and II (Math 114 and 115 or 118)

**NOTE:** To expand teaching eligibility, technology education majors should seek additional certification endorsement. Some of the courses for additional certification may be included in the GUR and the technology education major or may be taken after graduation.

The professional block courses are to be taken simultaneously in the spring quarter just prior to the student internship. The courses are taught on a competency-based model, with pedagogical, technical, managerial and professional competencies listed for achievement by candidates. Through problem-solving activities in a school technology education laboratory setting, students demonstrate competency to an acceptable level and will not receive credit for course work until such competence is clearly shown. Technology education majors do their internship only in the fall quarter.

## GRADUATE STUDY

For a concentration leading to the Master of Education degree, see the Graduate School section of this catalog.

## COURSES IN ENGINEERING TECHNOLOGY\*

Courses numbered X37; X97; 300, 400; 417, 445 are described on page 31 of this catalog.

### 101 INTRODUCTION TO TECHNOLOGY (3)

Explores the social, psychological and economic impacts of technology; defines the current situation American technology has helped to create; and explores solutions technology can provide, along with the political decisions needed to implement the solutions. Topics from transportation, design, materials, communications, computers and computer-integrated manufacturing.

### 110 ENGINEERING GRAPHICS I (4)

Introductory-level engineering drawing. First of two courses. Includes orthographic projection, pictorial drawing and sketching, scales, dimensions, sections and auxiliary views. Introduction to computer-aided drafting.

### 111 ENGINEERING GRAPHICS II (4)

Prereq: ETec 110 or equivalent. CAD-based second course in engineering graphics. Includes engineering tolerance specifications, working drawings, assemblies, piping, welding, bills of material, print interpretation and reproduction methods.

### 201 CAE TOOLS (2)

Prereq: Math 114 or written permission. The fundamentals of engineering problem solving with Computer-Aided Engineering (CAE) tools, such as spreadsheets, graphical equation solvers, graphing calculators, operating systems and integrated word processing.

### 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 first-hand 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.

### 217 THE CHAIR — ULTIMATE DESIGN PROBLEM (4)

Prereq: ETec 214. The chair is the ultimate design problem because of the challenge of bringing comfort to the human body while retaining a pleasing or acceptable visual presentation. The University Chair Collection serves as the basis of study.

### 218 CONTROL SYSTEMS FOR TECHNOLOGY EDUCATION (4)

Includes theory and application of mechanical, fluid, electrical, electronic and computer instrumentation and regulation in the design and operation of technical operations and systems through a balance of research and hands-on activities.

### 220 MATERIALS TECHNOLOGY (5)

Prereq: Math 115 or 118, Physics 114, Chem 115 or 121. The relationship between the properties, structure and processes of engineering materials is discussed. While emphasizing metals, all engineering materials are included.

### 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 AND FORMING (3)

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 (5)

Prereq: ETec 110, Math 114. Basic concepts and skills in machine metal processes.

### 224 APPLIED ENGINEERING STATICS (3)

Prereq: Math 125 (or concurrent), and Physics 121 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 (4)

Prereq: ETec 220, 224, Math 125. Internal response of structural members to forces; principal stresses and strains; combined stresses.

### 231 DESIGN PROBLEMS IN WOODWORKING (4)

Prereq: ETec 110 recommended. Technology education majors are given priority enrollment. Wood as a material for solving a variety of design problems.

### 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

\* Most engineering technology courses with a laboratory have a materials fee.

electronics with emphasis on basic digital concepts, Boolean algebra, digital integrated circuit devices and the major functional units from "building block" approach. Laboratory with applications, constructing, testing and troubleshooting of digital circuits.

### 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.

### 307 CAD SYSTEM CUSTOMIZATION AND PROGRAMMING (3)

Prereq: ETec 111 and CS 140. Programming, menu customization and configuration of computer-aided design systems.

### 309 ENGINEERING DESCRIPTIVE GEOMETRY (4)

Prereq: ETec 110. Practical applications of concepts and principles of engineering descriptive geometry. Application of creative problem solving through term project.

### 310 TECHNICAL ILLUSTRATION (3)

Prereq: ETec 110 or equivalent. Preparation of three-dimensional pictorial drawings including an introduction to rendering techniques.

### 311 PERSPECTIVE AND RENDERING I (4)

Prereq: ETec 110 or permission. 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.

### 313 ARCHITECTURAL CONCEPTS AND RESIDENTIAL PLANNING (5)

Prereq: ETec 110. Historical development; considerations of design; analysis of needs; utilization of sites; preparation of plans.

### 314a 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.

### 314b JUNIOR INDUSTRIAL DESIGN II (5)

Prereq: ETec 314a. 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.

### 314c JUNIOR INDUSTRIAL DESIGN III (5)

Prereq: ETec 314b. 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.

### 322 NUMERICAL CONTROL OPERATIONS (3)

Prereq: ETec 111, 223. Laboratory-intensive course which provides students with the opportunity to design, program and produce NC and CNC manufactured parts.

### 323 ADVANCED CAD APPLICATIONS (4)

Prereq: ETec 110, ETec 111, or equivalent. Review third-party software for AutoCAD, develop block libraries, modify screen menus and create

tablet menus for specific application areas. Work with CAD software in addition to AutoCAD. Emphasis on application of three-dimensional and solid-model drafting using personal computers.

### 324 DATA ANALYSIS AND DESIGN OF EXPERIMENTS (3)

Prereq: Math 240 or equivalent, ETec 201 or CS 101 or equivalent. A practical approach to Design of Experiments and the analysis of data, including analysis of variance, linear, multiple linear, and non-linear 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.

### 325 INDUSTRIAL METALLURGY (4)

Prereq: ETec 220. Production of the common metals from their ores, industrial processing, heat treatments and alloying, corrosion, failure analysis; properties of metals as related to manufacturing operations. Laboratory.

### 326 FLUID POWER (4)

Prereq: Math 125, Physics 115, ETec 224 and 351, CS 140 or equivalent. 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: ETec 223 and pre- or co-req: ETec 201 or CS 101 or CS 140 or equivalent. Examines many techniques to factor cost into manufacturing decisions. Topics covered include capital allocation, product cost estimating, work measurement, value engineering and budgeting.

### 328 OCCUPATIONAL HEALTH AND SAFETY (3)

A basic study of industrial accident prevention considering the nature and extent of the accident problem. The role management must play in industrial safety and the information it must have to ensure an efficient, well-managed safety program. Includes an introduction to federal, state and local safety codes applying to materials, material handling and equipment. Codes from Occupational Safety and Health Act (OSHA), National Fire Protective Association (NFPA) and Department of Transportation (DOT) are used.

### 333 POLYMER TECHNOLOGY (5)

Prereq: ETec 110, 220 (includes Physics 114 and Chem 115 as prerequisite). Polymer science and analysis of basic plastics materials; experience in product design, tooling, and processing of thermoplastic and thermosetting materials.

### 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 223, 322, 333. 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 PLASTICS PRODUCT DESIGN (3)

Prereq: ETec 333, 335. 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.

### 337 INDUSTRIAL FINISHING (3)

Prereq: ETec 333. Introduction to industrial finishing materials and processes. Topics such as color theory, surface analysis, surface treatments, composition of resinous coatings, testing of finishes, as well as processes including spray, powder, screen, metal, offset, pad, transfer and sublimation.

### 351 ELECTRICAL TECHNOLOGY I (4)

Prereq: Physics 115 or 123 and 133; Math 115 or 118; IT, MET, PET, TE major or written permission. Electrical concepts, elementary circuit analysis, introduction to electronic devices, introduction to AC and DC machines, applications of discrete electronic devices. Laboratory experiments stressing electrical and electronic measurements. (For non-EET majors).

### 352 ELECTRICAL TECHNOLOGY II (4)

Prereq: ETec 351; MET, IT, or PET major; or written permission. Introduction to digital electronics combinational and sequential logic, electrical transducers and instrumentation, industrial applications of analog and digital electronics. Laboratory experiments stressing

applications of digital and analog integrated circuits. (For non-EET majors.)

### 354 BASIC MICROPROCESSOR CONTROL (5)

Prereq: ETec 352; IT, MET, PET major; or written permission. Third in a three-course sequence designed for MET and IT majors. Study of the microprocessor and its use as the central element in control applications. Primary emphasis on programming of popular units. Laboratory experiences with control devices provided. May not be used for credit in EET program.

### 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 semi-conductor 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 273, 372, EET major or written permission. An upper-division course in digital system analysis and design including the study of sequential/state machine design techniques and applications using SSI, MSI and ASIC technologies. Laboratory projects with formal reports.

### 374 MICROPROCESSOR APPLICATIONS (5)

Prereq: ETec 274, 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)

Pre- or co-req: ETec 372, EET major or written permission. A study designed to acquaint the student with the operation of electronic systems. Feedback systems, multi-phase power systems and solid state control systems. Structured laboratory with emphasis on experimental verification of results, original design, data analysis and formal report preparation.

### 376 ELECTRICAL POWER (5)

Prereq: ETec 372, EET major 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 NON-LINEAR CIRCUITS (5)

Prereq: ETec 372, 378, EET major or written permission. Upper-division treatment of active linear and non-linear circuits. Analysis, design, testing, and evaluation of electronic circuits and subsystems with primary emphasis on the application of integrated circuit components and modules. Computer modeling of complex electronic circuits with frequency response, sensitivity and 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 ELECTRICITY (2)

Prereq: ETec 280. Basic principles of electrical components on systems of the automobile and other engines. Electronic fuel injection is covered in detail.

### 391 TECHNOLOGY AND HUMAN VALUES (3)

Via films, lectures and discussion, various aspects of technology are examined for their impact upon the values of the individual and society.

### 402 COOPERATIVE WORK/STUDY (1-15)

Prereq: junior status; approval of adviser. 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 15 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.

### 411 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.

### 414a SENIOR INDUSTRIAL DESIGN I (5)

Prereq: ETec 314c. 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.

### 414b SENIOR INDUSTRIAL DESIGN II (5)

Prereq: ETec 414a. 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.

### 414c SENIOR INDUSTRIAL DESIGN III (5)

Prereq: ETec 414b. 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. May be taken three times. Repeatable three times to a maximum of 9 credits.

### 420 MANUFACTURING AUTOMATION AND ROBOTICS (4)

Prereq: ETec 322, 326; or, for EET majors, departmental permission. 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.

### 421 COMPUTER INTEGRATED MANUFACTURING (3)

Prereq: ETec 225, 322. The computerized integration of all aspects of design, planning, manufacturing, distribution and management is discussed along with projects emphasizing hardware and software techniques to achieve integration.

### 422 MANUFACTURING PROJECT DEFINITION (2)

Prereq: Pass JWE; Eng 302; pre- or coreq: ETec 421. 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.

## **423 INDUSTRIAL QUALITY ASSURANCE (4)**

Prereq: CS 101 or 140 or equivalent, Math 240 or equivalent. Quality assurance as applied to industrial manufacturing operations. One-fourth of this course is used to enhance and expand on applied statistics.

## **424 MANUFACTURING IMPLEMENTATION (3)**

Prereq: ETec 422. Follow up to ETec 422. Manufacture a product or design an industrial process. Project will be fully documented with performance specifications, functional description, schematics, cost analysis, parts list, photographs, diagrams and charts.

## **425 MACHINE DESIGN (4)**

Prereq: ETec 421. Design of components of machines (connections, bearings, gears, etc.) with an emphasis on industrial practices. Theoretical dynamics also is included.

## **426 ADVANCED COMPUTER NUMERICAL CONTROL (3)**

Prereq: ETec 322. Programming techniques and requirements for manufacturing components on CNC machining centers and turning centers, emphasizing programming and applications.

## **427 TOOL DESIGN (3)**

Prereq: ETec 322. Design of special tooling used in manufacturing processes to include, but not limited to: inspection gauges, fixtures, jigs, assembly fixtures, punch and dies.

## **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.

## **433 ENGINEERING POLYMERS (3)**

Prereq: ETec 333; pre- or co-req: ETec 435 (may be taken concurrently) or written permission. Structure, properties, processing 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.

## **435 INJECTION MOLDING (3)**

Prereq: ETec 333. Theory and practice of injection molding. Analysis of machine functions, processing parameters, production tooling, process control systems, quality assurance, automation. Extensive laboratory experience.

## **436 POLYMER COMPOUNDING (4)**

Prereq: ETec 433; Chem 251; Math 240. Principles of polymer formulation and modification. Additives and modifiers, polymer rheology, compounding processes. Formulation through experimental design.

## **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.

## **454 EMBEDDED SYSTEMS (4)**

Prereq: ETec 374, CS 215c 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 NOx, 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, 381. 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 31 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

Graduate research or final project under direction of graduate committee or program adviser.

## ENGLISH

The English major is one of the central liberal arts degrees. In addition to engaging students in our literary heritage, it fosters the development of sophisticated abilities in analysis, reading, effective communication and expression. These abilities provide graduates with a sound basis for pursuing careers in law, business, publishing and government, as well as graduate work in language, literary and cultural studies and writing.

The Department of English offers majors for the liberal arts student and for the teacher education student.

Two programs lead to the Bachelor of Arts in English. One focuses on the study of British world and American literatures in an historical context, and on courses in English language and literary theory and, then, through elective credits, allows students to select English courses of their choice. The other program is a writing concentration. Here courses in literature supplement a focus on writing courses, either creative writing (fiction, drama, poetry) or nonfiction prose, exposition and argumentation.

In teacher education, the department prepares majors for teaching at the secondary and elementary levels. Students are urged to support their major by means of auxiliary courses in drama, reading, linguistics, speech, journalism, history and computer science, or work in other subjects that are related to English language and literature.

The Department of English is committed to enhancing the diversity of its faculty, students and curriculum. The literature of women and minorities is taught in survey and historical period courses as well as in courses devoted to women and minority writers.

### ENGLISH FACULTY

RICHARD K. EMMERSON (1990) Chair and Professor. BA, Columbia Union College; MA, Andrews University; PhD, Stanford University.  
 BONNIE J. BARTHOLD (1980) Professor. BA, University of Arizona; MA, Ohio State University; PhD, University of Arizona.  
 BRUCE BEASLEY (1992) Associate Professor. BA, Oberlin College; MFA, Columbia University; MA, PhD, University of Virginia.  
 DARSIE BOWDEN (1999) Associate Professor. BA, Hollins College; MFA, MA, PhD, University of Southern California.  
 MEREDITH B. CARY (1964) Professor. BA, Central Missouri State College; MALS, University of Michigan; MA, Michigan State University; PhD, University of Washington.  
 DAWN DIETRICH (1992) Associate Professor. BA, Eastern Michigan University; MA, PhD, University of Michigan.  
 MARC GEISLER (1992) Associate Professor. BA, Bates College; MA, PhD, University of California, Irvine.  
 BRUCE GOEBEL (1996) Associate Professor. BA, Eastern Washington University; MA, California State University, Fresno; PhD, The University of Iowa.  
 CAROL GUESS (1998) Assistant Professor. BA, Columbia University; MA, MFA, Indiana University.  
 KATHLEEN HALME (1998) Associate Professor. BS, University of Wisconsin; MFA, University of Michigan.  
 ROBIN HEMLEY (1994) Professor. BA, Indiana University; MFA, University of Iowa.  
 NANCY JOHNSON (1994), Associate Professor. BA, University of Washington; MA, PhD, Michigan State University.  
 ROSANNE D. KANHAI (1990) Associate Professor. BA, M.Phil, 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.

ROSINA LIPPI-GREEN (1997) Associate Professor. BA, University of Illinois; MA, PhD, Princeton University.  
 ANNE LOBECK (1990) Professor. BA, Whitman College; MA, PhD, University of Washington.  
 KATHLEEN LUNDEEN (1991) Associate Professor. BA, MA, PhD, University of California, Santa Barbara.  
 WILLIAM LYNNE (1995) Associate Professor. BA, University of California, Los Angeles; MA, PhD, University of Virginia.  
 MARY JANELL METZGER (1995) Associate Professor. BA, University of Washington; MA, PhD, University of Iowa.  
 BRENDA MILLER (1999) Assistant Professor. BA, Humboldt State University; MFA, University of Montana; PhD, University of Utah.  
 SUZANNE PAOLA (1994) Associate Professor. BA, Oberlin College; MFA, University of Virginia.  
 DOUGLAS B. PARK (1979) Professor. AB, Hamilton College; PhD, Cornell University.  
 JOHN PURDY (1991) Professor. BA, Western Oregon State College; MA, University of Idaho; PhD, Arizona State University.  
 DONNA QUALLEY (1994) Associate Professor. BA, University of Kentucky; MST, PhD, University of New Hampshire.  
 PETER RICHARDSON (1999) Assistant Professor. BA, University of California, Santa Barbara; PhD, University of California, Berkeley.  
 WILLIAM E. SMITH (1990) Professor. BA, MA, Appalachian State University; PhD, University of Utah.  
 KEN M. SYMES (1967) Professor. BA, MA, Utah State University; PhD, University of New Mexico.  
 STEVEN VANDERSTAAY (1996) Associate Professor. BA, MA, University of Washington; PhD, University of Iowa.  
 CHRISTOPHER WISE (1996) Assistant 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 adviser. Students are strongly urged to meet with the department advisers 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 B.A. degree program in English (English, English-Writing Concentration, English-Secondary Education, English-Elementary Education, or English-Interdisciplinary) within a four-year time span should have completed the following courses by the start of their junior year:

- All GUR writing or literature courses (8 credits maximum) that will be counted toward the major

### BACHELOR OF ARTS

*Major — English*

60 credits

- Two courses from Eng 306, 307, 308

- Two courses from Eng 309, 310, 311
- One course from Eng 316, 317
- One course from Eng 318, 319
- One course from Eng 313, 314
- Eng 370
- Eng 417

Electives in English up to the 60 credits are required for the major, with at least 8 elective credits at the 400 level. A maximum of 8 credits of 200-level GUR (literature and/or Eng 202) courses may be included.

### *Major — English — Writing Concentration*

60 credits

Students majoring in the writing concentration are admitted to senior-level writing courses by permission only, based on evaluation of a Writing Portfolio. The number of students who can be admitted into the writing concentration is necessarily limited; the department may be unable to guarantee access to required courses when students want them. Students should consult the undergraduate adviser.

- 24 credits in literature at the 300 or 400 level
- Two of the following: Eng 301, 302, 350, 351, 353, 354, ThA 285 (or ThA 385 or Fair 354)
- Twelve credits selected from the following two groups:
  - 4-8 credits from Eng 381, 383, 384 and
  - 4-8 credits from Eng 401, 402, 451\*, 453\*, 454\*, 456, 457, or ThA 485, 486, 487, 488 or Fair 454
- One additional upper-division writing course in English or another department under advisement
- Electives in English up to the 60 credits are required for the major (Eng 370 recommended). A maximum of 8 credits of 200-level GUR (literature and/or Eng 202) courses may be included.

### *Minors*

All minors offered by the English Department are open only to non-English majors.

#### *English*

24 credits

- 24 credits of electives, with a minimum of 12 elective credits at the 300 or 400 levels

Students may choose among English courses to complete the elective requirements of the minor. Students may wish to concentrate elective credit in one area of the curriculum, such as American, British or ethnic literatures. Students who wish to develop applied writing skills may choose courses in advanced composition, technical writing and rhetoric. (Students interested in any of these options are urged to confer with the undergraduate adviser.)

#### *Creative Writing*

24 credits

- Four creative writing courses including work in at least two genres
- Electives under advisement from the 300 and 400 levels

#### *Women's Literature*

24 credits

- Two courses from Eng 341, 424, 425

\* **Note:** Eng 451, 453, 454 may be repeated once, with a limit of one course per quarter.

- Electives under advisement, to be selected from courses in women writers, topics focused on the work of women writers, and topics in language and power or gender

## **BACHELOR OF ARTS IN EDUCATION**

### *Major — English — Secondary*

64 credits

Completion of this major will lead to a primary endorsement in English when taken in combination with a professional education program.

- Eng 370, 436, 438, 443, 444
- Eng 347
- Two courses at the 300 or 400 level in British literature
- One of the following: Eng 281, 282, 283, 335, 336, 339, 415, 429
- Eng 316 or 317
- One additional course in American literature at the 300 or 400 level
- One of the following: Eng 301, 302, 350, 351, 353, 354, 401; Fair 354
- One of the following: Eng 327, 338, 341, 420, 422, 424, 425 or other appropriate course
- Electives in English up to the 64 credits are required for the major (Eng 364 recommended). A maximum of 8 credits of 200-level GUR (literature and/or Eng 202) courses may be included.

The department strongly recommends that students include courses in literary theory and criticism in their electives.

### *Major — English — Elementary*

44 credits

This major must be taken in combination with the elementary or special education professional program. Completion of this major will lead to a Western-approved supporting endorsement in English.

- Eng 370, 440, 441, 446
- Eng 442 (or another 400-level language course)
- One course in American literature at the 300 or 400 level
- One course in British literature at the 300 or 400 level
- One of the following: Eng 301, 302, 350, 351, 353, 354, 401; Fair 354
- One of the following: Eng 327, 338, 341, 420, 422, 424, 425 or other appropriate course
- Electives in English up to 44 credits are required for the major. A maximum of 4 credits of 200-level GUR.

Students should consult the English education faculty adviser for distribution of electives and should consult the elementary program adviser for teacher certification requirements.

### *Interdisciplinary Major Concentrations*

#### *English/Communication*

93-94 credits

(English 49 credits and Communication 44-45 credits)

Completion of this major will lead to primary endorsements in English and speech when taken in combination with a professional education program.

*English*

49 credits

- Eng 370, 436, 443, 444
- Eng 347
- Two courses in British literature at the 300 or 400 level
- One of the following: Eng 281, 282, 283, 335, 336, 339, 415, 429
- One of the following: Eng 301, 302, 350, 351, 353, 354, 401; Fair 354
- Eng 316 or 317
- An additional course in American literature at the 300 or 400 level
- Electives

*Communication 44-45 credits*

(See the Communication Department section of this catalog.)

*English/Theatre*

97 credits

(Theatre 48 credits and English 49 credits)

Completion of this major will lead to primary endorsement in English and supporting endorsements in drama/theatre when taken in combination with a professional education program.

*English*

49 credits

- Eng 370, 436, 443, 444
- Eng 347
- Two courses in British literature at the 300 or 400 level
- One of the following: Eng 281, 282, 283, 335, 336, 339, 415, 429
- One of the following: Eng 301, 302, 350, 351, 353, 354, 401; Fair 354
- Eng 316 or 317
- An additional course in American literature at the 300 or 400 level
- Electives

*Theatre 48 credits*

(See the Theatre Arts Department section of this catalog.)

*Program Standards*

In certain situations the English education adviser 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.

*Minor*

*English — Supporting Endorsement — Secondary*

36 credits

Completion of this minor will lead to a supporting endorsement in English when taken in combination with a professional education program.

- Eng 370, 436, 443, 444

- One of the following: Eng 301, 302, 350, 351, 353, 354, 401; Fair 354
- One elective in British literature at the 300 or 400 level
- One elective in American literature at the 300 or 400 level
- One of the following: Eng 281, 282, 283, 335, 336, 339, 415, 429

*English — Elementary Education*

28 credits

Completion of this minor will lead to a supporting endorsement in English when taken in combination with a professional education program.

- Eng 370, 441
- Eng 442 (or another 400-level language course)
- One course from Eng 301, 302, 350, 351, 353, 354, 401; Fair 354
- One course in American literature at the 300 or 400 level
- One course in British literature at the 300 or 400 level

**THE VERTICAL COMPOSITION PROGRAM**

These courses are designed to allow the student to improve writing skills progressively throughout the four years of college. They do not constitute a minor; they are available to anyone interested. The courses consist of Eng 101, 201, 202, 301, 354, 401.

**GRADUATE STUDY**

For a concentration leading to the Master of Arts degree, see the Graduate School section of this catalog.

**COURSES IN ENGLISH**

*Courses numbered X37; X97; 300, 400; 417, 445 are described on page 31 of this catalog.*

**General University Requirement Courses:**

*English courses which satisfy GUR requirements are as follows:*

*Communications: 101, 201, 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*, the English Department's Course Descriptions and the Guide for English Majors. The department makes every effort to offer all required courses at least once a year and all courses in the catalog at least once every two years.

**100 INTRODUCTION TO COLLEGE COMPOSITION (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 foundational course in the process of writing on topics drawn from personal experience and assigned readings, designed to help students develop and practice analytical, critical and reflective habits of mind, and to provide students with information and practice in using the specific and general conventions writers use to formulate and clearly communicate their understanding to others. 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.

#### **201 EXPOSITORY WRITING (4)**

Prereq: Eng 101 and completion of 36 college credits. An intermediate course in writing expository prose, with readings from various disciplines.

#### **202 WRITING ABOUT LITERATURE (4)**

Prereq: Eng 101 and completion of 36 college credits. Focuses on writing academic responses to a variety of literary texts. Students learn to read and write critically, articulating their responses to representative genres through summaries, reviews, critiques and analyses.

#### **214 INTRODUCTION TO SHAKESPEARE (4)**

Reading and discussion of a selected number of Shakespeare's plays: histories, comedies, tragedies and romances.

#### **215 INTRODUCTION TO BRITISH LITERATURE (4)**

Readings and discussion of a range of works in British literature with some attention to historical contexts.

#### **216 INTRODUCTION TO AMERICAN LITERATURE (4)**

Readings and discussion of a range of works in American literature with some attention to historical contexts.

#### **227 INTRODUCTION TO GAY & LESBIAN LITERATURE (4)**

Introduces gay and lesbian literature. Analyzes selected literary works in light of shifting, often overlapping and conflicting, historical models of gay and lesbian desire.

#### **234 INTRODUCTION TO AFRICAN-AMERICAN LITERATURE (4)**

Reading and discussion of selected novels, plays, poems and essays by African-American men and women writers from the 18th century to the present.

#### **235 INTRODUCTION TO NATIVE AMERICAN LITERATURES (4)**

Reading and discussion of selected works of contemporary fiction, poetry and nonfiction prose by Native American writers.

#### **236 INTRODUCTION TO ASIAN-AMERICAN LITERATURE (4)**

Reading and discussion of selected works of contemporary fiction, poetry and non-fiction prose by Asian-American writers.

#### **238 SOCIETY THROUGH ITS LITERATURE (4)**

A thematic approach to literature. Different themes will be treated from year to year, showing with various literary forms present society and its problems. Repeatable with different topics. May be taken only once for GUR credit.

#### **270 INTRODUCTION TO LANGUAGE AND SOCIETY (4)**

This course is concerned with the relationship between language variation and community in the United States. Looks at the reality of a living, changing English which varies over time, space, social and stylistic dimensions and how this variation serves important emblematic and communicative functions. Looks at other languages spoken here: who speaks what, where, when, and why — how these patterns became established, and the nature and function of multilingualism.

#### **281, 282, 283 INTRODUCTION TO GLOBAL LITERATURES (4 ea)**

Readings from ancient, medieval and modern literatures throughout the world. Not open to students with credit in Lbrl 121, 122, 123.

#### **301 ADVANCED COMPOSITION (4)**

Prereq: Eng 101; junior standing or completion of 76 credits; and pass JWE. Deals with issues of audience, style and the conventions of private, public and academic discourse; explores assumptions, contexts and rhetorical situations as defined by various writing communities. Emphasis on expressive, argumentative, speculative and evaluative writing as appropriate.

#### **302 INTRODUCTION TO TECHNICAL WRITING (3)**

Prereq: Eng 101; junior standing or completion of 76 credits; and pass JWE. Introduces students to discourse conventions of technical and organizational writing. Covers a variety of written forms used in the preparation and design of technical documents. Emphasis on clarity and precision in written and oral communication.

#### **304 CRITICAL INTRODUCTION TO POETRY (4)**

Prereq: Eng 202. Introduces the prospective English major to the vocabulary and grammar of technical discourse about poetry through

the close reading of a variety of poetic texts and the writing of a number of expository essays.

#### **306 BRITISH LITERATURE: MEDIEVAL (4)**

Prereq: Eng 202. Reading and discussion of a selection of works from this period.

#### **307 BRITISH LITERATURE: RENAISSANCE (4)**

Prereq: Eng 202. Reading and discussion of a selection of works from this period.

#### **308 BRITISH LITERATURE: 18TH CENTURY (4)**

Prereq: Eng 202. Reading and discussion of a selection of works from this period.

#### **309 BRITISH LITERATURE: ROMANTIC (4)**

Prereq: Eng 202. Reading and discussion of a selection of works from this period.

#### **310 BRITISH LITERATURE: VICTORIAN (4)**

Prereq: Eng 202. Reading and discussion of a selection of works from this period.

#### **311 BRITISH LITERATURE: 20th CENTURY (4)**

Prereq: Eng 202. Reading and discussion of a selection of works from this period.

#### **312 GLOBAL LITERARY STUDIES (4)**

Prereq: Eng 202. Comparative approaches to world literature, including reading and discussion of works in translation.

#### **313 CRITICAL AND CULTURAL THEORY (4)**

Prereq: Eng 202. An introduction to contemporary practices of interpretation, with an emphasis on the student as theorist and critic.

#### **314 HISTORY OF LITERARY CRITICISM (4)**

Prereq: Eng 202. Reading and analysis of major documents of criticism from Plato and Aristotle to 20th-century critics.

#### **316 AMERICAN LITERATURE: BEGINNINGS TO 1776 (4)**

Prereq: Eng 202. Reading and discussion of a selection of works from this period.

#### **317 AMERICAN LITERATURE: 1776-1860 (4)**

Prereq: Eng 202. Reading and discussion of a selection of works from this period.

#### **318 AMERICAN LITERATURE: 1860-1940 (4)**

Prereq: Eng 202. Reading and discussion of a selection of works from this period.

#### **319 AMERICAN LITERATURE: 1940 TO PRESENT (4)**

Prereq: Eng 202. Reading and discussion of a selection of works from this period.

#### **327 STUDIES IN MINORITY AMERICAN LITERATURE (4)**

Prereq: Eng 202. Reading and discussion of texts from within or among distinct minority communities with varying topics. Repeatable with various studies.

#### **335 POST-COLONIAL LITERATURES (4)**

Prereq: Eng 101. Comparative study of the new literatures which have emerged since World War II in Africa, India, Middle East and/or West Indies.

#### **336 LITERATURE OF THE BIBLE (4)**

Prereq: Eng 101. Analysis of literary practices of Old and New Testament writers, and evaluation of the Bible's influence on culture.

#### **338 WOMEN AND LITERATURE (4)**

Prereq: Eng 101. A study of major works by women, including their treatment of intellectual and cultural issues.

#### **339 CLASSICAL BACKGROUNDS TO BRITISH LITERATURE (4)**

Prereq: Eng 202. Study of the major epics, lyrics, dramas, and dialogues of Greek and Roman literature as they have provided models, themes and techniques for poets, playwrights and novelists.

#### **340 STUDIES IN GENRES AND FORMS (4)**

Prereq: Eng 202. A wide variety of studies in fiction, drama, poetry, nonfiction and traditional forms. Repeatable with various studies.

#### **341 TOPICS IN THE HISTORY OF WOMEN'S LITERATURE (4)**

Prereq: Eng 202. Focuses on specific issues in the history of women's literature, including the history of women's contribution to formal and informal literary discourses. Repeatable with various topics.

**347 STUDIES IN YOUNG ADULT LITERATURE (4)**

Prereq: Eng 202 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. Was Eng 447 in previous catalog.

**350 INTRODUCTION TO CREATIVE WRITING (4)**

Prereq: Eng 101. Examines the fundamentals and vocabulary of principal modes of creative writing: fiction, poetry, nonfiction prose. Part large lecture and part workshop for actual writing experience.

**351 INTRODUCTION TO FICTION WRITING (4)**

Prereq: Eng 101. An introductory course open to students who have not previously taken a college course in fiction writing. Study of appropriate models.

**353 INTRODUCTION TO POETRY WRITING (4)**

Prereq: Eng 101. An introductory course in poetry writing. Open to students who have not previously taken a college course in poetry writing. Study of appropriate models.

**354 INTRODUCTION TO CREATIVE NONFICTION WRITING (4)**

Prereq: Eng 101. Opportunity for writers to develop creative writing skills on a mature level, emphasizing the literary effects of language. The personal essay, biographical sketch, extended argument and other forms.

**364 INTRODUCTION TO FILM STUDIES (4)**

Prereq: Eng 202. Overview of the conventions and techniques of narrative cinema with some readings in film theory.

**370 INTRODUCTION TO THE STUDY OF THE ENGLISH LANGUAGE (4)**

Prereq: Eng 101. Introduction to the structure, history and use of the English language. Includes fundamentals of linguistic analysis (phonology, morphology, syntax, semantics and pragmatics), historical development of English, developmental patterns of language acquisition, and regional and social language variation.

**371 INTRODUCTION TO RHETORIC (4)**

Prereq: Eng 101. Studies major issues in classical and modern rhetoric. Rhetorical analysis of a variety of texts.

**375 SEMINAR FOR WRITING FELLOWS: TUTORING ACROSS THE CURRICULUM (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.

**381 INTERMEDIATE FICTION WRITING (4)**

Prereq: Eng 351 and approval of portfolio; written permission of instructor. Intermediate-level opportunity for disciplined expression in writing fiction. Study of appropriate models.

**383 INTERMEDIATE POETRY WRITING (4)**

Prereq: Eng 353 and approval of portfolio; written permission of instructor. Intermediate-level opportunity for disciplined expression in writing poetry. Study of appropriate models.

**384 INTERMEDIATE CREATIVE NONFICTION WRITING (4)**

Prereq: Eng 354 and approval of portfolio; written permission of instructor. Intermediate-level opportunity for disciplined expression in writing non-fiction prose. Study of appropriate models.

**401 SENIOR WRITING SEMINAR (4)**

Prereq: Eng 301 and senior status; restricted to English majors and minors. Theory and practice of writing with clarity and style for public and professional occasions.

**402 TECHNICAL AND BUSINESS REPORT WRITING (4)**

Prereq: Eng 302. Theory and practice of writing with objectivity and clarity for business, industry and government.

**406 TOPICS IN LITERARY THEORY (4)**

Prereq: Eng 202 and possible additional prerequisite relevant to topic. Examines one or more approaches to the study of literature, including feminist, mythic, new-historicist, political, psychoanalytical, structuralist and others. Repeatable with various topics.

**408 TOPICS IN CULTURAL STUDIES (4)**

Prereq: Eng 202 and either Eng 313 or Eng 314. Applications of

semiotic and/or textual approaches to a wide range of issues in cultural studies. Repeatable with various topics.

**410 STUDIES IN LITERARY HISTORY (2-5)**

Prereq: Eng 202 and possible additional prerequisite relevant to topic. A wide variety of studies in literary history. Repeatable with various topics.

**413 HISTORY OF THE BRITISH NOVEL (4)**

Prereq: Eng 202 and either Eng 308, 309 or 310. History of the British novel from the 18th century to the 20th century.

**414 HISTORY OF THE AMERICAN NOVEL (4)**

Prereq: Eng 202 and either Eng 317, 318 or 319. History of the American novel from the 18th century to the 20th century.

**415 STUDIES IN NATIONAL LITERATURES (4)**

Prereq: Eng 202 and possible additional prerequisite relevant to topic. Studies in national literatures, such as the literature of Ireland and Canada; explores writers other than British and American writers. Repeatable with different national literatures.

**420 NATIVE AMERICAN LITERARY ARTS (4)**

Prereq: Eng 202 and either Eng 235 or permission of instructor. Comparative study of texts from a number of Native American cultures, employing close readings and ethnographic research.

**422 AFRICAN-AMERICANS AND THE LITERARY IMAGINATION (4)**

Prereq: Eng 202 and 234. Comparative study of texts by both black and white American writers in the context of contemporary literary theory and an African-American literary tradition.

**423 STUDIES IN MAJOR AUTHORS (2-5)**

Prereq: Eng 202 and possible additional prerequisite relevant to topic. Studies in women and men major authors writing in English. Repeatable with different authors.

**424 STUDIES IN MAJOR WOMEN AUTHORS (4)**

Prereq: Eng 202 and possible additional prerequisite relevant to topic. Studies in British, American and other women writers. Repeatable with different authors.

**425 STUDIES IN MINORITY WOMEN AUTHORS (4)**

Prereq: Eng 202 and either Eng 335 or 338 (or any other 300-level course in ethnic or women's studies). Studies of minority women writers of North and South America, the Caribbean and the Third World. Focuses on literary conventions specific to the particular environment and to women's writing, and on differences of gender, race and class. Repeatable with different authors.

**429 GLOBAL LITERATURES (4)**

Prereq: One of the following: Eng 281, 282, 283, 312, 335, or permission of instructor. Examines literatures across national and cultural boundaries, including diasporic, hybrid, and borderland literatures, as well as works in translation. Repeatable with various topics.

**436 THE STRUCTURE OF ENGLISH (4)**

Prereq: Eng 370 or permission of instructor. Introduction of syntactic analysis and its application to texts. Topics include the structure of sentences, modification, complementation and nominalization. Analysis of various types of written and spoken English to understand syntactic variation reflected in different dialects and styles.

**438 CULTURAL HISTORY OF ENGLISH (4)**

Prereq: Eng 370 or permission of instructor. Considers the development of Old, Middle, Early Modern and present-day Englishes as reflective of cultural values, literary practice and linguistic change.

**439 TOPICS IN LANGUAGE AND LINGUISTICS (4)**

Prereq: Eng 370 or another prerequisite may be required depending on topic. Examines various topics in language and linguistics of interest to students of literature and English education. Repeatable with various topics.

**440 ENGLISH FOR THE ELEMENTARY SCHOOL (4)**

Prereq: Eng 202 and 370. Survey of theory, practice, resources and methods of assessment for teaching English/language arts.

**441 WORLD LITERATURE FOR THE ELEMENTARY AND MIDDLE SCHOOL TEACHER (4)**

Prereq: Eng 202. Examination of the variety and diversity of literature for children and adolescents; exploration of major genres and noted authors and illustrators.

**442 STUDIES IN LITERACY AND LEARNING (4)**

Prereq: Eng 370 or permission of instructor. Focuses on a variety of historical, cultural, political and pedagogical issues regarding the nature of literacy and what it means to be literate in today's world. Examines the role of schools in general and the English curriculum in particular for fostering the development of literacy/literacies.

**443 TEACHING LITERATURE AND COMPOSITION IN THE SECONDARY SCHOOLS I (4)**

Prereq: Eng 436. Survey of theory, practice, resources and methods of assessment for the teaching of reading, writing and literature.

**444 TEACHING LITERATURE AND COMPOSITION IN THE SECONDARY SCHOOLS II (4)**

Prereq: Eng 443 with the same instructor. Continuation of the survey of theory, practice, resources and methods of assessment for the teaching of reading, writing and literature. Two-week, one period a day teaching practicum in middle or high school required.

**446 WRITING IN THE ELEMENTARY SCHOOLS (4)**

Prereq: Eng 370 and 440. Focuses on the ways children learn to write by examining the writing process, participating in writing workshops, discussing current issues in the teaching of writing, and developing methods and strategies to teach writing in the elementary school.

**451 CREATIVE WRITING WORKSHOP: FICTION (4)**

Prereq: Eng 381 or equivalent and written permission of instructor. Opportunity for disciplined expression in fiction writing. Study of appropriate models. Repeatable to a maximum of 12 credits with a limit of one course per quarter.

**453 CREATIVE WRITING WORKSHOP: POETRY (4)**

Prereq: Eng 383 or equivalent and written permission of instructor. Opportunity for disciplined expression in writing poetry. Study of appropriate models. Repeatable to a maximum of 12 credits with a limit of one course per quarter.

**454 CREATIVE WRITING WORKSHOP: NONFICTION PROSE (4)**

Prereq: Eng 384 or equivalent and written permission of instructor. Opportunity for disciplined expression in a specialized genre of non-fiction prose: essay, critical review, autobiography, article, etc. Study of appropriate prose models. Repeatable to a maximum of 12 credits with a limit of one course per quarter.

**456 EXAMINING AND COMPOSING POETIC MODES (4)**

Prereq: Eng 353 or equivalent and written permission of instructor. Combines genre study and literary expression. Opportunity to compose in a variety of traditional poetic forms. Study of appropriate models.

**457 FICTION WRITING IN SPECIAL MODES (4)**

Prereq: Eng 351 or equivalent and written permission of instructor. Workshop explorations in special areas such as writing commercial fiction, translating fiction and adapting fictional works to other media.

**464 TOPICS IN FILM STUDIES (4)**

Prereq: Eng 364 or permission of instructor. Examines various specific topics in film studies and theory.

**475 SEMINAR FOR WRITING ASSISTANTS (4)**

Prereq: selection as a Writing Assistant. Intended for Writing Assistants selected to work in Western's Writing Center. Provides theoretical background and practical experience needed to assist students writing in all disciplines.

**Graduate Courses**

*Courses numbered 500; 517; 545; 597 are described on page 31 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 five credits.

**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

M.A. candidates. Repeatable with different topics. Each topic repeatable to a maximum of 5 credits.

**595a,b FOURTH CORNER WRITING PROJECT (8,2)**

595a Summer institute. 595b Saturday seminars, academic year.

Prereq: experience teaching writing or administering a writing program; special application, with selection by co-directors. Review and implementation of composition research; demonstration of methods for teaching writing; refinement of personal writing and skills useful in teaching colleagues.

**596 NORTHWEST WRITING INSTITUTE: THE TEACHING OF WRITING (3-5)**

Prereq: experience in the classroom or experience in administration within a language-arts program. Theory and practice of teaching writing and planning writing instruction in secondary school and college for experienced teachers and experienced school

administrators (e.g. language-arts coordinators). Topics covered include the composing process, design of writing assignments, evaluation of writing (both by individual teachers and district-wide assessment) and writing across the curriculum. Emphasis on the collaborative preparation of instructional materials and strategies, assessment procedures and planning of in-service instruction for other educators. 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 M.A. Program or teaching experience. Various announced topics in the teaching of language, literature and composition. Repeatable with different topics. Each topic repeatable to a maximum of 5 credits.

**690 THESIS WRITING (2-5)**

## 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 B.A., B.A./Ed., B.S. and M.S. degrees plus specialized courses in the following subjects: economic geology; environmental geology; geochemistry; geomorphology; geophysics; glacial geology; hydrology; paleomagnetism; paleontology; petrology; sedimentation; stratigraphy; and structure and tectonics.

### STUDENT INVOLVEMENT IN RESEARCH

The faculty in the Department of Geology are active in a wide variety of ongoing research projects that frequently involve undergraduate and graduate students in special projects and thesis projects or provide employment. Some of this research is funded or partially supported from grants to individual faculty members from the National Science Foundation, U.S. Geological Survey, National Parks Commission, Office of Ecology and geological-related companies. Many of these projects are in the Western Washington region, others include investigations in other

parts of the United States, Canada and even overseas.

### GEOLOGY FACULTY

THOR A. HANSEN (1985) Chair and Professor. BS, George Washington University; PhD, Yale University.  
 RANDALL S. BABCOCK (1967) Professor. AB, Dartmouth College; MS, PhD, University of Washington.  
 DOUGLAS H. CLARK (1998) Assistant Professor. BS, MS, Stanford University; PhD, University of Washington.  
 SUSAN M. DEBARI (1998) Assistant Professor. BA, Cornell University; PhD, Stanford University.  
 DON J. EASTERBROOK (1959) Professor Emeritus. BS, MS, PhD, University of Washington.  
 DAVID C. ENGBRETSON (1983) Professor. BA, Western Washington University; MS, PhD, Stanford University.  
 JOHN J. FIELD (1994) Assistant Professor. BS, Virginia Tech; MS, PhD, University of Arizona, Tucson.  
 BERNARD A. HOUSEN (1997) Assistant Professor. BS, University of Washington; MS, PhD, University of Michigan.  
 ROBERT J. MITCHELL (1996) Assistant 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.  
 JAMES L. TALBOT (1976) Professor Emeritus. BA, University of Cambridge; MA, University of California, Berkeley; PhD, University of Adelaide.  
 ANTONI WODZICKI (1977) Professor. BE, University of Otago; MS, University of Minnesota; 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.  
 THOMAS F. REDFIELD (1995). BA, University of California, Santa Cruz; MS, Western Washington University; PhD, Arizona State University.  
 CHARLES A. ROSS (1992). BA, University of Colorado; MS, PhD, Yale University.  
 JULIANNA SHULTZ THOMPSON (1995). BS, Central Washington University; MS, Western Washington University.

### Adjunct Faculty

KENT C. NEILSEN (1997). BS, MS, University of North Carolina; PhD, University of British Columbia.  
 PETER WILLING (1997). BA, University of Washington; MS, PhD, Cornell University.

### BACHELOR OF ARTS

#### Major — Geology

71 credits

An accompanying minor in one of the sciences or in mathematics is recommended.

- Geol 211, 212, 306, 310, 318, 407a
- 18 credits under advisement from geology courses above the 100 level (may include only one of Geology 214 and 314)
- Chem 121, Math 124, Physics 121 and 131; 10 additional credits selected from Math 125, 240; Physics 122, 132; Chem 122, 123; Biol 201

*Minor — Geology*

25 credits

- Geol 211, 212
- Electives under departmental advisement (may include only one of Geol 214 and 314)

**MID-PROGRAM CHECKPOINT**

Students seeking to complete a B.A. degree in geology within a four-year time span should have completed Geol 211 and 212, Math 124, Physics 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.

*Major — Earth Science — Elementary*

50-51 credits

- Geol 211, 212, 306, 310 and 407a
- Chem 121 and 122; Geog 203; Geog 331 or Geol 252; Physics 114; Astron 103
- Electives under departmental advisement from Geol 214, 309, 314, 315, 316, 318, 340, 352, 400, 410a, 410b, 414, 415, 430, 440, Geog 431, 432; Astron 315, 316; Biol 406

This major must be accompanied by the professional preparation program in elementary education.

*Major — Earth Science — Secondary*

78 credits

- Geol 211, 212, 214, 306, 310, 340, 407a
- Geog 331 or Geol 252; Physics 114 and 115; Astron 315; Chem 121 and 122; Sci Ed 491, 492
- At least two electives from Geol 309, 314, 315, 316, 318, 352, 400, 406, 407b, 410a, 410b, 414, 415, 430, 440

It is recommended that this major be accompanied by a minor in chemistry, physics or biology.

This major must be accompanied by the professional preparation program in secondary education.

*Combined Major — Earth Science/General Science — Secondary*

98 credits

This major leads to recommendation for teaching endorsements in earth science (4-12) and science (4-12).

- Geol 211, 212, 214, 306, 310, 340, 407a
- Geog 331 or Geol 252
- Chem 121, 122, 251
- Physics 114, 115, 116 or 121, 122, 123 and Astron 315
- Biol 201, 202, 203
- Sci Ed 491, 492
- At least one elective from: Geol 309, 314, 315, 316,

318, 352, 400, 406, 407b, 410a, 410b, 414, 415, 430, 440

This major must be accompanied by the professional preparation program in secondary education.

*Major — Earth Science/Mathematics — Secondary\**

110 credits

- Geol 211, 212, 214, 306, 310, 340, 407a
- Geol 331 or Geol 252; Chem 121, 122; Astron 315; Math 124, 125, 204, 207, 209, 224, 302, 341, 360, 410, 483
- Sci Ed 491, 492
- At least one elective from: Geol 309, 314, 315, 316, 318, 352, 400, 406, 407b, 410a, 410b, 414, 415, 430, 440

This major must be accompanied by the professional preparation program in secondary education.

\*Pending approval of HEC Board.

*Minor — Geology 25 credits*

- Geol 211, 212
- Electives under departmental advisement

**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, Physics 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, 407a, 410 a and b, 415, and one of Geol 446, 447 or an approved course in computer science
- Chem 121, 122, 123; Math 128 or Math 124 and 125, Physics 121, 122, 131, 132

*Geology Concentration*

This option is designed for students wishing a general degree; it stresses earth materials. It is suitable preparation for graduate school.

- The core courses
- Geol 316, 406, 407b or 420
- One of Math 204, 224, 341 or Geol 448

*Environmental and Engineering Geology Concentration*

This option is designed to provide students with a general background for geotechnical careers in a variety of environmental fields, including geologic hazard analysis, hydrology, geologic site evaluation, environmental impacts and environmental planning.

- The core courses

- Geol 314, 430 and either 413 or 472
- 6 additional credits from Geol 413, 440, 450, 451, 452, 462, 472, 473, 474, 475, Geog 432

#### Geophysics Concentration

This option is for students wishing to specialize in geophysics with a view to graduate work in the field.

- The core courses plus Geol 452
- At least one from Geol 453, 454, 456
- At least one from Geol 314, 432, 450, 451, 472
- 12 credits from Math 204, 224, 225, 331, Physics 123, 133, 271, 272

### MID-PROGRAM CHECKPOINT

Students seeking to complete a B.S. 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 Physics 121, 122, 131, 132 and, if graduate school is contemplated, Physics 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 B.A. or B.S. major once they have completed Geol 211, 212, Math 124 and Chem 121. (**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, etc.

### DEPARTMENTAL HONORS

B.S. students and students in the University honors program who have completed Geol 490 and have a cumulative GPA of 3.50 or better meet the requirements for departmental honors.

### 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

*Courses numbered X37; X97; 300, 400; 417, 445 are described on page 31 of this catalog.*

#### 101 GENERAL GEOLOGY (4)

Prereq: Math 102 or equivalent. Introduction to geology for non-science majors; practical applications of geology; processes that have produced the earth and its landforms. Laboratory included. Geology majors and those having had geology in high school should take Geol 211.

#### 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. Was Geol 302 in previous catalog.

#### 211 PHYSICAL GEOLOGY (5)

Prereq: high school or college chemistry; open to students with credit in Geol 101 only with permission of department. Origin, composition and structure of earth. Identification of common rocks and minerals; the evolution of the surface features of continents and interpretation of landforms from maps. Laboratory included. Students with a grade of B- or better in Geol 101 may "upgrade" to Geol 211 by taking the lab part of Geol 211 via a 2-credit course entitled Geol 211a. See department for details.

#### 211a PHYSICAL GEOLOGY LAB (2)

Prereq: Geol 101 with a grade of B or better. Students who have completed Geol 101 with a grade of A or B may take the course to satisfy the 211 prerequisite for higher geology courses and for other departments where Geol 211 is required.

#### 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.

#### 214 ENVIRONMENTAL GEOLOGY (3)

Prereq: Geol 101 or 211. Not recommended for students planning to take Geol 314. The interaction between geological processes and human activities. Emphasis on geologic hazards such as earthquakes, landslides, floods and volcanic eruptions. Relevant aspects of soil and water analysis.

#### 252 THE EARTH AND ITS WEATHER (4)

Prereq: Geol 101, Chem 101 or Physics 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.

#### 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. Was Geol 213 in previous catalog.

#### 306 MINERALOGY (6)

Prereq: Geol 211; Chem 121, 122. Introduction to crystallography. Origin, occurrence and classification of common minerals; physical and chemical properties of minerals used in identification.

#### 309 VOLCANOLOGY (3)

Prereq: Geol 101 or 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.

#### 310 GEOMORPHOLOGY (5)

Prereq: Geol 211. Origin and evolution of topographic features by surface processes; analysis of glaciers, streams, wind, waves, ground water and other agents in development of landforms.

**314 ENVIRONMENTAL AND ENGINEERING GEOLOGY (3)**

Prereq: Geol 211, Physics 121; open to students with credit in Geol 214 only with permission of department. Application of geologic principles to problems of environmental science and engineering, including properties of earth materials, evaluation of geologic hazards, surface and groundwater hydrology, geochemistry and geomorphology. Intended for students with science background.

**315 MINERALS, ENERGY AND SOCIETY (4)**

Prereq: Geol 101 or 211. Mineral resources are vital to society, and yet they are non-renewable, 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.

**318 STRUCTURAL GEOLOGY (4)**

Prereq: Geol 211, 212; Physics 114 or 121. Description, classification and interpretation of earth structures; laboratory solution of structural problems by use of geologic maps.

**340 GEOLOGICAL OCEANOGRAPHY (3)**

Prereq: Geol 211, Chem 121, 122 or equivalent. Nature and origin of major structural and geomorphic features of the ocean basins, coastal processes and geochemical oceanography. The content of this course is coordinated with Envr 321 (Oceanography). Either course may be taken first.

**352 INTRODUCTION TO GEOPHYSICS (4)**

Prereq: Geol 318; Physics 121. Basic elements of geomagnetism, seismology, gravity and heat flow with reference to the internal structure of the earth.

**396a,b,c HONORS TUTORIALS (2-5)**

Repeatable with no maximum.

**401a TEACHING PRACTICUM (2)**

Prereq: Geol 211, with a minimum of a B grade, and permission of chair. Supervised teaching experience in the general geology laboratory. Repeatable to a maximum of 4 credits. S/U grading.

**401b TEACHING PRACTICUM (2)**

Prereq: permission of chair. Assisting faculty in teaching advanced undergraduate geology courses. Repeatable to a maximum of 4 credits. S/U grading.

**406 OPTICAL MINERALOGY (3)**

Prereq: Geol 306. Optical properties and identification of minerals with the polarizing microscope.

**407a PETROLOGY (4)**

Prereq: Geol 306. Origin, occurrence and classification of igneous, sedimentary and metamorphic rocks; hand specimen identification of rocks.

**407b THIN SECTION PETROGRAPHY (1)**

Prereq: Geol 406 and concurrent enrollment in Geol 407a. Study of rocks and minerals with an optical microscope.

**410a FIELD THEORY (5)**

Prereq: Geol 211, 318 and permission of instructor. Methods of geological field investigations; use of field instruments. Concurrent enrollment in Geol 410b recommended.

**410b FIELD METHODS (5)**

Prereq: concurrent or successive enrollment in Geol 410a. Application of geological field trip 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 (5)**

Prereq: Geol 211. This is a field geology class to be taken in conjunction with Geol 410. The focus is on geologic features of the U.S. Cordillera, ranging from the Coast Ranges to the craton. Emphasis is on outcrop study, reading and tectonic reconstruction.

**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. Repeatable with no maximum.

**415 STRATIGRAPHY AND SEDIMENTATION (4)**

Prereq: Geol 212; 10 upper-division credits in geology 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.

**420 IGNEOUS AND METAMORPHIC PETROLOGY SEMINAR (4)**

Prereq: Geol 406, 407a. A research-oriented class in which students employ a variety of field and laboratory techniques to solve petrogenetic problems.

**430 MAP AND AERIAL PHOTOGRAPH INTERPRETATION (3)**

Prereq: Geol 310. Identification, interpretation of geologic features using topographic maps and aerial photos. Offered in alternate years.

**432 ECONOMIC GEOLOGY (5)**

Prereq: Geol 306. Classification, occurrence and origin of ore deposits; hand specimen study of rock samples from selected mining districts.

**440 GLACIAL GEOLOGY (4)**

Prereq: Geol 310. Processes and phenomena of modern and ancient glaciers; effects of Pleistocene glaciations.

**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 earth's surface features using radar, aerial photography and multispectral scanners.

**443 DIGITAL IMAGE PROCESSING (4)**

Prereq: Geol 442. Microcomputer techniques used to create images from digital data collected using the Landsat Thematic mapper.

**446 MATHCAD FOR SCIENTISTS (3)**

Prereq: Math 128 or Math 124 and 125 or permission of instructor. An introduction to the use of MathCad for solving mathematical equations. Two- and three-dimensional plots are graphically created. Introduction to symbolic solutions (Maple) for differential equations and matrix algebra.

**447 GIS APPLICATIONS IN GEOLOGY (3)**

Prereq: 10 credits in geology or permission of instructor. The display, georegistering and analysis of geologic data and maps using GIS software. Field data, digital images, scanned and digitized maps and databases will be used in the solution of geological and environmental problems. Students will undertake a project of their own choice.

**448 GEOSTATISTICS (3)**

Prereq: Must be a declared geology major; computer literate (i.e., spreadsheet proficient). Application of statistical concepts to spatial data of geological interest.

**450 ADVANCED TOPICS IN STRUCTURAL GEOLOGY (4)**

Prereq: Geol 318, 407a, 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 AND EARTHQUAKE GEOLOGY (4)**

Prereq: Geol 310, 318, 352 recommended but not required. Study of active and recently active structures of the earth, tectonic geomorphology, and geology of earthquakes. Includes examination of faults, folds, coastal neotectonics, seismology, paleoseismology, and earthquake prediction.

**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, groundwater estimates and earthquake potential and ground response.

**453 PLATE TECTONICS (4)**

Prereq: Geol 352. Kinematics and dynamics of plate motions, with applications to geotectonics.

**454 GEOPHYSICS AND GEOTECTONICS (4)**

Prereq: Geol 352 or equivalent. Application of geophysics to the study of the tectonic processes.

**455 CLIMATE-RELATED GEOLOGIC HAZARDS (3)**

Prereq: Physics 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 407a. Application of geological and geophysical tools to understanding of earth's 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, 124. 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.

**472 HYDROLOGY (4)**

Prereq: Geol 211, Math 125. Components of the hydrologic cycle and their interaction, including precipitation, evaporation, infiltration, runoff processes and flood prediction.

**473 HYDROGEOLOGY (4)**

Prereq: Geol 211, Math 125; Geol 472 recommended. Geologic and hydrologic factors controlling the occurrence, movement and development of subsurface water. Applications in well hydraulics, groundwater contamination and water resources development.

**474 CONTAMINANT HYDROLOGY (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.

**490 SENIOR THESIS (3-6)**

Prereq: senior status. Research project under direction of faculty. Repeatable to a maximum of 6 credits.

**Graduate Courses**

*Courses numbered 500; 517; 545; 597 are described on page 31 of this catalog.*

*Admission to Graduate School or special permission required. See the Graduate School section of this catalog.*

**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. Was Geol 514 in previous catalog.

**516 ADVANCED STUDIES IN BIOSTRATIGRAPHY AND PALEONTOLOGY (3)**

Prereq: Geol 316 or permission of instructor. Independent or class study of recent advances in biostratigraphy, paleontology and micropaleontology.

**523 IGNEOUS PETROLOGY AND PETROGRAPHY (5)**

Prereq: Geol 407b or 420 or equivalent course. Advanced course on

modern methods of igneous petrology. Emphasis on interpretive methods including field work, petrography, geochemical analyses, and geochronology. Individual research projects required.

**524 SEDIMENTARY PETROLOGY AND PETROGRAPHY (5)**

Prereq: Geol 406, 407b or equivalent. Description, classification and interpretation of sedimentary rocks, including provenance, depositional history and diagenesis. Advanced lab stresses work with the petrographic microscope.

**525 METAMORPHIC PETROLOGY AND PETROGRAPHY (5)**

Prereq: Geol 406, 407a or equivalent. Advanced course in metamorphic petrology. Subject matter includes graphical and mathematical analysis of phase relations, field and laboratory study of metamorphic structures, and microscope study of metamorphic minerals and textures.

**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 MAP AND AERIAL PHOTOGRAPH INTERPRETATION (3)**

Prereq: Geol 310 or equivalent. Use of air photos and topographic maps in interpretation of geologic features.

**532 ECONOMIC GEOLOGY (5)**

Prereq: Geol 406; Chem 123. Geology and geochemistry of ore deposits. Microscopic study of ore minerals, hydrothermally altered rocks and fluid inclusions from selected districts.

**536 PALEOBIOLOGY (3)**

Prereq: Geol 316 or permission of instructor. Exploration of current topics in the study of fossils. Topics may include mass extinctions, community paleoecology, dinosaur behavior or the effects of extraterrestrial events on the earth's biosphere. Specific topics for each quarter will be decided by the class.

**540 GLACIAL GEOLOGY (4)**

Prereq: permission of instructor. Physics of glacial movement; processes of glacial erosion and deposition; effects of Pleistocene climatic changes.

**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.

**543 DIGITAL IMAGE PROCESSING (4)**

Prereq: Geol 442 or 542. Microcomputer techniques used to create images from digital data collected using the Landsat Thematic Mapper.

**547 GIS APPLICATIONS IN GEOLOGY (3)**

Prereq: permission of instructor. The display, georegistering and analysis of geologic data and maps using GIS software. Field data, digital images, scanned and digitized maps and databases will be used in the solution of geological and environmental problems. Students will undertake a project of their own choice, preferably relating to their thesis topics.

**548 ADVANCED GEOSTATISTICS (3)**

Prereq: graduate status and permission of instructor; computer literate (i.e., spreadsheet proficient). Application of statistical concepts to spatial data of geological interest. Explores traditional solutions to parametric analysis.

**550 ADVANCED TOPICS IN STRUCTURAL GEOLOGY (4)**

Prereq: Geol 318, 407a, 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 AND EARTHQUAKE GEOLOGY (4)**

Prereq: Geol 310, 318; Geol 352 recommended but not required. Study of active and recently active structures of the earth, tectonic geomorphology, and geology of earthquakes. Includes examination of faults, folds, coastal neotectonics, seismology, paleoseismology, and earthquake prediction.

**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 grounds response.

### **553 PLATE TECTONICS (4)**

Prereq: Geol 352. Kinematics and dynamics of plate motions, with applications to geotectonics.

### **554 GEOPHYSICS AND GEOTECTONICS (4)**

Prereq: Geol 352 or equivalent. Application of geophysics to the study of tectonic processes.

### **555 CLIMATE-RELATED GEOLOGIC HAZARDS (3)**

Prereq: Physics 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 407a. 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.

### **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.

### **570 SLOPE STABILITY AND LANDSLIDES (3)**

Prereq: two quarters of physics and calculus, Geol 310. Factors of slope stability leading to slope failure; types of slope failure and their causes; geological influences on the properties of rock and unconsolidated deposits; effect of pore water pressure on stability; stability analysis.

### **572 HYDROLOGY (4)**

Prereq: permission of instructor. Components of the hydrologic cycle and their interaction, including precipitation, evaporation, infiltration, runoff processes, and flood prediction. Independent project required.

### **573 HYDROGEOLOGY (4)**

Prereq: permission of instructor. Geologic and hydrologic factors controlling the occurrence, movement and development of subsurface water. Applications in well hydraulics, groundwater contamination, and water resources development. Independent project required.

### **574 CONTAMINANT HYDROGEOLOGY (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.

### **579 SUMMER FIELD PROJECT (10)**

Prereq: admission to field project option. Six weeks of data collection in the field and laboratory, followed by submission of a formal written report.

### **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 (2-12)**

Thesis research.

# 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

GEORGE MARIZ (1970) Chair and Professor. BA, MA, PhD, University of Missouri.  
 SUSAN E. COSTANZO (1993) Associate Professor. BA, MA, PhD, Northwestern University.  
 CECILIA A. DANYSK (1996) Assistant Professor. BA, Concordia University; MA, PhD, McGill University.  
 ROLAND L. DE LORME (1966) Professor and Provost/Vice President for Academic Affairs. AB, University of Puget Sound; MA, University of Pennsylvania; PhD, University of Colorado.  
 PETER D. DIEHL (1992) Associate Professor. BA, Yale University; MA, PhD, University of California, Los Angeles.  
 SUSAN AMANDA EURICH (1986) Associate Professor. BA, Portland State University; MA, PhD, Emory University.  
 CHRISTOPHER C. FRIDAY (1992) Associate Professor. BA, Lewis and Clark College; MA, PhD, University of California, Los Angeles.  
 ALAN GALLAY (1988) Professor. BA, University of Florida; MA, PhD, Georgetown University.  
 LEONARD M. HELFGOTT (1970) Professor. BA, MA, PhD, University of Maryland.  
 THOMAS C. R. HORN (1964) Associate Professor. BA, University of Pittsburgh; MA, PhD, University of California, Berkeley.  
 RANDALL C. JIMERSON (1994) Associate Professor. BA, Earlham College; MA, PhD, University of Michigan.  
 EDWARD H. KAPLAN (1968) Associate Professor. BS, Georgetown University; MA, PhD, The University of Iowa.  
 KATHLEEN A. KENNEDY (1995) Associate Professor. BA, State University of New York, Plattsburgh; MA, PhD, University of California, Irvine.  
 KEVIN A. LEONARD (1997) Assistant Professor. BA, Pomona College; MA, PhD, University of California, Davis.  
 HARRY R. RITTER (1969) Professor. BA, University of Arizona; MA, PhD, University of Virginia.  
 MART A. STEWART (1992) Associate 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) Assistant Professor. BA, Kent State University; MA, Ohio State University; MLIS, University of Texas; PhD, University of Illinois, Urbana-Champaign.  
 DONALD W. WHISENHUNT (1991) Professor. BA, McMurry College; MA, PhD, Texas Tech University.

\* Half must be in upper-division courses.

DIANA E. WRIGHT (1997) Assistant Professor. BA, MA, University of Michigan; PhD, University of Toronto.

## Affiliated Faculty

ANTHONY G. GULIG, Lecturer. Academic Advising Services.  
 ROBERT H. KIM, Professor. Educational Administration and Foundations.  
 RAYMOND G. MCINNIS, Professor. Wilson Library.  
 MIDORI TAKAGI, Assistant 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 or East Asian Studies 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 credits taken in fulfillment of the following programs must be in upper-division courses.

### 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
- 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
- History 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” (History 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 an appropriate foreign language. 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 of 2.50 is required for graduation.

*Minor — History*

25 credits\*

- ❑ United States
- ❑ Europe
- ❑ East and South Asia
- ❑ Africa and Middle East
- ❑ Western Hemisphere (outside U.S.)

Credits should be distributed as follows:

- ❑ Three courses in one of the above fields
- ❑ Two courses in a second field
- ❑ Electives under advisement

A minimum grade point average in history of 2.50 is required for graduation.

*Minor — Foreign Cultures*

25 credits\*

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, 426, 427, 428, 429)
- ❑ 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.

**BACHELOR OF ARTS IN EDUCATION**

The department recommends that students take its offerings in the General University Requirements program.

At least one-half the total credits taken in fulfillment of the following programs must be in upper-division courses.

A minimum grade point average in history of 2.50 is required for graduation and recommendation for teaching endorsement.

*Major — History — Junior and Senior High School*

60 credits\*

History credits should be distributed under advisement as follows:

- ❑ Three courses in United States history

\* Half must be in upper-division courses.

- ❑ Two courses in European history
- ❑ Two courses from one of the following three areas: East and South Asia; or Africa and Middle East; or Western Hemisphere (outside U.S.)
- ❑ Hist 391, 499
- ❑ Electives under advisement

**NOTE:** Students majoring in secondary education must also complete the specific program requirements for social studies education, including the social studies minor. See the Social Studies Education Program section of this catalog.

Completion of this major/minor program leads to a teaching endorsement in history and social studies at the secondary level.

*Major — History — Elementary*

45 credits

- ❑ 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 of 2.50 is required for graduation and recommendation for teaching endorsement. At least 15 of the credits must be in upper-division courses.

This major must be accompanied by the professional preparation program in elementary education.

**LATIN AMERICAN STUDIES**

This program is offered so that students interested in the area of Latin America may be able to concentrate a portion of their academic work in this area free of the stricture of departmental programs and to make more viable the relationships among 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 Liberal Studies section of this catalog).

*Minor — Latin American Studies*

30 credits

- ❑ Two courses in Spanish at 200 or 300 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.

**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

Courses numbered X37; X97; 300, 400; 417, 445 are described on page 31 of this catalog.

### 103, 104 INTRODUCTION TO AMERICAN CIVILIZATION (4 ea)

#### 103 AMERICAN HISTORY TO 1865

From the European background to the end of the Civil War.

#### 104 AMERICAN HISTORY SINCE 1865

From the end of the Civil War to the present.

### 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 occidental 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.

### 199 PROBLEMS IN MODERN HISTORY (4)

Prereq: Hist 104, 113 or advanced placement in either American or European history. An exploration of issues in European and/or American history in the 19th and 20th centuries, with special attention to problems of historical reasoning and methodology.

### 261 BLACK HISTORY IN THE AMERICAS (5)

The cultures and achievements of blacks in the Americas.

### 263 AFRICAN AMERICAN SINCE 1865 (4)

Prereq: Hist 104. Analyzes the experience of African Americans since 1865, with special attention to gender and politics.

### 265 LESBIAN AND GAY EXPERIENCE IN AMERICAN HISTORY (4)

Examines the lesbian and gay experience in American history from 1870-1990. Specifically, it examines how lesbian and gay people formed identities, communities, and civil rights movements.

### 273 LATIN AMERICA: 1492-1824 (5)

Political, economic and socio-cultural trends from the Spanish conquest through the independence movements.

### 274 LATIN AMERICA: 1824 TO THE PRESENT (5)

Political, economic and socio-cultural 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 CIVILIZATION (5)

The origins and evolution of the political, economic and social aspects of East Asian civilization to the present. Also taught as East Asian 201.

### 281 EAST ASIAN CULTURAL HISTORIES (5)

Examines political and/or cultural aspects of East Asian civilizations. Also taught as East Asian 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.

### 314 THE ENLIGHTENMENT TRADITION (5)

Prereq: Hist 113 or Liberal 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.

### 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. 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. 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. An examination of several imperial powers, their controls and methods, their attitudes to race questions, their influence on the colonial peoples and economies.

### 347 EUROPEAN INTELLECTUAL HISTORY I (5)

Prereq: Hist 111 or 112 or Lbrl 121 or 122 or equivalent. A study of the evolution of Western thought from its Greek and Hebrew origins to the early Middle Ages.

### 348 EUROPEAN INTELLECTUAL HISTORY II (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.

### 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 equity. Also taught as AmSt 362.

### 364 FILM AS HISTORY (4)

Prereq: any introductory American or European history course or one of the following: Lbrl 121, 122, 123. Readings and related films on selected historical topics; subject and course content varies with instructor. Repeatable with various topics.

### 365 GREAT PERSONALITIES IN AMERICAN HISTORY (5)

Prereq: sophomore status. Biographical approach based on evaluation of careers of typical leaders in public affairs, the arts and ideas.

### 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. WOMEN'S 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 GODS AND DEMIGODS FROM YAO TO MAO: HISTORY OF CHINESE STATECRAFT (5)

Prereq: Hist 280 or equivalent introductory course. Chinese politics and foreign relations from earliest times to the present.

## **371 THE CHINESE ECONOMY: FROM STONE AGE TO MAO'S AGE (5)**

Prereq: Hist 280 or equivalent. Chinese economic and social history from earliest times to the present.

## **372 SAGES, SCRIBES AND SCRIBBLERS: CHINESE INTELLECTUAL HISTORY TO THE PRESENT (5)**

Prereq: Hist 280 or Lbrl 272 or 273 or 274 or equivalent. The religious, intellectual and literary life of China from earliest times to the present.

## **374 HISTORY OF PREMODERN JAPAN (4)**

Prereq: Hist 280 or 281, East Asian 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 socio-historical context. Some of the topics to be covered 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, East Asian 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. Socio-political history is emphasized. Some of the major topics to be addressed 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."

## **378 CANADA: A NATION OF IMMIGRANTS (4)**

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, 112, 113, 287, or Lbrl 121, 122, 123, or any upper-division European or Middle Eastern history course. 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.

## **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.

## **392 SURVEY HISTORY OF THE U.S. WEST (4)**

Prereq: Hist 104 or equivalent. A survey of the trans-Mississippi region in the 19th and 20th centuries with emphasis on definitions of regionalism, varieties of human experiences, and connections to national and global history.

## **398 METHODS OF RESEARCH AND ANALYSIS (4)**

Prereq: Hist 103 or 104 and Hist 111, 112, or 113. Familiarizes students with the application of a wide variety of historical methods and tools. Designed to develop writing skills, it also focuses on different techniques in data analysis, source criticism and historiography.

## **413 A HISTORY OF ROME AND THE ROMAN EMPIRE (5)**

Prereq: Hist 111, Lbrl 121 or permission of instructor. The political and

cultural transformation of Rome from village to empire, and its fragmentation in the 5th and 6th centuries.

## **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 121; 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).

## **421 ECONOMIC AND SOCIAL HISTORY OF EARLY MODERN EUROPE (4)**

Prereq: Hist 112. An examination of the transition toward a capitalist, industrialized economy and society in Western Europe, with particular attention to roles played by gender, class, religion, technology and political institution.

## **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.

## **425 MODERN EUROPE: 1648-1789 (5)**

Prereq: junior status. Development of the modern state system and the conflict between monarchs and the growing middle class.

## **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 1815 to 1914 (5)**

Prereq: senior 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 PRESENT (5)**

Prereq: senior 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 since 1917.

## **440 BRITAIN: 1688 TO THE PRESENT (5)**

Prereq: Hist 113, Lbrl 123 or equivalent. Political, social, economic and intellectual history of Britain from the Glorious Revolution to the present; development of parliamentary institutions and modern economic and social organizations.

## **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, 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.

## **449 TWENTIETH-CENTURY EASTERN EUROPE (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. Offered in alternate years.

## **450 AMERICAN COLONIAL HISTORY (4)**

Prereq: junior status. The settlement of the English colonies in America and their political, economic, religious and social developments to the mid-18th century.

**454 THE CIVIL WAR AND RECONSTRUCTION (4)**

Prereq: junior status. Development of sectionalism; problems of war in North and South; efforts toward reunion; the failure of Reconstruction.

**455 THE AMERICAN REVOLUTION (4)**

Prereq: senior status. Nature of colonial society, mid-18th century; origins of the patriot movement; military course of the war and the effect of war on the composition of American society.

**457 THE UNITED STATES: 1870-1901 (4)**

Prereq: Hist 104. Examines the rise of the United States as a major industrial power and the social, political and cultural ramifications of industrialization.

**458 THE UNITED STATES: 1900-1941 (5)**

Prereq: junior status. Political, social and economic trends from the beginning of World War I to World War II.

**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, Hist 103 or 104. History of the role and place of nature in American culture from the colonial era to the present with emphasis on the history of cultural constructions of nature, American perceptions and conceptions of nature, and the environmental consequences of these.

**462 U.S. IMMIGRATION, ETHNIC AND LABOR HISTORY (4)**

Prereq: Hist 104. An analysis of the immigration process, the lives of the working class, multi-ethnic relations, and the political and social consequences of human migrations in the U.S. since c. 1820.

**463 LATINAS AND LATINOS IN THE U.S. WEST (4)**

Prereq: sophomore status, 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.

**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 SOCIAL AND CULTURAL HISTORY, 1790-1910 (4)**

Prereq: junior status. American social and cultural history, late colonial era to early 20th century.

**469 ORIGINS OF THE OLD SOUTH, 1512-1775 (4)**

Prereq: junior status. Analysis of processes which transformed southern colonies into a distinct region: interaction of Indians, blacks and whites; evolution of slavery and the plantation system; competing concepts of family, place and economy; influence of climate and geography; politicization and ideology.

**470 THE OLD SOUTH, 1776-1860 (4)**

Prereq: junior status. Analysis of plantation system, social relations, politics and slavery. Explores a variety of primary and secondary sources for understanding the Antebellum South.

**471 WOMEN AND GENDER IN LATIN AMERICA (4)**

Prereq: Hist 273 or 274. A thematic and chronological approach to gender relations in Latin America from the conquest to the present.

**473 HISTORY OF BRAZIL (4)**

Prereq: junior status. A social, economic and political history of Brazil from 1500 to the present.

**474 HISTORY OF MEXICO (5)**

Prereq: junior status. Mexican history from pre-conquest Indian cultures to the present.

**479 RURAL CANADA (4)**

Prereq: Hist 277 or permission of instructor. Changing contours of the rural Canadian experience during the age of urban-industrial transformation, through such themes as social relations, labor, gender, family, ethnicity and ideology.

**480 ANCIENT AND EARLY IMPERIAL CHINA (5)**

The evolution of early civilization and the first stage of high civilization in China through the Han dynasty.

**481 IMPERIAL CHINA FROM THE FALL OF HAN TO MID CH'ING (5)**

Political, socio-economic and intellectual trends during the eras of highest development of the imperial system.

**482 CHINA FROM LATE CH'ING TO THE PRESENT (5)**

Dissolution of the imperial system and experimentation with new political ideas and institutions; social and intellectual developments to the present.

**483 EDO SOCIAL HISTORY (4)**

Prereq: Hist 280 or 281, or East Asian 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 as well as legal codes, official dogma and ideologies are examined. Topics include Tokugawa religions and politics, popular culture, "Western Studies," Tokugawa social structure, education, women's political involvement, *Bushido*, the family, art and literature, science, and the economic sphere.

**484 WOMEN IN JAPANESE HISTORY (4)**

Prereq: Hist 280 or 281, or East Asian 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 (4)**

Prereq: Hist 280 or 281, or East Asian 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 are: the evolution of the military class, important battles, translated "war tales" (*gunki monogatari*), the evolution of military skills and technology, the military's political involvement over time, the myth of *Bushido*, martial traditions cultural contributions and influences, and the relationship between Japan's religious and martial spheres.

**486 RELIGION IN JAPANESE HISTORY (4)**

Prereq: Hist 280 or 281, or East Asian 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 socio-political 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,b THE MIDDLE EAST (5 ea)**

Prereq: junior status.

**487a THE TRADITIONAL MIDDLE EAST**

From the 6th century to 1800

**487b MIDDLE EAST, 1800 TO THE PRESENT****488 MODERN EGYPT, LIBYA AND THE NILE VALLEY (5)**

Prereq: senior 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.

**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. Also taught as East Asian 302 (selected sections only).

## Graduate Courses

*Courses numbered 500; 517; 545; 597 are described on page 31 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. 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.

### 505 CONTEMPORARY HISTORICAL METHODS (4)

Prereq: Hist 501. 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.

### 515 MEDIEVAL HISTORY (4)

Prereq: Hist 315 or permission of department. Selected studies from the Fall of Rome to the Renaissance. Repeatable.

### 520 RENAISSANCE AND REFORMATION (4)

Readings in the history of Europe from 1337-1848. Repeatable.

### 533 RUSSIAN HISTORY (4)

Prereq: Hist 434 or equivalent, or permission of the department.

### 536 BRITISH HISTORY (4)

Prereq: one undergraduate course in British history or permission of the department.

### 540 MODERN EUROPEAN HISTORY (4)

Prereq: Hist 428 or equivalent or permission of the department.

### 550 COLONIAL AMERICAN HISTORY (4)

Prereq: Hist 450 or equivalent or permission of the department.

### 552 U.S. SOUTH, 1512-1860 (4)

Prereq: graduate status. Examination of the colonial and antebellum periods: slavery, plantation system, politics and social relations.

### 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 Envr 553.

### 554 CIVIL WAR AND RECONSTRUCTION (4)

555 U.S. WOMEN'S HISTORY (4)  
Selected readings in U.S. women's history.

### 556 TOPICS IN LATIN AMERICAN HISTORY (4)

Prereq: graduate status. Selected readings in Latin American history.

### 558 20th-CENTURY AMERICAN HISTORY (4)

### 563 U.S. URBAN HISTORY (4)

Prereq: graduate status. Readings that relate to the history of U.S. cities and suburbs. Primary focus on the 20th Century.

### 565 SEMINAR IN U.S. LABOR AND IMMIGRATION HISTORY (4)

Prereq: graduate status. Readings on the history and interpretations of U.S. labor history (not confined to institutional studies) and immigration history.

### 566 AMERICAN SOCIAL AND CULTURAL HISTORY (4)

### 567 PRESERVATION OF ARCHIVAL MATERIALS (4)

Prereq: Hist 595. 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.

### 568 ADVANCED SEMINAR IN ARCHIVES AND RECORDS MANAGEMENT (4)

Prereq: Hist 599a,b. Readings in selected aspects of archives administration and the management of current records and information systems.

### 571 CANADA (4)

Prereq: graduate status. Selected topics in Canadian social history.

### 582 REPUBLICAN AND COMMUNIST CHINA (4)

Prereq: Hist 482 or equivalent or permission of the department. Readings in the history of China from 1912 to the present.

### 587 SEMINAR IN MIDDLE EASTERN HISTORY (4)

### 588 AFRICA (4)

Prereq: undergraduate preparation in African history or permission of instructor.

### 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)

### 594 COLLECTIONS MANAGEMENT AND USER SERVICES (4)

Prereq: Hist 595. Detailed examination of archival collecting policies, acquisitions, appraisal, access policies, reference services, outreach and related issues.

### 595 HISTORY AND PRINCIPLES OF ARCHIVES ADMINISTRATION AND RECORDS MANAGEMENT (6)

Prereq: minimum of 25 undergraduate credits of history or allied discipline. 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.

### 596 ARRANGEMENT AND DESCRIPTION OF ARCHIVES (4)

Prereq: Hist 595. Detailed examination of archival arrangement and description systems, including both manual and automated applications, the USMARC cataloging format, and Internet and electronic descriptive systems. Practicum project required.

### 598 RECORDS MANAGEMENT (4)

Prereq: Hist 595. 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.

### 599a,b INTERNSHIP IN ARCHIVES AND RECORDS MANAGEMENT (10 ea)

Prereq: Hist 596 or 598. Professional internship in a cooperating agency or organization. S/U grading.

### 690a RESEARCH AND WRITING SEMINAR: THESIS (4)

Introduction to research, the use of primary source materials, auxiliary sciences, problems of interpretation, textual criticism and the use of bibliographical aides. A knowledge of foreign language or the use of statistics or computer programming may be required depending upon the topic of research.

### 690b RESEARCH AND WRITING SEMINAR: THESIS (4)

Prereq: Hist 690a. Continuation of research begun in Hist 690a.

### 690c RESEARCH AND WRITING SEMINAR: THESIS (4)

Prereq: Hist 690b. Emphasis upon writing the thesis.

# 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 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. A combined major, environmental studies/journalism, is available in cooperation with Huxley College.

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 adviser before embarking on classes beyond Journ 190 and Journ 207.

## DECLARATION OF MAJOR

The Department of Journalism offers two sequences leading to a Bachelor of Arts degree: a journalism sequence (news-editorial) and a journalism/public relations 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 Journ 207 with a B- or better (transfer students must meet the same requirement for any course accepted as an equivalent of Journ 207 and also complete one additional non-staff journalism course with a B- or better).
- ❑ Complete with a B- or better one journalism staff course.

- ❑ Complete with a C- or better Library Instruction 125.
- ❑ 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 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 B.A. 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.

- ❑ Journ 190, 207
- ❑ Eng 101
- ❑ 100- and 200-level GURs

## JOURNALISM FACULTY

FLOYD MC KAY (1990) Chair and Professor. BA, Linfield College; MA, University of Maryland; PhD, University of Washington.

CAROLYN DALE (1977) Associate Professor. BA, MC, University of Washington.

SHEARLEAN DUKE (1999) Assistant Professor. BS, Tennessee Tech University; MA, Chapman University.

LYLE E. HARRIS (1976) Professor. BA, MA, University of Montana; PhD, University of Missouri.

JAMES J. NAPOLI (1999) Associate Professor. BA, MA, Boston College.

TIM PILGRIM (1992) Associate Professor. BA, Western Montana College; MA, University of Montana; MA, PhD, University of Washington.

## BACHELOR OF ARTS

### *Major — Journalism*

#### *News-Editorial Sequence*

66 credits

- ❑ Journ 207
- ❑ Library 125
- ❑ Journ 190, 307, 309, 340, 350, 404, 470, 480
- ❑ Three courses from list (a), one course from list (b) and one additional from list (a) or (b):
  - (a) Journ 214, 314, 414
  - (b) Journ 221, 321, 421
- ❑ Journ 430
- ❑ 15 upper-division credits in another academic area under departmental advisement
- ❑ Cumulative GPA of 2.50 or higher in major

- A maximum of 60 journalism course credits may be applied toward the 180-credit minimum for graduation

## *Public Relations Sequence*

71 credits

- Journ 207
- Library 125
- Comm 101 or 235 and 428
- FMDS 380
- Journ 190, 307, 309, 330, 350, 404, 480
- One course from list (a), one from list (b), and one additional from (a) or (b)
  - (a) Journ 214, 314, 414
  - (b) Journ 221, 321, 421
- Journ 430
- 15 upper-division credits in another academic area, under departmental advisement. Strongly recommended are courses covering graphic design in the Art Department, and courses on business organization and marketing in the College of Business and Economics. Please see a Journalism Department adviser for listing of recommended concentration courses and electives.
- Cumulative GPA of 2.50 or higher in major
- A maximum of 60 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*

30 credits

- Journ 207
- Journ 190, 307, 309, 340, 350
- Three staff courses, or equivalent professional experience:
  - Two from: Journ 214, 314, 414
  - One from: Journ 221, 321, 421

## COURSES IN JOURNALISM

*Courses numbered X37; X97; 300, 400; 417, 445 are described on page 31 of this catalog.*

### **106 WRITING STRUCTURE (2)**

Prereq: permission of the instructor. 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 (4)**

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 (3)**

Prereq: basic word processing skills required. Writing for news media; news elements and values; gathering news, structure and style of news stories; covering speeches and meetings, interviewing. Was Journ 104 in previous catalog.

### **214 NEWSPAPER STAFF (2)**

Prereq: sophomore status; Journ 207. Participation on the staff of the University newspaper; critiques in news reporting, writing, editing and make-up; editorial writing. Repeatable to 8 credits.

### **221 PERIODICAL STAFF (2)**

Prereq: sophomore status; Journ 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 6 credits.

### **305 PHOTOJOURNALISM (3)**

Prereq: Art 290 or equivalent experience; Journ 207. Basics of news photography; use of equipment; news picture planning and coverage; composing effective news pictures; essentials of processing for publication; photographic notes and files; picture editing and layout; professional ethics and the law.

### **307 REPORTING (5)**

Prereq: Journ 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. Cannot be taken concurrently with Journ 309. Was Journ 304 in previous catalog.

### **309 EDITING (5)**

Prereq: Journ 207. News copy desk operations; editing; headline writing; dummyming; page make-up and news graphics; and computerized editing. Cannot be taken concurrently with Journ 307. Was Journ 204 in previous catalog.

### **314 NEWSPAPER STAFF (2)**

Prereq: junior status; Journ 207. Participation on the staff of the University newspaper; critiques in news reporting, writing, editing and make-up; editorial writing. Repeatable to 8 credits.

### **321 PERIODICAL STAFF (2)**

Prereq: junior status; Journ 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 6 credits.

### **330 PRINCIPLES OF PUBLIC RELATIONS (3)**

Prereq: Journ 207 or Eng 101. 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 THE PRESS AND SOCIETY (3)**

Historical backgrounds of journalism, tracing the rise of mass communications in the Western world with social, economic and political trends.

### **350 LAW OF THE PRESS (4)**

Prereq: junior status required. 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 PRESS ETHICS (3)**

Prereq: Journ 207. Introduction to ethical theories; examination of press codes and standards; changing roles of the news media that affect moral reasoning for the journalist; responsibilities of the press in a world of instant communication and reaction; historical perspectives through case studies; use of reporting methods, headlines, pictures, and news play in print and broadcast.

### **360 LITERATURE OF JOURNALISM (3)**

Prereq: junior status. Reading and critical evaluation of literature by and about journalists.

### **390 THE NEWS PROCESS (4)**

Prereq: junior status required. Critical examination of the news process by visiting news media professionals. Repeatable to 8 credits with various topics.

### **404 FEATURE WRITING (3)**

Prereq: Journ 307; major status required. In-depth article 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, Journ 207. 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: Journ 207, 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 adviser. Repeatable to a maximum of 12 credits. This course may not be taken concurrently with a newspaper staff course.

**421 PERIODICAL STAFF (2)**

Prereq: senior status; Journ 207; 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: Journ 207, 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; learning personnel communication skills; using advanced publication software and technology; making

self-evaluation and production reports for adviser. Repeatable to a maximum of 9 credits. This course may not be taken concurrently with a periodical staff course.

**430 FIELD INTERNSHIPS (6)**

Prereq: Journ 307, 309, 350, and newspaper staff courses; 330 for PR majors; written permission. Supervised field work on newspapers, magazines, radio and TV stations, public relations and advertising agencies, or other appropriate professional situations; for journalism majors between junior and senior years; usually during summer session. S/U grading.

**460 SPECIAL REPORTING PROJECT (3)**

Prereq: Journ 307, 350 and three staff courses that include one each on *Klipsun* and *Western Front*. 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.

**470 MASS COMMUNICATIONS THEORY AND RESEARCH (3)**

Prereq: Journ 307; major status required. Introduction to theory and research in mass communications; review of pertinent literature; limited field studies. Preparatory course for Journ 480, Current Problems.

**480 CURRENT PROBLEMS (3)**

Prereq: Journ 350; Journ 470 for news-editorial majors; major status required. The modern function of the press in a democratic society; virtues and shortcomings of the press in current trends; management structure of media and its interaction with journalistic ethics.

## LIBERAL STUDIES

The Department of Liberal Studies is an interdisciplinary department offering courses in humanities, comparative cultural study and the academic study of religion. Traditionally, study in the “humanities” addresses major ideas about human beings and their place in the universe which have shaped Western society and culture, as these ideas are expressed in language, literature, philosophy, religion and fine arts. “Comparative cultural study,” as conducted by the department, addresses these same concerns in the principal civilizations of the Orient and Africa. The “academic study of religion” brings the tools of modern scholarship to bear on the literature and institutions of the religions of mankind, understood as cultural forces. The department is “interdisciplinary” in that its faculty are trained in a variety of academic fields and bring multiple scholarly perspectives to their courses. The department’s objectives, implied in its title, are those traditionally associated with “liberal education” and education in the “liberal arts.”

The Department of Liberal Studies serves the Western Washington University community in the following ways:

- 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 B.A. in humanities and a B.A. in humanities (elementary education). These majors offer integrated study in the materials and perspectives of the humanities. 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 Arts and Sciences. This program allows students, in consultation with appropriate faculty, to design a 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 (Arntzen Hall 314).

### MID-PROGRAM CHECKPOINT

Students seeking to complete a humanities degree in liberal studies within a four-year time span should have completed the following courses by the beginning of their junior year. Major omissions from this list will make it difficult or impossible to complete this degree within two additional years.

Lbrl 121, 122, 123 and Eng 202, plus 12-15 additional credits from the courses listed under Bachelor of Arts below. English 304 is recommended for fall quarter of the junior year, if not taken previously.

\* Contact the department before enrolling.

\*\* Lbrl 273 may be counted in one group only.

For information or advisement, contact the Liberal Studies office.

### LIBERAL STUDIES FACULTY

WILLIAM K. B. STOEVER (1970) Chair and Professor. BA, Pomona College; MDiv, Yale Divinity School; MPhil, PhD, Yale University.  
 DAVID L. CURLEY (1996) Assistant Professor. BA, MA, PhD, University of Chicago.  
 ANDREA GOGROF-VORHEES (1996) Assistant Professor. BA, MA, University of Paris, Nanterre; PhD, University of Washington.  
 MILTON H. KRIEGER (1970) Professor. BA, Reed College; PhD, University of Toronto.  
 RODNEY J. PAYTON (1970) Professor. BA, MA, Washington State University; PhD, University of Chicago.  
 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.  
 WILLIAM L. WALLACE (1970) Associate Professor. BS, Appalachian State University (North Carolina); MA, PhD, Ohio University.

### BACHELOR OF ARTS

#### *Major — Humanities\**

65-70 credits

The B.A. in humanities provides interdisciplinary study of the humanities (literature, history, philosophy, religion, the arts) in Western and other civilizations. The course of study focuses on the manner in which societies create and modify their culture. It addresses methods of study in the humanities, as well as their traditional content. The major emphasizes reading, critical analysis and writing. Students who complete the major will have substantial acquaintance with significant literary texts, historical development, and principal philosophical and aesthetic currents in Western civilization, and a sense of comparable phenomena in South and East Asian and African civilizations. Students will have opportunity to develop a sense of historical and cultural context and to develop analytical and expressive skills of broad application.

- Lbrl 121, 122, 123
- One course from each of the following:
  - Phil 112, 114
  - Phil 113, Lbrl 231, 232
  - Lbrl 243, 273\*\*
  - Lbrl 271, 272, 273\*\*, 275, 276, 277
- Lbrl 302, Eng 304
- Three courses from Lbrl 417a-d
- Electives under advisement from Lbrl 332, 333, 335, 370, 371, 372, 373, 378; Phil 315, 320, 340, 350, 355, 360, 364-369, 420; and other appropriate upper-division courses
- Lbrl 499

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 and Eng 304 should

be completed before enrolling in Lbrl 417a-d. (**NOTE:** Eng 202 is prerequisite to Eng 304.) Permission of the instructor is required for enrollment in Lbrl 417a-d. Students who are deficient in expository writing may be required to complete an appropriate additional writing course. Arrangements regarding topic and faculty adviser for Lbrl 499 should be made at the beginning of the quarter preceding enrollment in the course. 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 Education)\*

43 credits

This major offers the same approach and much of the subject matter of the B.A. in humanities (above). It is designed to accompany the professional elementary education program. Students who complete the course of study will have substantial acquaintance with content and perspectives of the humanities in Western culture, and with methods of study that are broadly applicable to the teaching of the humanities.

- Lbrl 121, 122, 123
- Two courses to be chosen from two of the three following groups: Lbrl 231, 232; Lbrl 243, 273\*\*; Lbrl 271, 272, 273\*\*, 275, 276, 277
- Lbrl 302, Eng 304 (preferred) or 301
- Two courses from Lbrl 417a-d
- Electives under advisement from Lbrl 332, 333, 335, 370, 371, 372, 373, 378, 499 and other appropriate upper-division courses

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 and Eng 304 or 301 should be completed before enrolling in Lbrl 417a-d. (**NOTE:** Eng 202 is a prerequisite for Eng 304.) Permission of the instructor is required for enrollment in Lbrl 417a-d. Students who are deficient in expository writing may be required to complete an appropriate additional writing course. Arrangements regarding topic and faculty adviser for Lbrl 499 should be made at the beginning of the quarter preceding enrollment in the course.

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 Department of Educational Curriculum and Instruction.)

### Minor — Humanities

31 credits

Interdisciplinary study of the traditional material of the humanities — i.e., major beliefs about and images of human beings and their place in society and the universe — in western and other cultural traditions.

- Lbrl 121, 122, 123
- One course from Lbrl 231, 232, 243
- Two courses from Lbrl 271, 272, 273, 275, 276, 277
- One course from Lbrl 302, 332, 335, 378 and other appropriate courses under advisement

\* Contact the department before enrolling.

\*\* Lbrl 273 may be counted in one group only.

### Minor — The Study of Religion

24-27 credits

Scholarly, critical, non-sectarian study of religious traditions and religious behavior; directed toward understanding of the role of religion in human experience and the complex relationship between religion and other cultural forms.

- Lbrl 231
- Three courses from Lbrl 271, 272, 335; Hist 287; Phil 113
- Remaining credits from the following: Anth 330; Eng 336; Lbrl 332, 333, 335, 378; Hist 387; Pol Sci 480; other appropriate courses under advisement

For advisement regarding either minor, contact the Liberal Studies office.

## LIBERAL STUDIES COURSES

Courses numbered X37; X97; 300, 400; 417, 445 are described on page 31 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 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: CONCEPTS OF MAN IN MEDIEVAL AND 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: MAN IN MODERN TIMES

Nineteenth- and twentieth-century ideologies; their philosophies of man; alienation and integration of the individual in society.

### 121a, 122a, 123a A FOUNDATION FOR THE LIBERAL ARTS (5 ea)

A three-quarter sequence in humanities, open to fall quarter entering freshmen only. Courses must be taken in sequence to meet the GUR requirement. For individual course descriptions, see above.

### 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)

An 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 MYTHOLOGY/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 ARTISTIC EXPRESSION 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 (4)**

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.

### **302 METHODS OF INTERDISCIPLINARY STUDY (4)**

Prereq: Lbrl 121, 122, 123, 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.

### **332 UNIVERSAL RELIGIONS: FOUNDERS AND DISCIPLES (4)**

Prereq: junior status. Beliefs and practices of major world religions; traditional images of religious founders; development of religious traditions; historical and phenomenological perspective.

### **333 RELIGION IN AMERICA (4)**

Prereq: junior status. 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 (4)**

Prereq: junior status. 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.

### **370 MAJOR ASIAN AND AFRICAN TRADITIONS: THE TRADITIONAL ORDER (4)**

Prereq: junior status. 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. 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. 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. 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.

### **378 RELIGION AND SOCIETY IN INDIA (4)**

Prereq: junior status. Examination of major Indian religious traditions — Hindu, Sikh 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.

### **499 RESEARCH IN HUMANITIES (4)**

Prereq: two courses from Lbrl 417a-d, senior status, permission of instructor. Research and writing of a formal paper on a topic developed by the student in consultation with a faculty adviser; adviser is assigned and topic identified at the beginning of the quarter prior to enrollment in 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. Rudolf Weiss (Humanities 253), director of the interdisciplinary program in linguistics, (360) 650-3927, for advisement. Fax: (360) 650-6110, e-mail weiss@cc.wvu.edu. Web site: <http://www.ac.wvu.edu/~linguist/>

The linguistics major is currently a pre-approved student-designed major.

## LINGUISTICS FACULTY

RUDOLF WEISS, Director. Modern and Classical Languages. General and applied phonetics, applied linguistics, general linguistics.

KENN APEL, Communication Sciences and Disorders. Language acquisition, language analysis, language disorders.

SANDRA BREITENBACH, Modern and Classical Languages. Sinology, general linguistics, applied linguistics, historical linguistics.

CATHERINE CRAIN-THORESON, Psychology. Psycholinguistics, child language and literacy development.

KRISTEN DENHAM, English. Syntactic theory, morphology, sociolinguistics, psycholinguistics, Native American languages.

SHAW N. GYNAN, Modern and Classical Languages. Sociolinguistics, second language acquisition, syntax and phonology.

JAMES W. HEARNE, Computer Science. General linguistics, computational linguistics, narratology.

LINDA KIMBALL, Anthropology. Southeast Asia linguistics.

ROSINA LIPPI-GREEN, English. Sociolinguistics, critical language studies, language ideology, language and law.

ANNE LOBECK, English. Syntactic theory, historical linguistics, sociolinguistics.

EDWARD J. VAJDA, Modern and Classical Languages. Morphology and semantics, language typology, general historical linguistics.

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 Advisers:

English — Anne Lobeck

Anthropology — Linda Kimball

Communication Sciences and Disorders — Kenn Apel

Computer Sciences — James W. Hearne

Modern and Classical Languages — Shaw N. Gynan

## Bachelor of Arts

### Major — Linguistics\*

55 credits

- One college year of a non-IE language (Chinese,

Japanese or Korean) or second year of other language (12-15 credits)

- Ling 201 or Eng 370 or Anth 348; 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, 247, 348 (to replace Ling 201), 448
- Additional work under advisement

#### Speech Pathology/Audiology 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

#### Foreign Languages option

- 314 course in the language (4 credits)
- Additional credits under advisement; this may include a second foreign language or FL 410

### Minor — Linguistics

25 credits

- Ling 201 or Eng 370 or Anth 348; Ling 204, 301, 302, 303, 314
- Additional or substitute work may be recommended according to the departments chosen (anthropology, computer science, English, foreign languages, speech pathology). See the director or area adviser for details.

## COURSES IN LINGUISTICS

Courses numbered X37; X97; 300, 400; 417, 445 are described on page 31 of this catalog.

### 201 INTRODUCTION TO LINGUISTICS SCIENCE (5)

Survey of linguistic method and theory.

### 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. Theory, methods and problems of phonological analysis and description.

### 302 MORPHOLOGY (4)

Prereq: Ling 201. Theory, methods and problems of morphemic analysis and description.

### 303 SYNTAX (4)

Prereq: Ling 201. Comparative survey of modern theories of grammar with special reference to syntax.

### 314 PHONETICS (4)

Prereq: Ling 201 or any applicable course in one of the following departments: speech pathology, anthropology, foreign languages or English (see instructor for applicability). An introduction to phonetics

\* Regular major status is pending review and approval of the Higher Education Board.

## LINGUISTICS

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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 (4)**

Prereq: permission of instructor. Readings and/or directed research as determined by instructor. Variable topic. 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.

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.

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 and 382.

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. To gain the Initial Teaching Certificate, students must also complete a program of studies in professional education, including student teaching. Students should seek formal admission to the appropriate program in education early in their careers at Western. It is essential that the interested reader consult the Department of Educational Curriculum and Instruction portion of this catalog for further information.

## ACADEMIC PLACEMENT

Placement in the first mathematics course 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 adviser before registering.

Except by permission of the chair of the Department of Mathematics, a student may not receive credit for any of Math 102, 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, and the Bachelor of Arts in Education in mathematics — secondary 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)
- CS 140 (computer programming) or Math 207

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. 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.

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.

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 graphics calculator. Students should contact the department for recommendations before purchasing a calculator.

## 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 adviser. 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.

## 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 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 Honors Program section of this catalog) with the following modifications:

- Entering freshmen must satisfy the GUR in science by completing one of the following sequences:
  - Chem 121, 122, 123
  - Physics 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.  
 IGOR AVERBAKH (1996) Assistant Professor. MSc, PhD, Moscow Institute of Physics and Technology.  
 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.  
 KEITH CRASWELL (1966) Associate Professor. BS, MS, PhD, University of Washington.  
 BRANKO CURGUS (1988) Professor. BS, MS, PhD, University of Sarajevo.  
 ALBERT J. FRODERBERG (1966) Professor and Vice President for External Affairs. BS, MS, PhD, University of Washington.  
 RICHARD J. GARDNER (1991) Professor. BSc, PhD, University College, London; DSc, University of London.  
 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.  
 RICHARD G. LEVIN (1967) Associate Professor. BS, University of Pennsylvania; PhD, University of California, Davis.  
 NORMAN F. LINDQUIST (1967) Associate Professor. BA, Linfield College; PhD, Oregon State University.  
 VANIA MASCIONI (1999) Assistant Professor. BS, Eidgenössische Technische Hochschule Zürich; PhD, University of Zürich.  
 MICHAEL NAYLOR (1999) Assistant Professor. BS, Michigan State University; MS, PhD, Florida State University.  
 THOMAS T. READ (1967) Professor. BA, Oberlin College; MA, PhD, Yale University.  
 JOHN R. REAY (1963) Professor. BA, Pacific Lutheran University; MS, University of Idaho; PhD, University of Washington.  
 SEBASTIAN J. SCHREIBER (1997) Assistant Professor. BA, Boston University; PhD, University of California, Berkeley.  
 YUN-QIU SHEN (1988) Associate Professor. BS, University of Science and Technology of China; MS, PhD, Michigan State University.

JOHN M. VEROSKY (1989) Associate Professor. BS, MS, University of Texas, El Paso; PhD, Tulane University.  
 JOHN W. WOLL (1968) Professor. BS, Haverford College; PhD, Princeton University.

### BACHELOR OF ARTS

#### Major — Mathematics

70 credits in mathematics plus 19-20 credits in other courses

- Math 124, 125, 204, 224, 226, 331
- Math 341 or 441
- CS 140 or Math 207
- At least three courses from Math 209, 302, 304, 312, 360
- At least two courses from Math 410, Math-CS 335, 375, 435, 475
- Math 419 or 420
- Not 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, Math-CS 335-435, Math-CS 375-475
- At least one of the following sequences:
  - Physics 121, 122, 123, 131, 132, 133
  - Chem 121, 122, 123
  - CS 140, 145, 211, 241, 311
  - Econ 206, 207, 306, 470 or 475

### BACHELOR OF ARTS IN EDUCATION

#### Major — Mathematics — Elementary

49 credits

- Math 124, 125, 204, 209, 381, 302, 341, 360, 382, 419
- CS 140 or Math 207
- 4 credits in mathematics (200+ level) as advised

It is recommended that the student also take EdAF 452.

This major must be accompanied by the professional preparation program in elementary education.

#### Major — Mathematics — Secondary

70 credits

- Math 124, 125, 204, 209, 224, 226, 302, 331, 341, 360, 419, 483
- CS 140 or Math 207
- At least four courses selected from the following: Math 304, 312, 401, 402, 410, 441, and Math-CS 375.

It is recommended that the student also take EdAF 452.

This major must be accompanied by the professional preparation program in secondary education.

#### Minor — Mathematics — Secondary

41 credits

This minor meets the requirement for a supporting endorsement in mathematics (4-12) for Washington state certification.

- Math 124, 125, 204, 209, 302, 360, 419, 483

ARTS & SCIENCES

## MATHEMATICS

- CS 140 or Math 207
- 4 credits in mathematics (200+ level) as advised

This minor must be accompanied by the professional preparation program in secondary education.

### *Combined Major — Chemistry/Mathematics — Secondary*

88 credits plus supporting courses in physics

This major meets the requirements for Washington state teaching endorsements in both chemistry and mathematics.

- Chem 121, 122, 123, 461, 462, 463
- 10-12 credits in chemistry to include a minimum of five credits in organic chemistry under departmental advisement.
- Math 124, 125, 224
- Math 204, 209 or 341, 302, 331, 360, 483
- CS 140 or Math 207
- Sci Ed 491, 492
- Supporting courses: one year of college physics (recommended sequence is Physics 121, 122, 123, 131, 132, 133)
- Math 419 recommended as writing proficiency course

It is recommended that the student also take EdF 452.

This major must be accompanied by the professional preparation program in secondary education.

### *Other Combined Majors*

See the Physics/ Astronomy Department section of this catalog for the physics-mathematics major.

### *Teaching Endorsement*

Recommendation for teaching endorsement requires completion of the appropriate major with a minimum grade point average of 2.50 in courses used in the major.

## BACHELOR OF SCIENCE

### *Major — Mathematics*

70 credits in mathematics plus 19-20 credits in other courses

- Math 124, 125, 204, 224, 225, 226, 304, 312
- Math 209 or 302
- Not 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, Math-CS 335-435, Math-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

### *Supporting Courses*

- CS 140 or Math 207
- One of the following sequences:
  - Physics 121, 122, 123, 131, 132, 133
  - Chem 121, 122, 123
  - CS 140, 145, 211, 241, 311
  - Econ 206, 207, 306, 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, Math-CS 335, 435, and Math-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, 204, 224, 226, 304, 312, 331
- Math 209 or Math 302
- CS 140 or Math 207
- Math-CS 375-475
- Math 341-342 or Math 441-442
- One of the following concentrations:
  - Engineering Concentration: Math 225, either Math 430 or 432, Math 438
  - Operations Research Concentration: Math-CS 335-435, CS 439 or Math 410
- No fewer than 3 additional credits at the 400 level from Math, Math-CS, or CS 405, 439, 480
- One of the following sequences:
  - Physics 121, 122, 123, 131, 132, 133
  - Chem 121, 122, 123
  - CS140, 145, 211, 241, 311
  - Econ 206, 207, 306, 470 or 475

### *Minor — Mathematics*

35 credits

- Math 124, 125, 224
- Math 204
- CS 140 or Math 207
- 12 credits of approved electives from Math 209, 225, 226 and upper-division courses except Math 381, 382, 483

### *Combined Major — Mathematics-Computer Science*

93 credits

- Math 124, 125, 204, 224, 226, 302, 312, 331, 430 or 432; 341 or 441; 304 or 401
- Three courses from Math-CS 335, 375, 435, 475
- CS 140, 145, 211, 241, 311, 341, 345
- 7 additional upper-division credits in mathematics and computer science as advised

### *Other Combined Majors*

The Department of Mathematics cooperates with other departments in offering combined majors for students wishing to achieve considerable depth in both areas.

*Biology-Mathematics, BS:* See the Biology Department section of this catalog.

*Chemistry-Mathematics, BA in Ed:* See the Chemistry Department section of this catalog.

*Economics-Mathematics, BA:* See the Economics Department section of this catalog.

*Physics — Physics-Mathematics concentration, BA in Ed:* See the Physics and Astronomy Department section of this catalog.

## 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

*Courses numbered X37; X97; 300, 400; 417, 445 are described on page 31 of this catalog.*

*(Courses in Mathematics-Computer Science are listed after the listings in Mathematics.)*

### 102 FUNCTIONS AND ALGEBRAIC METHODS (5)

Prereq: suitable score on the Intermediate mathematics placement test. 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.

### 107 MATHEMATICAL REASONING AND ITS APPLICATIONS (3)

Prereq: suitable score on the Intermediate mathematics placement test or at least C- in Math 102 at WWU. Introduction to the methods of thought and logic in mathematics. A cultural approach to mathematics which emphasizes practical problems of the type which can be solved with a hand-held calculator. Graphing calculator required. Students interested in studying a single area of mathematics in detail should consider substituting a course from Math 114, 115, 124, 156, 204, 240.

### 114 PRECALCULUS I (5)

Prereq: suitable score on the Intermediate mathematics placement test or at least C- in Math 102. 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.

### 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.

### 117a 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.

### 117b 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.

### 118 ACCELERATED PRECALCULUS (5)

Prereq: Suitable score on the Intermediate mathematics placement test or suitable score on the Advanced mathematics 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.

### 124 CALCULUS AND ANALYTIC GEOMETRY (5)

Prereq: suitable score on the Advanced mathematics placement test or at least C- in Math 115 or Math 118. Derivatives, rules for computing derivatives, applications including curve sketching and optimization, antiderivatives. Students with a full year of high school calculus may be eligible for Math 128. Graphing calculator required.

### 125 CALCULUS AND ANALYTIC GEOMETRY (5)

Prereq: Math 124. The definite integral, techniques of integration, applications including area and volume, growth and decay, 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 Math 125. Offered fall quarter only.

### 156 ALGEBRA WITH APPLICATIONS TO BUSINESS AND ECONOMICS (4)

Prereq: suitable score on the Intermediate mathematics placement test or at least C- in Math 102. 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 115 or Math 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.

### 204 ELEMENTARY LINEAR ALGEBRA (4)

Prereq: Math 124. 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 (CS 101 or equivalent); Math 125 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 or Math 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.

### 224 MULTIVARIABLE CALCULUS AND GEOMETRY (5)

Prereq: Math 125 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 or 128. Limits, continuity, convergence of sequences and infinite series, Taylor series, applications.

### 240 INTRODUCTION TO STATISTICS (3)

Prereq: suitable score on the Intermediate mathematics placement test or Math 102. The nature of statistical reasoning, descriptive statistics, ideas of probability and measurement, sampling distributions, the binomial and normal distributions, confidence intervals and the testing of statistical hypotheses. Cannot be counted toward any major in the Department of Mathematics.

### 302 INTRODUCTION TO PROOFS VIA NUMBER THEORY (4)

Prereq: Math 125 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.

## 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 Math 302. 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. A survey of topics from differential equations, Laplace transforms, matrix theory, statistics, designed especially for students majoring in engineering technology. Cannot be counted toward any major or minor in the Department of Mathematics. Open only to technology students except by permission.

## 331 ORDINARY DIFFERENTIAL EQUATIONS (4)

Prereq: Math 224. An introductory course including first-order equations, higher-order linear equations, applications to physical and other systems.

## 341 PROBABILITY AND STATISTICS (4)

Prereq: Math 125 or 128. Probability, including discrete distributions using combinatorial methods and continuous distributions using integrals. Descriptive statistics and the use of computer statistical packages. Statistical methods of estimation and hypothesis testing. Emphasis on use, validity and understanding of particular statistical models.

## 342 STATISTICAL METHODS (4)

Prereq: Math 341. Use of statistical models and inference including analysis of variance, covariance, multiple regression and non-parametric statistics. Use of computer statistical packages.

## 360 EUCLIDEAN AND NON-EUCLIDEAN GEOMETRY (4)

Prereq: Math 125 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 mathematics placement test or a grade of C- or better in Math 102 or 107 at WWU. Investigations of mathematical topics, such as number, functions, geometry, probability, statistics and measurement. Emphasis on problem solving, the use of manipulatives and computing technologies, instructional strategies, curricular issues, assessment, remediation and resource materials. Not acceptable for any department major except B.A. Ed., Elementary, and does not satisfy GUR mathematics requirement except for those who complete the B.A., Ed., Elementary.

## 382 TEACHING K-8 MATHEMATICS II (4)

Prereq: A grade of C- or better in Math 381. Investigations of mathematical topics, such as number, functions, geometry, probability, statistics and measurement. Emphasis on problem solving, the use of manipulatives and computing technologies, instructional strategies, curricular issues, assessment, remediation and resource materials. Not acceptable for any department major except B.A. Ed., Elementary, and does not satisfy GUR mathematics requirement except for those who complete the B.A., Ed., Elementary.

## 401, 402 INTRODUCTION TO ABSTRACT ALGEBRA (4 ea)

Prereq: Math 204 and either Math 209 or Math 302; Math 401 prerequisite to 402. Groups, rings, fields, field extensions, Galois Theory.

## 410 MATHEMATICAL MODELING (4)

Prereq: Math 204 and 224; 331 recommended. 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 and passing grade on Junior Writing Examination. History and development of mathematical thought from ancient to modern times. Philosophical, sociological and biographical perspectives. Writing proficiency course.

## 420 TOPICS IN THE HISTORY AND PHILOSOPHY OF MATHEMATICS (3)

Prereq: Math 312; passing grade on Junior Writing Examination. 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. Writing proficiency course.

## 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. Was Math 423 in previous catalog.

## 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. Was Math 424 in previous catalog.

## 430 FOURIER SERIES AND PARTIAL DIFFERENTIAL EQUATIONS (4)

Prereq: Math 204, 226 and 331. 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: Math 204 and 331; 304 recommended. First-order linear systems, stability theory of nonlinear systems, phase portraits, Laplace transforms, 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, 442 MATHEMATICAL STATISTICS (4 ea)

Prereq: Math 224 and 304; Math 441 prerequisite to Math 442. Probability theory; development of distributions; generating functions; averages, moments, regression, correlation, variance and statistical inference.

## 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.

## 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 31 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, 224; 331. 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.

**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, 226 and 331 or equivalents. 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 CS 140 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 521. 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 224, 304. 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.

**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, Math-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: Math-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 4 credits.

**690 THESIS (variable credit)**

Repeatable to 4 credits. S/U grading.

**691 REQUIRED PROJECT (1 or 2)**

Prereq: advancement to candidacy. Repeatable to 2 credits. S/U grading.

**COURSES IN MATHEMATICS-COMPUTER SCIENCE**

*Courses numbered X37; X97; 300, 400; 417, 445 are described on page 31 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 CS 140 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 CS 140 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 CS 140 or Math 207. Non-linear 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, Math-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.

## 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.

The department provides Western students the opportunity to acquire intermediate skills in three Pacific Rim languages other than English and Spanish: Chinese, Japanese 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

RONALD D. RIGGINS (1977) Professor and Acting Chair. BA, LaVerne College; MS, ReD, Indiana University.

DARREL W. AMUNDSEN (1969) Professor of Classics. BA, Western Washington State College; MA, University of Washington; PhD, University of British Columbia.

ROBERT S. BALAS (1969) Professor of French. BA, Upsala College; MA, University of Nebraska; PhD, University of Wisconsin.

LOUISE-MARIE BOUCHARD (1992) Assistant Professor of French. BA, McGill University, Montréal, Québec; MSc, Université de Montréal, Montréal, Québec, Canada; PhD, Université de Sherbrooke, Sherbrooke, Québec, Canada.

SANDRA BREITENBACH (1998) Assistant Professor of German and Linguistics. PhD, University of Göttingen, Germany.

BRENT J. CARBAJAL (1997) Assistant Professor of Spanish. BA, Lewis and Clark College; MA, PhD, University of Washington.

PETRA S. FIERO (1995) Associate Professor of German. MA, PhD, University of Nebraska, Lincoln.

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) Associate Professor of French. BS, Southwest Missouri State University; MA, Arizona State University; PhD, University of Arizona.

JOAN M. HOFFMAN (1994) Assistant Professor of Spanish. BA, University of Washington; MA, University of North Carolina, Chapel Hill; PhD, Indiana University.

DANIEL RANGEL-GUERRERO (1969) Associate Professor of Spanish. AA, Sierra College; BA, Stanford University; MA, PhD, University of Oregon.

WALTER F. SUESS (1991) Associate Professor of German. BA, Ruhr-Universität, Bochum, Germany; MA, California State University, San Francisco; PhD, University of California, Davis.

MASSIMILIANO TOMASSI (1998) Assistant Professor of Japanese. Laurea (BA), University of Florence, Italy; MA, PhD, Nagoya University, Japan.

KATHLEEN M. TOMLONOVIC (1987) Associate 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, BA in Ed, Western Washington State College; MA, PhD, University of Colorado.

ZHIQUN (JANET) XING (1999), Assistant 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 degree in French, German 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; French 425 is not applicable to major.

#### *Required Courses*

- French 301, 302
- French 314
- Two of French 331, 332, 340, 341
- French 401 (must be taken on campus)
- French 405

#### *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; German 385 and 425 are not applicable to major.

*Required Courses*

- ❑ German 301 and 302
- ❑ German 305 or 405
- ❑ German 314
- ❑ German 331 or 332
- ❑ German 340
- ❑ One of German 341, 343, 442, 450
- ❑ German 401 and 402 (must be taken on campus)

*Language Major — Spanish*

Admission to the Spanish major requires that students demonstrate competence in three skill areas: grammar and composition (Spanish 302), literature (Spanish 340), and culture (Spanish 331 or 332) with a minimum GPA of 2.70 in these three courses, or equivalents, before declaring a major in Spanish.

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*

- ❑ Spanish 301 and 302
- ❑ Spanish 305 or 405
- ❑ Spanish 314
- ❑ Spanish 331 or 332
- ❑ Spanish 340
- ❑ Spanish 351 or 352
- ❑ One of Spanish 450
- ❑ Spanish 401 and 402 (must be taken on campus)

*Language Minor — Chinese, French, German, Japanese, Russian or Spanish*

25 credits at the 200 level or above; GPA of 2.50 or above in minor language; limit of 15 credits at 200 level.

*Required Courses*

- ❑ French 301; German, Russian or Spanish 301, 302; or Chinese or Japanese 301, 302, 303

*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*

- ❑ Classical Studies 260, 270 and 350
- ❑ 18 credits from the following: Classical Studies 450; History 413; Philosophy 364; Art History 220

*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 Masters in Education degree.

Regulations for teaching endorsement are subject to change. For current requirements and for admission into the teaching endorsement program, contact the foreign language endorsement adviser.

*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*

FL 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 two language teaching endorsements may apply 10 upper-division credits from the first language toward the 55 credits required for the second. The student must complete the most advanced skills course and pass the oral proficiency exam for both languages to receive teaching endorsement. FL 410, 420 and 430 will apply to both languages.

*Other Endorsements*

For possible endorsement in other languages, consult department.

*Endorsement of Postbaccalaureate Students*

Postbaccalaureate 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 FL 410, 420, 430 and 314 (phonetics)

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*

45 credits

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. (See Elementary Education section of this catalog.)

- Minimum of 21 credits must be taken in language skills courses (e.g., 201, 202, 301, 305, 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 15 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, 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, Old Main 530, well in advance of their planned quarter abroad, as well as with the coordinator of the language section to discuss transfer credit.

### GRADUATE STUDY

For a concentration in French, German or Spanish leading to the Master of Education degree, see the Graduate section of this catalog.

This program, however, is not currently accepting new students and courses are not offered every year. For further information, contact the department.

### 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

*Courses numbered X37; X97; 300, 400; 417, 445 are described on page 31 of this catalog.*

#### 109a,b,c DIRECTED INSTRUCTION IN MODERN FOREIGN LANGUAGES (3-5)

To be taken in sequence. Beginning level. Only those languages for which qualified instructors are available for supervision and testing will be offered. Repeatable to 15 credits per language at the 109 level.

#### 209a,b,c DIRECTED INSTRUCTION IN MODERN FOREIGN LANGUAGES (3-5)

Prereq: FL 109. To be taken in sequence. Intermediate level. Only those languages for which qualified instructors are available for supervision and testing will be offered. Repeatable to 15 credits per language at the 209 level.

#### 410 APPLIED LINGUISTICS (4)

Prereq: 6 credits in one modern foreign language beyond the second year; Ling 201 recommended. The role of linguistics in the analysis of foreign language teaching. Topics include learner variables, research in second language acquisition and contrastive structure (English with other languages).

#### 420 METHODS AND MATERIALS FOR TEACHING FOREIGN LANGUAGES (4)

Prereq: 6 credits in one modern foreign language beyond the second year. To be taken prior to student teaching. Theory and practice of teaching foreign languages in secondary schools. Emphasis on developing appropriate techniques and materials to aid language acquisition.

#### 430 TEACHING PRACTICUM AT THE ELEMENTARY LEVEL (3)

Prereq: FL 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 Asian 367, 368.*

## Graduate Core Courses

Graduate core courses are not currently offered.

Courses numbered 500; 517; 545; 597 are described on page 31 of this catalog.

Admission to Graduate School or special permission required. See the Graduate School section of this catalog.

### 540 SECOND-LANGUAGE ACQUISITION: THEORY (4)

Prereq: graduate status or permission of department. Second-language acquisition discussed in terms of current theories of cognition. Groundwork for these discussions focus on structural and communicative aspects of language; social context of language; notional-functional syllabus, grammatical syllabus; learner strategies; learning theory; interlanguage; acquisition of language components, vocabulary. Offered summers only.

### 542 SECOND-LANGUAGE ACQUISITION: METHODS (4)

Prereq: graduate status or permission of department. Theory and practice of current methods and techniques in terms of their theoretical bases and application (Natural Approach, Comprehension Approach, TPR, etc.). Discussion of practical solutions to teaching problems. Includes classroom observation and in-class peer teaching. Offered summers only.

### 544 LANGUAGE LEARNING AND TECHNOLOGY (4)

Prereq: graduate status or permission of department. Introduction to computer-assisted language learning and the use of video in the classroom. The course focuses on software evaluation and current development with authoring systems and videotapes; introduction to materials development with authoring systems; use of video in the classroom; interactive video; videotaping as a source of materials. Offered summers only.

## Chinese

### 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: Chinese 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: Chinese 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 (5 ea)

Prereq: Chinese 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: Chinese 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: Chinese 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

(The following courses require no knowledge of Latin or Greek as prerequisites.)

### 260 MASTERWORKS OF ANCIENT GREEK LITERATURE (3)

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 (3)

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 (3)

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)

Prereq: Cl St 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 Timetable of Classes for offerings. Repeatable with different topics with no minimum.

## French

### 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 INTERMEDIATE FRENCH (5 ea)

Prereq: French 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.

### 205 INTRODUCTION TO FRENCH PRONUNCIATION (2)

Prereq: French 103 or equivalent. An introduction to the production of French sounds as they relate to the pronunciation and orthography of the language.

### 301 GRAMMAR REVIEW (3)

Prereq: French 202 or equivalent. Study of language and structure, vocabulary building, use of reference tools and writing styles.

### 302 WRITTEN EXPOSITION (3)

Prereq: French 301. Practice in written expression of various kinds: résumés, analyses de texte, personal and formal correspondence as well as fiction.

### 305 ORAL EXPOSITION (3)

Prereq: French 202 or equivalent. Discussion and expository talks, with emphasis on vocabulary and concept building; topic areas vary each quarter. Repeatable to a maximum of 9 credits.

### 314 PHONETICS (4)

Prereq: French 202 or equivalent. Emphasizes improvement of pronunciation, contrasts English and French pronunciations and teaches phonetic transcription.

### 331 CIVILISATION ET CULTURE FRANÇAISES (3)

Prereq: French 202 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: French 202 or equivalent. An introduction to Québec culture and civilization from historical and modern perspectives. Readings, discussions, films, oral and written assignments in French.

### 340 INTRODUCTION TO FRENCH LITERATURE I (5)

Prereq: French 301 or equivalent. An introduction to literary analysis, *explication de texte* involving poetry, prose and drama from the works of major authors before 1800.

### 341 INTRODUCTION TO FRENCH LITERATURE II (5)

Prereq: French 301 (French 340 recommended). An introduction to

literary analysis, *explication de texte* involving poetry, prose and drama from works of major authors after 1800.

### 401 ELEMENTS DE STYLISTIQUE (3)

Prereq: French 302, 314. Extensive practice in writing and in analyzing grammatical, stylistic and textual forms.

### 405 COMMUNICATION ET DISCOURS (3)

Prereq: French 302, 314. Development of complex presentations and discussions. Exercises in interpretation and synthesis. Topic areas vary each quarter. Repeatable to a maximum of 9 credits.

### 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.

### 430 LA CHANSON D'EXPRESSION FRANÇAISE (3)

Prereq: French 405. Aspects of French and Francophone song traditions as the expression of an oral and textual art form reflecting many different cultural themes, voices, eras and modes.

### 450 SEMINAR IN FRENCH STUDIES (3-5)

Prereq: French 401. Authors, genres, movements and period studies. Repeatable with different topics.

## Graduate Courses in French

*Graduate courses in French are not currently offered.*

*Courses numbered 500; 517; 545; 597 are described on page 31 of this catalog.*

*Admission to Graduate School or special permission required. See the Graduate School section of this catalog.*

### 501a,b FRENCH LANGUAGE (4 ea)

Prereq: two quarters of French 401. Continuing acquisition of proficiency in the four skills: listening, speaking, reading, writing. Offered summers only.

### 510a,b APPLIED FRENCH LINGUISTICS (4 ea)

Prereq: Ling 201. Applied French linguistics for the language teacher; contrastive French-English grammar and the examination of teaching problems. Repeatable with various topics. Offered summers only.

### 520a,b STUDIES IN FRENCH CULTURE (4 ea)

Prereq: graduate status or permission of department. Topics in the culture of France and French-speaking countries. Emphasis on materials for possible use in the teaching of culture at the high school level. Sources include texts, songs and films. Repeatable with various topics. Offered summers only.

### 530a,b STUDIES IN FRENCH LITERATURE (4 ea)

Prereq: French 450. Topics in French literature. Emphasis on materials for possible use in the teaching of reading and literature at the high school level. Topics include authors, themes, genres and movements. Repeatable with various topics. Offered summers only.

## German

### 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 development of basic structure and vocabulary. Also for students needing a review of the first year.

### 201, 202, 203 INTERMEDIATE GERMAN (4 ea)

Prereq: German 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: German 203 or equivalent; to be taken in sequence. Written and oral composition and grammar, and vocabulary building.

### 305 GERMAN FOR BUSINESS PURPOSES (3)

Prereq: German 302. This course prepares students to function in a

wide variety of business-related communicative situations, like social contact with business partners, business travel, oral and written contact with customers. Students who successfully finish this course are eligible to participate in the internationally recognized exam: *Zertifikat Deutsch für den Beruf*.

### 314 PHONETICS (4)

Prereq: German 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 (3)

Prereq: German 203 or equivalent. Significant elements of German civilization presented through German texts.

### 332 GERMAN CIVILIZATION TODAY (3)

Prereq: German 203 or equivalent. Significant elements of German civilization.

### 340 INTRODUCTION TO GERMAN LITERATURE (4)

Prereq: German 301. Selected works of major German authors, with emphasis on reading improvement and methods of textual interpretation.

### 341 NINETEENTH-CENTURY GERMAN LITERATURE (3)

Prereq: German 340. Emphasis on either Romanticism or Realism. Repeatable with different topics with no maximum.

### 343 EIGHTEENTH-CENTURY GERMAN LITERATURE (3)

Prereq: German 340. Classical period of German literature as reflected in a major work of Lessing, Goethe and Schiller.

### 360 BUSINESS GERMAN (3)

Prereq: German 302. Designed to prepare students for professional use of German language skills by acquiring German business vocabulary and oral and writing skills in the context of textbooks, videos and journal articles related to the field of business.

### 385 GERMAN CULTURE AND CONVERSATION (1)

Prereq: German 201. German culture through film, talks and song. General discussion of Germany and its culture, especially in contrast to our own. Does not apply to major or minor. Repeatable with no maximum. S/U grading.

### 401 ADVANCED GRAMMAR (3)

Prereq: German 302 or equivalent. Analysis of syntactical, semantic and stylistic problems in German.

### 402 ADVANCED GRAMMAR AND COMPOSITION (3)

Prereq: German 302 or equivalent. It is recommended to take 401 before 402. Analysis of syntactical, semantic and stylistic problems in German. Extensive practice in composition.

### 405 GERMAN AND AMERICAN INSTITUTIONS (3)

Prereq: German 302. The study of institutions in Germany and their contrastive analysis of equivalent American institutions. Course relevant for the study of German culture and business.

### 425 TEACHING-LEARNING PROCESS IN ELEMENTARY GERMAN (2)

Prereq: written permission of department and six credits in upper-division German. Practicum in course preparation, classroom and language laboratory procedures, materials, evaluation and counseling. Repeatable with no maximum. S/U grading.

### 442 GERMAN LITERATURE IN THE TWENTIETH CENTURY (3)

Prereq: German 302 and 340. Selections reflecting development of recent German literature.

### 450 STUDIES IN GERMAN LITERATURE (3)

Prereq: German 302 and 340. Major authors and movements. Repeatable with different topics with no maximum.

### 460 ADVANCED BUSINESS GERMAN (3)

Prereq: German 360. Designed to enhance the students' knowledge of all aspects of business German. Focuses primarily on dealing both orally and in writing with German and European business materials.

## Graduate Courses in German

Graduate courses in German are not currently offered.

Courses numbered 500; 517; 545; 597 are described on page 31 of this catalog.

Admission to Graduate School or special permission required. See the Graduate School section of this catalog.

### 501a,b GERMAN LANGUAGE (4 ea)

Prereq: graduate status or permission of department. Continuing acquisition of proficiency in the four skills: listening, speaking, reading, writing. Offered summers only.

### 510a,b APPLIED GERMAN LINGUISTICS (4 ea)

Prereq: graduate status or permission of department. Applied German linguistics for the language teacher: contrastive phonetics, pronunciation, phonology, morphology, syntax, etc. Repeatable with various topics. Offered summers only.

### 520a,b STUDIES IN GERMAN CULTURE (4 ea)

Prereq: graduate status or permission of department. Topics in the culture of the German-speaking world. Emphasis on materials for possible use in the teaching of culture at the high school level. Sources include texts, songs and films. Repeatable with various topics. Offered summers only.

### 530a,b STUDIES IN GERMAN LITERATURE (4 ea)

Prereq: graduate status or permission of department. Topics in German literature. Emphasis on materials for possible use in the teaching of reading and literature at the high school level. Topics include authors, themes, genres and movements. Repeatable with various topics. Offered summers only.

## Greek

### 101, 102, 103 ELEMENTARY GREEK (5 ea)

Each course prerequisite to the next. Fundamentals of ancient Greek grammar designed primarily to provide an elementary reading knowledge; selected readings from various Greek writers.

### 201, 202, 203 INTERMEDIATE GREEK (3 ea)

Prereq: Greek 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.

## Japanese

### 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. Tape-assisted oral practice is an integral part of the course.

### 201, 202, 203 SECOND-YEAR JAPANESE (5 ea)

Prereq: Japanese 103 or equivalent; to be taken in sequence. Further fundamental grammar; review of first-year grammar; emphasis on writing, reading, listening and speaking skills. Tape-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: Japanese 203 or equivalent; to be taken in sequence. Emphasis on well-rounded development of reading, writing, listening and speaking abilities; introduction of colloquial Japanese. Tape-assisted oral practice is an integral part of the course.

### 330a JAPANESE CULTURE THROUGH FILM, MODERN (2)

Prereq: Japanese 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. S/U grading.

### 330b JAPANESE CULTURE THROUGH FILM, CLASSIC (2)

Prereq: Japanese 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. S/U grading.

### 330c JAPANESE CULTURE THROUGH FILM, LITERATURE (2)

Prereq: Japanese 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. S/U grading.

## Latin

### 101, 102, 103 ELEMENTARY LATIN (5 ea)

To be taken in sequence. Fundamentals of grammar to provide a reading knowledge; selected readings from various Roman writers.

### 201, 202, 203 INTERMEDIATE LATIN (3 ea)

Prereq: Latin 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.

## Russian

### 101, 102, 103 ELEMENTARY RUSSIAN (5 ea)

To be taken in sequence. Fundamentals of the language; pronunciation, grammar, aural comprehension, reading and speaking.

### 201, 202, 203 INTERMEDIATE RUSSIAN (5 ea)

Prereq: Russian 103 or equivalent; to be taken in sequence. Review of fundamentals; speaking, reading, writing and understanding.

### 301 THIRD-YEAR COMPOSITION (4)

Prereq: Russian 203 or equivalent. Written and oral expression, advanced grammar, and vocabulary building.

### 302 THIRD-YEAR COMPOSITION (3)

Prereq: Russian 301 or equivalent. Written and oral expression, advanced grammar and vocabulary building.

### 330 CIVILIZATION OF RUSSIA (3)

Prereq: Russian 201, 202 and 203; or equivalent. Significant elements of Russian civilization presented through Russian texts.

## Spanish

### 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: Spanish 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: Spanish 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: Spanish 203 or equivalent. Development of speaking skills in communicative situations.

### 314 PHONETICS (4)

Prereq: Spanish 301 or equivalent. Improvement of student pronunciation, familiarization with phonetic transcription and description of Spanish sounds.

### 331 CULTURE OF SPAIN (3)

Prereq: Spanish 301 or equivalent. Survey of Spanish culture.

### 332 CULTURE OF LATIN AMERICA (3)

Prereq: Spanish 301 or equivalent. Survey of Latin American culture.

### 340 INTRODUCTION TO HISPANIC LITERATURE (3)

Prereq: Spanish 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: Spanish 340. Study of genres and trends during various periods of Hispanic literature.

### **352 SURVEY OF THE LITERATURE OF LATIN AMERICA (4)**

Prereq: Spanish 340. Study of genres and trends during various periods in Latin American literature.

### **401 ADVANCED GRAMMAR (4)**

Prereq: Spanish 302 or equivalent. Analysis of special problems in Spanish syntax.

### **402 ADVANCED COMPOSITION (4)**

Prereq: Spanish 401 or equivalent. Composition and stylistics; analysis of textual examples of style and organization.

### **405 FOURTH-YEAR CONVERSATION (3)**

Prereq: Spanish 302 or equivalent. Advanced speaking practice in communicative situations.

### **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: Spanish 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: Spanish 351 or 352. Major authors and movements. Repeatable with various topics with no maximum.

## **Graduate Courses in Spanish**

*Graduate courses in Spanish are not currently offered.*

*Courses numbered 500; 517; 545; 597 are described on page 31 of this catalog.*

*Admission to Graduate School or special permission required. See the Graduate School section of this catalog.*

### **501a,b SPANISH LANGUAGE (4 ea)**

Prereq: graduate status or permission of department. Continuing acquisition of proficiency in the four skills: listening, speaking, reading, writing. Offered summers only.

### **510a,b APPLIED SPANISH LINGUISTICS (4 ea)**

Prereq: graduate status or permission of department. Applied Spanish linguistics for the language teacher. Topics may include contrastive Spanish-English grammar, pronunciation and phonology, lexicon, and teaching problems in Spanish morphology and syntax. Repeatable with various topics. Offered summers only.

### **520a,b STUDIES IN SPANISH CULTURE (4 ea)**

Prereq: graduate status or permission of department. Topics in Spanish and Hispanic culture. Emphasis on materials for possible use in the teaching of culture at the high school level. Sources include texts, songs and films. Repeatable with various topics. Offered summers only.

### **530a,b STUDIES IN SPANISH LITERATURE (4 ea)**

Prereq: graduate status or permission of department. Topics in Spanish and Hispanic literature. Emphasis on materials for possible use in the teaching of reading and literature at the high school level. Topics include authors, themes, genres and movements. Repeatable with various topics. Offered summers only.

# 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

PHILLIP MONTAGUE (1966) Chair and Professor. BS, Loyola University; PhD, Stanford University.

STUART BROCK (1999) Lecturer. BA, Monash University; MA, Australian National University; MA, Princeton University.

THOMAS E. DOWNING (1968) Associate Professor. AB, Wayne State University; PhD, Stanford University.

FRANCES HOWARD-SNYDER (1993) Associate Professor. BA, MA, University of Capetown; PhD, Syracuse University.

HUD HUDSON (1992) Associate Professor. BA, Boise State University; MA, PhD, University of Rochester.

NED MARKOSIAN (1998) Assistant Professor. BA, Oberlin College; PhD, University of Massachusetts.

PAUL OLSCAMP (1975) Professor. BA, MA, University of Western Ontario; PhD, University of Rochester.

## BACHELOR OF ARTS

### Major — Philosophy

59 credits

- Phil 102, 112, 114, 202, 310, 320, 330, 364, 366, 367, 410, 420, 430
- One course from Phil 365, 368, 369
- Two courses from Phil 303, 417, 425
- Electives under departmental advisement

### Combined Major — Politics/Philosophy/Economics

84-85 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
- Econ 208 or FMDS 205 (or equivalent)
- 12 additional upper-division economics credits
- Pol Sci 250, 360
- One course from each group:
  - Pol Sci 272 or 291
  - Pol Sci 320 or 425 or 427
  - Pol Sci 345 or 346 or 347
  - Pol Sci 462 or 463 or 465 or 469
- Phil 102, 112, 114, 310, 320, 420, 350, 360, 364
- One Communications Focus course must be taken

### Minor — Philosophy

25 credits

- Phil 102, 112, 114
- One course from Phil 364, 365, 366, 367, 368, 369
- Two courses from Phil 310, 320, 330
- Electives under departmental advisement

## COURSES IN PHILOSOPHY

*Courses numbered X37; X97; 300, 400; 417, 445 are described on page 31 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.

*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, etc., in the context of contemporary issues.

### 113 PHILOSOPHY OF RELIGION: UNDERSTANDING 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, etc.

**114 INTRODUCTION TO PHILOSOPHY: KNOWLEDGE AND REALITY (3)**

Emphasis is given to the nature and possibility of knowledge, to relate concepts such as truth, belief and evidence, and to selected metaphysical problems. Was Phil 201 in previous catalog.

**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.

**303 PHILOSOPHY OF LANGUAGE (3)**

Prereq: Phil 102. 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.

**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. Normally offered in even-numbered academic years.

**315 INTRODUCTION TO EXISTENTIALISM (3)**

Prereq: one course in philosophy or upper-division status. Major philosophers of the existential school, philosophical problems and answers as seen by existentialism. Special attention is given to Kierkegaard, Nietzsche and Sartre.

**320 ETHICAL THEORY I (3)**

Prereq: Phil 112 or instructor's permission. 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. Normally offered in odd-numbered academic years.

**330 METAPHYSICS I (3)**

Prereq: Phil 102, 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. Normally offered in even-numbered academic years.

**340 PHILOSOPHY OF SCIENCE (3)**

Prereq: upper-division status or instructor's permission. 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 or upper-division status. 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 or upper-division status. 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 or upper-division status. 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 (4)**

Prereq: one course in philosophy. Great philosophical thinkers from the pre-Socratic philosophers to the Hellenistic period; special attention to Plato and Aristotle. Normally offered in even-numbered academic years.

**365 HISTORY OF PHILOSOPHY: MIDDLE AGES TO RENAISSANCE (4)**

Prereq: one course in philosophy. Great philosophical thinkers from the 12th to the 17th centuries, including St. Thomas Aquinas, St. Bonaventure, Duns Scotus, William of Occam, Roger and Francis Bacon. Normally offered in even-numbered academic years.

**366 HISTORY OF PHILOSOPHY: THE RATIONALISTS (4)**

Prereq: Phil 114. Great philosophical thinkers in the rationalist tradition, their problems and their methods: Descartes, Spinoza, Leibniz, et al. Normally offered in even-numbered academic years.

**367 HISTORY OF PHILOSOPHY: THE EMPIRICISTS (4)**

Prereq: Phil 114. Great philosophical thinkers in the empiricist tradition, their problems and their methods: Locke, Berkeley, Hume, et al. Normally offered in odd-numbered academic years.

**368 HISTORY OF PHILOSOPHY: KANT AND POST-KANTIAN PHILOSOPHY (4)**

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.

**369 CONTEMPORARY PHILOSOPHY: THE ANALYTIC TRADITION (4)**

Prereq: one course in philosophy. Critical examination of central concerns and methods of the 20th-century analytic movement; treats such persons as Russell, Moore, Wittgenstein. Normally offered in odd-numbered 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 300-level course or instructor's permission. 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 offers degree programs for students interested in professions related to exercise and sport science, physical education, health fitness, health education and recreation.

## FACULTY

The department currently consists of 11 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 Carver Gymnasium. 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 state-of-the-art laboratory and computerized equipment enables the student to develop skills in cardiorespiratory, anthropometrical, strength, movement analysis and health appraisals. In addition, students are expected to perform community service in all programs.

## MAJOR PROGRAMS

### *Physical Education*

The major programs are varied and include undergraduate and graduate student preparation for careers as professional physical educators, exercise science specialists, and health fitness instructors in agencies, schools, industries, hospitals and health care facilities. The concentrations offered include the following:

- Teacher Education K-12 Physical Education and Health Certification
- Exercise and Sport Science
  - Fitness and Exercise Science
  - Pre-Physical Therapy
  - Athletic Training
  - Sport Psychology

### PHYSICAL EDUCATION MID-PROGRAM CHECKPOINT

Students seeking to complete a B.A. degree in physical education (teacher education K-12 or exercise and sport science) 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.

- All GUR requirements
- Biol 101 and Biol 348 preferred

**NOTE:** The *teacher education K-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

K-12 physical education and health program. Students should apply for entry into the K-12 physical education and health program during the fall quarter of their junior year. Students who do not meet the minimum qualifications of the Woodring College of Education cannot apply to be considered for entry into the K-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 (PEHR faculty) during their freshman or sophomore year in order to establish a reasonable plan of study for the completion of this degree.

**NOTE:** Unlike other areas of specialization in Exercise and Sport Science, only 4-5 students are selected annually for the WWU Athletic Training Internship Program. An application is required and should be submitted to Linda Bergen (WWU athletic trainer), preferably at the outset of a student's sophomore year. It should be noted that this specialization requires an extensive internship of 1,800 hours over a period of 7-8 quarters. Students who are interested in this specialization should consult with Dr. Caine (PEHR faculty) to obtain an application form to establish a reasonable plan of studies.

### *Health Education*

Health education is a multidisciplinary practice concerned with designing, implementing and evaluating education programs that enable individuals, families, groups and communities to achieve, protect and sustain health. The curriculum in health education offers a generalist preparation for entry-level career opportunities in community health and health promotion. The concentrations include:

- Community Health Education
  - Community-based
  - Worksite-based
  - College/university-based

**NOTE:** Students interested in teaching health education in K-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 B.S. degree in community health within a four-year time span should make normal progress toward the GUR requirements and should apply for admission to the program during their sophomore year. It is suggested that students interested in health education consult the program adviser (Dr. Evelyn Ames) during their sophomore year to establish a reasonable plan of study for the completion of the degree. The following courses should be completed during the junior year 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.

- HEd 150, 151 and 152

- Biol 348, 349
- Chem 115 and 251
- PE 303

## Recreation

The curriculum in recreation offers a generalist preparation for a wide range of career entry-level positions including:

- Community Recreation
- Therapeutic Recreation
- Outdoor Recreation
- Commercial Recreation
- Tourism
- Military Recreation

## RECREATION MID-PROGRAM CHECKPOINT

Students seeking to complete a B.A. 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 their sophomore year. Interested students are strongly urged to contact the Recreation Program for more information regarding admission and normal progress toward completion of a degree.

## Other Activities

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. In addition to individual and team sports classes, courses are offered in outdoor pursuits including skiing, sailing and horsemanship.

## FACULTY

KATHLEEN KNUTZEN (1977) Chair and Professor. BA, MA, Western Washington State College; PhD, University of Oregon.  
EVELYN E. AMES (1964) Professor. BS, University of Nevada; MS, Washington State University; PhD, University of Maryland.  
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) Assistant Professor. BS, Simon Fraser University; MS, PhD, University of California, Los Angeles.  
ROY A. CLUMPNER (1975) Professor. BS, University of Wisconsin, Lacrosse; MA, California State University, San Jose; PhD, University of Alberta.  
LEA ANN MARTIN (1991) Associate Professor. BS, Southwest Missouri State University; MS, University of Arizona; PhD, University of Texas.  
JAMES E. MOORE (1977) Associate Professor. BA, University of Oregon; MA, Antioch University; MEd, PhD, Oregon State University.  
RONALD D. RIGGINS (1977) Professor. BA, La Verne College; MS, ReD, Indiana University.  
CHARLES D. SYLVESTER (1984) Professor. BS, MA, University of Maryland; PhD, University of Oregon.  
RALPH A. VERNACCHIA (1973) Professor. BA, Montclair State College; MS, Ohio University; PhD, University of Utah.

## Affiliated Teaching Faculty

DANIEL C. BROWN, M.D. (1981) Lecturer. BS, University of Michigan; M.D., University of California, Irvine.  
JEFF DAVIS (1987) Certified Water Sports Instructor. U.S. Sailing Association, Levels I and II Instructor Trainer; Windsurfing Instructor Trainer.  
LORI DEKUBBER (1991) Assistant Coach, Women's Basketball. BS, MEd, Western Washington University.  
PAT FABIANO (1991) Health Education. BS, University of Pittsburgh; MS, University of Wisconsin; MA, Southern Illinois University.

KELVEN HALSELL (1987) Head Coach, Track and Cross-Country. BS, MEd, Wayland Baptist University.  
MARGO H. HARRIS (1995) Health Education. BA, Farleigh Dickinson University; MAT, University of Massachusetts.  
MARY HAWK (1990) Health Education. BS, University of Alberta; MEd, Western Washington University.  
JILL HECKATHORN (1980) Lecturer. Recreation. BS, MA, Michigan State University.  
BRAD JACKSON (1985) Head Coach, Men's Basketball. BA, Washington State University; MA, Seattle Pacific University.  
MARTIN MULHOLLAND (1993) Lecturer. Student Teacher Supervisor. BEd, Exeter University; MSc, University of Oregon.  
LYNNE SHERWOOD PARKER (1986) Health Education. BS, BA, Central Washington University; MEd, Western Washington University.  
SHARON SHEREMETA (1996) Lecturer. Physical Education and Health. ScB, Brown University; MS, ScD, Boston University.  
ROBERT SMITH (1987) Associate Athletic Director; Head Coach, Football. BA, University of Washington.  
LOWELL "BUD" TURNER (1974). BA, MEd, Seattle University.

## PHYSICAL EDUCATION

### BACHELOR OF ARTS

#### Major — Physical Education/Exercise and Sport Science

85-109 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 for students who are pursuing a career in athletic training. Additionally, this degree can serve as a preparatory course of study for graduate study or post-baccalaureate study in the areas of exercise physiology, health/fitness, biomechanics, physical therapy and sport psychology. 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.

#### Pre-Major Requirements

Entry into the exercise and sport science option of the physical education major requires satisfactory completion of a pre-major curriculum. Students are assigned an adviser for their pre-major program and can gain entry into the physical education major program once they have satisfactorily completed the pre-major requirements.

Specific premajor requirements can be obtained from Carver 102, through written request (mail to: Department of Physical Education, Health and Recreation, Western Washington University, MS-9067, Bellingham, WA 98225-9067), or via the physical education program Web site at <http://www.ac.wvu.edu/~pehr/PE.html>.

#### Major Requirements

55-64 credits

- General Courses: 8 credits
  - PE 203, Biol 348
- Professional Activities: 8 credits
  - PE 102, 103, 113, 208
  - Select 2 credits from PE 120, 122, 136, 139, 154, 167, 168

- Exercise Science Foundations: 23 credits
  - PE 301, 302, 303, 307, 485 or 486, 490
- Psychosocial and Historical Foundations: 10 credits
  - PE 309, 407
  - Select 3 credits from PE 308, 310, 311, 409
- Field Experience: (PE 491; 6 credits)
 

*or*
- Field Experience (PE 491; 3 credits) and Exercise and Sport Science Research (PE 493; 3 credits)
 

*or*
- Internship: (PE 471; 15 credits)

*Specializations (select one)*

A. Fitness and Exercise Science

30 credits

The fitness and exercise 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.

- Select 15 credits from the following courses: Biol 349; Chem 115, 121, 122, 123, 251, 371; Math 240; Physics 114, 115, 116
- Select 15 credits from the following courses: CS 101, 110; HEd 345, 435; PE 304, 403, 440, 485 or 486

B. Pre-Physical Therapy

45-53 credits

The pre-physical therapy option is available for students who wish to pursue post-baccalaureate study in a physical therapy program. Students meet with an adviser 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 or to pursue careers in a variety of allied health professions. Students should select 53 credits or 45 credits if they complete the internship option.

- Biol 201, 202, 203, 321, 340, 345, 346, 349; Chem 121, 122, 123, 251; Physics 114, 115, 116; Psych 201, 314, 316; Math 240; CS 101, 140

C. Athletic Training

33 credits

The athletic training specialization is available for students who are pursuing certification in athletic training. This option may only be completed under the direct supervision of the athletic training adviser and the athletic trainer employed by the University. Students must apply for a student trainer position in the training room in order to obtain the athletic training hours. In order to be eligible for certification by the National Athletic Trainers Association, students must complete 1,500 hours of athletic training internship under the direction of a certified athletic trainer. Students must be committed to the completion of these hours before specialization approval will be given.

- Biol 349; PE 304, 403, 440, 491; HEd 345; Psych 201

D. Sport Psychology

30 credits

The sport psychology option is available for students who have a clinical or practical use for the application of psychology to athletic and exercise settings. This option provides an emphasis in psychology which will serve as an adequate set of prerequisites for post-baccalaureate study in sport psychology. PE 307, 309 and 310 are required and must be taken as part of the core requirements in the major.

- PE 408; Psych 201, 311 or 315
- Select 17 credits from the following: Psych 301, 311, 313, 315, 316, 321, 322, 324, 342, 353

*Minor — Sport Psychology*

30-32 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 and introduces students to psychometric and clinical techniques which are an integral part of this discipline.

- Psych 201, 311 or 315; PE 307, 309, 310
- PE 408 (to be taken after all courses in the minor are completed)
- Two courses under advisement from Psych 301, 311, 313, 315, 316, 321, 322, 324, 342, 353

Physical education majors cannot use PE 307,309 or 310 for both major and minor requirements and must select replacement courses from psychology electives.

**BACHELOR OF ARTS IN EDUCATION**

*Major — Teacher Education K-12 — Physical Education and Health*

126-127 credits, including student teaching

This major provides concentrated study of instructional methodology, exercise and sport science, and psychological/sociological/historical aspects of physical education and sport. Completion of the requirements leads to teacher certification in K-12 physical education fitness and health. The program is unique in that it consists of four sequential five-credit blocks with practicum experiences at the elementary, middle and high school levels. It allows students concentrated time developing teaching techniques while working with students in the public schools.

Ongoing video analysis of teaching effectiveness is incorporated throughout the blocks.

*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 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 to be considered for entry into the K-12 physical education fitness and health program.

- Meet with a department adviser to declare the major and outline a plan of study.
- Enroll in PE 203, 485, 320 and Biol 348 fall quarter. **NOTE:** PE 203 and Biol 348 may be taken prior to fall quarter.
- Submit a completed application packet for the K-12 physical education and health program no later than the fifth 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 K-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 of Biol 348, PE 203, 485, 320
- Applications for the K-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.

### *Recommended Sequence of Study*

#### First Year

- *Fall:* PE 203, Biol 348, PE 320 (Block I: Elementary PE), PE 485
- Accepted into the PE program
- *Winter:* PE 330 (Block II: Elementary PE), PE 302, Sec 410, Psych 352/353
- *Spring:* PE 330p (Elementary Practicum), PE 496 and 303, EdF 310, Sec 425

#### Second Year

- *Fall:* PE 420 (Block III: Secondary PE), PE 420p (Middle School Practicum), PE 301, 307, 308, or 310 or 311, HEd 456
- *Winter:* PE 430 (Block IV: Secondary PE), PE 430p (High School Practicum), PE 309, EdF 411, Psych 351
- *Spring:* PE 308 or 310 or 311, 407, 490, 492, IT 444, Sec 432

#### Third Year

- *Fall/Winter:* Student internship (student teaching)
- or
- *Winter/Spring:* Student internship (student teaching)

**NOTE:** The State of Washington has approved a new teaching endorsement entitled, "Health and Fitness." Students are advised to take the following classes: HEd 150, 151, 152, 345, 450 and PE 440.

### *Major — Physical Education-Elementary Education* 45 credits

This major is to accompany the elementary education professional program. Students complete an internship in an elementary classroom and are certified for teaching grades K-8. This does not result in a K-12 physical education endorsement.

- Introductory courses: 8 credits

- Biol 348, PE 203
- Exercise and Sport Science: 20 credits
  - PE 301, 302, 303, 307, 485
- Psychological, Sociological and Historical Foundations: 7 credits
  - PE 309 or 310, 407
- Instructional Methodology: 10 credits
  - PE 320, 330 (students are strongly encouraged to take PE 330p, Elementary Practicum)

At the time of press, the elementary program is under review. Decisions about the continuation of this program have yet to be finalized.

## HEALTH EDUCATION

A health educator is a practitioner who is professionally prepared in the field of health education, who demonstrates competence in both theory and practice, and who accepts responsibility to advance the aims of the health education profession. The practice of health education takes place in community, school, worksite, medical care and college settings. A certified Health Education Specialist (CHES) is an individual who is credentialed as a result of demonstrating competency based on criteria established by the National Commission for Health Education Credentialing.

Students normally devote most of the freshman and sophomore years of study to completion of the General University Requirements and health education foundation courses (HEd 150, 151 and 152). Several supporting courses required in the health major fulfill GUR requirements (e.g., Chem 115, 251; Psych 201, Soc 201 or Anth 201). Junior and senior years are devoted to the health education core, human development core, and to the concentration core. Electives that emphasize oral and written communication skills are recommended. Prospective majors are encouraged to fulfill the biological science and chemistry requirements by the end of their junior year.

## BACHELOR OF SCIENCE

### *Major — Community Health*

110 credits

A community health educator is a practitioner professionally prepared in the field of health education who demonstrates competence in the planning, implementation and evaluation of a broad range of health-promoting, health-enhancing programs for community groups. This major prepares students to apply a variety of methods and models of health behavior change that result in the education and mobilization of community members in actions for resolving health issues and problems which affect the community. Students participate in aspects of programs that identify and address the health needs of society.

Prerequisites for entry into the major are completion of HEd 150, 151 and 152, a 2.50 GPA and completion of a program application form. Students must maintain the 2.50 GPA to satisfactorily complete the degree and to enroll in HEd 451 (internship). Further information and major declaration forms are available from the Coordinator

of Health Education, Carver 104, Physical Education, Health and Recreation Department.

**PROGRAM OF STUDY**

*General Courses*

15 credits

- Chem 115\*, 251\*
- Psych 201,\* Soc 201,\* or Anth 201\*

*Health Education*

47 credits

- HEd 150, 151, 152
- HEd 345
- HEd 407, 435, 447, 450, 460
- HEd 451 (internship)

*Human Development*

33 credits

- Nutrition — PE 440
- Upper-division psychology, sociology or anthropology course
- Biol 348 and 349; Biol 345 or statistics
- PE 303
- Journ 330

*Concentration*

17 credits

Students select supporting courses that relate to settings in which they wish to practice.

- **Recommended courses for community-based:**
  - Comm 240
  - Anth 353, 424
  - Psych 309, 315, 316
  - Soc 260, 333, 340, 380
  - HEd 250
- **Recommended courses for worksite-based:**
  - PE 302, 403, 490
  - Psych 320
  - Comm 224
  - Soc 340

*Exit Requirement*

- Standard First Aid/CPR certification

**School Health — Supporting Teaching Endorsement**

24 credits

This course of study is a supporting teaching endorsement. This endorsement can be taken only if the student has a primary endorsement — an academic major certifiable by the Office of the Superintendent of Public Instruction. The 24 credits must include, but are not limited to, the following: substance use and abuse, wellness and illness, nutrition, human physiology and safety education.

Recommended courses:

- HEd 150, 151, 152, 345
- Nutrition — PE 440
- Physiology — PE 303 and/or Biol 349
- PE 301

The State of

\* Meets General University Requirements

Washington has approved a new teaching endorsement entitled "Health and Fitness." Please refer to the Physical Education and Health major for a list of required courses.

**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 phase system. Students enter Phase I of the program during spring quarter of their sophomore year. They continue through the curriculum as a group, as indicated in the schedule below.

	Fall	Wtr	Spr	Sum
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 and therapeutic recreation. Community and outdoor recreation graduates have been successful in finding employment in federal and state recreation and park agencies, county and community recreation departments, commercial recreation businesses, and industrial 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.

The recreation program is nationally accredited. 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 Tuesday before Thanksgiving*. 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. Due to limited space, applications for minors are not currently being accepted.

ARTS & SCIENCES

## BACHELOR OF ARTS

### Major — Recreation

66 credits

- Prereq: Rec 201
- Phase I: Rec 271, 272, 274, 275, 276
- Phase II: Rec 372, 373, 378 plus 1 of 3: Rec 370, 376, 379
- Phase III: Rec 471
- Phase IV: Rec 444, 450, 480 plus 1 of 3: Rec 421, 470, 476

Rec 380 is required for therapeutic recreation majors and is offered fall quarter each year.

#### Support Area

Recreation majors must develop a 25-credit support area. Support-area prescriptions are worked out cooperatively with the student's faculty adviser and must have the adviser's final approval. They may range from traditional minors in sociology, environmental studies and other fields to interdisciplinary studies incorporating courses from a broader spectrum of University course offerings. Support areas are designed on the basis of previous experience in recreation related programs, skills and interests, and professional aspirations.

*Example Support Areas:* business, sociology, special education, communications, retail management, psychology, journalism, natural resource management, environmental planning, physical education, cultural arts, commercial recreation, biology, health promotion, tourism, aging.

## GRADUATE STUDY

For a concentration leading to the Master of Science degree, see the Graduate School section of this catalog.

## COURSES IN PHYSICAL EDUCATION

*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.*

All 100-level classes are S/U graded. For courses numbered 168 or below, an \$11 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.

#### 101-109 DEVELOPMENTAL (1 ea)

- 102a BEGINNING CONDITIONING
- 102b BEGINNING AEROBIC FITNESS
- 103 BEGINNING JOGGING
- 108 BEGINNING WEIGHT TRAINING

#### 111-119 AQUATICS (1 ea)

- 112 BEGINNING SWIMMING (for non-swimmers)
- 113 INTERMEDIATE SWIMMING
- 114 ADVANCED SWIMMING
- 116 LIFEGUARD TRAINING — NEW METHOD (2)

Prereq: current ARC Standard First Aid and Cardio-Pulmonary Resuscitation Certificate, and advanced swimming test. Instruction leading to qualification for the American Red Cross Lifeguard Training Certification.

#### 120-129 DANCE (1 ea)

(See Dance Program for additional dance offerings.)

- 120 BEGINNING SOCIAL DANCE
- 122 BEGINNING FOLK AND SQUARE 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
- 136 BEGINNING TENNIS
- 137 INTERMEDIATE TENNIS
- 139 BEGINNING RACQUETBALL

The student furnishes equipment for PE 136, 137, 139.

#### 140-149 TEAM SPORTS (1 ea)

- 142 BEGINNING BASKETBALL
- 144 BEGINNING SOCCER
- 145 BEGINNING VOLLEYBALL
- 148 BEGINNING LACROSSE
- 149 BEGINNING RUGBY

#### 150-179 INDIVIDUAL SPORTS (1 ea unless otherwise noted)

- 150 BEGINNING ARCHERY
- 151 BEGINNING GYMNASTICS
- 154 BEGINNING GOLF
- 157 BEGINNING SKIING
- 158 INTERMEDIATE SKIING
- 159 ADVANCED SKIING
- 162 BEGINNING HORSEMANSHIP
- 165 BEGINNING HANDBALL
- 166 INTERMEDIATE HANDBALL
- 167 BEGINNING BICYCLING
- 168 BEGINNING MARTIAL ARTS
- 170 SAILING

Prereq: swim test. Fee: \$35.

#### 171 SAILBOAT RACING I

Prereq: swim test and basic sailing skills required. Fee: \$35.

#### 172 SAILBOAT RACING II

Prereq: PE 171 or written permission. Advanced sailing skills, racing a boat with spinnaker and trapeze. Fee: \$35.

#### 173 SAILING INSTRUCTOR TRAINING (3)

Prereq: demonstrate basic sailing competence, swim test. Fee: \$35.

#### 174 SAILBOAT RACING INSTRUCTOR TRAINING (2)

Prereq: U.S. Sailing Association, Level I, Certificate. How to teach sailing and racing in high-performance sailboat. U.S. Sailing Association, Level II, Certificate. Fee: \$35.

#### 175 WINDSURFING

Prereq: swim test. Fee: \$35.

#### 176 WINDSURFING INSTRUCTOR TRAINING (3)

Prereq: intermediate sailing skill. Instructional techniques of teaching basic windsurfing. U.S. Sailing Association Certification. Fee: \$35.

**177 KAYAK TOURING**

Prereq: advanced level in swimming proficiency test. Fee: \$35.

**178 BEGINNING SALTWATER KEEL BOAT SAILING**

Prereq: basic sailing skills required. Boat handling under power and sail, plus basic seamanship. Fee: \$100.

**179 INTERMEDIATE SAILING**

Prereq: basic sailing skills required. Provide own transportation.

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 157, 158, 159 and 167 also furnish own equipment.

**180-194 INTERCOLLEGIATE SPORTS (2 ea)**

Courses below repeatable to a maximum of 10 credits.

**180m INTERCOLLEGIATE FOOTBALL**

**181 INTERCOLLEGIATE BASKETBALL**

**183 INTERCOLLEGIATE TRACK AND FIELD**

**185 INTERCOLLEGIATE GOLF**

**186 INTERCOLLEGIATE TENNIS**

**189 INTERCOLLEGIATE CROSS COUNTRY**

**190 INTERCOLLEGIATE CREW**

**192w INTERCOLLEGIATE VOLLEYBALL**

**193m,w INTERCOLLEGIATE SOCCER**

**194w INTERCOLLEGIATE SOFTBALL**

**Professional Courses**

**201 PERSPECTIVES OF HUMAN LIFESTYLE AND WELLNESS (3)**

Overview and analysis of the role and place lifestyle and wellness play in society (past, present and future). Issues in health, fitness and leisure.

**203 INTRODUCTION TO PHYSICAL EDUCATION AND HEALTH (3)**

Must be taken first two quarters in the program. Library research methods, career orientation, professional readiness, and current issues in physical education and health.

**208 PRINCIPLES OF CONDITIONING AND STRENGTH TRAINING (3)**

Theoretical and practical background regarding strength training and aerobic/anaerobic activities.

**301 BIOMECHANICS (4)**

Prereq: completion of math GUR. Application of basic mechanical principles to movement. Motion fundamentals, kinetics, kinematics, aerodynamics, hydrodynamics, equilibrium and external forces, rebound and spin, two-dimensional analysis, and the body as a machine; laboratory work is included.

**302 KINESIOLOGY (5)**

Prereq: Biol 348 or equivalent. 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; laboratory work included.

**303 PHYSIOLOGY OF EXERCISE (5)**

Prereq: Biol 348. 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.

**304 PREVENTION AND CARE OF ATHLETIC INJURIES (3)**

Prereq: Biol 348. Overview of current information on the care and prevention, and immediate care, of common sports injuries.

**306 CREATIVE MOVEMENT, PSYCHOMOTOR SKILL, AND FITNESS FOR ELEMENTARY SCHOOL (3)**

Prereq: admission to the Woodring College of Education and Psych 316 or 352. Physical activities in fundamental skill development, fitness, creative movement, rhythms and gymnastics for elementary age. Includes methods of teaching and developmental characteristics of children.

**307 MOTOR CONTROL AND LEARNING (3)**

Prereq: PE 203 or permission of instructor. Principles of motor control and skill acquisition, as it relates to human movement.

**308 INTERNATIONAL ASPECTS OF PHYSICAL EDUCATION, SPORT, HEALTH AND LEISURE (3)**

Prereq: PE 203. An analysis of various aspects of physical education, elite sport, health and leisure throughout the world.

**309 PSYCHOLOGY OF SPORT (3)**

Psychological principles and states which are present in sporting activities, both at recreational and highly competitive levels.

**310 SOCIOLOGY OF SPORT (3)**

Sociological implications of sport in contemporary American society.

**311 OLYMPISM AND THE MODERN OLYMPIC GAMES (3)**

Prereq: PE 203 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.

**320 BLOCK I: ELEMENTARY PHYSICAL EDUCATION (5)**

Prereq or co-requisite: PE 203. 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.

**330 BLOCK II: ELEMENTARY PHYSICAL EDUCATION (5)**

Prereq: PE 320. 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.

**330p ELEMENTARY PHYSICAL EDUCATION PRACTICUM (3)**

Prereq: PE 320, 330. Observing/assisting/teaching in an elementary school setting.

**341-347 SPORTS OFFICIATING (2 ea)**

Officiating techniques for individual and team sports.

**342m BASKETBALL**

**342w BASKETBALL**

**343 TRACK AND FIELD**

**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)**

**381 BASKETBALL (3)**

**383 TRACK (3)**

**385 VOLLEYBALL (2)**

**403 PHYSICAL FITNESS ASSESSMENT AND EXERCISE PRESCRIPTION (5)**

Prereq: PE 302, 303. 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.

**407 HISTORY AND PHILOSOPHY OF PHYSICAL EDUCATION (4)**

Prereq: PE major or minor; senior status, last three quarters on campus. Historical, philosophical and ethical considerations of physical education. Writing proficiency course.

**408 SEMINAR IN SPORT PSYCHOLOGY (3)**

Prereq: Psych 201, 311 or 315; PE 307, 309, 310. 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.

**409 PHYSICAL EDUCATION ADMINISTRATION AND MANAGEMENT (3)**

Prereq: PE 203; 15 credits in the major courses. Criteria for the selection of program activities, planning and maintenance of facilities and equipment, personnel development, evaluative procedures and techniques, administrative policies.

### **420 BLOCK III: SECONDARY PHYSICAL EDUCATION (5)**

Prereq: PE 330, 330p and concurrent enrollment in PE 420p. 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.

### **420p MIDDLE SCHOOL PHYSICAL EDUCATION PRACTICUM (2)**

Prereq: PE 330, 330p and concurrent enrollment in PE 420. Observing/assisting/teaching in a middle school setting.

### **430 BLOCK IV: SECONDARY PHYSICAL EDUCATION (5)**

Prereq: PE 420, 420p and concurrent enrollment in PE 430p. 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).

### **430p SENIOR HIGH SCHOOL PHYSICAL EDUCATION PRACTICUM (2)**

Prereq: PE 420, 420p and concurrent enrollment in PE 430. Observing/assisting/teaching in a senior high school setting.

### **440 PHYSICAL ACTIVITY AND NUTRITION (3)**

Prereq: PE 303 or permission of instructor. Current topics on exercise and nutrition; weight control, dietary supplementation and performance, fluid regulation, atherosclerosis and diabetes.

### **471 INTERNSHIP (15)**

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.

### **485 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.

### **486 PHYSICAL DIMENSIONS OF AGING (3)**

Prereq: PE majors only. 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.

### **490 MEASUREMENT AND EVALUATION IN PHYSICAL EDUCATION (3)**

Prereq: PE 203 or permission of instructor. 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.

### **491a FIELD EXPERIENCE IN FITNESS AND EXERCISE SCIENCE (3)**

Prereq: First Aid/CPR certification, proof of malpractice insurance, and permission of instructor. Practical volunteer experience in agencies such as worksite wellness programs, hospitals, fitness facilities, on-campus fitness programs and community sports organizations. Repeatable to a maximum of 6 credits. S/U grading.

### **491b 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.

### **491c FIELD EXPERIENCE IN ATHLETIC TRAINING (3)**

Prereq: First Aid/CPR certification, proof of malpractice insurance, and permission of instructor. Practical volunteer experience, under supervision of a certified athletic trainer, in athletic training facilities and intercollegiate sports events. Repeatable to a maximum of 15 credits for athletic training majors. S/U grading.

### **491d FIELD EXPERIENCE IN SPORT 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.

### **492 PRACTICUM IN PHYSICAL EDUCATION (2)**

Prereq: upper-division status, permission of department. Individualized practicum in teaching physical education activities. May be repeated with no maximum. 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.

### **496 ADAPTED PHYSICAL ACTIVITY (3)**

Prereq: PE 485 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.

## **Graduate Courses**

*Courses numbered 500; 517; 545; 597 are described on page 31 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 5 credits.

### **505 ANALYSIS OF EFFECTIVE TEACHING AND COACHING (4)**

Prereq: PE 401 or equivalent; videotape of self in a teaching/coaching situation; previous teaching or coaching experience. Exploration of the current research in the area of teaching effectiveness in physical education and coaching, together with analysis, design and implementation of teaching and coaching effectiveness instruments.

### **506 RESEARCH DESIGN IN HUMAN MOVEMENT AND PERFORMANCE (4)**

Prereq: graduate status. 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 307 or equivalent. Examination of the structure and function of the human neuromuscular system, as it pertains to the production of movement.

### **509 ADMINISTRATION OF PHYSICAL EDUCATION, SPORTS, PHYSICAL ACTIVITY CENTERS (3)**

Prereq: EdAd 541, physical education major degree, teaching experience. Administrative structures, policies and procedures for the conduct of physical education and sports programs in school, commercial and governmental agencies. Discussion of budgets, legal liability, purchase and maintenance of equipment, facilities, public relations.

### **510 LABORATORY TECHNIQUES IN EXERCISE SCIENCE (4)**

Prereq: PE 301 and 303 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 303 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 302,303 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.

**531 SEMINAR IN COMPARATIVE PHYSICAL EDUCATION (3)**

Prereq: PE 407. Physical education systems in major countries; backgrounds, types, aims and present function; comparison with the American system.

**533 CARDIOVASCULAR PHYSIOLOGY (3)**

Prereq: PE 303 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 303 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 SEMINAR IN SPORT PSYCHOLOGY (3)**

Prereq: PE 309 or permission of instructor. Theoretical foundations and behavioral applications of sport psychology including: history 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 310 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 301, 302 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 301, 302 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.

**690a THESIS (6-9)**

Prereq: formal advancement to candidacy for the master's degree. Repeatable to a maximum of 9 credits.

**690b FIELD PROJECT (6-9)**

Prereq: formal advancement to candidacy for the master's degree.

Repeatable to a maximum of 9 credits.

**COURSES IN HEALTH EDUCATION**

*Courses numbered X37; X97; 300, 400; 417, 445 are described on page 31 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: HEd 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.

**345 HEALTH PROMOTION/DISEASE PREVENTION (4)**

Prereq: junior status; HEd 150, 151, 152 recommended. Investigation of chronic/degenerative diseases and infectious/communicable illnesses; intentional and unintentional injuries; relationship of physiology, lifestyle choices and personal beliefs to well-being.

**407 PRINCIPLES AND PRACTICES OF HEALTH EDUCATION (3)**

Prereq: HEd 150, 151, 152, 345 and permission of instructor. Historical perspectives of health education; professional issues and ethics; principles and practices of health education. Writing proficiency course.

**435 WORKSITE HEALTH PROMOTION (5)**

Prereq: HEd 345, PE 303. Theoretical bases and direct applications of worksite health promotion programs; assessment tools; cost-benefit ratio and employee productivity; individual/organizational behavior change process.

**447 COMMUNITY HEALTH (3)**

Prereq: HEd 150, 151, 152, 345 and permission of instructor. Concept of community health; role of government, non-profit and private agencies; investigation of health issues targeting Healthy People 2000 and 2010; grant writing; coalition building; service-learning required.

**450 METHODS AND MATERIALS IN HEALTH EDUCATION (4)**

Prereq: Prereq: HEd 150, 151, 152, 345. Principles and application of methodology for educating about health in school, community, worksite and medical care settings; utilization and evaluation of resources.

**451 INTERNSHIP (15)**

Prereq: HEd 407, 435, 447, 450, 460 and proof of malpractice insurance. Full-time supervised professional experience emphasizing functional proficiency under joint sponsorship of University and agency personnel. S/U grading.

**455 HEALTH EDUCATION GRADES K-6 (2)**

Prereq: senior status; admission to teacher education. Instructional methods in health for grades K-6; selection, analysis and application of health education curricula and materials; education about prevention of child abuse and alcohol/drug abuse, AIDS/HIV and sexuality education. Meets state WAC 180-79-349.

**456 ABUSE PREVENTION FOR SECONDARY EDUCATION TEACHERS (1)**

Prereq: senior status; admission to teacher education. Identification and prevention of physical, emotional and sexual abuse of young people; prevention of substance abuse; responsibilities of teachers. Meets state WAC 180-79-115.

**460 PROGRAM PLANNING AND EVALUATION IN HEALTH EDUCATION (5)**

Prereq: HEd 447, 450. Application of processes of program development in designing health education/health promotion programs. Writing proficiency course.

## COURSES IN RECREATION

*Courses numbered X37; X97; 300, 400; 417, 445 are described on page 31 of this catalog.*

### **201 FOUNDATIONS OF RECREATION AND LEISURE (4)**

Prereq: sophomore status or permission. 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: Rec 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: Rec 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: Rec 201; majors only. Introduction to the principles and practices of therapeutic recreation. Includes history, philosophy, and trends and issues. Also presents an overview of consumer groups associated with therapeutic recreation.

### **275 PROFESSIONAL PRACTICUM (1)**

Prereq: Rec 201; majors only. Participation in a recreation and park agency in the delivery of recreation services. S/U grading.

### **276 PROGRAM LEADERSHIP (3)**

Prereq: Rec 201; majors only. Leading and processing recreation experiences in community, outdoor and therapeutic settings that promote individual and social well being.

### **370 OUTDOOR PROGRAM DEVELOPMENT (4)**

Prereq: Phase I or appropriate experience and written permission. 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 1. Entry-level administrative skills associated with managing personnel and organizational resources within parks and recreation systems.

### **373 RECREATION PROGRAMMING (4)**

Prereq: Phase 1. 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 appropriate experience and written permission. Methods and techniques in the organization, implementation and evaluation of recreation programs for special populations: needs assessment, activity modification, adaptive equipment, physical and behavioral management and intervention techniques.

### **378a HUMAN RELATIONS: CONCEPTS AND SKILLS (4)**

Prereq: Phase I; 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; 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 written permission. 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 (4)**

Prereq: Rec 201, Phase I or appropriate experience and written permission. 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.

### **421 THERAPEUTIC RECREATION TRENDS AND ISSUES (3)**

Prereq: Phase III or appropriate experience and written permission. Trends and issues of therapeutic recreation in relation to a variety of special populations.

### **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. Methods and techniques in the assessment, design, implementation and evaluation of adventure programs in enrichment and therapeutic recreation settings.

### **471 INTERNSHIP (15)**

Prereq: Phase II. Full-time supervised professional experience emphasizing functional proficiency under joint sponsorship of University and agency personnel. S/U grading.

### **476 PARK AND FACILITY DESIGN AND OPERATIONS (3)**

Prereq: Phase III or appropriate experience and written permission. Design and operations considerations for the park and recreation administrator; program development, master plans, functional considerations, scheduling and maintenance.

### **480 LEISURE AND SOCIETY (4)**

Prereq: Phase III. Builds on general education and foundations of professional education and is a senior capstone for recreation majors. 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.

## PHYSICS AND ASTRONOMY

The Department of Physics and Astronomy offers a B.S. degree in physics and a B.A. in Education degree in physics/mathematics education. The physics B.S. 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, holography, lasers, optoelectronics and astronomical imaging. 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.

Physics majors are encouraged to work for the department as laboratory teaching assistants and as coworkers 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 of 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, as well as physics itself.

To become a professional physicist requires a Ph.D. degree in physics. 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.

Computers are playing an increasingly important role in physics research and work in applied physics. The department, working with the geology department, has developed a computer laboratory/classroom equipped with 20 modern microcomputers running sophisticated physics, mathematics and astronomy software packages. The machines are networked and run Mosaic and Netscape, the powerful mouse-oriented World Wide Web browsers that enable users to tap global Internet resources. Students are introduced to the use of these computers in their Physics 131 laboratories and can expect to make use of them in nearly all their high-level physics courses. The computers are available to physics majors 24 hours a day, seven days a week.

### ASTRONOMY

Astronomy is the study of the stars, the planets, and the origin, structure and evolution of the universe. Cultures all over the world have observed and formed theories about stars and planets throughout history, but today is undoubtedly the "golden age" of astronomy. And the future looks just as bright. The number of telescopes with diameters greater than five meters will more than triple during the next decade. These, together with increasingly

sophisticated electronic instrumentation, more powerful computers and the space programs of several nations will all combine to bring a continuation of the current flood of discoveries.

Although the department does not have an observatory, it does have an astronomical imaging laboratory equipped with three Sun SPARCstation computers (with professional image analysis software and Internet access to astronomy databases), a CCD camera and a computer-controlled 12-inch Schmidt-Cassegrain telescope. Physics majors can take the astronomical imaging laboratory course, Astron 357, to learn how to use this equipment and software. They are then prepared to undertake an astronomy research project in the senior astronomy project course, Astron 457.

To become a professional astronomer requires a Ph.D. in astronomy, so anyone seriously considering a career as an astronomer should plan on graduate study in an astronomy doctoral program. The physics Bachelor of Science program provides the solid background in physics, mathematics and computer science that astronomy graduate schools expect of entering graduate students.

Only one astronomy course, Astron 327, is required for the physics Bachelor of Science degree. Students planning to become astronomers are advised to take Astron 315, 320, 357 and 416 in addition to the courses required by the major. They also are advised to undertake a senior astronomy project in Astron 457. (This is one of three ways to satisfy a senior lab requirement of the major.) Physics 485, a course devoted to Fourier transform methods, is also strongly recommended.

### OPTICS

Optics is the study of light. *Optical science* has emerged as a field that deals not only with light but with the interaction of light with matter. *Optical engineering* applies optics and optical science to the design and construction of useful devices and systems that generate, manipulate or detect light and other forms of electromagnetic radiation.

Students interested in careers in optics, optical science or optical engineering should select the physics Bachelor of Science degree. After obtaining a solid foundation in geometrical and physical optics, upper-division students study the principles of laser operation and some of the many applications of lasers. Students may then elect to do a senior physics project by taking Physics 449 their senior year. (This is one of three ways to satisfy a senior lab requirement of the major.)

Students may construct their own lasers or do other independent optics project work in the department's well-equipped laser, holography and optoelectronics laboratories. Students interested in optics careers are advised to also take Physics 485 (Fourier transform techniques).

Optical science and optical engineering have become important fields for both industry and government. Major international meetings are held several times a year (in cities all over the world) by SPIE — the International

Society for Optical Engineering. This organization has its headquarters in Bellingham, and an excellent relationship has developed between the Physics/Astronomy Department and SPIE. Western's physics majors are often employed as projectionists at SPIE meetings, giving them a chance to see the latest in high-tech optics equipment as well as learn about the current developments in optical science and engineering.

### ACADEMIC PLACEMENT

#### *Advice to Freshman*

The physics curriculum that forms the core of the physics B.S. 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) his or her very first quarter at Western.* Freshmen who have had calculus in high school are advised to take Physics 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 Physics 121 until their second quarter at Western, so that they may first complete Math 124. The physics course sequence has been arranged so that this one-quarter delay will not cause problems later, so long as Math 124 is still taken the first quarter. Freshmen who elect to delay Physics 121 one quarter are advised to take Physics 119 (Introduction to Special Relativity) their first quarter at Western. This course does not require calculus beyond what the student would know from taking Math 124 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 B.S. program is based on the following core courses:

- Physics 121, 122, 123, 131, 132, 133; Math 124, 125, 224, 204
- Physics 223, 224, 233; Math 225, 226, 331; CS 140
- Physics 322, 323; Astron 327

Students planning to transfer to Western from a community college should strive to take as many equivalents of the first grouping of courses above as possible. The community college sequence equivalent to Physics 121-122-123 will usually be called introductory physics with calculus and will probably include Physics 131-132-133 (which are just the lab courses that accompany the corresponding Physics 121-122-123 courses). Math 124-125-224 is the first year of college calculus, and Math 204 is linear algebra. Students should be aware that 200-level community college courses in differential equations may not transfer to Western as equivalent to Math 331.

### MID-PROGRAM CHECKPOINT

A student seeking to complete a B.S. 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.

- Physics 121, 122, 123, 131, 132, 133, 223, 224, 233, 322, 323
- Math 124, 125, 204, 224, 225, 226, 331
- Astron 327
- CS 140

A student seeking to complete a B.A. 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.

- Physics 119, 121, 122, 123, 131, 132, 133, 223, 224, 233, 322
- Math 124, 125, 204, 224, 209, 331
- Astron 327

### ADMISSION TO THE MAJOR

The department has established a requirement that holds for both the physics B.S. major and the physics/mathematics B.A. 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 (Bond Hall 152) 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 98225-9064. Telephone: (360) 650-3818, fax: (360) 650-7788. Information about Western's physics and astronomy programs is also available through Internet's World Wide Web (WWW). <http://www.physics.wvu.edu/> is the URL

(WWW address). The department is located in Bond Hall 152.

## PHYSICS AND ASTRONOMY FACULTY

LESLIE E. SPANEL (1968) Chair and Associate Professor. BS, University of Missouri, Rolla; PhD, Iowa State University, Ames.  
 RICHARD A. ATNEOSEN (1968) Associate Professor. BS, MS, University of Minnesota; PhD, Indiana University.  
 W. LOUIS BARRETT (1968) Professor. BS, University of Idaho; MS, PhD, University of Washington.  
 MELVIN G. DAVIDSON (1967) Professor. AB, Whitman College; PhD, Rensselaer Polytechnic Institute.  
 RICHARD FEINBERG (1980) Professor. BSC, State University of New York; MS, PhD, Stanford University.  
 MILTON FROM (1998) Assistant Professor. BSC, University of Manitoba; MSc, PhD, McGill University.  
 BRAD L. JOHNSON (1997) Assistant Professor. BS, MSBS, University of Colorado, Colorado Springs; PhD, University of Colorado, Boulder.  
 ROBERT J. QUIGLEY (1970) Professor. BS, MS, California Institute of Technology; MA, PhD, University of California, Riverside.  
 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.  
 RICHARD D. VAWTER (1968) Associate Professor. BS, Texas Technological University; MS, State University of Iowa; PhD, State University of New York.

### Research Associates

JOHN S. BLAKEMORE (1989). BSc, PhD, DSc, University of London.  
 KRISTEN LARSON (1998) BS, University of California, San Diego; MS, PhD, Rensselaer Polytechnic Institute.  
 ROY F. POTTER (1977). BS, University of Washington; MS, University of Maryland; PhD, University of Rhode Island.

## BACHELOR OF SCIENCE

### Major — Physics

110 credits

- Physics 121, 122, 123, 131, 132, 133; Math 124, 125, 224, 204
- Physics 223, 224, 233, 322, 323; Astron 327; Math 225, 226, 331; CS 140
- Physics 325, 331, 336, 339, 341, 349, 363, 368, 369
- Physics 423, 431, 455, 456, 472, 475

In addition, two credits selected from one of the following (or a combination thereof):

- Physics 424 (1-3 credits)
- Physics 449 (1-5 credits)
- Astron 457 (1-5 credits)

Physics 119 and 485 are recommended electives. Physics 419 is recommended as a course to satisfy the writing proficiency requirement.

### Minor — Physics

38 credits

- Physics 121, 122, 123, 131, 132, 133, 223, 224, 233
- Math 124, 125, 224

### Minor — Astronomy

29-30 credits

- Physics 119

- Physics 114, 115 and 116; or Physics 121, 122, 123, 131, 132 and 133
- Astron 315; and 320 or 333
- Astron 316; or both Astron 327 and 416

## BACHELOR OF ARTS IN EDUCATION

### Teaching Endorsement

Recommendation for teaching endorsement requires completion of the appropriate major with a minimum grade point average of 2.50 in courses required by the major.

### Major — Physics/Mathematics

100 credits

- Physics 119, 121, 122, 131, 132; Math 124, 125, 224, 204
- Physics 123, 133, 223, 224, 233; Math 209, 331
- Physics 201 or 205; 322, 331, 341; Astron 327; Math 302
- Physics 339, 349; Math 360, 483; Sci Ed 491, 492
- 9 additional credits of upper-division physics or astronomy courses, including 3-5 credits of Physics 449.

This major meets the requirements for Washington state teaching endorsements in both physics and mathematics.

This major must be accompanied by the professional preparation program in secondary education.

### Major — Chemistry/Physics

See the Chemistry Department section of this catalog.

## COURSES IN PHYSICS

Courses numbered X37; X97; 300, 400, 417, 445 are described on page 31 of this catalog.

### 101 PHYSICS FOR THE LIBERAL ARTS (4) F,W,S

Prereq: Math 102. Basic concepts of physics: force, mass, velocity, acceleration and energy; waves and sound; temperature and heat; electricity and magnetism; light; atoms and nuclei. For students with no previous physics background. Laboratory.

### 114 PRINCIPLES OF PHYSICS I (5) F,W

Prereq: Math 115. Kinematics and dynamics of particles; force, momentum and energy; fluids; vibrations and waves. Recommended for students in science and pre-professional programs not requiring physics with calculus.

### 115 PRINCIPLES OF PHYSICS II (5) W,S

Prereq: Physics 114. Kinetic theory; heat and thermodynamics; principles of electricity and magnetism. Laboratory.

### 116 PRINCIPLES OF PHYSICS III (5) S

Prereq: Physics 115. Geometrical and wave optics; relativity; atomic and nuclear physics. Laboratory.

### 119 INTRODUCTION TO SPECIAL RELATIVITY (3) F

Prereq: Math 124 (or concurrent). The relationship of space and time; the Michelson-Morley experiment; the Lorentz transformation; time dilation and the Lorentz contraction; spacetime events and world lines; spacetime four-vectors; relativistic momentum and energy.

### 121 PHYSICS WITH CALCULUS I (4) F,W

Prereq or coreq: Math 124; concurrent enrollment in Physics 131 (lab) required for physics majors. Kinematics and dynamics of particles; work and energy; collisions and conservation of momentum; rotational kinematics and dynamics.

## 122 PHYSICS WITH CALCULUS II (4) W,S

Prereq or coreq: Physics 121; concurrent or previous with Math 125; concurrent enrollment in Physics 132 (lab) required for physics majors. Oscillation; gravitation; fluid statics and dynamics; thermodynamics.

## 123 ELECTRICITY AND MAGNETISM (4) F,S

Prereq: Physics 122; pre- or coreq Math 224; current enrollment in Physics 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 Physics 121.

## 132 PHYSICS WITH CALCULUS II LAB (1) W,S

Prereq: concurrent enrollment in Physics 122.

## 133 E AND M LABORATORY (1) F,S

Prereq: concurrent enrollment in Physics 123.

## 201 THE SCIENCE OF SOUND (3) F

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. Laboratory. Offered alternate years; alternates with Physics 205.

## 202 SOUND SYSTEMS (3) S

Prereq: Physics 201 or permission of instructor. Electricity and amplifiers; magnetism and tape recording; loudspeaker theory and crossovers; digital techniques. Laboratory. Offered alternate years; alternates with Physics 344.

## 205 LASERS AND HOLOGRAPHY (3) F

Introduction to lasers and the properties of light; reflection and transmission holography. Laboratory. Not intended for B.S. physics majors. Offered alternate years; alternates with Physics 201.

## 223 WAVES AND OPTICS (3) F

Prereq: Physics 123 (or concurrent); concurrent enrollment in Physics 233 (lab) required for physics majors. Waves in elastic media, superposition, interference and standing waves; sound waves; electromagnetic waves and Maxwell's equations; reflection, refraction and polarization of light; geometrical optics; interference and diffraction of light; special relativity.

## 224 MODERN PHYSICS (4) W

Prereq: Physics 223; Math 224. Black body radiation, photoelectric effect; Compton effect; wave-particle duality; de Broglie waves; quantum treatment of the particle in a box, the harmonic oscillator, and the hydrogen atom; band structure of solids; radioactivity; elementary particles.

## 233 WAVES AND OPTICS LABORATORY (1) F

Prereq: concurrent enrollment in Physics 223.

## 271 STATICS FOR ENGINEERS (4) W

Prereq: Math 125 (or concurrent) and Physics 121. Principles and basic concepts of statics; parallelogram law; Newton's laws; resultants; force-couple relationships; equilibrium diagrams; equilibrium analysis; three-dimensional structures; two-dimensional frames; trusses; friction and virtual work.

## 272 DYNAMICS FOR ENGINEERS (4) S

Prereq: Physics 271 and Math 224. Rectilinear motion; vector calculus; kinematics and kinetics of a particle; friction; vibration; impulse; momentum; work and energy; conservation laws; moving references; central force motion; systems of particles; rigid body mechanics.

## 305 HOLOGRAPHY (3) W

Prereq: Physics 223 and 233. Basic concepts of holography in thin and thick recording media; theory of elementary holograms; major hologram types; interferometric holography. Laboratory. Was Physics 403 in previous catalog.

## 322 FUNDAMENTALS OF ELECTRONICS (4) W

Prereq: Physics 123. Principles of DC and AC circuit theory; diodes; bipolar and FET transistors; amplifiers; SCRs; test equipment; transducers; AM and FM modulation. Laboratory.

## 323 ANALOG AND DIGITAL ELECTRONICS (4) S

Prereq: Physics 322. Principles of operational amplifiers; active filters; logarithmic and non-linear circuits; Boolean algebra; TTL and CMOS logic gates; counters and registers; multiplexing; timing and control; D to A and A to D conversion. Laboratory.

## 325 MATHEMATICAL TOOLS FOR PHYSICS (3) F

Prereq: Physics 223; Math 225 and 226. Mathematical techniques needed for advanced undergraduate physics courses. Topics selected from coordinate systems, vector and tensor analysis, complex variable theory, Fourier series, the Dirac delta function, probability and statistics, and numerical methods.

## 331 THERMODYNAMICS (3) F

Prereq: Physics 122 and Math 224; concurrent enrollment in Physics 341 (lab) required for physics majors. Laws of thermodynamics; state variables; Maxwell relations; entropy; heat engines and refrigerators; thermal properties of matter.

## 336 STATISTICAL PHYSICS (3) W

Prereq: Physics 224, 325 and 331. Statistical description of physical systems; foundations of macroscopic thermodynamics; ensemble theory, methods and applications; quantum statistics of gases.

## 339 OPTICS (3) S

Prereq: Physics 223, 368; concurrent enrollment in Physics 349 (lab) required for physics majors. Reflection and refraction at plane and spherical surfaces; lenses and aberrations; optical instruments; interference and interferometers; diffraction; polarization.

## 341 THERMODYNAMICS LAB (1) F

Prereq: concurrent enrollment in Physics 331.

## 344 ACOUSTICS (3) S

Prereq: Physics 223 and Math 224. Generation, transmission and reception of acoustic waves. Applications to selected areas of practical acoustics. Offered alternate years; alternates with Physics 202.

## 349 OPTICS LABORATORY (1) S

Prereq: concurrent enrollment in Physics 339.

## 363 CLASSICAL MECHANICS (3) F

Prereq: Physics 122, Math 331. Newtonian mechanics; general motion of a particle in three dimensions; the harmonic oscillator; non-inertial reference systems; celestial mechanics; Lagrangian mechanics; oscillating systems.

## 368 ELECTROMAGNETISM I (3) W

Prereq: Physics 123 and 325; Math 331 (or concurrent). Differential representation of electric and magnetic field laws; Maxwell's equations; plane electromagnetic waves in free space, dielectrics and conductors; reflection and refraction at a plane boundary.

## 369 ELECTROMAGNETISM II (3) S

Prereq: Physics 368. Boundary value problems; guided waves; electromagnetic radiation; relativistic electrodynamics.

## 419 FOUNDATIONS AND PHILOSOPHY OF PHYSICS (3) S

Prereq: one year of college physics and passing grade on Junior Writing Exam. Development of concepts from the Greek period through the 20th century. Essays and a term paper required. Writing proficiency course.

## 423 SENIOR LAB I (2) F

Prereq: Physics 224, 323 and 349. Selected experiments in modern physics and error analysis.

## 424 SENIOR LAB II (1-3) W

Prereq: Physics 423 and 431. Selected advanced experiments in optics, fiber optics, atomic physics, laser spectroscopy and solid state physics.

## 431 OPTOELECTRONICS (3) F

Prereq: Physics 323, 339 and 368. Properties of laser light; basic laser principles; overview of laser types; gas, dye, doped-insulator and semiconductor; electro- and acousto-optic modulation of light; photodetectors; electronic imaging devices; fiber and integrated optics.

## 449 SENIOR PHYSICS PROJECT (1-3) F,W,S

Prereq: Physics 224, 323, 339 and 369; senior status in physics; permission of instructor required. Individual projects under supervision. The project may be an extension of a summer research project carried out at another institution. Written report required. Repeatable for credit.

## 455 QUANTUM MECHANICS I (3) F

Prereq: Physics 224, 325; Math 204, 331. Quantum mechanical operators, eigenfunctions and eigenvectors; Dirac notation; superposition and compatible observables; time development, conservation theorems and parity.

**456 QUANTUM MECHANICS II (3) W**

Prereq: Physics 455. Bound and unbound states; solvable one- and two-dimensional problems; angular momentum operators, eigenfunctions and eigenvalues; addition of angular momentum; problems in three dimensions; matrix mechanics; Pauli spin matrices.

**472 NUCLEAR AND PARTICLE PHYSICS (3) W**

Prereq: Physics 368 and 455. Nuclear properties and instability; alpha, beta and gamma decay; nuclear interactions and models; detectors and accelerators; properties and interactions of elementary particles; quarks, gluons and QCD; CP violation; the standard model and beyond.

**475 SOLID STATE PHYSICS (3) S**

Prereq: Physics 368, 455. Crystal structure and lattices; lattice vibrations; electrons in a periodic potential; energy bands, with applications for semiconductors and metals; transport in a solid.

**479 RELATIVITY THEORY (3) S**

Prereq: Physics 119 and 369. Review of special relativity; tensor analysis and differential geometry; geodesic deviation and the Riemann curvature tensor; the three classic tests of Einstein's General Theory of Relativity. Offered alternate years; alternates with Astron 416.

**485 FOURIER TRANSFORM TECHNIQUES (3) F**

Prereq: Physics 325 and 339. Fourier transforms; convolution; autocorrelation; signal analysis and power spectra; applications of major Fourier transform theorems; filters; discrete Fourier transforms; use of computer software to solve transform problems.

**486 MATHEMATICAL METHODS OF PHYSICS (3) W**

Prereq: Physics 325; Math 331. Mathematical techniques needed for physics graduate courses. Orthogonal functions and the boundary value problem; power series solutions of differential equations and special functions defined by power series solutions; Laplace transforms; groups and group representations.

**COURSES IN ASTRONOMY**

*Courses numbered X37; X97; 300, 400; 417, 445 are described on page 31 of this catalog.*

**103 ASTRONOMY FOR THE LIBERAL ARTS (4) F,W,S**

Prereq: Physics 101 or Chem 101. A survey of astronomy including the solar system, galactic structure and cosmology. Not recommended for science, math or computer science majors.

**315 GENERAL ASTRONOMY: SOLAR SYSTEM (4) F**

Prereq: Physics 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 GENERAL ASTRONOMY: STARS AND GALAXIES (4) W**

Prereq: Physics 114. Origin, structure and evolution of stars; supernovae, pulsars and black holes. The structure of galaxies; radio galaxies and quasars. Intended for science, math and computer science majors.

**320 COSMOLOGY (3) S**

Prereq: Astron 316 or 327 (or Astron 103 and one year of college physics). Origin and evolution of the universe; curved spacetime; the big bang; the expanding universe; the fate of the universe. Offered alternate years; alternates with Astron 333.

**327 ASTRONOMY FOR PHYSICISTS (2) S**

Prereq: Physics 223, 224; Math 224. Astronomical background needed by physicists; at a higher mathematical level than Astron 315 and 316. Positions and magnitudes of stars; time systems; stellar motions; atmospheric extinction; binary and variable stars; stellar spectra and H-R diagrams; temperatures of stars; line formation; stellar interiors and stellar evolution; interstellar matter and gaseous nebulae.

**333 SEARCH FOR LIFE IN THE UNIVERSE (3) S**

Prereq: 3 credits of college physics or astronomy. Life in and beyond the solar system; extraterrestrial intelligence and interstellar communication; radio search for extraterrestrial life; life detection experiments; problems of interstellar travel. Offered alternate years; alternates with Astron 320.

**357 ASTRONOMICAL IMAGING LABORATORY (3) S**

Prereq: CS 120; Physics 224, 322 and 325; Astron 327. Image detector systems used in astronomy. CCD camera fundamentals and use in laboratory experiments and telescope imaging. Use of image analysis software on UNIX workstations. Studies of spectra of stars and gaseous nebulae. Laboratory.

**416 ASTROPHYSICS (3) S**

Prereq: Physics 336, 363 and Astron 327. Application of physics to stars, nebulae and galaxies. Radiation; atomic spectra and chemical abundances in stellar atmospheres and gaseous nebulae; nuclear synthesis in stars; stellar evolution. Offered alternate years; alternates with Physics 479.

**457 SENIOR ASTRONOMY PROJECT (1-3) F,W,S**

Prereq: Physics 323, 336 and 339; Astron 327 and 357; senior status in physics; permission of instructor required. Individual projects under supervision. The project may use the equipment of the Astron 357 lab and it may be an extension of a summer research project carried out at another institution. Written report required. Repeatable for credit.

## 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 Bachelor of Arts in Education with secondary education endorsement, the Master of Arts, the Master of Arts option in public policy, 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.
  - *Minors*: political science, Canadian-American studies, East Asian studies
- Bachelor of Arts in Education
  - *Major*: political science for secondary education
- Master of Arts in Political Science
- Master of Arts in Political Science (Public Policy)
- Master of Arts in Political Science (Political Science/Environmental Studies)

### MID-PROGRAM CHECKPOINT

In order to finish the political science major in a timely fashion, you should try, by the end of your sophomore year, to complete the prerequisites you may need for advanced courses in the five fields within the major. Check the specific courses you intend to take so that you can plan

on completing the appropriate prerequisites. It is also advisable to take a course in the methodology and political analysis field early in your program since these tools are helpful in other courses. The most common prerequisites are:

*International and Comparative*: Pol Sci 271 or 272, or 291

*Methodology and Political Analysis*: Pol Sci 101 or 250

*Political Theory*: Pol Sci 360

*Politics, Government and Law*: Pol Sci 250

*Public Policy and Administration*: Pol Sci 320

### POLITICAL SCIENCE FACULTY

EUGENE J. HOGAN (1969) Chair. Associate Professor. BA, Gonzaga University; MA, Georgetown University; PhD, University of Oregon.  
 DONALD K. ALPER (1971) Professor. BA, MA, California State University, Long Beach; PhD, University of British Columbia.  
 TODD A. DONOVAN (1991) Associate Professor. BA, California State University, Sacramento; MA, PhD, University of California, Riverside.  
 MAURICE H. FOISY (1970) Associate Professor. BA, Gonzaga University; MA, Georgetown University; PhD, University of Oregon.  
 KENNETH R. HOOVER (1988) Professor, BSc, Beloit College; MSc, PhD, University of Wisconsin, Madison.  
 VERNON D. JOHNSON (1986) Associate Professor. BA, Akron University; MA, PhD, Washington State University.  
 RALPH E. MINER (1970) Associate Professor. BA, San José State College; MA, PhD, University of Oregon.  
 KRISTEN D. PARRIS (1991) Associate Professor. BA, MA, PhD, Indiana University.  
 ADAM RESNICK (1999) Assistant Professor. BA, University of California, Berkeley; MA, University of Colorado.  
 GERARD F. RUTAN (1969) Professor. BA, MA, University of Montana; PhD, University of North Carolina, Chapel Hill.  
 DEBRA J. SALAZAR (1990) Professor. BSc, University of California, Berkeley; MSc, PhD, University of Washington.  
 SARA J. WEIR (1989) Associate Professor. BA, MA, Ball State University; PhD, University of Washington.  
 DAVID W. ZIEGLER (1967) Associate Professor. BA, Oberlin College; MA, PhD, Harvard University.

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 telephone (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

- Pol Sci 250
- One of the following: Pol Sci 460, 461, 462, 463
- Additional credits selected from the five areas listed below; at least 18 credits in one area; at least 8 credits in each of two areas; and 4 credits in the remaining two areas. No course may be counted in more than one area. Pol Sci 101 credits apply toward the major but do not count in any area. No more than ten credits of internship, or of independent study, may be counted toward the major.

*International and Comparative Politics:* Pol Sci 271, 272, 291, 301, 302, 303, 305, 307, 308, 370, 376, 390, 402, 406, 411, 417, 418a, 430, 431, 453

*Methodology and Political Analysis:* Pol Sci 260, 365, 366, 427, 450

*Political Theory:* Pol Sci 360, 365, 460, 461, 462, 463, 464, 465, 466, 469, 480

*Politics, Government and Law:* Pol Sci 311, 313, 343, 345, 346, 353, 411, 414, 415, 421, 423, 427, 429, 441, 443, 446, 449, 450, 453, 475, 480, 491

*Public Policy and Administration:* Pol Sci 320, 345, 346, 347, 350, 353, 414, 415, 420, 421, 423, 425, 427, 429, 444, 468, 481, 491

### Combined Major

A combined major is possible as an option for 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 Political Science Department and a department with which political science has established arrangements. A plan of study must be approved by both departments for completion of the major.

#### Minor — Political Science

25 credits

- ❑ Pol Sci 250
- ❑ Remaining credits from at least two areas

#### Minor — Canadian/American Studies

30 credits

Program Advisers: Dr. Donald Alper, Dr. Gerard Rutan

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 Adviser: Dr. James Hearne

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 credits

Program Adviser: Dr. Ralph E. Miner

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, 208, 303, 306, 307, 310
- ❑ FMDS 205 or equivalent
- ❑ 12 additional credits in upper-division economics courses, under departmental advisement
- ❑ One Business and Economics communications focus course must be taken
- ❑ Pol Sci 250; 260 or 365; 272 or 291; 360; 425

- ❑ Econ/Pol Sci 491 (or approved alternative)
- ❑ A minimum of one course from each of these groups: Pol Sci 320 or 427 or 468; 345 or 346 or 347; 462 or 463 or 465
- ❑ 8-9 additional credits in upper-division political science electives, to complete the total required 94 credits of this program

### Combined Major — Politics/Philosophy/Economics

84-85 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
- ❑ Econ 208 or FMDS 205 or equivalent
- ❑ 12 additional upper-division economics credits
- ❑ Pol Sci 250, 360
- ❑ One course from each group:
  - Pol Sci 272 or 291
  - Pol Sci 320 or 425 or 427
  - Pol Sci 345 or 346 or 347
  - Pol Sci 462 or 463 or 465 or 469
- ❑ Phil 102, 112, 114, 310, 320, 420, 350, 360, 364
- ❑ One communications focus course must be taken

## BACHELOR OF ARTS IN EDUCATION

### Major — Political Science

Program Adviser: Dr. Sara Weir

60 credits, including:

- ❑ Pol Sci 250
- ❑ 18 credits in politics, government and law
- ❑ 8 credits in each of three of the following four areas:
  - International and comparative politics
  - Political theory
  - Public policy and administration
  - Methodology

Alternatives to this distribution may be approved by the department adviser.

- ❑ Political science electives under advisement

### DEPARTMENTAL HONORS

A political science major who wishes to graduate with honors in political science must complete Pol Sci 496 (Honors Tutorial) and two years of foreign language (or a satisfactory reading knowledge of a foreign language or two years of participation in college debate). The student also must submit a senior thesis and have a grade point average of 3.50 in upper-division political science courses. Students in the University honors program also must satisfy these departmental requirements.

### INTERNSHIPS

Students are encouraged to obtain internships in state, local or national government agencies, political parties and interest groups. Credit may be obtained by prior arrangement. Up to 10 credits may be counted toward the

major. The academic relevance and adequacy must be determined by the department through a written evaluative report. Prerequisite is 10 credits in political science or consent of the chair.

### 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 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

*Courses numbered X37; X97; 300, 400; 417, 445 are described on page 31 of this catalog.*

#### 101 GOVERNMENT AND POLITICS IN THE MODERN WORLD (5)

Introduction to concepts of politics; types of governments and political problems in the world today.

#### 210 WRITING ABOUT POLITICS (4)

Prereq: Pol Sci 101 or 250, Eng 101 or equivalent. Practice in writing analytical reviews and critiques concerning political ideas, events, and texts. Regularly scheduled conferences with instructor required. Applicable to GUR Communication and Critical Analysis, Part A, requirement for a second writing course.

#### 250 THE AMERICAN POLITICAL SYSTEM (5)

Consideration of the system and process of American politics and government with primary focus on the national level.

#### 260 POLITICAL ANALYSIS (5)

Prereq: Pol Sci 101 or 250. An introduction to the kinds of argument and evidence used in politics and political science.

#### 271 INTERNATIONAL POLITICS: WAR AND PEACE (5)

Analysis of wars, current threats to peace and alternatives to war.

#### 272 INTERNATIONAL POLITICS: INTERNATIONAL POLITICAL ECONOMY (5)

Analysis of political institutions and international regimes that deal with problems of international economics, trade, foreign aid and environmental issues.

#### 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: Pol Sci 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: Pol Sci 101 or 291. Governments and politics of selected western European states.

#### 303 RUSSIAN POLITICS (5)

Prereq: Pol Sci 101 or 291 or equivalent. A survey of the political systems of Russia and the newly independent states: state institutions, state/social relations, policy-making, foreign policy.

#### 305 INTERNATIONAL POLITICS IN THE MIDDLE EAST (4)

Prereq: Pol Sci 101, 271 or 272. The interplay of Zionism and Arab nationalism; the individual and collective responses of the Arab states to the creation of Israel.

#### 307 EAST ASIA (5)

Prereq: Pol Sci 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: Pol Sci 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.

#### 311 JURISPRUDENCE (5)

Prereq: Pol Sci 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: Pol Sci 250. A comparative study and analysis of public policy on outstanding contemporary socio-political issues.

#### 320 POLITICS AND PUBLIC ADMINISTRATION (5)

Prereq: Pol Sci 250. The politics, institutions and management of the executive branch of American governments: federal, state and local.

#### 343 POLITICAL COMMUNICATION (5)

Prereq: Pol Sci 101 or 250. The relationship between mass media and politics; issues of law, regulation and bias; public officials and the press; the impact and role of media in election campaigns.

#### 345 WOMEN AND POLITICS (5)

Prereq: Pol Sci 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: Pol Sci 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: Pol Sci 250 or equivalent. The historical and political bases of contemporary racial conflict in the United States.

#### 350 WASHINGTON STATE POLITICS (4)

Prereq: Pol Sci 250 or equivalent. A survey of the evolution of the public sector in the State of Washington. Examination of state political processes and institutions.

#### 353 STATE AND LOCAL POLITICS (5)

Prereq: Pol Sci 250. Politics of states, urban regions and suburbs. Inter-jurisdictional conflict over growth or development. Federal relations, direct democracy and state policy making.

#### 360 INTRODUCTION TO POLITICAL THEORY (5)

Prereq: Pol Sci 101 or 250. Major concepts of Western political theory — thematic or historical approach.

#### 365 POLITICAL INQUIRY (5)

Prereq: Pol Sci 260. An examination of the contributions of science, philosophy and other inquiry systems to political knowledge and action. Explores ethical and political problems posed for inquiry by the relation between knowledge and power. Techniques for identifying and defining problems for analysis.

#### 366 RESEARCH IN POLITICS (5)

Prereq: Pol Sci 260. Fundamentals of research design, including basic methods for the collection and statistical analysis of political and administrative data.

#### 370 GLOBAL ISSUES IN INTERNATIONAL POLITICS (4)

Prereq: Pol Sci 271 or 272. Problems of global dimensions (population, food, resources, environment, nuclear proliferation, terrorism) and international efforts to solve them.

#### 376 AMERICAN FOREIGN POLICY (5)

Prereq: Pol Sci 250 or 271 or 272. Background and organization of American foreign policy; the conduct of diplomatic relations with other states; current issues and problems in foreign affairs.

#### 390 THE POLITICS OF DEVELOPMENT (5)

Prereq: Pol Sci 272 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.

**402 REGIONAL EUROPEAN SOCIETY AND POLITICS (4)**

Prereq: Pol Sci 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: Pol Sci 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.

**411 INTERNATIONAL LAW (4)**

Prereq: Pol Sci 271. Origin, principles and problems. Not offered every year.

**414 CONSTITUTIONAL LAW I: NATIONAL POWERS (5)**

Prereq: Pol Sci 250 and upper-division status. Supreme Court decisions interpreting major parts of the Constitution: judicial power; separation of powers; and federalism.

**415 CONSTITUTIONAL LAW II: INDIVIDUAL RIGHTS (5)**

Prereq: Pol Sci 250, 414 and upper-division status. Supreme Court decisions interpreting major parts of the Constitution: Bill of Rights and Fourteenth Amendment.

**417a SPECIAL TOPICS IN COMPARATIVE POLITICS (3-5)**

Analysis and discussion of current changes, crises and challenges confronting contemporary governments. Topics vary but emphasis is on comparative issues and approaches. Repeatable with various topics to a maximum of 10 credits.

**417b TOPICS IN WOMEN AND POLITICS (3-5)**

Prereq: PolSci 345 and WS 211 or permission. Analysis and discussion of current topics related to women and politics. Topics vary. Repeatable with various topics to a maximum of 10 credits.

**418 SPECIAL PROBLEMS (2-3)**

(Not offered every year.)

**418a SEMINAR IN INTERNATIONAL POLITICS (3)**

Prereq: Pol Sci 271 or 272.

**420 ENVIRONMENTAL POLITICS (5)**

Prereq: Pol Sci 101 or 250. 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: Pol Sci 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: Pol Sci 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.

**425 THE POLITICS OF ECONOMIC POLICY-MAKING (4)**

Prereq: Pol Sci 250 or equivalent and Econ 206 or 207 or equivalent. The political consequences of taxing, spending, interest rates, and of the federal reserve system and government regulation of business.

**427 POLICY-MAKING AND POLICY ANALYSIS (4)**

Prereq: Pol Sci 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.

**429 ADMINISTRATION AND DEMOCRACY (4)**

Prereq: Pol Sci 320. Relationships of various administrative forms, processes and behaviors to varying theoretical conceptions and empirical descriptions of democracy. Not offered every year.

**430 MODERN CHINESE POLITICS (4)**

Prereq: Pol Sci 291 or equivalent. An 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: Pol Sci 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.

**441 CONGRESS: PEOPLE AND POLITICS (4)**

Prereq: Pol Sci 250. The politics and policies of the national Congress in the internal organization of the U.S. Senate and House of Representatives and in their external relations with the President, the bureaucracy, interest groups and the voters. Not offered every year.

**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: two courses in appropriate field within the discipline and permission of department. Internships in administrative agencies and other public service settings. Priority given to seniors. Requests for internships should be filed with the departmental intern coordinator one quarter in advance of registration for this course. No more than 10 credits in internship may be counted toward the major without the permission of the chair. Credit may be divided over two quarters where the internship placement requires a commitment of more than 10 weeks. Repeatable to 15 credits.

**446 CURRENT PROBLEMS IN AMERICAN GOVERNMENT AND POLITICS (3)**

Prereq: upper-division status. Discussion and assessment of current changes in the laws, institutions, policies and political processes of American government. Focus on issues and problems drawn from scholarly journals, journals of opinion, magazines and newspapers. Current changes and contemporary issues and problems from both a scholarly and journalistic perspective.

**449 POLITICS AND SOCIAL CHANGE (4)**

Prereq: Pol Sci 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: Pol Sci 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: Pol Sci 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.

**460 CLASSICAL POLITICAL THOUGHT (4)**

Prereq: Hist 111 or Lbrl 121 or Pol Sci 360 or equivalent. Origin and evolution of major concepts in Western political thought from the ancients to the Renaissance.

**461 POLITICAL THEORY: RENAISSANCE AND MODERN (4)**

Prereq: Hist 112 or Lbrl 121 or Pol Sci 360 or equivalent. The development of major concepts in the classical liberal tradition, and the critique of that tradition by communitarians and conservatives. The Renaissance to the Moderns.

**462 THE RISE OF MODERN POLITICAL ECONOMY (4)**

Prereq: Pol Sci 360 or Hist 113 or Econ 206 or 207 or equivalent. The development of modern conceptions of politics and the economy beginning with the classical political economists of 18th-century through 20th-century developments.

**463 AMERICAN POLITICAL THOUGHT (4)**

Prereq: Pol Sci 360 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: Pol Sci 360 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.

**465 THEORIES OF DEMOCRACY (4)**

Prereq: Pol Sci 360. Survey and analysis of theories of democracy, from ancient to modern. Normative and empirical theories with emphasis on contemporary theory and research findings. Not offered every year.

**466 IDENTITY, IDEOLOGY AND POLITICS (4)**

Prereq: Pol Sci 101 or 360. Examines the impact of ideologies on political behavior and public policy. Explores such examples as the rise and fall of the left, and the decline and regeneration of conservatism in American politics; and examines the link between ideology and identity as an explanatory theme.

**468 POLITICAL ECONOMY OF NATURAL RESOURCES (5)**

Prereq: Pol Sci 260; Econ 206; or permission. The role of political/economic institutions in regulating the exploitation of natural resources; how polities define and modify property arrangements; how economies allocate natural resources within the context of property rules.

**469 FEMINIST POLITICAL THEORY (4)**

Prereq: Pol Sci 360 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.

**475 POLITICS AND INFORMATION (4)**

Prereq: Pol Sci 250, 271 or 272 or 320. How policy makers gather, evaluate and use information; special attention to public policy, the judicial system and foreign policy.

**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.

**481 AUTHORITY, POWER AND PARTICIPATION (4)**

Prereq: PolSci 101 or 250; 260 or 366. Analysis and comparison of ways of constructing relations of authority, of power and of participation. Uses case studies drawn from politics, cooperatives, corporations and other forms of organization to develop generalizations about the functioning and limits of each kind of relationship.

**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.

**496a,b,c HONORS TUTORIAL (2-5 ea)**

**Graduate Courses**

*Courses numbered 500; 517; 545; 597 are described on page 31 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 sub-fields trends and challenges.

**502 RESEARCH TECHNIQUES IN POLITICAL SCIENCE (5)**

Prereq: Pol Sci 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.

**506a,b ADVANCED TOPICS IN COMPARATIVE GOVERNMENT AND POLITICS (5 ea)**

Prereq: permission of instructor and graduate adviser. Advanced comparative consideration of the political systems of selected nation-states.

**520 SEMINAR IN PUBLIC ORGANIZATIONAL THEORY (3)**

Organizational theory and practice in public settings.

**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 Envr 524.

**525 SEMINAR IN MODERN POLITICAL ECONOMY (3)**

Prereq: permission of instructor. Consideration of contemporary theories of political economy: the political aspects of resource allocation and the politics of the distribution of governmental benefits and burdens. Consideration also is given to various exchange theories of collective decision making in democratic systems.

**528a,b SPECIAL PROBLEMS IN PUBLIC POLICY AND ADMINISTRATION (1-5)**

Prereq: permission of instructor and graduate adviser. The consideration of special problems and the conduct of independent study under the guidance and supervision of a member of the faculty. Repeatable to a maximum of 10 credits.

**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.

**541 SEMINAR IN VOTING BEHAVIOR AND PUBLIC OPINION (3)**

Prereq: Pol Sci 502 or permission of instructor. The evaluation of major empirical studies of voting behavior and public opinion. Consideration of the role of information in structuring opinions and the act of voting. An examination of individual attachments to parties, economic motivation for voting and decision-making in multiple electoral contexts.

**542 PUBLIC SERVICE INTERNSHIP (1-10)**

Prereq: Pol Sci 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 non-profit 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 sub-national levels, both American and other, internally and in relation to national levels.

**560a,b SEMINAR IN POLITICAL THEORY (5 ea)**

Function and history of political theory; the crisis in traditional theory; emerging trends

**570a,b SPECIAL PROBLEMS IN POLITICAL SCIENCE (1-5)**

Prereq: permission of instructor and graduate adviser. 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.

**595 TEACHING IN THE SOCIAL SCIENCES (3)**

Prereq: Pol Sci 501 or equivalent in anthropology or sociology. Examination of conceptual frameworks and techniques for teaching social science subjects at the high school and community college levels. Also offered as Anth 595 and Soc 595.

**690 THESIS/THESIS RESEARCH (1-9)**

# PSYCHOLOGY

## College of Arts and 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 25 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. Since the number of required courses is relatively small, students can complete the major from a variety of course offerings under advisement.

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 offers the M.S. degree in general psychology. There also are specialized concentrations in clinical/counseling psychology, and in measurement, evaluation, and statistical analysis. The department also offers an M.Ed. in school counseling psychology. Complete descriptions of the master's program are included in the Graduate section of this catalog.

## PSYCHOLOGY FACULTY

RONALD A. KLEINKNECHT (1970) Chair and Professor. BA, MS, PhD, Washington State University.  
 CHRISTINA A. BYRNE (1997) Assistant Professor. BS, Virginia Commonwealth University; MS, PhD, University of Georgia.  
 STEPHEN L. CARMEAN (1964) Professor. BA, MA, PhD, University of Illinois.  
 CATHERINE CRAIN-THORESON (1991) Associate Professor. BA, San Diego State University; MA, University of California, San Diego; PhD, University of Washington.

GEORGE T. CVETKOVICH (1969) Professor. BA, Youngstown State University; MA, Akron State University; PhD, Kansas State University.  
 DALE L. DINNEL (1986) Associate Professor. BS, MAT, MA, PhD, University of Nebraska.  
 PETER J. ELICH (1961) Professor and Dean of College of Arts and Sciences. BA, University of Washington; MEd, Western Washington State College; PhD, University of Oregon.  
 DEBORAH C. FORGAYS (1994) Associate Professor. BA, MEd, PhD, University of Vermont.  
 FREDERICK W. GROTE, JR. (1970) Associate Professor. AB, Dartmouth College; PhD, University of North Carolina.  
 DAVIS C. HAYDEN (1986) Associate Professor. BA, MA, PhD, University of California, Santa Barbara.  
 SUSANNA A. HAYES (1990) Associate Professor. MS, Loyola University; MEd, University of Arizona; PhD, University of Michigan.  
 IRA E. HYMAN, JR. (1991) Associate Professor. BA, Duke University; MA, PhD, Emory University.  
 SAERA R. KHAN (1998) Assistant Professor. BA, Loyola University; MA, PhD, Washington 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.  
 MARCIA Z. LIPPMAN (1969) Associate Professor. BA, MA, Michigan State University; PhD, University of British Columbia.  
 WALTER J. LONNER (1968) Professor. BA, MA, University of Montana; PhD, University of Minnesota.  
 MICHAEL J. MANA (1999) Assistant Professor. BS, Washington State University; MA, PhD, University of British Columbia.  
 LESLIE C. MCDONALD-MISZCZAK (1997) Assistant Professor. BA, University of Alberta; MA, PhD, University of Victoria.  
 LAURENCE P. MILLER (1968) Professor. BA, University of California, Los Angeles; MA, San Fernando Valley State College; PhD, Ohio State University.  
 SCOTT A. OTTAWAY (1996) Assistant Professor. BA, Western Washington University; MS, PhD, University of New Mexico.  
 MERLE M. PRIM (1969) Professor. BA, University of Washington; MS, San Diego State College; PhD, Washington State University.  
 RONALD W. SHAFFER (1970) Associate Professor. BA, California State University at Los Angeles; MA, PhD, University of New Mexico.  
 DAVID SUE (1985) Professor. BS, University of Oregon; MS, PhD, Washington State University.  
 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.

## MID-PROGRAM CHECKPOINT

Students seeking to complete a B.A. in psychology within a four-year time span should have completed the following courses by the start of their junior year. Major omissions from the list will make it difficult or impossible to complete this degree within two additional years.

- Psych 201 and 15 additional credits from Psych 309, 310, 313, 314, 315, 316, 320, 321, 322, 323, 324, 325, 326, 327, 329, 342, 343, 347, 353

## DECLARATION OF MAJOR

Students wishing to declare a major in psychology must: (a) have completed at least 75 credits; (b) students must have completed 20 psychology credits before enrolling in Psych 301 and at least 5 of them must be from WWU; and (c) achieved a WWU all-college GPA of 2.50 or higher. A GPA of 3.0 for at least 25 credits of Psychology (including Psych 301) may substitute for the 2.50 WWU all-college

GPA. For more detailed information and application, contact the Department of Psychology, Miller Hall 220.

## BACHELOR OF ARTS

### Major — Psychology

60 credits

The psychology major consists of a 49-credit core and 11 elective credits in psychology.

#### Core Required Courses

- Psych 201, 301, 302, 303
- Two courses from Psych 309-316
- Two courses from Psych 321-327, 329
- One course from Psych 401-403
- One course from Psych 404-406
- One course from Psych 411-412
- 11 elective credits in psychology. Only 5 credits of independent study are applicable for fulfillment of the required 11 hours of elective courses

### Minor — Psychology

24 credits

- Psych 201
- One course from Psych 309-316
- One course from Psych 321-327, 329
- Electives under advisement

### Minor — Sport Psychology

30-32 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 and introduces students to psychometric and clinical techniques which are an integral part of this discipline.

- Psych 201, 311 or 315; PE 307, 309, 310
- PE 408 (to be taken after all courses in the minor are completed)
- Select a minimum of two courses under advisement from Psych 301, 311, 313, 315, 316, 321, 322, 324, 329, 342, 353
- Physical education majors cannot use PE 307, 309, 310 for both major and minor requirements and must select replacement courses from psychology electives

## BACHELOR OF ARTS IN EDUCATION

### Major — Elementary — Human Development

53-56 credits

Adviser: F. Grote

- Psych 201
- Psych 301, 302, 303
- Either Psych 316 or Psych 352
- Either Psych 321 or Psych 351

\* Students enrolled in Psych 306 who will have completed the other requirements for admission to the major at the end of that quarter may apply for admission to the psychology major and register for Psych 307. Admission to the major and continuing enrollment in Psych 307 will be contingent on successful completion of Psych 306.

- One course from Psych 309-315
- One course from Psych 322-327
- One course from Psych 401, 402 or 403
- One course from Psych 404, 405 or 406
- Two courses from Psych 353, 355 or 456
- Psych 411 or Psych 412

This major must be accompanied by the professional preparation program in elementary education. This results in both a K-8 elementary and a 4-12 psychology endorsement.

### Minor — Psychology

24 credits

- Psych 201
- One course from Psych 309-316
- One course from Psych 321-327, 329
- Electives under advisement

## 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

Courses numbered X37; X97; 300, 400; 417, 445 are described on page 31 of this catalog.

Courses in educational psychology include Psych 316, 351, 352 and 353. Note that credit may not be earned for both Psych 321 and 351 or 316 and 352.

### 201 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.

### 219 PSYCHOLOGY OF GENDER (4)

Basic concepts, foundations for sex roles; similarities and differences between the sexes; historical customs, personality theories, cultural, sub-cultural and cross-cultural perspectives.

### 301 OVERVIEW OF RESEARCH METHODS (5)

Prereq: Psych 201. 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 (4)

Prereq: Psych 301 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: Psych 302. Continuation of statistical inferencing introduced in Psych 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.

**309 ENVIRONMENTAL PSYCHOLOGY (5)**

Prereq: Psych 201. Theoretical, methodological and empirical problems and issues relating to behavior in constructed and natural environments.

**310 PSYCHOLOGY AND CULTURE (5)**

Prereq: Psych 201. 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.

**311 PSYCHOLOGICAL TESTS AND MEASUREMENT (5)**

Prereq: Psych 201, 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 non-restricted instruments of various types in small groups.

**313 PERSONALITY (5)**

Prereq: Psych 201. An examination of the major approaches to personality development, research and application.

**314 ABNORMAL PSYCHOLOGY (5)**

Prereq: Psych 201. 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.

**315 SOCIAL PSYCHOLOGY (5)**

Prereq: Psych 201. 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.

**316 DEVELOPMENTAL PSYCHOLOGY (5)**

Prereq: Psych 201. Basic principles of development. Topics include behavior genetics, early experience, language, cognition, personality and social development. Students cannot earn credit for both Psych 316 and 352. May be substituted for Psych 352 in the teacher education program.

**320 INDUSTRIAL/ORGANIZATIONAL PSYCHOLOGY (4)**

Prereq: Psych 201. Application of psychological principles to industrial problems of personnel selection and appraisal, human relations, marketing, training and engineering psychology.

**321 LEARNING (5)**

Prereq: Psych 201. A survey of the major principles of learning, memory and cognition. May be substituted for Psych 351 for teacher certification. Students cannot earn credit for both Psych 321 and 351.

**322 MOTIVATION (5)**

Prereq: Psych 201. 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 SENSORY PROCESSES (5)**

Prereq: Psych 201. The mechanisms by which humans and lower animals process information through various sensory modalities. The adaptive significance of sensory processes.

**324 PERCEPTION (5)**

Prereq: Psych 201. Classical and contemporary descriptions of human perceptual behavior; specific perceptual phenomena such as perceptual constancies, perception of intersensory stimuli, creativity and levels of awareness. Examples drawn from music, art, verbal and nonverbal communication.

**325 COMPARATIVE PSYCHOLOGY (5)**

Prereq: Psych 201. Phylogenic comparison of animal behavior, learning, motivation and sensory processes in selected species of animals.

**326 PHYSIOLOGICAL PSYCHOLOGY (5)**

Prereq: Psych 201. The biological foundations of behavior.

**327 PSYCHOLOGY OF INDIVIDUAL DIFFERENCES (5)**

Prereq: Psych 201, 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. Was Psych 312 in previous catalog.

**328 LABORATORY IN PHYSIOLOGICAL PSYCHOLOGY (3)**

Prereq: concurrent with Psych 326; Psych 301 or concurrent; Biol 101 recommended. Introduction to methods and techniques used to understand basic psychobiology. Experience in fundamental laboratory and electrophysiological procedures as provided through the study of crayfish biology and behavior. Live animal research. Was Psych 327 in previous catalog.

**329 COGNITION (5)**

Prereq: Psych 201. Provides an overview of the theories, methods and practical applications of cognitive psychology. The higher mental processes, particularly the ways in which knowledge is acquired, stored and used, will be emphasized. The course also examines how theories and findings from cognitive psychology can help us to understand mental activities in everyday life.

**342 THINKING AND IMAGINATION (4)**

Prereq: Psych 201. 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.

**343 PHENOMENOLOGY (5)**

Prereq: Psych 201. An introduction to phenomenology as an alternative method for psychological research and understanding. Works by Husserl, Heidegger, Levinas and Merleau-Ponty are examined, and students participate in research projects that emphasize the phenomenological approach to psychology.

**347 HUMANISTIC PSYCHOLOGY (5)**

Prereq: Psych 313. Reviews personality theories, practices and research generated by the contemporary, humanistic view of man. Some work of such leaders in this third force of psychology as Adler, Allport, May, Maslow, Rogers, Frankl and Fromm.

**349 PSYCHOLOGY AND THE ARTS (3)**

Prereq: Psych 201. 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.

**351 PSYCHOLOGY OF HUMAN LEARNING, COGNITION AND INSTRUCTION (4)**

Prereq: Psych 201; not open to those with credit in Psych 321. Psychological principles of learning and cognition and their application to classroom teaching. Students cannot earn credit for both Psych 321 and 351.

**352 CHILD DEVELOPMENT AND EDUCATION (4)**

Prereq: Psych 351 or concurrent. Basic principles of development, with special attention to the preschool and elementary school age child. Students cannot earn credit for both Psych 316 and 352.

**353 ADOLESCENT PSYCHOLOGY (4)**

Prereq: Psych 201 or 351. Basic principles of development with special attention to the secondary school age child; implications for educational practices.

**355 PSYCHOLOGY OF CHILD REARING (3)**

Prereq: Psych 201. 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.

**357 ADULT DEVELOPMENT AND AGING (4)**

Prereq: Psych 201. 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.

**362 PSYCHOLOGY OF FEAR (2)**

Prereq: Psych 201 or equivalent. Emotional and behavioral components and effects of fear, anxiety and phobias. Diagnosis assessment and treatment of anxiety disorders. Summer only.

**401 SEMINAR IN CROSS-CULTURAL AND ENVIRONMENTAL PSYCHOLOGY (3)**

Prereq: a grade of C- or better in Psych 303 and 309 or 310. Major issues and methods in the study of culture as a cause and effect of

psychosocial adaptation to the physical environment. Library and laboratory or field research.

**402 SEMINAR IN PERSONALITY AND ABNORMAL PSYCHOLOGY (3)**

Prereq: a grade of C- or better in Psych 303 and 313 or 314. Major issues and methods in the study of personality and abnormal psychology. Library and laboratory or field research.

**403 SEMINAR IN SOCIAL AND DEVELOPMENTAL PSYCHOLOGY (3)**

Prereq: a grade of C- or better in Psych 303 and 315 or 316. Major issues and methods in the study of social and developmental psychology. Library and laboratory or field research.

**404 SEMINAR IN LEARNING AND MOTIVATION (3)**

Prereq: a grade of C- or better in Psych 303 and one from 321, 322 or 329. Major issues and methods in the study of learning and motivation. Library and laboratory or field research.

**405 SEMINAR IN PERCEPTUAL AND COGNITIVE PROCESSES (3)**

Prereq: a grade of C- or better in Psych 303 and one from 323, 324, 329 or 342. Major issues and methods in the study of sensation, perception and thinking. Library and laboratory or field research.

**406 SEMINAR IN COMPARATIVE AND PHYSIOLOGICAL PSYCHOLOGY (3)**

Prereq: a grade of C- or better in Psych 303 and 325 or 326. Major issues and methods in the study of comparative and physiological psychology. Library and laboratory or field research.

**407 LABORATORY IN COMPARATIVE AND PHYSIOLOGICAL PSYCHOLOGY (3)**

Prereq: concurrent with Psych 406; Psych 327; Psych 303 or concurrent; Biol 101 recommended. Laboratory-based electrophysiological and behavioral study of integrated neural systems. Live animal research.

**411 SEMINAR IN HISTORY AND SYSTEMS OF PSYCHOLOGY (4)**

Prereq: Completion of 50 credits in psychology, including Psych 303. An historical perspective of the development of psychological systems and theories and the impact of these developments on contemporary psychology.

**412 SEMINAR IN PSYCHOLOGICAL THEORY (4)**

Prereq: Completion of 50 credits in psychology, including Psych 303. A seminar examining the philosophical assumptions of science in general and psychology in particular.

**426 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 up to 6 credits. S/U grading.

**431 INTRODUCTION TO SCHOOL AND COMMUNITY COUNSELING (4)**

Prereq: declared major in psychology and Psych 301, 313 or 314. 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.

**456 ADVANCED TOPICS IN DEVELOPMENTAL PSYCHOLOGY (3)**

Prereq: Psych 301 and 316. Topics vary and include cognitive development; personality and social development; psycholinguistics; and youth and social issues. Check the *Timetable of Classes* to determine which topic is covered in a given quarter. Repeatable for credit with different topics. No maximum.

**Graduate Courses**

*Courses numbered 500; 517; 545; 597 are described on page 31 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 PHYSIOLOGICAL PSYCHOLOGY (4)**

Prereq: admission to the M.S. or M.Ed. in psychology program. Physiological psychology is the study of an organism's nervous system, its anatomy, physiology, and function as it correlates with the behavior of that organism. Review will be made of different levels of analysis of the central nervous system from the molecular to the molar; from single neuron to system levels that undergird behavior.

**502 PERSONALITY AND PSYCHOPATHOLOGY (4)**

Prereq: admission to the M.S. or M.Ed. 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 M.S. or M.Ed. 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 LIFE SPAN AND SOCIAL PSYCHOLOGICAL DEVELOPMENT (4)**

Prereq: admission to the M.S. or M.Ed. in psychology or permission of the instructor. An overview of the major theories and principles in developmental and social psychology. Theories, issues and principles are highlighted through an analysis of various topics across the lifespan and as they affect the psychological development of the individual.

**505 SOCIAL PSYCHOLOGY (4)**

Prereq: admission to the M.S. or M.Ed. 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.

**510 COMPUTERIZED DATA ANALYSIS (2)**

Prereq: admission to M.S. program or permission of instructor. Applications of computers to data-entry methods and statistical packages for data analysis. Use of computer packages to "clean" data for analysis. S/U grading.

**511 FUNDAMENTALS OF PSYCHOLOGICAL TESTING (3)**

Prereq: admission to M.S. program and Psych 306 or equivalent. 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: Psych 511. Covers topics in bivariate and multivariate correlation and regression. Students learn to design correlation studies and to analyze correlational data involving one dependent variable and one or more independent variables. Indices covered include regression coefficients, bivariate product-moment correlations and their special cases, partial and semi-partial correlations, and multiple correlations/regression. Use of computer-based statistical software packages for data analysis and interpretation is stressed.

**513 RESEARCH AND ANALYSIS (4)**

Prereq: Psych 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.

**514 TOPICS IN QUANTITATIVE PSYCHOLOGY (1-6)**

Prereq: Psych 515 or 516 or permission of instructor. Specific content of course to be arranged by agreement of instructor and students. Examples of appropriate content would be computer applications in psychological research; mathematical models of behavior; statistical consulting. Repeatable to 6 credits. S/U grading.

**515 MULTIVARIATE ANALYSIS (3)**

Prereq: Psych 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 ADVANCED RESEARCH AND EVALUATION DESIGN AND DATA ANALYSIS (3)**

Prereq: Psych 513. Multivariable designs, multiple interaction analysis, computer programs and operation. Research designs that involve several criterion measures.

### **520 SEMINAR IN PERCEPTION (3)**

Prereq: permission of instructor.

### **521 SEMINAR IN LEARNING (3)**

Prereq: permission of instructor.

### **522 SEMINAR IN COMPARATIVE PSYCHOLOGY (3)**

Prereq: permission of instructor.

### **523 SEMINAR IN PHYSIOLOGICAL PSYCHOLOGY (3)**

Prereq: permission of instructor.

### **524 SEMINAR IN MOTIVATION (3)**

Prereq: permission of instructor.

### **525 SEMINAR IN CURRENT PHILOSOPHICAL ISSUES IN PSYCHOLOGY (3)**

Prereq: permission of instructor.

### **526 SEMINAR IN DEVELOPMENTAL PSYCHOLOGY (3)**

Prereq: permission of instructor.

### **527 SEMINAR IN PERSONALITY (3)**

Prereq: permission of instructor.

### **528 SEMINAR IN SOCIAL PSYCHOLOGY (3)**

Prereq: permission of instructor.

### **529 SEMINAR IN BEHAVIOR PATHOLOGY (3)**

Prereq: permission of instructor.

### **530 SEMINAR IN MEASUREMENT (3)**

Prereq: permission of instructor.

### **531 DEVELOPMENTAL PSYCHOPATHOLOGY (3)**

Prereq: admission to the M.S. Or M.Ed. in psychology program. 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.

### **532 CROSS-CULTURAL PSYCHOLOGY: THEORY, RESEARCH AND APPLICATIONS (3)**

Prereq: admission to M.S. Or M.Ed. in psychology program. This seminar is a basic introduction to the cross-cultural perspective in psychology. History of the modern cross-cultural movement will be covered along with a selection of a number of conceptual and methodological issues and problems. Topic areas will include perception, cognition and emotion, developmental topics, social psychological variables, testing and measurement, personality and psychopathology, and virtually all areas of psychology mediated by culture and ethnicity. Some emphasis given to professional applications such as counseling.

### **551 DEVELOPMENTAL SCHOOL COUNSELING (3)**

Prereq: admission to M.S. mental health counseling curriculum or to M.Ed. in school counseling; students in general 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 M.S. mental health counseling curriculum or to M.Ed. school counseling program; may be taken by students in the M.S. general curriculum with permission of the 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 (3)**

Prereq: admission to M.Ed. school counseling program, M.S. 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 M.S. mental health counseling curriculum or to M.Ed. school counseling program and Psych 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 M.S. mental health counseling curriculum or to M.Ed. in school counseling and Psych 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 M.S. mental health counseling curriculum and Psych 511, or admission to the M.Ed. school counseling program and Psych 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, MARITAL AND SEX COUNSELING (3)**

Prereq: admission to M.S. mental health counseling curriculum or M.Ed. school counseling program plus Psych 553 and 564. A review of major theories, techniques and research in psychological counseling with families. Emphasis is on parent-child developmental problems and the role of interpersonal relationships within the total family. Students are involved in limited supervised family counseling experiences.

### **560 FAMILY COUNSELING LAB (1-6)**

Prereq: admission to M.S. mental health counseling curriculum or M.Ed. 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 M.S. mental health counseling curriculum or M.Ed. 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 M.S. mental health counseling curriculum or M.Ed. 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 M.S. mental health counseling curriculum or M.Ed. school counseling program. Current group counseling and psychotherapy techniques. Covers task-directed, encounter, decision-making and communication techniques.

### **570 PRACTICUM (1-10)**

Prereq: admission to M.S. mental health counseling curriculum or M.Ed. school counseling program. Professional practice under assigned departmental supervision. Repeatable to 15 credits. S/U grading.

### **580 SEMINAR IN COLLEGE TEACHING OF PSYCHOLOGY (3)**

### **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.

**583 RESEARCH MENTORSHIP (1)**

Prereq: admission to the M.S. in psychology program. Provides an overview of research methods in psychology and the opportunity to develop a research program. Students meet independently with faculty to read, discuss and design research in their area of interest. Mentorship also will cover the procedures involved in conducting research at Western. Students will be given the opportunity to participate in ongoing research projects. S/U grading. Repeatable to a maximum of 3 credits.

**661 ADVANCED SEMINAR IN PROFESSIONAL ISSUES IN COUNSELING PRACTICE (2-4)**

Prereq: admission to M.S. mental health counseling curriculum, M.Ed. 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.

**670 INTERNSHIP (1-12)**

Prereq: admission to M.S. mental health counseling curriculum or M.Ed. school counseling program. An extension of Psych 570 with increasingly independent responsibilities for practice in a professional setting. Primary supervision is by appropriate staff in the cooperating agency. Repeatable to 30 credits. S/U grading.

**690 THESIS (1-6)**

Prereq: advancement to candidacy. S/U grading.

## SCIENCE EDUCATION

Students planning to major in a science for elementary or junior high teaching should see majors in general science or earth science. Students planning a major in science for high school teaching should consult with the appropriate science education advisers within the natural science departments or with the director of science education regarding the General Science major.

For further information and advisement contact the director of Science Education, Dr. Joseph Morse, phone (360) 650-3637, Science, Mathematics and Technology Education Office, SL 250D.

### GENERAL SCIENCE

For information consult the adviser, the director of Science Education.

### BACHELOR OF ARTS IN EDUCATION

#### *Major — General Science — Elementary*

45 credits

- Physics 114; Astron 103 or Geog 331 or Geol 252
- Chem 115 or 121; Geol 211, 212
- Biol 101, 102 or 201, 202
- Electives under advisement

This major must be accompanied by the professional preparation program in elementary education. It does not result in a science endorsement.

#### *Major — General Science — Secondary 4-12*

90-92 credits

The major in secondary science results in a science 4-12 endorsement. For certification a minimum grade point average of 2.75 in science courses is normally required.

- Physics — 15 credits: Physics 114, 115, 116 (or Physics 121, 122, 123, 131, 132, 133 and Math 124, 125)
- Chemistry — 15 credits: Chem 121, 122, 251
- Biology — 15 credits: Biol 201, 202, 203
- Earth Science — 12-14 credits: Geol 211, 212, 214, or 340 or 414
- Astron 315
- Sci Ed 491, 492
- Biol 485 or equivalent

Minimum of 15 additional credits in upper-division courses in one science discipline under advisement.

This major must be accompanied by the professional preparation program in secondary education.

### 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

*Courses numbered X37; X97; 300, 400; 417, 445 are described on page 31 of this catalog.*

#### **390 SCIENCE METHODS AND CURRICULUM FOR THE ELEMENTARY SCHOOL (3)**

Prereq: at least 12 credits in the natural sciences; general university requirements in mathematics; El Ed 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. To be taken in sequence with Sci Ed 391 (enroll one quarter prior to registering for Sci Ed 391).

#### **391 LABORATORY/FIELD EXPERIENCE IN ELEMENTARY SCIENCE (2)**

Prereq: Sci Ed 390. Emphasis on an experience in which students teach science to elementary students for an extensive portion of the quarter. To be taken in quarter following completion of Sci Ed 390. S/U grading.

#### **401 READING IN SCIENCE EDUCATION (1)**

Prereq: Sci Ed 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.

#### **491 METHODS IN SECONDARY EDUCATION FOR SCIENCE TEACHERS (5)**

Prereq: admission to the secondary teaching program and a major or concentration in natural sciences. Study of literature, curriculum and teaching strategies in life, earth and physical sciences for grades 4-12, plus peer teaching and school observations. To be taken in fall quarter of year student does student teaching.

#### **492 TEACHING SCIENCE FOR THE SECONDARY SCHOOL (4)**

Prereq: Sci Ed 491. Preparation and performance of the TIC during first 3 to 4 weeks of winter quarter prior to entering Sec 495. S/U grading.

### Graduate Courses

*Courses numbered 500; 517; 545; 597 are described on page 31 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 with major emphasis on the elementary grades as a basis for development 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.

#### **517 SPECIAL TOPICS (1-3)**

Prereq: Sci Ed 390, 391 or equivalent or teaching experience. Special topic offerings include a series of 12 physics subject areas and three watershed education courses.

### **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: Sci Ed 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 adviser, to a maximum of 8 credits.

### **583 SPECIAL TOPICS IN THE BIOLOGICAL SCIENCES FOR ELEMENTARY SCHOOL TEACHERS (4)**

Prereq: Sci Ed 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 adviser, to a maximum of 8 credits.

### **584 SPECIAL TOPICS IN THE EARTH SCIENCES FOR ELEMENTARY SCHOOL TEACHERS (4)**

Prereq: Sci Ed 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 adviser, 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 M.Ed. 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 adviser, to a maximum of 8 credits.

### **593 SPECIAL TOPICS IN THE BIOLOGICAL SCIENCES (4)**

Prereq: secondary method course, admission to M.Ed. 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 adviser, to a maximum of 8 credits.

### **594 SPECIAL TOPICS IN THE EARTH SCIENCES (4)**

Prereq: secondary method course, admission to M.Ed. 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 adviser, to a maximum of 8 credits.

### **598 RESEARCH PROJECT (6)**

Prereq: admission to M.Ed. natural sciences program, and completion of 15 credits of 500-level courses including one of Sci Ed 590, 592, 593 or 594. 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.

# SOCIAL STUDIES EDUCATION

Social studies education is an interdisciplinary history and social science program for Woodring College of Education students seeking certification in elementary or secondary education. Social studies education courses and curriculum are directed by the Social Studies Program Committee. Secondary students should consult the individual advisers listed under Secondary Education below in this section of the catalog.

## BACHELOR OF ARTS IN EDUCATION

### Elementary Education

The elementary social studies major is designed for students enrolled in the Woodring College of Education K-8 certification program. A 2.75 GPA is required for all courses taken to satisfy this major.

#### Major — Social Studies — Elementary

55-62 credits

Adviser: Program Head of Social Studies Education

- Anth 201 or Soc 201
- Econ 446 (preferred) or Econ 206
- Geog 201 and 320; select one course from Geog 209, 310, 312, 326, 327, 328
- Hist 103, 104, 391
- Pol Sci 250
- 3-5 credits upper-division social science
- Soc St 425
- One course from Econ 447, Geog 406, Soc St 435 or Soc St 446
- 10 credits in history including one course in world, Western or Pacific Rim history or civilization

### Secondary Education

Completion of this program meets certification requirements in the selected academic discipline and social studies. Students must complete the following:

- An approved academic degree program\* in:
  - American Cultural Studies\*\* — Adviser: Dr. Lawrence J. Estrada
  - Anthropology — Adviser: Dr. James P. Loucky
  - Economics — Adviser: Dr. David M. Nelson
  - Geography — Adviser: Dr. Thomas Terich

- History — Advisers: Dr. George Mariz, Dr. Louis W. Truschel, Dr. Donald W. Whisenhunt
- Political Science — Adviser: Dr. David Ziegler
- Sociology — Adviser: Linda Clark
- Social Studies\*\* — Adviser: Dr. Bruce Larson
- Certification requirements of the Secondary Education Department
- The social studies minor
- 2.75 GPA for all social science and history courses

#### Minor — Social Studies

44-46 credits

Adviser: For social science or history secondary education majors, the adviser is the designated contact area adviser.

Required Courses:

- Hist 103, 104, 391 and 10 credits including one course in world, Western or Pacific Rim history or civilization
- Geog 201 plus two additional geography credits
- Pol Sci 250
- Econ 446 (preferred) or 206 and Econ 447 (preferred) or 207
- Soc St 425 (elementary) or 426 (secondary)

Secondary students who major in economics, geography, history or political science may count the above courses, even though they are also a part of the major. Secondary history majors must complete 30 non-history social science credits.

## COURSES IN SOCIAL STUDIES EDUCATION

Courses numbered X37; X97; 300, 400; 417, 445 are described on page 31 of this catalog.

### 425 SOCIAL STUDIES FOR THE ELEMENTARY SCHOOL (4)

Prereq: EEd 320. Social studies methods, resources, curriculum, objectives, planning and exposure to contributions of social sciences. For elementary certification.

### 426 SOCIAL STUDIES FOR THE SECONDARY SCHOOL (4)

Prereq: Sec 471. Social studies methods, resources, curriculum, objectives, planning. For secondary certification.

### 435 USING COMMUNITY RESOURCES IN SOCIAL STUDIES (3)

Prereq: junior status. Community resources and the incorporation of the resources in the curriculum.

### 446 LAW-FOCUSED TEACHING AND CURRICULUM (1-5)

Prereq: junior status. Course to enable teachers to teach about criminal justice system, police, juvenile justice, consumer law, due process, etc. Provides teachers with tested classroom procedures, substantive law and field experience with justice agencies. Repeatable under different topics.

\* See appropriate catalog sections and/or advisers for approved degree programs.

\*\* Social studies majors are student/faculty—designed majors, approved by the Social Studies Program Committee and leading to the Bachelor of Arts in Education degree. Students in the American Cultural Studies Program must select this option.

## SOCIOLOGY

In common with the other branches of science, sociology offers not only a theoretical point of view, but also a method for discovery and a body of information developed through an accumulation of scientific research. While sociology speaks to current social issues and problems, the best tools it offers students to this end are (a) a greater understanding of the most basic social structures and processes that underlie our daily lives, and (b) a critical awareness of the possibilities and limits on the social-scientific research that students will be exposed to over a lifetime. This is the type of background most valued by graduate schools in sociology or social work. It also offers a perspective on society, organizations and interpersonal life that can help make students more aware and productive, as employees and citizens.

The sociology major at Western is therefore designed to provide a strong academic foundation in scientific sociology. That foundation includes the theory and method of sociological inquiry, addressed most directly in the core program, as well as knowledge compiled in specific areas of students' choice. Majors are strongly encouraged to begin their course of study with the core program, upon which all other courses build. Majors may choose to pursue more thoroughly such areas as demography, criminology/law, family, gender, stratification, education, human sexuality, or survey research. Majors who plan to attend graduate school and others who are especially committed are encouraged to participate in the department's advanced seminars.

The department houses a number of facilities for sociological research, in which students are invited to participate, working with sociology faculty. The Demographic Research Laboratory contains U.S. Census Bureau publications and data, a collection of census maps for the local area, vital statistics data and a serials collection. The department also houses a growing set of national surveys and other data for analysis. The Office of Survey Research conducts Western's student and alumni surveys, providing a training ground for sociology students. The department also has a computer laboratory equipped with microcomputers and terminal access to University mainframes and various computer peripherals. Most importantly, the faculty are involved in a variety of original research projects which students are often invited to become a part of.

The department has programs leading to the B.A. and B.S. in sociology and the B.A. in Education. Employment as a sociologist requires graduate education. For bachelor degree holders, a wide range of less specific employment options exist, requiring a good deal of self-definition as part of the job search. The department offers career advising as well as advising concerning graduate schools. Graduates with the sociology degree find employment as often as other Western graduates, with earnings about at the university average.

### SOCIOLOGY FACULTY

JOHN G. RICHARDSON (1974) Chair and Professor. BA, University of the Pacific; PhD, University of California, Davis.  
 KAREN BRADLEY (1992) Associate Professor. BA, Providence College; MA, Boston College, Stanford University; PhD, Stanford University.  
 KRIS BULCROFT (1988) Associate Professor. BA, Pacific Lutheran University; MA, Eastern Washington University; PhD, University of Minnesota.  
 RABEL BURDGE (1996) Visiting Assistant Professor. BS, Ohio State University; PhD, Pennsylvania State University.  
 KYLE D. CROWDER (1998) Assistant Professor. BA, University of Washington; PhD, University at Albany, State University of New York.  
 LUCY DWIGHT (1999) Assistant Professor. BSPH, University of North Carolina; PhD, Pennsylvania State University.  
 JAMES INVERARITY (1985) Associate Professor. BA, University of Michigan; PhD, Stanford University.  
 ELDON R. MAHONEY (1970) Professor. BA, Chico State College; PhD, University of Oregon.  
 CARL H. SIMPSON (1978) Professor. BA, PhD, Stanford University.  
 G. EDWARD STEPHAN (1970) Professor. BA, San Francisco State College; PhD, University of Oregon.  
 JAY D. TEACHMAN (1998) Professor. BA, Western Washington University; PhD, University of Chicago.

### MID-PROGRAM CHECKPOINT

A student seeking to complete a B.A. degree in sociology 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.

- Any one: Soc 221, 251, 255, 260, 268
- Soc 205, 207, 210, 302
- Mathematics GUR

### DECLARATION OF MAJOR

To declare a major in sociology, students must have a minimum overall GPA of 2.7. Students with a 3.0 or higher GPA are automatically accepted as pre-majors. Students with an overall GPA above 2.7 but less than 3.0 or a GPA of 2.7 for the first twenty credits of sociology at WWU, may petition the department for entry into the pre-major. Acceptance of these petitions will depend upon the number of additional majors the department can accommodate and the individual student's record. Pre-majors must obtain a grade of C or better in Soc 207 (statistics) before being advanced to major status. All majors must also complete Soc 210 with a grade of C or better within two quarters of completing Soc 207.

### BACHELOR OF ARTS

#### *Major — Sociology*

60 credits

The sociology major consists of a 21-credit core, 30 credits of area requirements, a capstone seminar, and electives to bring the total to a minimum of 60 credits.

**Core Requirements: 21 credits**

- Any *one* of the following introductory courses: Soc 221, 251, 255, 260, 268
- Soc 205, 207, 210, and 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*

Soc 326, 330, 332, 333, 336, 338, 380, 371

*Law/Crime Deviance*

Soc 352, 355, 359, 371, 387

*Population Studies*

Soc 320, 321, 326, 333, 371, 375, 385, 418, 421

*Social Organization/Social Inequality*

Soc 340, 361, 362, 364, 367, 368, 369, 370, 371, 375

**Capstone Seminar: 4 credits**

- At least *one* course from one of the following areas:
 

Family	Soc 460
Law/Crime Deviance	Soc 450, 452, 456
Population Studies	Soc 426
Social Organization/Inequality	Soc 440, 461

Soc 404 or 415 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 60 credits.

**Course restrictions:**

- Soc 471 may not be applied toward the 60 credits required for the major
- No more than two of the following introductory courses may be applied to the major: Soc 221, 251, 255, 260, 268

**Combined Major**

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 Sociology Department and a department with which sociology has established arrangements. A plan of study must be approved by both departments for completion of the major.

**Minor — Sociology**

25 credits

- One (or at most two) from the following: Soc 221, 251, 255, 260, 268
- Soc 302
- Soc 321, 330 or 340
- Electives under departmental advisement (not to include Soc 400, 471, 480 or 492)

**Minor — Demography**

25 credits

A minor in demography is offered by the department for students whose major work in another discipline can be strengthened by training in the techniques of demographic analysis.

- Soc 207, 320, 321, 421
- Electives under departmental advisement (not to include Soc 400, 471, 480 or 492)

**Minor — Criminology/Sociology of Law**

30 credits

The criminology/sociology of law minor is constructed to give students from other disciplines a focus in one of sociology's oldest areas of study. The minor includes the study of crime and of the criminal legal system.

- Soc 207 or equivalent
- Soc 210
- Soc 251 or 255
- Soc 352 or 355
- Electives under departmental advisement (not to include Soc 400, 471, 480 or 492)

**BACHELOR OF ARTS IN EDUCATION****Major — Sociology-Elementary**

50 credits

- Any one of the following introductory courses (no more than two may be applied to the major): Soc 221, 251, 255, 260, 268
- Soc 207, 210, 302, 361, 461
- At least two courses from Soc 321, 340, 364, 369, 380
- Under advisement: electives from sociology or other disciplines
- Elementary program students also must complete professional program courses as outlined in the Elementary Education section.

**BACHELOR OF SCIENCE****Major — Sociology**

75 credits

- Math 124, 125
- CS 140
- Any one course from Soc 221, 251, 255, 260, 268
- Soc 205, 207, 210, 302, 320, 321, 415, 421, 492
- Additional credits under advisement in mathematics, computer science, sociology or cognate areas. Course work in a modern foreign language is strongly recommended.

**GRADUATE STUDY**

For a concentration leading to the Master of Arts degree, see the Graduate School section of this catalog.

**COURSES IN SOCIOLOGY**

*Courses numbered X37; X97; 300, 400; 417, 445 are described on page 31 of this catalog.*

**CORE COURSES**

The following five 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)

**COURSES IN SOCIOLOGY**

*Courses numbered X37, X97; 300, 400, 417; 445 are described on page 31 of this catalog.*

**205 PROFESSIONAL SKILLS PROSEMINAR (1)**

Prereq: Restricted to sociology premajors and majors. Orientation to sociology as an academic discipline and as a field associated with occupational futures; assessment of skills relevant to social science literature and research. Intended as interactive introduction to, and planning for, the major. S/U grading.

**207 SOCIAL STATISTICS (5)**

Prereq: completion of Mathematics GUR. Application of statistical reasoning and methods in sociological research.

**210 INTRODUCTION TO RESEARCH METHODS (5)**

Prereq: Soc 207. 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.

**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.

**302 CLASSICAL SOCIOLOGICAL THEORY (5)**

Prereq: any Soc 221, 251, 255, 260, 268. 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.

**316 SURVEY EXPERIENCE (2)**

Prereq: any one course from Soc 221, 251, 255, 260, 268. An introduction to survey research methods is provided through

experience as part of a survey research team. Students will participate in each phase of conducting actual surveys for the University or other public or non-profit organizations.

**318 SURVEY RESEARCH METHODS (4)**

Prereq: any Soc 221, 251, 255, 260, 268; Soc 207, 210. Principles and techniques of survey research, emphasizing experiential learning. Includes major involvement in one or more of Western's student assessment surveys.

**320 COMPUTER APPLICATIONS FOR SOCIAL SCIENCE DATA (4)**

Prereq: any Soc 221, 251, 255, 260, 268 and Soc 207 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., SPSSx) 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 AMERICAN FAMILY AND HOUSEHOLD DEMOGRAPHY (5)**

Prereq: Soc 207 and 221 or 321. Theoretical, conceptual and analytic issues in the areas of family and household demography based on research conducted in the U.S.: singlehood, cohabitation, entry into first marriage, work and family, marital disruption, remarriage, and household structure.

**330 INTRODUCTION TO SOCIAL PSYCHOLOGY (5)**

Prereq: any Soc 221, 251, 255, 260, 268. 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. 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. 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.

**336 DEVELOPMENT OF SELF IN SOCIETY (5)**

Prereq: any Soc 221, 251, 255, 260, 268; Soc 302; Soc 207, 210. Development of personal identity through the life course, focusing on the interplay of macro and micro processes.

**338 SOCIOLOGY OF SEXUAL BEHAVIOR (5)**

Prereq: any Soc 221, 251, 255, 260, 268. 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. 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. 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.

### 355 CRIMINAL JUSTICE SYSTEM (5)

Prereq: Soc 207, 210, 255, 302. 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).

### 359 WOMEN AND DEVIANCE (5)

Prereq: any Soc 221, 251, 255, 260, 268. Examines the socio-cultural-political 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.

### 361 SOCIOLOGY OF EDUCATION (5)

Prereq: any Soc 221, 251, 255, 260, 268. 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.

### 362 POLITICAL SOCIOLOGY (5)

Prereq: any Soc 221, 251, 255, 260, 268. The social aspects of political phenomena with an emphasis on power and authority, conflict and change, political attitudes and ideologies.

### 364 SOCIAL STRATIFICATION (5)

Prereq: any Soc 221, 251, 255, 260, 268. 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. Sociological and social-psychological significance of work; factors affecting contemporary career patterns/life cycle changes; sex, race, ethnic and social class differences; structural characteristics of selected occupational areas.

### 368 SOCIOLOGY OF GENDER (5)

Prereq: any Soc 221, 251, 255, 260, 268 or equivalent. The construction of gender as a category of social, political and economic classification and regulation in the U.S. and cross-nationally. Gender inequality in work and education; the relationship between gender and law/state policy. Gender as a cultural construct which varies historically by race, age and class.

### 369 MINORITIES IN AMERICA (5)

Prereq: any Soc 221, 251, 255, 260, 268. Sociological and sociopsychological aspects of minority group situations and minority relations with the larger society; emphasis on non-white subcultures in the United States.

### 370 HISTORICAL SOCIOLOGY (5)

Prereq: any Soc 221, 251, 255, 260, 268 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.

### 371 SOCIAL RESEARCH AND SOCIAL POLICY (5)

Prereq: any Soc 221, 251, 255, 260, 268; research methods and introductory statistics in any field. Examines the relationship between social policy decisions and social research. Outlines the role of the social scientist in the dynamics of the policy-making process, studies the recent expansion of methods for evaluating social policy programs, and critiques current policy in light of available evidence. Subject areas

include health, welfare, crime, housing, affirmative action, social security and child support. Research a topic and present a policy memo to the class in mock testimony to a congressional committee.

### 375 COMMUNITY AND URBAN SOCIETY (5)

Prereq: Any Soc 221, 251, 255, 260, 268. 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.

### 380 SOCIOLOGY OF YOUTH (5)

Prereq: any Soc 221, 251, 255, 260, 268. 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.

### 385 ENVIRONMENTAL SOCIOLOGY (5)

Prereq: any Soc 221, 251, 255, 260, 268. Uses sociological concepts to analyze human-bio/physical environment interactions. Topics are environmental sustainability, population and limits to growth, the environmental movement, public opinions, environment and third world development, food production and agricultural technology, natural resource dependent communities, forestry and fishing, alternative environmental practices and the energy crisis.

### 387 SOCIOLOGY OF CORRECTIONAL INSTITUTIONS (5)

Prereq: any Soc 221, 251, 255, 260, 268. 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.

### 396a,b,c HONORS TUTORIAL (3-5 ea)

Repeatable to a maximum of 10 credits.

### 404 SEMINAR IN SOCIOLOGICAL THEORY (4)

Prereq: sociology core or permission of instructor. Examines the continuity of social theory from the 18th century to contemporary European and American work. Broad themes that span this time are explored in both primary works and current reviews.

### 415 ADVANCED QUANTITATIVE ANALYSIS (4)

Prereq: any Soc 221, 251, 255, 260, 268; Soc 207, 210 or equivalent; or permission of instructor. Experimentation and tests of significance applied to research problems.

### 418 SOCIAL IMPACT ASSESSMENT (5)

Prereq: Soc 210, Soc 207 recommended. 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 proposed project or policy change. The focus is on measuring and understanding community level social change in advance of the event. Also offered as Envr 418.

### 419 SOCIAL SCIENCE AND HEALTH CARE RESEARCH (4)

Prereq: sociology core and permission of instructor. Applications of social science methods and substantive knowledge in health care research. Emphasis is on structural-societal changes in health care in the United States, organizational characteristics of integrated health care delivery, outcomes assessment and measurement, and quality of health care assessment. Students will do both standard academic course work and conduct research in the health care system under the direction of the instructor. The substantive methodological and research activity components of the course are integrated around individual student projects.

### 421 DEMOGRAPHIC ANALYSIS (4)

Prereq: any Soc 221, 251, 255, 260, 268; Soc 207, 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 (4)

Prereq: Soc 207, 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.

**440 COMPARATIVE SOCIAL INSTITUTIONS (4)**

Prereq: sociology core. Focus varies, depending on instructor. Examines the relationship between large-scale social structures and processes. Current theory and research on topics may include world system theories, comparative state structures and social organization, and the network of relationships among formal organizations, and others.

**450 SOCIOLOGY OF LAW (4)**

Prereq: sociology core; Soc 355 or permission of instructor. The relationship between law and society: the origin of laws as reflecting popular attitudes and elite measures of social control. The methodological study of legal evolution and social change.

**452 ADVANCED CRIMINOLOGY (4)**

Prereq: sociology core; Soc 352 or permission of instructor. 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 (4)**

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 (4)**

Prereq: sociology core; Soc 361 or permission of instructor. Advanced study of topics and research presented in Soc 361: educational stratification, origins and expansion of educational systems in the U.S. and cross-nationally, school and classroom organization and their effects on student learning and socialization; interaction processes in classrooms.

**471 DIRECTED INTERNSHIP (5)**

Prereq: sociology core, permission of instructor and declared major in sociology; 2.7 GPA for preceding three quarters; C or better in two 300-level sociology courses relevant to the internship area. Participant observation in research and applications in human services agencies and organizations. Elective credits only; does not apply toward sociology major. Repeatable to a maximum of 10 credits. S/U grading.

**480 LEARNING AND TEACHING SOCIOLOGY (2-5)**

Prereq: sociology core. Combines experience as a teaching assistant for a sociology course and participation in a seminar with other teaching assistants, focused on effective teaching and learning processes in sociology. Repeatable to a maximum of 5 credits.

**492 SENIOR THESIS (5)**

Prereq: sociology core and permission of instructor. Supervised independent research, on an advanced topic, leading to a substantial research paper.

**496a,b,c HONORS TUTORIAL (3-5 ea)**

Repeatable to a maximum of 10 credits.

**Graduate Courses**

*Courses numbered 500; 517; 545; 597 are described on page 31 of this catalog.*

*Admission to Graduate School or special permission required. See the Graduate School section of this catalog.*

**501 SOCIOLOGY AS A DISCIPLINE (2)**

Prereq: permission of instructor. Study of sociology as an academic field; description of subfields, with emphasis on relation between theory and research in each subfield. S/U grading.

**504 ADVANCED THEORY (4)**

Prereq: permission of instructor. Examines the continuity of social theory from the 18th century to contemporary European and

American work. Broad themes that span this time are explored in both primary works and current reviews.

**505 COMPUTER APPLICATIONS IN SOCIOLOGY (4)**

Prereq: permission of instructor. Emphasis on computer applications in the analysis of large-scale data sets; training in the use of SPSS and other library statistical routines.

**515 SEMINAR: QUANTITATIVE TECHNIQUES (4)**

Prereq: permission of instructor. Regression, path analysis and related techniques as applied to sociological research.

**521 SEMINAR: DEMOGRAPHY (4)**

Prereq: permission of instructor. Critical review of demographic theory, methods and applications in the light of contemporary world population problems.

**526 ADVANCED TOPICS IN DEMOGRAPHY (4)**

Prereq: permission of instructor. 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.

**533 ADVANCED AGING (4)**

Prereq: permission of instructor. Analysis of the social, medical and legal issues surrounding growing old in American society, including to "protect" the elderly. Cross-cultural comparisons concerning the economic and social support of older populations.

**535 SEMINAR: CURRENT SUBSTANTIVE RESEARCH (1-4)**

Prereq: permission of instructor. Topics to vary. Examines current research in a selected substantive field of sociology. Repeatable, no maximum, with different subject areas.

**540 COMPARATIVE SOCIAL INSTITUTIONS (4)**

Prereq: permission of instructor. Examines the relationship between large-scale social structures and processes. Current theory and research on topics may include world system theories, comparative state structures and social organization, and the network of relationships among formal organizations, and others.

**555 SEMINAR: SOCIAL CONTROL AND DEVIANCE (4)**

Prereq: permission of instructor. Critical review of theories and concepts of deviance; analytic and philosophic problems of attempts at programmed social control.

**560 ADVANCED TOPICS IN FAMILY (4)**

Prereq: permission of 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.

**563 ADVANCED STATISTICS (4)**

Prereq: permission of instructor. The application of advanced statistical methods to particular types of data and research questions. Emphasis on selecting and implementing various techniques under different measurement and analysis conditions.

**581 ADVANCED SOCIOLOGY OF EDUCATION (4)**

Prereq: permission of instructor. Advanced study of topics and research presented in Soc 461: educational stratification, origins and expansion of educational systems in the U.S. and cross-nationally, school and classroom organization and their effects on student learning and socialization; interaction processes in classrooms.

**595 TEACHING IN THE SOCIAL SCIENCES (3)**

Prereq: permission of instructor. Examination of conceptual frameworks and techniques for teaching social science subjects at the high school and community college levels. Also offered as Anth 595 and Pol Sci 595.

**690 THESIS (1-12)**

Prereq: formal advancement to candidacy for the M.A. in sociology. Repeatable to a maximum of 12 credits. S/U grading.

## STUDENT/FACULTY-DESIGNED MAJOR

Students whose educational objectives are best served by combining courses from several academic or professional areas may, in consultation with appropriate faculty members, design an individualized major leading to a Bachelor of Arts or Bachelor of Science degree in the College of Arts and Sciences.

This major takes the form of a contract for an individualized course of study. The course of study may include courses from any department, program or college at Western that are open to the student and for which the student is qualified. The contract is developed by the student and an advisory committee of faculty appointed from the departments that contribute courses. The contract is reviewed by the Curriculum Council of the College of Arts and Sciences.

The major requires a minimum of 70 credits and permits a maximum of 110 credits. A minimum of 45 credits must be taken from the College of Arts and Sciences. No more than 50 percent of the credits in the major may be completed before the contract is reviewed by the Curriculum Council. The contract may not substantially duplicate a major that is regularly offered by a department

or college at Western.

Individual programs may be academic in emphasis, vocational, or both. Regardless of emphasis, the program of courses should be logically coherent and academically defensible in relation to its educational objectives. Like all majors, the SFDM should encompass both breadth and depth, the latter being represented by 300- and 400-level courses. The student is responsible for meeting prerequisites to courses included in the contract. Directed independent study and field internships may be included, subject to University regulations. Courses taken elsewhere, if transferrable to Western, may be included with approval of the student's advisory committee. Ordinarily, a student should apply for the major at the beginning of the junior year.

The Student/Faculty-Designed Major is administered by the Department of Liberal Studies. Contact the department for full information about procedures to be followed. Make an appointment with the department chair for initial advisement. The departmental office is Arntzen Hall 314, phone (360) 650-3031.

## TEACHING ENGLISH AS A SECOND LANGUAGE

Western Washington University offers a nine-month TESL program leading to a certificate of achievement. The program is offered in a three-quarter lockstep manner beginning fall quarter. Most students complete the program in a single academic year by enrolling in two courses each quarter. During one of the quarters, students must enroll in a three- or four-credit elective multicultural studies course through the SPAN program (SPace Available for Non-matriculated students). The multicultural studies requirement may be satisfied through previous course work or overseas experience at the discretion of the program director.

The program is self-supporting through tuition revenue; therefore, a minimum number of students are needed in order for the program courses to be offered. For application information, contact University Extended Programs at (360) 650-2841.

### Courses in TESL

#### **401 INTRODUCTION TO ENGLISH LINGUISTICS FOR TESL (4)**

Students are introduced to the structure, history, and use of English with emphasis on their application to the teaching of ESL. Includes an outline of basic linguistic aspects of language (phonology, syntax, semantics and pragmatics) and their historical, geographical and social variation.

#### **402 ENGLISH GRAMMAR FOR TESL (4)**

Prereq: TESL 401 or permission of instructor. The fundamentals of English syntactic structure with emphasis on its application to teaching of ESL. Includes the structure of sentences, parts of speech,

modification, complementation, and nominalization. Demonstration and practice in explaining and presenting key structures.

#### **410 APPLIED ENGLISH LINGUISTICS (4)**

Prereq: TESL 401 (may be taken concurrently). 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.

#### **420a METHODS AND MATERIALS IN TESL I (4)**

Prereq: TESL 401 or permission of instructor. Theoretical and practical concerns in teaching English as a second language. Emphasis on innovative approaches to the teaching of listening, speaking, structure, reading, writing, and culture within a communicative framework. Guidance in the evaluation of textbooks and the development and use of creative materials, including media-based materials.

#### **420b METHODS AND MATERIALS IN TESL II (4)**

Prereq: 420a. An expansion on theoretical and practical concerns in teaching English as a second language. Emphasis on innovative approaches to the teaching of listening, speaking, structure, reading, writing, and culture within a communicative framework. Guidance in the evaluation of textbooks and the development and use of creative materials, including media-based materials.

#### **430 PRACTICUM IN TESL (4)**

Prereq: 420b. Supervised teaching of ESL in local public school, adult education, or university program. Includes a weekly seminar to discuss observations, materials and teaching strategies.

## WOMEN STUDIES

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 Arts and 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

KATHLEEN KENNEDY, Women Studies Director, History. American women's history, women and American politics.  
 KATHRYN ANDERSON, Fairhaven. American women's history and politics, gender and communication, women's oral history.  
 BONNIE BARTHOLD, English. Post-colonial and African-American literatures.  
 KAREN BRADLEY, Sociology. Organizations, stratification, political sociology, cross-national research.  
 JULIE BRIDGES, History. U.S. women and colonial history.  
 CHRISTINA BYRNE, Psychology.  
 MEREDITH CARY, English. Gender equality in the study of literature and writing.  
 MARIA CHAVEZ, Anthropology. Global perspectives on feminism, women of Latin America, women of color.  
 LAURA CRARY, Art History. Modern Latin American art and feminist art theory.  
 DAWN DIETRICH, English. Feminist theatre and performance arts, women and film.  
 PATRICIA M. FABIANO, Wellness Center. Women's health, women and HIV infection/AIDS, and the connections between personal and planetary health and well-being.  
 CONSTANCE FAULKNER, Fairhaven. Political economy, social theory and history, Third World women.  
 WENDY FURST, Sociology.  
 GRETA GAARD, Fairhaven. Ecofeminism, gay/lesbian theory and literature.  
 CAROL GUESS, English. Gay/lesbian/bisexual/transgendered studies, 20th century American and British literature.  
 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. Women and psychology.  
 CAROL JANSON, Art. Women in art.  
 ROSANNE D. KANHAI, English. Feminist literary theory, post-colonial literatures, imaginative texts by women of color.  
 DEBORAH KIRBY FORGAYS, Psychology. Psychology of women, women and health, gender assessment across cultures, the experience and expression of anger in women.  
 JUDITH KRIEGER, Sociology. Effect of economic crisis on women's work, relationships between women and food.  
 LAURA LAFFRADO, English. Nineteenth century women's literature, feminist theory.  
 ANNE LOBECK, English. Language and gender.  
 MARY JANELL METZGER, English. Feminist theory, theories of gender

and genre, women and literature.  
 GWENDOLYN D. POUJH, English. Black public culture, composition and rhetoric, Black women's literature.  
 MARIAN RODRIGUEZ, Fairhaven. Law and diversity.  
 DEBRA J. SALAZAR, Political Science. Women and environmental politics.  
 LINDA SMEINS, Art. Feminist art theory.  
 VEGA SUBRAMANIAM, Sociology. Women Studies, minorities in America.  
 MIDORI TAKAGI, Fairhaven. Race, class and gender, comparative studies of women of color.  
 KATE TRUEBLOOD, English. Women and literature, creative writing.  
 NANCY VAN DEUSEN, History. Women's history, gender in Latin America.  
 SARA WEIR, Political Science. Social and health policy, women and politics, feminist political theory.  
 DIANA WRIGHT, History. Japanese history.  
 KATHLEEN YOUNG, Anthropology. Cross cultural gender roles.

### Minor

30 credits

#### Core

13-19 credits

- WS 211
- WS 411
- 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: WS 311, 313; Fair 411, 418; Hist 366, 367, 368, 369, 417, 417a, 417c, 435, 517b; Pol Sci 345, 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 344, 347, 442, 445; Psych 219; Soc 268, 368.
  - *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: Eng 338, 341, 406, 424, 425, 439; ThA 428e

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

Courses numbered X37; X97; 300, 400; 417, 445 are described on page 31 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.

#### 311 AMERICAN WOMEN STUDIES: 1620-1850 (5)

Prereq: Hist 103 or 104 or Eng 216 or another women studies course.

## WOMEN STUDIES

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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.

### **315 ISSUES OF THE WOMEN'S MOVEMENT (3)**

Prereq: Pol Sci 101, Soc 101 or permission of instructor. Psychological, social, political and economic issues promoted by the women's

movement; sex stereotyping in the family, education, politics and economy; past efforts to overcome sex discrimination; contemporary legal and public policy issues related to women; women's life experiences in other countries; theories of women's liberation.

### **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. An interdisciplinary research or field project which demonstrates the student's ability to apply knowledge of subject matter and methodology. Repeatable to a maximum of 15 credits.

### **453 WOMEN IN THIRD-WORLD SOCIETIES (4)**

Prereq: 5 credits of anthropology. Women's familial, economic and political roles in selected Third-World or developing societies. Different theoretical perspectives for explaining women's roles are explored. Also listed as Anth 453.

# COLLEGE OF BUSINESS AND ECONOMICS

Dr. Dennis R. Murphy, *Dean*

Dr. Stephen V. Senge, *Associate Dean*

## Mission Statement of the College

The College 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 multi-national 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 International Association for Management Education at both the graduate and undergraduate levels.

## Department Chairs

Dr. Marguerite K.Hutton . . . . . Accounting  
 Dr. David M. Nelson . . . . . Economics  
 Dr. Earl D. Benson . . . . . Finance, Marketing and Decision Sciences  
 Dr. Bruce D. Wonder . . . . . Management

## Directors

Dr. Stephen V. Senge . . . . . MBA Program  
 Thomas W. Dorr . . . Small Business Development Program

\* Consult the MBA Director of the Graduate School of this catalog for further details.

Dr. David E. Merrifield . . . . . Center for Economic and Business Research  
 Dr. David M. Nelson . . . . . Center for Economic Education  
 Dr. Stephen Globerman . . . . . Center for International Business

## Named Professorships

Dr. James W. Dean . . . . . Kaiser Professor of International Business  
 Dr. Steven Globerman . . . . . Ross Distinguished Professor of Canada/U.S. Business and Economic Relations

## Academic Programs Leading to Undergraduate and Graduate Degrees

Accounting . . . . . BA  
 Business Administration . . . . . BA  
 Economics . . . . . BA  
 Manufacturing Management . . . . . BS  
 Master of Business Administration . . . . . MBA\*

## Combined Majors

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

## Admissions and Major Declaration

Admission to programs in the College of Business and Economics (CBE) is selective and based upon prior academic performance and other evidence of high promise. Students may apply for admission to the College concurrently with application to WWU, or at any time subsequent to University admission. Criteria for admission include:

- Overall high school, college or university GPA
- Test scores
- GPA in any college or university courses appropriate to the study of business or economics
- The number of places available in the students' intended area of interest

Students interested in majoring in economics must consult the Economics Department section of this catalog. Other applicants who have completed the equivalent of the foundation courses listed below with at least a 2.75 GPA or who have at least a 2.50 cumulative GPA will be assured admission if space is available in the program of choice.

Students interested in the B.S. degree in manufacturing management must consult the Management Department.

Students who are admitted to the University but who do not have credentials sufficient for immediate admission to CBE may apply after they have completed the foundation courses.

Following admission to the College, a student is assigned an adviser and is required to consult with that adviser. All

students intending to earn a degree in accounting or any area of business must complete the foundation courses comprised of Acctg 240, 245; Econ 206, 207; Math 157; FMDS 205; Mgmt 271 or their equivalent. **Students must either have completed the foundation courses, or have been granted special permission, before they may take most upper-division courses.** It is imperative that students complete these courses in a timely manner, and proper advisement will help assure this.

Students may enroll in lower-division courses and selected upper-division courses without formal admission into the College of Business and Economics.

### *Admission Process*

Students must be admitted to Western Washington University before making application to the College of Business and Economics. Students who are interested in applying to the College of Business and Economics should contact the College directly. Inquiries may be directed to: College of Business and Economics, Western Washington University, Bellingham, WA 98225-9072, or by phone: (360) 650-3896.

Applications will be processed in the order received, with every effort being made to inform the student of the outcome of the process in a timely manner. The College places great emphasis on short cycle times for these processes.

### *World Wide Web Page*

Information concerning admission and application to the College of Business and Economics is available on the World Wide Web at <http://www.cbe.wvu.edu>.

### *Retention*

Majors in any College program who have received an academic warning from the University or who have been placed on academic probation must have written permission from the appropriate department to register for upper-division courses.

### *Requirements for Bachelor's Degree*

Besides the general requirement for graduation from the University, explained elsewhere in this catalog, the College of Business and Economics 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 adviser regarding writing and communications requirements. All CBE majors are required to take one communication focus and one writing proficiency course, both within the College of Business and Economics, 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 adviser is strongly encouraged.

**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 four 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 (CEBR).** 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 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 *Timetable of Classes*, the Summer Bulletin and the University Extended Programs' bulletins.

## ACCOUNTING

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, non-profit 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.

### DEPARTMENTAL MISSION

The Department of Accounting provides high-quality, balanced accounting education to majors as well as 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 as well as 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.

#### World Wide Web Page

- The Department of Accounting's Web page is <http://www.cbe.wvu.edu/acct>

### DECLARATION OF MAJOR

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

### ACCOUNTING FACULTY

MARGUERITE R. HUTTON (1989) Chair and Associate Professor. BBA, MPA, University of Texas at Arlington; PhD, University of Houston; CPA, States of Texas and Washington.

DAVID L. GILBERTSON (1998) Assistant Professor. BS, University of Southern California; MBA, University of Montana; PhD, University of Utah; CPA, State of Montana; CMA.

JULIE A. LOCKHART (1982) Associate Professor. BS, MS, University of Illinois; CPA, State of Illinois; CMA.

WILLIAM R. ORTEGA (1997) Assistant Professor. BBA, University of Iowa; MBA, Indiana University; PhD, Florida State University; CMA.

MARY ANN REYNOLDS (1996) Assistant 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) Associate Professor. BS, Louisiana State University; MBA, University of New Orleans; PhD, The University of Alabama; CPA, State of Louisiana.

RONALD N. SAVEY (1976) Associate Professor. BA, Western State College (Colo.); MBA, University of Denver; CPA, State of Washington.

STEPHEN V. SENGE (1985) Professor and Associate Dean of the College of Business and Economics. 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.

DANIEL M. WARNER (1978) Associate Professor. BA, JD, University of Washington; MA, Western Washington University.

### BACHELOR OF ARTS

### COMMUNICATIONS REQUIREMENTS

All accounting majors are required to take one

\* For those students planning to take the CPA exam, the State of Washington has passed additional educational requirements effective in the year 2000. Please see Department of Accounting for details.

communication focus (CF) and one writing proficiency (WI) 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 WI requirements.

### Major

104 credits

- Acctg 240, 245, 321, 331, 341, 342, 343, 375, 441, 461, 470
- 16 upper-division accounting credits under advisement
- FMDS 205, 495
- Fin 341
- Mktg 380
- Mgmt 271, 311, 360, 482
- Econ 206, 207, 309
- Math 157

### Combined Major — Accounting/Computer Science

107 credits

- Acctg 240, 245, 341, 342, 461
- 6 upper-division accounting credits under departmental approval
- Comp Sci 140, 145, 211, 241, 311, 341, 345, 415, 430
- FMDS 205, Fin 341, Mktg 380
- FMDS 495
- Mgmt 271, 311, 360, 482
- Econ 206, 207, 309
- Math 157

An interdepartmental major in accounting/economics also is offered. See the Economics section of this catalog.

### Minor

22 credits

- Acctg 240, 245, 341, 342
- 6 additional credits in accounting under advisement

## COURSES IN ACCOUNTING

*Courses numbered X37; X97; 300, 400, 417, 445 are described on page 31 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: Acctg 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: Acctg 245, MIS 220 or equivalent. Overview of the analysis, design and implementation of both manual and computerized information systems. A review of the current state of the art of applications, software and systems available for accounting and managerial functions.

### 331 COST MANAGEMENT (4)

Prereq: Acctg 245, MIS 220 or equivalent. 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: Acctg 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: Acctg 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: Acctg 342. A study of the accounting theory underlying current practice. Existing and emerging issues in accounting.

### 375 INCOME TAXATION I (4)

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

### 377 ACCOUNTING IN NOT-FOR-PROFIT ORGANIZATIONS (3)

Prereq: Acctg 342. Fund and budgetary accounting as applied to governmental units and other not-for-profit entities.

### 421 ACCOUNTING INFORMATION SYSTEMS II (3)

Prereq: Acctg 321. Both current and prospective applications of computer-based information systems as applied to accounting data bases. Case studies, selected readings for group discussion and guest lecturers with specialized expertise. Will not involve conventional procedural computer programming.

### 431 ADVANCED MANAGEMENT ACCOUNTING (3)

Prereq: Acctg 331 and Econ 309. Managerial uses of accounting information for planning and control in complex organizations.

### 435 MANAGEMENT ACCOUNTING SEMINAR (3)

Prereq: Acctg 331. Case analysis, synthesis and review of management concepts such as responsibility accounting, performance evaluation, budgeting and control in profit-seeking and non-profit, domestic and international, and product and service firms.

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

Prereq: Acctg 343. An introduction to business combinations and fund accounting. Partnerships, SEC reporting, interim reports and other topics.

### 442 ADVANCED ACCOUNTING THEORY (3)

Prereq: Acctg 343. An advanced seminar in financial accounting. Contemporary topics in financial accounting. Specific topics vary by quarter.

### 444 MULTI-ENTITY ACCOUNTING AND RELATED ISSUES (3)

Prereq: Acctg 441. An in-depth look at accounting for business combinations and consolidated financial statements. Valuation and other issues attendant to mergers, acquisitions and closely held corporations.

### 451 INTERNATIONAL ACCOUNTING (3)

Prereq: Acctg 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: Acctg 321, 343. Theory and practice related to the auditing environment, including general audit technology, programmatic applications and reporting obligations.

### 462 ADVANCED AUDITING (3)

Prereq: Acctg 461. For the student intending a career as a professional auditor. Readings in current issues, case simulations and presentations by professional experts.

### 470 LAW OF COMMERCIAL TRANSACTIONS I (4)

Prereq: Mgmt 271. Legal principles underlying the law of contracts, sales, secured transactions, real property security, bankruptcy and suretyship. Was Acctg 370 in previous catalog.

### 471 LAW OF COMMERCIAL TRANSACTIONS II (4)

Prereq: Mgmt 271. Legal principles underlying the law of agency, commercial paper and documents of title, corporations, partnerships, antitrust, insurance, estates and trusts, and employment.

## ACCOUNTING

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### **475 INCOME TAXATION II (3)**

Prereq: Acctg 375. Taxation of corporations and partnerships. Was Acctg 371 in previous catalog.

### **476 ADVANCED TAXATION (3)**

Prereq: Acctg 475. Emphasis on gift, estate, trust and international taxation; advanced research, planning and policy topics in taxation.

### **477 TAX RESEARCH AND PLANNING (3)**

Prereq: Acctg 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 (3)**

Prereq: Acctg 331, 343, 375. A detailed analysis of the integration of accounting with environmental issues. Concepts in financial reporting, cost management, performance evaluation, decision making and taxation are addressed with current readings and case analysis.

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

# 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 late 20th and early 21st centuries.

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.

## 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. Students are encouraged to explore the possibility of combining economics with such fields as anthropology, Canadian/American studies, environmental science, finance, foreign languages, history, journalism, psychology, sociology, and urban and regional planning.

Students must consult with an adviser prior to the selection of a major option or the selection of elective credits in other departments of the College of Business and Economics to be included as part of the economics major.

## DECLARATION OF 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.

## INFORMATION

The department's faculty and staff invite questions about the program and career opportunities for economics majors. Interested persons are invited to visit the department office in Parks Hall 315 or to telephone (360) 650-3910. Written inquiries should be directed to the Department of Economics, Western Washington University, Bellingham, WA 98225-9074. E-Mail: econ@wwu.edu.

## ECONOMICS FACULTY

Typically all economics faculty on ongoing appointments hold the Ph.D. 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.

DAVID M. NELSON (1977) Chair and Professor. BA, Whitworth College; MA, PhD, University of Oregon.

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) Ross Distinguished Professor of Canada-U.S. Relations, 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) Associate Professor. BA, MA, PhD, University of California, Berkeley.

JULIA HANSEN (1988) Associate Professor. BA, University of Vermont; MA, PhD, University of California, Berkeley.

K. PETER HARDER (1970) Professor. BA, University of Puget Sound; MA, PhD, University of Nebraska.

MARY ANN HENDRYSON (1989) Lecturer. BA, MA, University of Denver.

STEVEN E. HENSON (1985) Associate Professor. BA, California State University; MS, PhD, University of Oregon.

DAVID E. MERRIFIELD (1983) Professor. BS, Willamette University; MA, PhD, Claremont Graduate School.

DENNIS R. MURPHY (1979) Professor and Dean of the College of Business and Economics. BA, MA, Western Washington University; PhD, Indiana University.

MATTHEW R. ROELOFS (1997) Assistant Professor. BA, Calvin College; MS, PhD, Purdue University.

ALLAN G. SLEEMAN (1977) Associate Professor. BSc (Econ), London School of Economics; PhD, Simon Fraser University.

PAUL A. STORER (1996) Assistant Professor. BA, MA, University of Toronto; PhD, University of Western Ontario.

DIANA WEYMARK (1988) Associate Professor. BA, MA, Dalhousie University; PhD, University of British Columbia.

PAMELA WHALLEY (1985) Lecturer. BA, Indiana University.

## BACHELOR OF ARTS

### *Major — Economics*

66 credits

- ❑ Econ 206, 207, 208, 303, 306, 307, and either 406 or 407
- ❑ FMDS 205 (or equivalent)
- ❑ MIS 220 or CS 101
- ❑ At least one of Econ 470, 475 or FMDS 305
- ❑ 28 credits of electives in the College of Business and Economics, under departmental advisement; at least 20 of these credits must be in economics; a minimum of 12 of the 20 credits of economics must be at the 400 level
- ❑ One communication focus and one writing proficiency course must be taken, both within the College of Business and Economics.

### *Minor*

24 credits

- ❑ Econ 206, 207
- ❑ Additional courses selected under departmental advisement.

### *Combined Major — Economics/Mathematics*

101 credits

This major is for students who wish considerable depth in both areas, and it is particularly suitable as preparation for graduate study in economics.

- ❑ Econ 206, 207, 208, 303, 306, 307, 406 or 407, 475
- ❑ 16 additional credits in upper-division courses in economics, under prior departmental advisement
- ❑ Math 124, 125, 204, 224, 225, 226
- ❑ Math/Comp Sci 335
- ❑ Math 341, 342; or Math 441, 442

- ❑ Comp Sci 140 or Math 207
- ❑ Additional credits in upper-division mathematics or computer science, under advisement from the departments of Economics and Mathematics, to complete the required 101 credits of this program
- ❑ One communication focus course must be taken

### *Combined Major — Economics/Accounting*

100 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 or finance.

- ❑ Econ 206, 207, 208, 303, 306, 307, 311
- ❑ 8 additional credits in upper-division economics courses, under departmental advisement
- ❑ Acctg 240, 245, 321, 341, 342, 343
- ❑ 8 additional credits in upper-division accounting courses, under departmental advisement
- ❑ FMDS 205 (or equivalent), 495
- ❑ Fin 341
- ❑ Mktg 380
- ❑ One communication focus course and one writing proficiency course must be taken, both within the College of Business and Economics

### *Combined Major — Economics/Political Science*

94 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, 208, 303, 306, 307, 310
- ❑ FMDS 205 (or equivalent)
- ❑ 12 additional credits in upper-division economics courses, under departmental advisement
- ❑ Pol Sci 250; 260 or 365; 272 or 291; 360; 425
- ❑ Econ/Pol Sci 491 (or approved alternative)
- ❑ A minimum of one course from each of these areas: Pol Sci 320 or 427 or 468; 345 or 346 or 347; 462 or 463 or 465
- ❑ 8-9 additional credits in upper-division political science electives, to complete the total required 94 credits of this program
- ❑ One communication focus course must be taken

### *Combined Major — Economics/Environmental Studies*

90 credits

This major is available for students who have a strong interest in problems of the environment and natural resources and who may contemplate graduate work, or careers, focused on the environment and natural resources.

- ❑ Econ 206, 207, 208, 303, 306, 307, 383, 384, 483
- ❑ FMDS 205 (or equivalent)
- ❑ Envr 302, 303, 304, 305, 436, 464, 468
- ❑ One of the following: Geog 310 or 340 or 312
- ❑ Econ/Envr 493 or 4 credits of Envr 499
- ❑ 13 credits of electives in economics or environmental studies, under faculty advisement
- ❑ One communication focus course must be taken

**Combined Major — Politics/Philosophy/Economics**

84-85 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
- Econ 208 or FMDS 205 (or equivalent)
- 12 additional upper-division economics credits
- Pol Sci 250, 360
- One course from each group:
  - Pol Sci 272 or 291
  - Pol Sci 320 or 425 or 427
  - Pol Sci 345 or 346 or 347
  - Pol Sci 462 or 463 or 465 or 469
- Phil 102, 112, 114, 310, 320, 420, 350, 360, 364
- One communication focus course must be taken

**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.

**COURSES IN ECONOMICS**

*Courses numbered X37; X97; 300, 400; 417, 445 are described on page 31 of this catalog.*

**206 INTRODUCTION TO MICROECONOMICS (4)**

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. 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.

**208 INTRODUCTION TO ECONOMIC MODELING (4)**

Prereq: Econ 206 and 207; Math 114 or equivalent; Math 124 or 157 recommended. Introduction to the use of algebra and differential calculus in the formulation and comparative statics of simple micro and macroeconomic models. Economics 208 is designed for majors. Non-majors must obtain permission of the instructor before registering.

**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. (Communications focus course.)

**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; Econ 208 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; Econ 208 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 Econ 208; and FMDS 205. Application of economic principles to managerial decision making. Demand, costs and market structure and their relation to pricing, product choice and resource allocation. 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.

**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 230. 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. Was 430 in previous catalog.

**343 POPULATION, ENVIRONMENT, AND WORLD AGRICULTURE (4)**

Prereq: Econ 206. Utilizes economic principles to understand the interactions among population growth, food demand, agricultural development, and natural resource utilization, degradation, and conservation.

**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.

**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 E.U. is the most advanced case study in multi-national economic integration of our time. Topics covered include the theory of economic integration, institutions of the E.U., various policy and agenda issues of the 1990s, and a look at E.U. 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. Was 490 in previous catalog.

### **405 MARXIAN POLITICAL ECONOMY (4)**

Prereq: Econ 206, 207; and any upper-division economics course. The fundamentals of Marxian economic theory and its modern variants. Application of the tools of radical economic analysis in examining economic trends and social issues.

### **406 TOPICS IN MICROECONOMICS (4)**

Prereq: Econ 306; Econ 208 or equivalent; FMDS 205 or Math 341 recommended. 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 307; Econ 208 or equivalent; FMDS 205 or Math 341 recommended. 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.

### **431 ECONOMICS OF MARRIAGE AND GENDER (4)**

Prereq: Econ 306. Reviews the now extensive literature on the economics of marriage, divorce, children, intra-household transfers, female labor force participation, and sexual discrimination in the labor and other markets.

### **442 INDUSTRIAL ORGANIZATION AND PUBLIC POLICY (4)**

Prereq: Econ 306 or 309. 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. Included are issues of protectionism, economic integration and strategic trade policy.

### **463 INTERNATIONAL FINANCE (4)**

Prereq: Econ 311; Econ 307 strongly recommended. 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.

### **470 ECONOMIC FLUCTUATIONS AND FORECASTING (4)**

Prereq: Econ 206 and 207; Econ 208 or equivalent; Econ 306 or 307 or equivalent; Math 341 or FMDS 205. 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 206 and 207; Econ 208 or equivalent; Econ 306 or 307; Math 341 or FMDS 205. The use of statistical methods to estimate and test economic models. Theory and application of regression techniques, with emphasis on problems arising in the analysis of economic data.

### **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 Pol Sci 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 Envr 493.

## **Graduate Courses**

*Courses numbered 500; 517; 545; 597 are described on page 31 of this catalog.*

Admission to Graduate School or special permission required. See the Graduate School section of this catalog. These courses are offered irregularly in conjunction with the MBA Program also described in the Graduate School.

### **510 SEMINAR IN PUBLIC ECONOMICS (4)**

Prereq: written permission of instructor. An analysis of the behavior of the public sector and the incidence of its attempts to achieve allocation, distribution and stabilization goals.

### **511 SEMINAR IN FINANCIAL INSTITUTIONS AND MONEY (4)**

Prereq: written permission of instructor. The monetary and financial system. Relation of economic theory to monetary policy and economic activity.

### **525 SEMINAR IN LABOR ECONOMICS (4)**

Prereq: written permission of instructor. Selected topics in the economics of labor markets and the process of collective bargaining.

### **561 SEMINAR IN INTERNATIONAL ECONOMICS (4)**

Prereq: written permission of instructor. Detailed analysis of the pure and monetary theories of international trade and their relevance to the modern world.

### **582 SEMINAR IN REGIONAL ECONOMICS (4)**

Prereq: written permission of instructor. Case studies in regional social accounting, growth and stability, intra- and interregional relations; concepts and criteria of regional planning.

# FINANCE, MARKETING AND DECISION SCIENCES

The Department of Finance, Marketing and Decision Sciences (FMDS) provides the opportunity for study in several related fields of business administration. The primary fields include finance, marketing and management information systems. Additional course work is provided in international business, business statistics and business policy. 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 FMDS Department will have completed a broad business program plus a wide range of non-business 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 mission of the Finance, Marketing, and Decision Sciences Department is to provide students with an understanding of business concepts and tools in our component disciplines and to equip students with the analytical, communication and information technology skills necessary in life as well as in business. 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, primarily applied in nature, 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 American Assembly of 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. Students may choose to concentrate their major electives in a single field if they wish. The department offers concentrations in finance, international business, management information systems 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.

### *International Business Concentration*

Students who choose to complete the international business (IB) concentration are expected to have a broad background outside the field of business. IB students are asked to carefully plan their GURs and University electives to include courses in geography, political science, anthropology, non-U.S. history and regional studies. Since language skills are of fundamental importance in international business, students should continue their training in foreign languages. For longer-term career purposes, IB students are encouraged to take two or more courses in a functional area of business. Study abroad and internships may be taken for credit in the major where appropriate and when formal procedures are followed.

### *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 FMDS Department. Students are expected to have some proficiency in word processing and spreadsheet software at the time they enter upper-division FMDS 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. Students who have not otherwise gained these skills are expected to register in FMDS 220 prior to their registration in FMDS 305, 320 and 341.

## COMMUNICATIONS REQUIREMENTS

All business majors are required to take one communication focus (CF) course and one writing proficiency (WI) course prior to graduation, both taken within the College of Business and Economics. 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 FMDS Department "Planning Guide," available in Parks Hall 343. Non-routine 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 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 of 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 those courses are requirements rather than electives. Priority is given to majors in the College of Business and Economics and other declared majors for whom the classes are required.

## FINANCE, MARKETING AND DECISION SCIENCES FACULTY

EARL D. BENSON (1980) Chair. Professor. BS, University of Idaho; MA, Pennsylvania State University; PhD, University of Oregon.

DAVID J. AUER (1980) Lecturer. BA, MA, Western Washington University.

DEEPINDER S. BAJWA (1999) Assistant Professor. BE, University of Mysore; MBA, PhD, Southern Illinois University at Carbondale.

WENDY J. BRYCE (1986) Associate Professor. BA, MS. Tufts University; MBA, Cornell University; PhD, University of Washington.

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.

L. FLOYD LEWIS (1983) Professor. BA, California State University, Sacramento; MS, San Jose State University; PhD, University of Louisville.

THOMAS J. OLNEY (1986) Associate Professor. AB, Cornell University; MBA, PhD Columbia University.

EROL A. PEKOZ (1998) Assistant Professor. BS, Cornell University; MS, PhD, University of California, Berkeley.

THOMAS W. ROEHL (1999) Assistant Professor. BA, Valparaiso University; MA, University of Oregon; PhD, University of Washington.

STEVEN C. ROSS (1989) Associate Professor. BS, Oregon State University; MS, PhD, University of Utah.

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.

STEPHEN S. STANDIFIRD (1999) Assistant Professor. BS, Purdue University; MBA, Northwestern University; PhD, University of Oregon.

TERRELL G. WILLIAMS (1990) Professor. BS, MS, University of Wyoming; PhD, University of Arizona.

## BACHELOR OF ARTS

*Major — Business Administration (Finance, Marketing and Decision Sciences)*

91-92 credits

- Foundation Courses (28 credits):
  - Acctg 240, 245
  - Econ 206, 207
  - FMDS 205
  - Mgmt 271
  - Math 157
- Core Courses (36 credits):
  - Econ 309
  - FMDS 305, \* 495, \*\* MIS 320, Fin 341, Mkt 380
  - Mgmt 311, 360, 482
- Concentration Electives (27-28 credits):
  - Students may select one of the faculty recommended concentrations listed below, or may choose to have no concentration and complete 27 to 28 credits under advisement

### Concentrations

#### Finance

- Fin 440, 441, 444
- Two courses from Fin 443, 446, 447, 448, 449
- Two courses from Acctg 331, 341, 375, Econ 306, 307, 310, 311, Fin 345, 346, 456, or other 44x course

#### International Business

- FMDS 370, 470
- One course from Econ 385, 462, 463
- One course from FMDS 473, Mkt 486, Mgmt 366, 481, Acctg 451
- One CBE elective
- Geog 312 (both the prerequisite, Geog 201, and Geog 312 may be taken as a GUR if planned for early in lower-division course work)
- One course under advisement
- International Experience Requirement (IER)
  - Completion of at least one of the following:
    - a qualified education experience in a foreign country
    - a qualified global internship
    - a foreign language through the second year (200 level)

#### Management Information Systems

- Mgmt 312, MIS 321, 322, 421, 429
- Two courses from: MIS 323, 420, 422, 423, 426 (may be repeated), either 427 (4 credits maximum may be applied to concentration) or 428, or FMDS 405, Acctg 421 or computer science courses under advisement
- Familiarity with a programming language is highly recommended

\* Majors should take FMDS 305 as early in their junior year as possible

\*\* Students may substitute Mgmt 491 and 492 in lieu of FMDS 495.

*Marketing*

- Mkt 381, 382, 489
- Two courses from Mkt 480, 481, 482, 483, 484, 486, 488
- Two courses from Mgmt 312, Mkt 480, 481, 482, 483, 484, 486, 488, marketing-related courses under advisement

*Minor — Business Administration*

40 credits

- Acctg 240, 245
- Mgmt 271, 311
- FMDS 205, Fin 341, Mkt 380
- Econ 206, 207
- Math 157

**COURSES IN FINANCE, MARKETING AND DECISION SCIENCES**

*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.*

**General Courses**

**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: FMDS 205. Applications of business statistics to research, analysis, and decision making in business. Regression, correlation, analysis of variance, and non-parametric tests with emphasis on the use of business-oriented computer statistical packages.

**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.

**405 BUSINESS FORECASTING (4)**

Prereq: FMDS 305 or equivalent. Introduction to business forecasting for managers. Emphasis on forecasting at the firm and industry level rather than aggregate economic forecasting. Techniques include exponential smoothing, ARIMA models, decomposition methods, econometric methods for managerial applications, judgmental and Bayesian forecasting. A project using business data is required.

**470 INTERNATIONAL BUSINESS OPERATIONS (4)**

Prereq: Mkt 380, FMDS 370. 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 (3)**

Prereq: FMDS 470 or permission of instructor. 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.

**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 a maximum of 12 credits, only four of which may be applied to a concentration.

**495 BUSINESS POLICY (4)**

Prereq: Mgmt 311, 360; MIS 320 (or Acctg 321), Fin 341, Mkt 380. 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.

**Finance**

**215 PERSONAL FINANCE (3)**

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 business administration majors.) Description of securities markets and trading of stocks and bonds. Characteristics of other investments including options, convertible securities, mutual funds and tangible investments. Investment risk and portfolio management.

**341 PRINCIPLES OF FINANCE (4)**

Prereq: Acctg 245, FMDS 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: FMDS 305, Fin 341, 440. An integrated approach to financial management including study of intermediate-level financial theory and its application to financial decision making under uncertainty.

**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: FMDS 305, 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: FMDS 305, 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.

## **Management Information Systems**

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

Prereq: Acctg 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.

### **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 Acctg 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 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. 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.

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

Prereq: MIS 321 or Acctg 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.

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

Prereq: MIS 322 or Acctg 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 or Acctg 321. 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.

### **426 TOPICS IN MANAGEMENT INFORMATION SYSTEMS (4)**

Prereq: MIS 321 or Acctg 321. Varying topics in management information systems such as groupware and GSS, project management and implementation, systems installation and training, and object-oriented applications. Repeatable with various topics to a maximum of 12 credits.

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

Prereq: MIS 321 and permission of instructor. Information systems related to employment, research, or special project experience. Emphasis is 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 4 of which may be applied to the MIS concentration.

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

Prereq: MIS 322 or 420 or 421 or 422. 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.

### **429 CORPORATE INFORMATION SYSTEMS MANAGEMENT (4)**

Prereq: MIS 321 and 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.

## **Marketing**

### **380 PRINCIPLES OF MARKETING (4)**

Prereq: MIS 220 or equivalent, Econ 206, Acctg 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: FMDS 205, Mkt 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: Mkt 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.

### **480 MARKETING PRACTICUM (4)**

Prereq: Mkt 380 and 381. 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: FMDS 305, Mkt 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: Mkt 381, 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: Mkt 381, 382. Management of non-personal 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: Mkt 381, 382, Acctg 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.

### **486 INTERNATIONAL MARKETING MANAGEMENT (4)**

Prereq: Mkt 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.

### **488 TOPICS IN MARKETING (4)**

Prereq: Mkt 381 and 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: FMDS 305, two 400-level marketing courses. 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.

# 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, management, production and operations management, and a separate major in manufacturing 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, operations and ethical and social issues.
- Offer students opportunities for improving communication skills and learning related to a diverse workforce 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 American Assembly of 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 with specific emphasis on the core elements of people and production.
- 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 and foundation courses in the major. Several foundation courses also satisfy General University Requirements. 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.

## STUDENT ADVISING

For answers to routine questions, and prior to declaration, students should consult this catalog and the department's *Planning Guide*. For non-routine questions, inquiry should be made at the departmental office for referral to an appropriate faculty member. A faculty adviser will be assigned to each student upon acceptance into the major.

## MANAGEMENT FACULTY

BRUCE D. WONDER (1981) Chair and Associate Professor. BS, University of California; MS, San Francisco State University; PhD, University of Washington.

BRIAN K. BURTON (1995) Assistant Professor. BA, MBA, 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.

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.  
 KENNETH S. KELEMAN (1977) Professor. BA, MA, San Diego State University; PhD, University of Utah.  
 E. LEROY PLUMLEE (1976) Professor. BBA, Texas Tech University; MS, Northern Illinois University; PhD, Texas Tech University.  
 TRACEY H. SIGLER (1997) Assistant Professor. BA, MBA, Bowling Green State University; PhD, University of North Carolina.  
 MARK C. SPRINGER (1987) Associate Professor. BA, University of Cincinnati; MBA, PhD, Vanderbilt University.  
 DANIEL M. WARNER (1978) Associate Professor. BA, JD, University of Washington; MA, Western Washington University.

**DECLARATION OF MAJOR**

Within the Department of Management a student may pursue either of two separate majors: (1) a Bachelor of Arts degree in business administration or (2) a Bachelor of Science degree in manufacturing management. Those students seeking a Bachelor of Arts degree should consult the College of Business and Economics introductory section of this catalog for declaration of major procedure. Students interested in the Bachelor of Science degree program should read the special declaration requirements listed under the "Bachelor of Science" section below.

**BACHELOR OF ARTS**

*Major — Business Administration (Management)\**

92 credits

- Foundation Courses (28 credits):
  - Acctg 240, 245
  - Econ 206, 207
  - FMDS 205
  - Mgmt 271
  - Math 157
- Core Courses (44 credits):
  - Econ 309
  - FMDS 305
  - Fin 341
  - Mgmt 311, 312, 322, 360, 482
  - MIS 320
  - Mktg 380
  - FMDS 495 or Mgmt 491 and 492\*\*
- Elective Courses (20 credits):
  - A minimum of 20 credits of approved upper-division elective courses are required to complete the major. A student may wish to concentrate these electives. Faculty recommended concentrations are listed 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 WI requirements.

**\*\*Students** interested in small business entrepreneurship should elect to take the small business sequence Mgmt 491 and 492. These two courses would substitute for FMDS 495 and the course under advisement required in the student's selected concentration.

*Concentrations*

*Human Resource Management*

- Select four courses from Mgmt 401, 404, 423, 424, 425, 426 or 427
- One course under advisement

*Management*

- Select two courses from Mgmt 401, 402, 404, 468
- Select two courses from Mgmt 301, 313, 471, 481
- One course under advisement

*Operations Management*

- Mgmt 460, 463, 468
- Select one course from Mgmt 365, 366, 367, 465 or 469
- One course under advisement

*General*

- In lieu of completing one of the above concentrations, students in the department may elect to work with their faculty adviser to design a set of five upper-division CBE courses appropriate to their academic interests. The resulting course of study shall have *prior* approval of the adviser and include at least three courses offered through the Management Department
- Students interested in entrepreneurial management should select the general option and inform the department of that interest. They will be advised of the preferred curriculum choices for students intending to embark upon entrepreneurial careers or careers in small business.

*Minor — Business Administration*

40 credits

- Acctg 240, 245
- Econ 206, 207
- FMDS 205
- Fin 341
- Mgmt 271, 311
- Mktg 380
- Math 157

**BACHELOR OF SCIENCE**

*Major — Manufacturing Management\**

133 credits

The Department of Management's unique manufacturing 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 combining 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

at or above 3.0 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)
  - Acctg 240, 245
  - Chem 115
  - Econ 206, 207
  - FMDS 305
  - Mgmt 271
  - Math 157
  - Physics 114
- Core Courses (77 credits)
  - Econ 309
  - ETec 110, 111, 220
  - FMDS 305
  - Fin 341
  - Mgmt 301, 311, 312, 322, 360, 460, 463, 468, 469, 482
  - MIS 320
  - Mktg 380
  - FMDS 495; or Mgmt 491 and 492\*\*
- Elective courses (18 credits)
  - Plus four courses (16 credits) under advisement and Mgmt 490 (two internships, one credit each)

**NOTE:** All manufacturing management 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.

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

## 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 the College of Business and Economics and other declared majors for whom the classes are required.

## COURSES IN MANAGEMENT

*Courses numbered x37; X97; 300, 400; 417, 445 are described on page 31 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.

### 301 BUSINESS COMMUNICATIONS (4)

Prereq: Eng 101 or equivalent. Business writing principles applied to various types of communications and reports. Cases used; work must be submitted in acceptable business format.

### 311 INTRODUCTION TO MANAGEMENT AND ORGANIZATIONAL BEHAVIOR (4)

Introduction to organization theory, behavior and interpersonal communication; concepts of power, authority and influence; the role of philosophy and values in organizations.

### 312 BEHAVIORAL PROCESSES FOR MANAGEMENT (4)

Prereq: Mgmt 311. Development of critical managerial skills at the individual, interpersonal and group levels.

### 313 TEAMWORK (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.

### 315 INFORMATION AND IMAGE MANAGEMENT (4)

Prereq: MIS 320. Management of organization information systems integrating hard copy, micro-imagery electronic imaging and electronic storage of information. Case approach using database software.

### 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.

### 360 OPERATIONS MANAGEMENT (4)

Prereq: FMDS 205, Acctg 245 and spreadsheet competence. Examines the concepts for designing, planning and controlling manufacturing and service operations. Topics include forecasting, queuing models, inventory management, manufacturing resource planning, just-in-time manufacturing, total quality control, project management and facility layout. Student teams apply these concepts in a simulation exercise.

### 365 INDUSTRIAL PURCHASING (4)

Prereq: Mgmt 311, Mktg 380. The interaction of buyer and seller in the industrial environment. Problems met in purchasing by industrial organizations.

### 366 GLOBAL OPERATIONS MANAGEMENT (4)

Prereq: Mgmt 360. Analysis of issues and problems experienced in managing international operations. Topics include international logistics, facility location, production planning, technology transfer, foreign manufacturing systems and management of operations in the Pacific Rim.

### 367 MANAGEMENT OF SERVICE OPERATIONS (4)

Prereq: Mgmt 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.

### 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 ORGANIZATIONAL BEHAVIOR (4)

Prereq: Mgmt 311. Advanced study of individual and group behavior for managing organizations. Emphasis on theory integration through management simulation.

### 402 SEMINAR IN ORGANIZATIONAL THEORY (4)

Prereq: Mgmt 311. Current research: measuring organizational effectiveness, planning, leadership patterns and current problems.

### 404 CHANGE MANAGEMENT (4)

Prereq: Mgmt 322 or equivalent. Study of the management of change in organizations. Topics include change models, organizational forces which enable and resist change, change processes at the individual, group, organizational and interorganizational levels.

### 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 or equivalent. Training as related to organizational objectives. Training models, learning theory, evaluation methodologies, instructional techniques and topics of special interest are emphasized.

### 425 INDUSTRIAL RELATIONS ADMINISTRATION (4)

Prereq: Mgmt 322. Cases, lectures and collective bargaining simulation are used to develop administrative skill in dealing with union-management relations. Nature of unions, institutional forces conditioning collective bargaining practices, and administrative practices dealing with unions.

### 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 311, 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.

## **430 CASES IN BUSINESS COMMUNICATION (4)**

Prereq: MIS 220 or equivalent, Mgmt 311. Development of written and oral communication skills through use of actual business cases.

## **460 OPERATIONS DESIGN SYSTEMS (4)**

Prereq: Mgmt 360. Examines project planning and the design of integrated manufacturing systems. Covers critical path method (CPM), project evaluation and review technique (PERT), production systems, work methods, facility layout and location, group technology, and cellular manufacturing systems.

## **463 OPERATIONS PLANNING SYSTEMS (4)**

Prereq: Mgmt 360. Examines the principles and techniques for planning production. Topics include forecasting, inventory management, master scheduling and rough-cut capacity planning, material and capacity requirements planning, just-in-time manufacturing and production activity control.

## **465 OPERATIONS CONTROL SYSTEMS (4)**

Prereq: Mgmt 360. Examines the principles and techniques for total quality control/total quality management (TQC/TQM). Topics include new product/service design control, incoming material control, manufacturing/service process control and continuous quality improvement (CQI).

## **468 OPERATIONS STRATEGY AND TACTICS (4)**

Prereq: Mgmt 360. Reviews operations management principles and techniques and examines current topics in domestic and international manufacturing and service operations. Topics include world-class manufacturing (WCM), total quality management (TQM) and continuous process improvement (CPI).

## **469 SEMINAR IN MANUFACTURING MANAGEMENT (4)**

Prereq: Mgmt 360 and permission of instructor. Operations management theory and concepts applied to current manufacturing operations problems combined with field-based study.

## **471 SOCIAL ISSUES IN INTERNATIONAL MANAGEMENT (4)**

Prereq: Mgmt 311. Introduces students to policy-making decisions of multinational corporations and how the effects of culture and alternative socioeconomic systems can have an impact on business' strategy. Taught primarily through case study and field work.

## **481 MANAGING CULTURAL DIVERSITY (4)**

Prereq: Mgmt 312. 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)**

Prereq: Mgmt 271 and senior status. 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.

## **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, 360, Fin 341, MIS 320, Mktg 380. 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 or concurrent with Mgmt 491 by instructor permission only. 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.

# MASTER OF BUSINESS ADMINISTRATION

## PROGRAM PURPOSE

The Master of Business Administration (MBA) Program is a graduate business program that seeks to prepare students for responsible leadership positions in private, public and non-profit organizations. The purpose of the program is to provide broad training in the skills needed by the professional manager. The Western MBA Program is a rigorous, integrated program that 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 mid-management level. Regardless of undergraduate education, candidates will find a challenging program designed to meet their specific background and needs.

The College of Business and Economics is accredited by AACSB (The International Association for Management Education) at both the graduate and undergraduate levels.

Three different programs of study are offered to meet the needs of three different student groups.

- *The Regular 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.
- *The Evening Part-Time MBA Program* serves students who have significant managerial or 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 and a résumé showing work experience. (Further information, including deadlines, is provided in the Graduate School section of this catalog.)

## PROGRAM REQUIREMENTS

- Knowledge Prerequisites: Normally an applicant to the program must have completed a college-level calculus course prior to entering the program. It also is expected that entering students will have competence in the use of microcomputers and common business software such as spreadsheets. Well-developed communications skills also are important.
- Regular Full-Time MBA (92 credits)
  - MBA 510a,b,c (48 credits)
  - MBA 524a,b,c (6 credits)
  - MBA 590 (4 credits)
  - MBA 591 (6 credits)
  - Electives (28 credits)
- Accelerated Full-Time MBA (60 credits)
  - MBA 510c (16 credits)
  - MBA 524a,b,c (6 credits)
  - MBA 590 (4 credits)
  - MBA 591 (6 credits)
  - Electives (28 credits)
- Evening Part-Time MBA (72 credits)
  - This MBA option is currently under development. The first class will be accepted for June 2000. Additional information is available from the MBA Program office.

A required comprehensive exam is given as part of MBA 591.

## 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

*Admission to Graduate School or special permission required. See the Graduate School section of this catalog.*

### 501 FINANCIAL ACCOUNTING AND REPORTING CONCEPTS (4)

Prereq: permission of graduate program director. 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: permission of graduate program director. 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: permission of graduate program director. 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: permission of graduate program director. 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: MBA 501, 502 and 504. 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: permission of the graduate program director. 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: MBA 504. Techniques for the management of individual, group and intergroup behavior in organizations. Includes concepts and techniques for change, conflict resolutions and organizational development.

## **508 OPERATIONS MANAGEMENT (4)**

Prereq: MBA 502, 504. 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: MBA 502. 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 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 and finance, and people and organizations.

## **510c MANAGERIAL DECISIONS (16)**

Prereq: 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: MBA 501, 504. 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.

## **513 TAXATION AND MANAGEMENT DECISIONS (4)**

Prereq: MBA 501, 511. Introduction to the various tax rules and regulations encountered by managers in operating a business. Cases and research problems emphasize the importance of the role of taxation in management decisions.

## **514 SEMINAR IN GOVERNMENTAL AND NOT-FOR-PROFIT ACCOUNTING (4)**

Prereq: MBA 501. Theory and practice of accounting for governmental entities and not-for-profit organizations. Focuses on both accounting and public financial management issues which are influenced by various accounting policies.

## **515 SEMINAR IN MANAGERIAL ACCOUNTING AND CONTROL (4)**

Prereq: MBA 511. Seminar/case study course. Focus on managerial accounting topics such as responsibility centers and transfer pricing; budgeting; and analysis of performance. Examines managerial accounting in international, service and not-for-profit entities.

## **516 FINANCIAL STATEMENT PRESENTATION AND ANALYSIS (4)**

Prereq: MBA 501, 505. 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.

## **522 PERSONNEL AND INDUSTRIAL RELATIONS (4)**

Prereq: MBA 507. The determination, acquisition, development, utilization and maintenance of human resources by employment organizations. Covers employment planning, recruitment and selection, training and development, performance evaluation, and

compensation administration, while giving special emphasis to labor-management relations.

## **523 LABOR/MANAGEMENT RELATIONS (4)**

Prereq: MBA 507. Analysis of the managerial implications in collective bargaining, government regulation, arbitration/mediation between management and labor in the organization.

## **524 MANAGERIAL SKILLS (4)**

Prereq: MBA 507. 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 507. Intensive examination of selected topics in management. Repeatable to a maximum of 8 credits.

## **526 MANAGERIAL COMMUNICATIONS (4)**

Prereq: MBA 501-507 recommended. Techniques for enhancing written and oral communication of information and ideas. Includes review of effective letter and memo-writing techniques as well as a study of report writing. Oral presentation of information, supported by presentation graphics, will accompany the study of report writing. Special application of oral skills is covered. Case approach is used.

## **532 MARKETING STRATEGY (4)**

Prereq: MBA 509. 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 509. Focuses on selected traditional and contemporary topics in marketing theory, planning, strategy, management and practice. Repeatable to a maximum of 8 credits.

## **538 INTERNATIONAL BUSINESS (4)**

Prereq: MBA 502, 505, 509. Analysis of the special economic, marketing, financial and production considerations in the international marketplace.

## **539 SEMINAR IN INTERNATIONAL BUSINESS (4)**

Prereq: permission of program director. Intensive examination of selected topics in international business. Repeatable to a maximum of 8 credits.

## **541 MANAGERIAL FINANCE (4)**

Prereq: MBA 502, 505. 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 505. 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 ADVANCED MANAGERIAL FINANCE (4)**

Prereq: MBA 505, 541. 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 FINANCIAL MARKET RATES AND INSTITUTIONS (4)**

Prereq: MBA 505. Examination of financial institutions and the markets in which they operate. Emphasis on interest rate determinants, fixed income securities and the management of financial intermediaries. Current topics including financial futures and regulatory changes.

## **551 MANAGERIAL ECONOMICS (4)**

Prereq: MBA 502, 503, 504. Economic analysis provides the framework to consider the problems of resource allocations that confront managers in business, government and non-profit 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.

## **552 MACROECONOMIC THEORY AND POLICY (4)**

Prereq: MBA 502. Examination of current issues in macroeconomic theory and policy. Emphasis on using macroeconomic theory to

explain recent U.S. economic performance and the level of income, employment, prices and output in an economic system. Particular attention given to using and interpreting economic indicators for the U.S.

**572 INFORMATION SYSTEMS FOR MANAGEMENT DECISION MAKING (4)**

Prereq: MBA 506. 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.

**581 BUSINESS AND ITS ENVIRONMENT (4)**

Prereq: MBA 507, 509. Study of how business organizations interact with the social and political/legal environments. Develops the causes and effects of regulation of business and explores the notion of

“corporate social responsibility.”

**582 LAW FOR BUSINESS MANAGERS (4)**

Prereq: permission of graduate program director. Lecture, discussion and student presentation regarding current legal issues of importance to business managers, including identifying and controlling risk in contract, tort, bankruptcy and employee relations, among others.

**590 FIELD EXPERIENCE**

Prereq: MBA 510c. Completion of an applied project in conjunction with a professional-level field experience.

**591 BUSINESS POLICY (4)**

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.

# FAIRHAVEN COLLEGE

*Dr. Marie D. Eaton, Dean*

## A COLLEGE WITHIN THE UNIVERSITY

Founded in 1966, Fairhaven College 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 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 curriculum integration; that is, courses are expected to use 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.

## WHO CAN ENROLL

Any new or current WWU student can apply to enroll in Fairhaven's integrated degree program, or, if affiliated with Western's other colleges, may take Fairhaven classes to augment their selected course of study. Fairhaven students take, on the average, about half their classes from other departments within Western. They have full University status and access to all the educational, cultural and social resources of WWU.

## INNOVATION IN EDUCATION

Fairhaven is an experimenting college where innovative teaching methods and varied classroom structures are welcomed. Experiential and diverse learning styles are respected and addressed, and important emerging studies are discussed along with, and in relation to, traditional knowledge.

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

At Fairhaven, students are responsible for their own learning. Students have the option of taking a regular major through any department at WWU, or of building their own individually designed degree in close consultation with faculty.

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 exchange of ideas. 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. In any given quarter, students may select classes offered across the University and/or design study projects in consultation with faculty.

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) or 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 (Fairhaven 101, 201 or 301 and Fairhaven 208 partially fulfill 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, unique objects of knowledge, modes of creativity and practical applications to be found in each area of study.

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

Studies to gain basic skills of thought and expression, and to develop broad perspectives in the areas of human inquiry and experience:

- 101 Foundations Seminar *or*
- 201 Intermediate Foundations *or*
- 301 Transfer Seminar: Methods of Interdisciplinary Study
- 202 Humanities and the Expressive Arts I
- 204 Society and the Individual I
- 206 Science and Our Place on the Planet I
- 208 Writing Competency
- 209 Transition Conference
- 302 Humanities and the Expressive Arts II
- 304 Society and the Individual II
- 306 Science and Our Place on the Planet II

### STAGE 2: CONCENTRATED STUDIES

Studies to sharpen, deepen and integrate knowledge, to learn different approaches to scholarship, to frame questions and find ways to answer them.

*Complete one of the following options:*

**Option A:** The individually designed major — "Fairhaven Interdisciplinary Concentration"

- 303 Concentration Seminar  
Components of concentration: proposal of study; completion of course of study; senior project; student summary and evaluation; committee review and

approval

OR

**Option B:** A major in one of the departments of Western Washington University. (See departmental requirements.)

Fairhaven offers the opportunity for majors in highly specialized disciplines (the sciences, the arts, environmental studies and others) to integrate and broaden their studies.

**NOTE:** Fairhaven students may not complete the General Studies major.

### STAGE 3: ADVANCED STUDIES

Studies to demonstrate understanding of knowledge gained and to assimilate and synthesize what has been learned; discovery of ways in which one's specialization may be generalized to other fields and applied to society.

- 401 Senior Project (Option A students only)
- 403 Advanced Seminar (both Option A and Option B students)

## 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 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 advisers and by the Concentration Seminar course. At the conclusion of the program, a senior project and a concentration summary and evaluation help each graduate to evaluate her or his own work and to look toward the future.

Concentrations have been developed in a wide range of areas not available through traditional majors.

Further information pertaining to the concentration, its possibilities and prospects, may be found in the *Student Guide to Fairhaven College*.

## THE EXPERIENCE OF GRADUATES

Fairhaven graduates have obtained positions in virtually all fields, from business to education, fine arts to government, and from medicine to journalism. They have started many new businesses, created new jobs in established organizations and distinguished themselves in research and publication.

Many graduates have pursued advanced studies or attended graduate school both in the U.S. and abroad.

## SPECIAL PROGRAMS

**Law and Diversity Program.** In the fall of 1991 Fairhaven inaugurated a program to provide special preparation for legal careers to students who are interested in law, diversity and access to the legal system for under-represented groups. Entering at the junior level, students become part of an ongoing learning community as they take required courses (economics, political structures and systems, ethical issues and historical background) at Fairhaven and other WWU departments. A weekly integrative seminar, as well as guest speakers, attorney mentors and a 16-credit legal internship reveal the many relationships between law and culture. Students must complete the program during the two-year term in which they are enrolled. The program meets the requirements of a Fairhaven concentration and leads to a Bachelor of Arts degree.

**Thematic and Intensive Studies.** The College often offers several classes in a single quarter which focus on particular topics, issues or themes. For example, "Canons in Conflict" involved the entire faculty and 80 students in a quarter devoted to examining the debate and conflict over standards and conventions of knowledge in education today. "The History of the Future" included group and independent study to explore an interdisciplinary look at the future and involved all of the faculty and nearly 200 students. "Humanity, Technology and Change" examined the increasingly complex relationships between human and technological systems.

Independent field studies abroad or community internships might consume a full quarter's registration.

**Professional Education.** For students wishing to acquire teaching credentials, Western's 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 the student to complete requirements. The document, "Policies and Procedures for the Student/Faculty Designed Programs for Teacher Certification at Fairhaven College," is available from the Fairhaven main office.

**The Upside-Down Degree.** The usual route to a B.A. degree calls for general education in the first two years and specialization in the last two years. Fairhaven's Upside-Down B.A. gives selected students an option to reverse this process. Graduates of Washington State community colleges who hold the ATA, the AAS or other approved two-year technical degrees may apply to transfer their specializations to Fairhaven as the completed major. Stages 1 and 3 of the curriculum and a minimum of 90 credits are then required for graduation. Students are expected to complete as much as possible of their elective credit at the upper-division level (courses numbered 300 or above). Each application for this program is reviewed on an individual basis. Students are urged to contact the 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. During their first quarter, students take the core Foundations Seminar or Transfer Seminar and are assigned a faculty adviser. The faculty and staff then meet with the students throughout their course of study.

## 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 complies with 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 for information.

## APPLYING FOR ADMISSION, VISITING FAIRHAVEN

*Students currently enrolled in other programs at Western may transfer to Fairhaven fall, winter or spring quarter. They must then satisfy Fairhaven's requirements for bachelor's degrees. Transfer students from other WWU divisions or other colleges and universities may have some core requirements waived upon admission.*

*New applicants to Fairhaven and to the University complete the Uniform Undergraduate Application for Admission to Four-Year Colleges and Universities in the State of Washington.*

The words "Fairhaven College" should be written at the top of the form. Send the standard application and all transcripts to: Office of Admissions, Western Washington University, Bellingham, WA 98225-9009.

In addition to the uniform application, Fairhaven requests a personal statement, two letters of recommendation and an interview (in person or by telephone). Before providing these materials (and to make an appointment), please call (360) 650-3680.

We encourage you to pay us a visit. If you contact us in advance, we can arrange appointments with the dean, an admissions adviser, faculty, students or other WWU staff.

## FAIRHAVEN COLLEGE FACULTY

MARIE D. EATON (1975) Professor and Dean of Fairhaven College. BA, Pomona College; MEd, PhD, University of Washington.

KATHRYN L. ANDERSON (1972) Professor. BA, MA, University of Iowa; PhD, University of Washington.

GARY BORNZIN (1981) Assistant Professor. BS, California Institute of Technology; MS, PhD, University of Colorado.

JOHN L. BOWER (1998) Assistant Professor. BS, PhD, Cornell University.

LESLIE CONTON (1980) Associate Professor. BA, Oberlin College; MA, PhD, University of Oregon.

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.

CONSTANCE P. FAULKNER (1966) Professor. BS, PhD, University of Utah.

GRETA GAARD (1997) Associate Professor. BA, Pepperdine University, Malibu; MA, Claremont Graduate School; PhD, University of Minnesota, Twin Cities.

DANA C. JACK (1982) Professor. BA, Mount Holyoke; MSW, University of Washington; EdD, Harvard University.

RAND F. JACK (1971) Professor. BA, Princeton University; LLB, Yale University Law School.

DANIEL M. LARNER (1966) Professor. AB, Harvard College; MS, PhD, University of Wisconsin, Madison.

JOHN C. MCCLENDON (1971) Associate Professor. BA, MA, San Francisco State College.

MARIAN RODRIGUEZ (1993) Associate Professor. BS, California State University; MEd, University of California, Los Angeles; JD, University of California, Berkeley.

TANIS S'EILTIN (1992) Associate Professor. BA, University of Alaska, Fairbanks; MFA, University of Arizona.

STAN TAG (1997) Assistant Professor. BA, Whitworth College; MA, PhD, University of Iowa.

MIDORI TAKAGI (1994) Associate Professor. BA, Oberlin College; MA, American University; MPhil, PhD, Columbia University.

### Adjunct Faculty

GEORGE DYSON (1993). Research Associate and Writer in Residence.

PATRICIA FABIANO (1991). Director, Wellness Center. BA, University of Pittsburgh; MA, University of Wisconsin; MS, Southern Illinois University.

LYNN MASLAND (1995). Director of Public Information. BA, MA, University of California at Riverside; PhD, University of British Columbia.

**Fairhaven Distinguished Teaching Colleague.** Each year a faculty member of another WWU department is invited to teach at Fairhaven.

**Faculty specialties** include African American and Asian American history, American literature, anthropology, art and art history, bioacoustics, constitutional and environmental law, creative writing, 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.

**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.

Registration appointments 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 by Fairhaven students taking other WWU classes 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 divisions is applied to the general 180-credit requirement for graduation. Fairhaven's courses and studies are open to all WWU students.

### The Fairhaven College Quarterly Class Descriptions.

Available prior to registration in the fall, winter and spring, this publication 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

**Fairhaven's 1999-2001 Curriculum.** The courses and studies listed in this catalog will be offered during the 1999-2001 academic years. Additional classes will be announced and described in the *Fairhaven College Quarterly Class Description* booklet, available at Fairhaven and the Registrar's Office.

At Fairhaven, new courses are constantly being developed by faculty and account for about one-half of the course offerings.

## CORE STUDIES

### 101 CORE: FOUNDATIONS SEMINAR (5)

Required of all Fairhaven College students with fewer than 90 credits the quarter of admission. An introduction to critical learning skills, academic writing, aspects of educational theory, curricular structures and individualized learning. Partially satisfies the all-University writing proficiency requirement.

### 201 INTERMEDIATE FOUNDATIONS (5)

Prereq: Some college experience and permission of Admissions Coordinator. Focus on critical learning skills, academic writing, aspects of educational theory, curricular structures and individualized learning. Individualized attention to writing and independent study skills.

### 202 CORE: HUMANITIES AND THE EXPRESSIVE ARTS I (5)

Exploration of the assumptions and practices which inform human inquiry and creativity in literature, philosophy and the arts.

### 204 CORE: SOCIETY AND THE INDIVIDUAL I (5)

Introduction to the study of people as individuals and in societies, explored through works in social science, literature, history and psychology.

### 206 CORE: SCIENCE AND OUR PLACE ON THE PLANET I (5)

Science and technology are systematic, self-critical, intellectual activities by which a culture copes with the regular phenomena of its world. Addresses science and its associated technological applications in Western culture and seeks to understand their limitations and potential.

### 208 CORE: WRITING COMPETENCY (3)

Development of a portfolio of writing and demonstration of writing competency in consultation with faculty. See *Student Guide to*

Fairhaven College for procedure. Partially satisfies the all-University writing proficiency requirement.

**209 CORE: TRANSITION CONFERENCE (1)**

Prereq: Fair 208. Demonstration of readiness to pursue Concentrated Studies, in consultation with faculty. See the *Student Guide to Fairhaven College* for procedure.

**301 CORE: TRANSFER SEMINAR: METHODS OF INTERDISCIPLINARY STUDY (5)**

Required of all transfer students to Fairhaven College, with upper-division status, the quarter of admission. An introduction to self-designed interdisciplinary studies. Individualized attention to writing and independent study skills. Seminar topics vary with instructor.

**302 CORE: HUMANITIES AND THE EXPRESSIVE ARTS II (5)**

Prereq: Fair 202 or permission of instructor. Critical, interdisciplinary study of the major themes, ideas, issues in the humanities and expressive arts.

**303 CORE: INTERDISCIPLINARY CONCENTRATION SEMINAR (5)**

Prereq: Fair 101, 201 or 301 and 208 and 209. Required of students undertaking an Interdisciplinary Concentration. Application of procedures and assistance in ordering one's course of study into an effective concentration proposal. Credit awarded upon filing the proposal.

**304 CORE: SOCIETY AND THE INDIVIDUAL II (5)**

Prereq: Fair 204 or permission of instructor. Techniques of interdisciplinary study expanded and evaluated in the critical exploration of major concerns in human and social development.

**306 CORE: SCIENCE AND OUR PLACE ON THE PLANET II (5)**

Prereq: Fair 206 or permission of instructor. Critical exploration and techniques of interdisciplinary study in the sciences and at the common boundaries of science with the arts, philosophy, society and history.

**401 CORE: SENIOR PROJECT (Variable)**

Independent study required of students undertaking an Interdisciplinary Concentration. See the *Fairhaven College Guidelines for Concentrations* for more information.

**403 CORE: ADVANCED SEMINAR (4)**

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.

**CONCENTRATED STUDIES**

**210/260/310/360/410 a-z History, Culture and Society (1-6)**

*Analysis of social institutions: theories or issues with reference to their history, structure or meaning; cultural unity and diversity. Repeatable with various topics.*

*Some of the offerings in this section are listed below. Additional topics will be listed in the Fairhaven College Quarterly Class Description booklet as they are offered.*

**211 THE AMERICAN LEGAL SYSTEM (5)**

NOTE: This course may be taken in partial fulfillment of the GUR Social Sciences requirement. 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. (A-F grading.)

**212 INTRODUCTION TO POLITICAL ECONOMY (5)**

A study of the American economic system from two perspectives: orthodox (Keynesian/neo-Keynesian) and critical; application of both theoretical frameworks to problems in modern American society.

**213 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.

**214 WHITE IDENTITY (3)**

An examination of what it means to be white — both through the eyes of those who consider themselves so and those who do not — and the role ethnicity plays in that meaning. Also includes a look at the invention of race categories and ways in which American society, culture and law have reinforced the resulting distinctions and hierarchies.

**215 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.

**216 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.

**217 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.

**218 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.

**219 THE LESBIAN, GAY, BISEXUAL EXPERIENCE (3)**

The development of the lesbian, gay, bisexual, and transgendered community in the United States, with emphasis on identity formation, historical and sociological influences and the effects of encounters between gay cultures and the larger American cultural context. Also offered as AmSt 242.

**261 RACE IN/TO THE MOVIES I: RACE RELATIONS ON FILM 1900-1950 (3)**

An exploration of 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.

**311 ALTERNATIVES IN EDUCATION: INSIDE AND OUTSIDE THE SYSTEM (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.

**312 POLITICAL ECONOMY AND THE LAW (5)**

Prereq: admission to the Law and Diversity Program or permission. An introduction to micro and macro economics and to the uses of both in legal decision making.

**313 GAY, LESBIAN, BISEXUAL AND TRANSGENDERED ISSUES IN EDUCATION (4)**

Prereq: Fair 219 or AmSt 242. Explore challenges for gay, lesbian, bisexual 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.

**314 THE SCIENCE AND STORIES OF GAY, LESBIAN, BISEXUAL AND TRANSGENDERED HEALTH (4)**

Prereq: Fair 204 or AmSt 242. Investigation of contemporary health issues of gay, lesbian, bisexual, and transgendered people in order to understand the interdependence between "health" and its social,

political and cultural contexts.

### 315 WORK (4)

Prereq: studies in the social sciences or the humanities. An interdisciplinary study which examines the meaning, necessity and value of our basic activity. Readings drawn from philosophy, psychology, sociology, political science and literature.

### 316 THE U.S. IN CENTRAL AMERICA AND THE CARIBBEAN (4)

Prereq: at least one course in history or political science. The history of American involvement in Central America and the Caribbean and the development of rationales for that involvement.

### 317 EAST ASIAN RELIGIONS (4)

Prereq: one humanities class. An historical and philosophical study of Chan (Zen) Buddhism and Chinese Taoism including theory and practice.

### 318 DEMOCRACY (4)

Prereq: a course in literature, history, philosophy or political science, or instructor permission. An exploration of the ideas, theories, practices, problems and the future of democracy, through literature, history and other writings.

### 319 THE VIETNAM ERA (4)

Prereq: U.S. history or political science course. Historical, political, cultural changes brought about during America's Vietnam Era, 1954-1975, both here and in Vietnam and their lasting legacy.

### 361 RACE IN/TO THE MOVIES II: RACE RELATIONS ON FILM: 1950-1980 (3)

Prereq: Fair 261 or other film studies class. An exploration of 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.

### 362 WE'RE NOT FOR SALE: HISTORY OF ASIAN WOMEN IN AMERICA (4)

Prereq: upper division status and AmSt 205 or course in history of American women. Exploration of the history and experiences of Asian women in America from the mid-19th century to the present.

### 363 SUZIE WONG TO MISS SAIGON: ASIAN PRESENCE IN HOLLYWOOD (4)

An exploration of 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.

### 364 EL MOVIMIENTO CHICANO (4)

Prereq: Fair 204, AmSt 204, or Hist 463. Examination of the socio-historical, 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.

### 365 ISSUES IN CONTEMPORARY MEXICAN SOCIETY (4)

Prereq: Fair 218 or AmSt 203 or course in Mexican history or culture recommended. Examination of 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.

### 366 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.

### 367 ECOFEMINISM (4)

Prereq: upper division status, an introductory women studies or feminist theory course or instructor permission. Explores the intersections of gender, race, class, species, and environment, the history of activism, and the development of thought and literature in this new branch of feminism.

### 369 CIVIL RIGHTS: POWER, PRIVILEGE AND LAW (3)

Prereq: studies in the social sciences, Fair 204 or 211 recommended.

Reading law critically with a special sensitivity to the ways in which legal techniques, rhetorical strategies and legal precedent reproduce patterns of power and privilege that subordinate people based on categories of identity. Issues pertaining to racial and ethnic groups, gender and sexual orientation, poverty and disabilities are explored. Was Fair 214 in previous catalog.

### 411 POLITICAL ECONOMY AND THE STATUS OF WOMEN (5)

Prereq: U.S. history or political science course. Historical, political, cultural changes brought about during America's Vietnam era, 1954-1975, both here and in Vietnam, and their lasting legacy.

### 412 CRITIQUE OF AMERICAN CAPITALISM (5)

Prereq: Econ 207; Fair 212 or equivalent plus upper-division status. The introduction of critical social theory and its application. Open to students from any field of study. The social problems and theoretical areas to be studied will be determined from students' academic and/or work-related backgrounds.

### 413 CURERS, CLIENTS AND CULTURE: CROSS-CULTURAL PERSPECTIVES ON HEALTH AND ILLNESS (4)

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 U.S.

### 414 COMING OF AGE: CROSS-CULTURAL PERSPECTIVES ON INITIATION PROCESSES (4)

Prereq: Fair 204 or equivalent. Through ethnography, poetry, first-person narratives, film and personal experience, explores commonalities and variations in the experience of achieving adulthood, across cultures and through time.

### 415 GOVERNMENT POWER UNDER THE CONSTITUTION (5)

Study of constitutional law and the way in which the Supreme Court construes the constitution in addressing major social and political questions. Critical reading and analysis of court opinions. Questions of power distribution and conflict among the three branches of the federal government and between the states and federal government.

### 416 INDIVIDUAL RIGHTS UNDER THE CONSTITUTION (5)

Prereq: Fair 415 recommended. Study of constitutional law and the way in which the Supreme Court construes the constitution in addressing major social and political questions. Critical reading and analysis of court opinions. Questions of individual rights in conflict with government regulation.

### 417 NEW WORLD ORDER (4)

Prereq: classes concentrating on international history or politics. A study of the dynamics of contemporary international development, often referred to as the "new world order." The political economy and history of this development.

### 418 WOMEN, IDEAS AND CHANGE: A HISTORY OF FEMINIST THOUGHTS AND ACTIONS (4)

Prereq: WS 211 or Fair 204 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.

### 419 THIRD-WORLD WOMEN: A PERSPECTIVE ON ECONOMIC DEVELOPMENT (4)

Prereq: Fair 212 or equivalent introductory macro-economics course. Writing by and about women of the Third World. Women's response to economic and social "reform," their changing roles and responsibilities, effects on the family, etc.

## 220/320/380/420 a-z Language, Literature and Communications (1-6)

*Literature as expression of the human experience; creative and expository writing; structure, technique and technology of communication; semantics. Repeatable with various topics. Some of the offerings in this section are listed below. Additional topics will be listed in the Fairhaven College Quarterly Class Description booklet.*

### 221 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)**

Workshop to develop and discuss student manuscripts. Repeatable to a maximum of 12 credits with different genres.

**223 a-c COMMUNICATION CLINIC (2 ea)**

Three mini-sessions for students interested in developing or sharpening specific skills in group communication, interviewing and public speaking. Repeatable with various topics.

**226 FILM AND SOCIETY (2)**

Viewing and discussion of selected films with reference to social, political and cultural issues, as well as to cinematic technique. Repeatable three times with various topics.

**227 WALKING (4)**

A literary and experiential examination of walking.

**321 DOCUMENTARY VIDEO PRODUCTION (4)**

Prereq: Course on documentary film theory, photography, or video editing strongly recommended. Production of a short documentary video using S-VHS A/B roll time-code editing. Theory and history of documentary film, lighting, sound, interviewing concerns, visual metaphor, voice-over, music, and toaster transitions will all be covered. Using time-code logs, students will script and rough cut their videos before the final edits.

**322 GAY, LESBIAN, BISEXUAL, AND TRANSGENDERED LITERATURE (4)**

Prereq: Fair 202 or introduction to literature. Exploration of identity, themes, and literary, political and historical context of gay, lesbian, bisexual and transgendered literature, as well as the place of its writers, artists and social actors.

**323 IMAGINATIVE WRITING II (4)**

Prereq: Fair 222, 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.

**324 SHAKESPEARE'S WORLD (4)**

Prereq: upper-division courses in Shakespeare, dramatic literature, or permission of instructor. An examination of the language and structure of selected plays and poems of Shakespeare and his contemporaries, with emphasis on their reflection of the culture, history and sensibilities of the times.

**325 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.

**326 STUDIES IN FILM (2-5)**

Prereq: Fair 226 or other 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.

**327 PERSPECTIVES IN FICTION (4)**

Prereq: women studies, literature, social science. Courses in which fictions, and the lives of its writers, are used to examine societies and the individuals in them. The formal aspects of fiction are considered, but the courses focus on what can be learned about the world beyond the works themselves. Particular attention to the diversity of voices and responses. Topics include women and fiction, family fiction and fiction of social unrest, minority women writers, women's novels of social change. Repeatable with different topics.

**328 POLITICAL THEATRE IN THE 20TH CENTURY (4)**

Prereq: upper-division courses in dramatic literature, history or political science, or permission of instructor. A study of the interaction of live theatre with its political environment. An emphasis on the work of Shaw and Brecht grounds this study of selected American, Canadian, British, African and South American writers.

**329 a-z LITERARY COUNTERPARTS (4)**

Prereq: upper-division standing or permission of instructor. Each section emphasizes a major literary text and surrounds it with a constellation of other works necessary or helpful to its understanding. A pair of authors will be selected for the quarter and will play off each other in theme, style and point of view. Repeatable with different topics.

**381 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.

**382 DIFFERENT VOICES: CREATIVE NON-FICTION WRITING (4)**

Prereq: introductory college writing course. Reading a variety of contemporary writers, and "trying on" the voices of different writers with the goal of developing a wardrobe of voices for writing creative non-fiction.

**383 ENVIRONMENTAL WRITING: DISARMING THE CANON (4)**

Prereq: introductory college writing course. Interrogation of the limits of "nature writing" in terms of race, class, gender, sexuality. Who or what "counts" as nature? Why is the canon of nature writing shaped primarily by white heterosexual male writers?

**384 WRITING NATURE (4)**

Prereq: background in sciences or writing or permission. Workshop on creative non-fiction writing focusing on natural history, nature, wildness, environment, conservation, science, medicine, landscape or place.

**385 LAW AND LITERATURE: THE VOICE OF THE OUTSIDER (4)**

Exploration of concepts of justice and equality through the literature of people of color and other marginalized groups in our society.

**386 THE NARRATIVE VOICE (4)**

Prereq: previous course in literature, oral history or women studies. A study of voice, including analysis of literature and first person accounts, and the theory and practice of collecting and comprehending oral histories.

**387 GRANT WRITING WORKSHOP (2)**

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.

**388 ORAL HISTORY (4)**

Prereq: Fair 223c or permission. Study in methods for conducting, editing, and interpreting oral interviews.

**421 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.

**423 ADVANCED FILM AND SOCIETY (3)**

Prereq: any film class or previous experience in the field. Viewing and discussion of selected films with reference to social, political and cultural issues. Building on skills from previous classes. Repeatable with various topics.

**425 ADVANCED WRITING WORKSHOP (4)**

Prereq: writing courses. An advanced course for those who wish to improve their skills in writing effective prose of any kind, as well as those actively engaged in specific writing projects. Devoted to reading and analyzing student work in various stages of completion, supplemented by discussions of individual and common writing problems with emphasis on form and craftsmanship. Includes conversations with experienced writers in both the arts and sciences.

**230/330/430 a-z Nature, Science and the Environment (1-6)**

*Analysis of systems for understanding, describing and predicting the world of nature; environmental concerns and social policy. Repeatable with various topics. Some of the offerings in this section are listed below. Additional topics will be listed in the Fairhaven College Quarterly Class Description booklet.*

**231a-c 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 8 credits.

**331 PATTERNS IN NATURE (4)**

Prereq: background in the sciences or literature or permission of

instructor. Noting, measuring and recording recurring patterns in the environment. May include nature writing, field work, and the design and execution of research projects. Repeatable with various topics to 12 credits.

### 332 CURRENT ENVIRONMENTAL TOPICS (2-5)

Prereq: Fair 206 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.

### 333 FEMINIST PERSPECTIVES IN SCIENCE (4)

Prereq: Fair 206 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.

### 334 FIELD STUDIES IN SCIENCE (5)

Prereq: Fair 206 or equivalent. Systematic studies of quantitative natural history, employing field techniques from biology, chemistry, physics, and interdisciplinary science.

### 335 ALTERNATIVE FUTURES AND SUSTAINABILITY (4-5)

Prereq: Fair 208 or Eng 101 and prior course work or experience in socio-political issues or environmental issues from a socio-political 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 socio-political, economic and environmental realities. Repeatable with different topics.

### 336 LOCAL CULTURE/LOCAL NATURE (5)

Prereq: Fair 204 or equivalent. Combining theoretical and field study, this seminar will address the myths, values, institutions and disparate ways of life that shape the interaction of the human community with the natural setting of the Nooksack River region.

### 337 THE SCIENCE AND MUSIC OF NATURAL SOUNDS (5)

Prereq: Fair 206 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.

### 338 EARTH IN MIND (4)

Prereq: Fair 206 or equivalent. An exploration of ecological philosophy, the senses, wildness, storytelling, (re)inhabitation, and living in a more-than-human world.

### 339 ENVIRONMENTAL ISSUES OF INDIGENOUS PEOPLES (5)

Prereq: Fair 206 or permission. Exploration of 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.

## 240/340/440 a-z Human Development, Personal Identity and Socialization (1-6)

*Studies in historical, social, educational, cultural, psychological and physiological components of human development, personal identity and social roles. Repeatable with various topics. Some of the offerings in this section are listed below. Additional topics will be listed in the Fairhaven College Quarterly Class Description booklet.*

### 242 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.

### 243 AWARENESS THROUGH THE BODY (4)

The body, its internal senses and its movements. Attention is paid both to theories and experiences of the body and its immediate environment.

### 341 AWARENESS THROUGH THE BODY II (4)

Prereq: Fair 243 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 psycho-physical integration, and to the underlying principles and theories in somatics.

### 343 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.

### 344 ADULT DEVELOPMENT IN WOMEN: CHOICES AND CONFLICT (4)

Prereq: previous courses in psychology. Study of major theories of adult development, including Jung, self-in-relation and cognitive-developmental theorists. Theories are applied to narratives of actual lives, as part of assessing the theories' usefulness.

### 346 THE PSYCHOLOGY OF C.G. JUNG: AN INTRODUCTION (3)

Jung's concepts of archetypes, consciousness, unconsciousness, personality types, and the use of symbols are explored as an introduction to Jung's approach to the study of human psychology.

### 347 PSYCHOLOGY OF WOMEN (5)

Prereq: previous courses in psychology or women studies. Major theories of psychology of women.

### 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.

### 442 DEPRESSION AND EATING DISORDERS IN WOMEN (4)

Prereq: psychology course. Major theories regarding women's development and greater vulnerability to depression. Examination of clinical and cultural explanations for eating disorders.

### 445 HUMAN AGGRESSION (4)

Prereq: previous courses in psychology and women studies. An examination of 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.

## 250/350/370/450 a-z Arts, Self-Expression and Creativity (1-6)

*The creative process in theory and practice; the role of art and artists in society; analyzing expressive forms within cultural context. Repeatable with various topics. Some of the offerings in this section are listed below. Additional topics will be listed in the Fairhaven College Quarterly Class Description booklet.*

### 252 EXPERIMENTAL DRAWING (3)

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.

### 254 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.

### 257 MUSICAL/DRAMATIC PRODUCTION (1-5)

Prereq: permission of instructor. Rehearse, stage and perform a musical/dramatic theatre production. Repeatable with various topics.

### 259 IMPROVISATIONAL THEATRE (2)

An introduction to acting through improvisation. Individual and ensemble work with a variety of forms and themes. Includes movement, voice, character, narration and scene development. Related readings and short essays.

### 351 PRINTMAKING NARRATIVES (4)

Prereq: Fair 254 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.

**352 DOING THEATRE (4)**

Prereq: previous work in the theater arts, television or film, or permission of instructor. A practical workshop for theatre artists, concentrating on intensive study of scenework for actors, but providing opportunity for directors, video artists and designers to practice their crafts in a setting which integrates all the arts of the theatre.

**354 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.

**356 DREAMS, IMAGINATION AND CREATIVITY (4)**

Prereq: Fair 204 or 243 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.

**357 HISTORY OF CONTEMPORARY NATIVE AMERICAN ART (4)**

Prereq: an art history class or permission of instructor. An examination of traditional and Western art influences in contemporary Native American art with special emphasis on the development of content and subject matter of specific artists living and creating in the Southwest and Northwest. Introduction to the Indian Arts and Crafts Act of 1990 and its affects on Native American art communities. Repeatable three times with different topics.

**358 ART IN THE ENVIRONMENT (4)**

Prereq: three studio art courses or instructor permission; 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 three times.

**359 PERFORMANCE ART (4)**

Prereq: Fair 202 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 two times.

**371 SONGWRITING WORKSHOP (2)**

Examination of the elements of songwriting; discussing techniques, strategies and blocks; the roles and inter-relationships of melody, rhythm, and lyric; and song forms and styles. Through a series of exercises, development of a portfolio of songs.

**452 CROSS-CULTURAL SHAMANISM (4)**

Prereq: Fair 204 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.

**454 SCRIPTWRITING WORKSHOP II (4)**

Prereq: Fair 354, 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.

**455 ADVANCED PRINTMAKING (4)**

Prereq: Fair 254 and Fair 351. Advanced printmaking techniques illustrating various themes developed by students in consultation with instructor, with an emphasis on technique and aesthetics.

**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.*

**337a-z FOREIGN FIELD STUDY (1-15)**

Prereq: permission required. Structured field study or research in a foreign country with on-campus or on-site professional guidance. Students must consult a Fairhaven faculty member in advance of registration and contract individually with that faculty member for course requirements. Narrative self-evaluation required at the conclusion of the course. Registration through Foreign Study Office. 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.

**297/397/497 a-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. Practicum in an area related to one's course of study; addresses specific roles or responsibilities. Repeatable.

**499 a-z Special Problems in Interdisciplinary Studies (1-15)**

Prereq: upper-division status or permission. 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

*Bertil H. van Boer, Jr., Dean*

The College of Fine and Performing Arts, consisting of the departments of art, music, and theatre arts, as well as the dance program, provides for an educational environment 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 Art Center Series, bringing world-class events to the University. Within this environment the College provides for its academic majors while also offering a full spectrum of arts experiences and courses to the general student body and community.

The College enables the student to grow in a specific discipline, while concurrently encouraging cross-disciplinary experiences. A commitment to a career in an arts discipline warrants and demands exploration in all the arts. The departments of the College provide the necessary flexibility to develop the specific talents and interests of each student. In addition to the traditional course of study, the College offers student/faculty-designed majors to allow for cross-disciplinary study. Within each department an appropriate balance of historical, analytical, practical and pedagogical courses combine to provide an effective curriculum.

The nature of instruction within the College provides for a nurturing atmosphere with the faculty acting as mentors to their students. This approach is consistent with the unique goals and dreams that each student brings to the College. The faculty of the College are dedicated educators, scholars and artists who strongly believe in the primary role the arts play in our civilization.

### *Academic Programs Leading to Undergraduate and Graduate Degrees*

Art . . . . . BA, BA/Ed, BFA, M/Ed  
 Art History . . . . . BA  
 Music . . . . . BA, B/Mus, M/Mus, BA/Ed  
 Theatre . . . . . BA, MA

### *Admission*

A student is admitted to the College of Fine and

Performing Arts 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 the three departments of the College. Advisement is carried on through the individual departments or the dance program (for minors).

### *Requirements for Bachelor's Degree*

Besides the general requirements for graduation from the University, explained elsewhere in this catalog, the College of Fine and Performing Arts 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 the College of Fine and Performing Arts. 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 the College of Fine and Performing Arts. Each major is approved by the Curriculum Committee of the College of Fine and Performing Arts. 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*

Thomas Johnston . . . . . Art  
 David Wallace . . . . . Music  
 Thomas Ward . . . . . Theatre Arts

## **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 *Timetable of Classes*, the Summer Bulletin and the University Extended Programs' bulletins.

FAIRHAVEN COLLEGE

## ART

The Department of Art offers a number of degree programs with major and minor concentrations in art education, art history, ceramics, design production, drawing, fibers, graphic design, illustration, inter and mixed media, painting, photography, printmaking, sculpture, or in a combination of these areas as determined by the student's formal course plan.

### CONCEPT OF INSTRUCTION

The broad instructional concept is to integrate the components of art history, criticism, design and studio courses, University courses, gallery exhibition programs and permanent collections.

It is important that the student understand the history, traditions and conventions of art and art criticism, for herein lies the intelligible language of art and the heritage of humankind. The student learns to interpret, analyze and make intelligent judgments about art as well as learning the skills and concepts of the studio. A grasp of the dynamic nature of a culture and the continuing extension of its visual language is a fundamental objective.

The faculty is composed of professional artists, scholars and designers dedicated to providing an environment for students to pursue studies preparing them for advanced studies, professional careers in the arts, and professional opportunities in education.

### WESTERN GALLERY AND OUTDOOR SCULPTURE COLLECTION

The internationally known Outdoor Sculpture Collection includes works by international, national and regional artists, such as Alice Aycock, Mark di Suvero, Nancy Holt, Robert Morris, Isamu Noguchi, Beverly Pepper, Anthony Caro, Donald Judd, Richard Serra and Magdalena Abakanowicz.

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

THOMAS A. JOHNSTON (1967) Chair and Professor. AA, San Diego City College; AB, San Diego State College; MFA, University of California, Santa Barbara.

SHARRON ANTHOLT (1996) Assistant Professor. BFA, California State University; MFA, San Francisco Art Institute..

EDMOND BEREAL (1993) Assistant Professor. Alternative Education. Professional artist.

LAURA CRARY (1993) Assistant Professor. BFA, Ohio University; MA, PhD, University of Pittsburgh.

CRISTINA de ALMEIDA (1997) Assistant 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.

ARISTOTLE GEORGIADES (1993) Associate Professor. BFA, University of Michigan; MFA, School of the Art Institute of Chicago.

MADGE GLEESON (1983) Professor. BA, MAT, Brown University; MFA, Washington State University.

GAYE LEIGH GREEN (1996) Assistant Professor. BA, California State University; MA, Stanford University; PhD, Pennsylvania State University.

CAROL JANSON (1989) Associate Professor. BA, MA, PhD, University of Minnesota.

CARA JAYE (1997) Assistant Professor. BFA, Parsons School of Design; MFA, University of Colorado.

ROSALIE ROSSO KING (1983) Professor. BS, University of Washington; MEd, Massachusetts State College at Framingham; PhD, University of Washington.

PATRICK F. McCORMICK (1969) Professor. BFA, BA, University of Washington; MFA, Cranbrook Academy of Art.

MOMI NAUGHTON (1997) Instructor. BA, University of Hawaii; MA, Western Washington University.

MARK NEWPORT (1997) Assistant Professor. BFA, Kansas City Art Institute. MFA, School of the Art Institute of Chicago.

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 Hayes 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 studio art, design, or art education, application is made in the form of a portfolio of 35 mm slides of art work they have executed. The portfolio will be reviewed by faculty from the Department of Art, and evaluation will be made based on demonstrated understanding of the essential elements of visual art, originality, and technical proficiency. Students with an interest in art history as a major may submit a writing sample in lieu of slides. Portfolios and writing samples must be submitted and reviewed by the Department of Art before students can enroll in Foundation courses. The primary annual review deadline is April 1 each year. Students applying for admission winter or spring quarters should follow the admissions office deadline for those quarters. Applicants for winter or spring quarters will be reviewed on a space available basis.

## PORTFOLIO REQUIREMENTS

Incoming freshmen and transfer students in studio art, design or art education must submit a portfolio of 12-15 slides (35 mm). It is recommended that the portfolio include: three drawings from direct observation, three works demonstrating use of color and six additional works. A detail or second view may be submitted for three pieces in the portfolio. Incoming art history applicants must submit a writing sample consisting of a 500-word essay explaining why they would like a major in art history.

### Scholarships

The Department of Art offers a limited number of scholarships to recognize individual talents, promise, and meritorious achievement. The Scholtz Family 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.

### Foundation Program

The Foundation program is a first-year program designed to provide an integrated base of approaches, attitudes, and experience in art and art making which parallel the pluralistic nature of art today. Through a combination of independent study and collaborative projects, classroom discussions and group critiques, students are involved in an intensive study of issues and practices in art.

As an introduction to the areas of study in the Department of Art and the potential for creating and understanding art, the Foundation program allows students to discover and refine skills and interests and begin to identify individual directions in the study of art. The courses in the Foundation program integrate technical and conceptual experience through a process of investigation which includes the development of vocabulary, critical thinking, a knowledge of historical and cultural information, and the exploration of a wide variety of materials and processes used in art making today.

The goals of the Foundation program include an investigation into the artist's role in society and the development of a community within the first-year program.

### Foundation Courses

- Art 109 (Visual Dialogue)
- Art 110, 120, 130 (Form and Content I, II, III)

The Foundation courses are required of all art pre-majors. Transfer students are required to satisfy the requirements of the Foundation courses, some of which may not be offered at their previous institution. **Note:** it is recommended that Art 109 be taken concurrently with Art 110 and that Art 120 be taken concurrently with Art 130. As an integral part of the Foundation program, art pre-majors are also required to take the art history survey courses, AH 220, 230, 240.

## BACHELOR OF ARTS

All students interested in majoring in art are encouraged to

meet with a departmental adviser quarterly. Thoughtful planning results in greater continuity and appropriate sequencing of educational experience. All students should note the prerequisites for intermediate and advanced courses and develop appropriate sequencing of their academic plan of study. Upper-division art courses are open to any student who has satisfactorily completed specific prerequisites as noted in the course descriptions listed in this catalog. Some disciplines within the department require a portfolio review before access to the 400-level classes. The design area (which includes graphic design, illustration, and design production) conducts a portfolio review at the end of the junior year for admission into the senior sequence classes.

The art degree requires a minimum of 70 credits within the department (29 of which are core requirements). These include the studio Foundations series (Art 109, 110, 120 and 130), the art history survey series (AH 220, 230 and 240) and two upper-division (300 or 400 level) art history classes. The remaining credits are selected under advisement from one or more of the following areas of concentration: art education, art history, ceramics, design production, drawing, fibers, graphic design, illustration, inter and mixed media, painting, photography, printmaking, sculpture. Selected courses outside of the department may be included on a case-by-case basis. All art majors (studio, design, art education, and art history) are required to complete the core as part of graduation requirements.

In the studio, design and art education areas, students first enter the department as pre-majors. After completing the 100-level Foundations program (109, 110, 120 and 130), students may change their declaration status from pre-major to major. Access to 200-level studio classes will be for majors only. When students are ready to enroll in 200-level studio classes, they should select a faculty adviser to help plan an individual course of study. A formal course plan must be developed with a faculty member by the time a student completes 12 credits of 200- or 300-level work. Once developed, the course plan is placed on file in the art office and becomes a map of the degree requirements. Students are strongly encouraged to complete the art history survey series early in their program of study and in the proper sequence.

In the art history area, students first enter the department as pre-majors. After completing the 200 level art history survey series (AH 220, 230, 240 and 270) students may change their declaration status from pre-major to major. Access to 300 level art history classes will be for art and art history majors only or by permission of instructor. When students are ready to enroll in 300-level art history classes, they should select a faculty adviser to help plan an individualized course of study. A formal Course Plan must be developed with a faculty member by the time a student completes 8 credits of work at the 300 level. Once developed, the Course Plan is placed on file in the art office and becomes a map of the degree requirements. Students are strongly encouraged to complete the studio Foundations series early in their program and in the proper sequence.

Western Washington University requires successful completion of one writing proficiency class as a degree requirement. This requirement may be fulfilled by a designated art history course or a designated writing proficiency course outside of the department.

*Studio Major*

70 credits

- Foundation courses: Art 109, 110, 120 and 130
- Art History sequence: Art History 220, 230, 240, two art history courses at the 300 or 400 levels

*Studio Minor*

30 credits

- Foundation courses: Art 109, 110, 120 and 130
- Art History 240
- Electives under advisement

*Major — Art History*

72 credits

- Foundation courses: Art 109, 110, 120 and 130
- Art History 220, 230, 240, 270
- Art History 275, 375, 475
- A minimum of two courses in each of the following:
  - Modern and contemporary emphasis: Art History 301, 312, 401, 415, 416, 440, 460, 490
  - Europe and United States emphasis: Art History 315, 316, 320, 330, 331, 340, 360, 429, 432
  - Comparative and multicultural emphasis: Art History 310, 350, 370, 371, 410, 431, 450, 471
- A minimum of three art history courses at the 400-level must be taken among the area selections and electives; 300- and 400-level classes are repeatable to 8 credits with permission of instructor.
- A reading knowledge of French, German or another second language appropriate to the student's career plans

*Minor — Art History*

28 credits

- Art History 220, 230, 240, 270
- Additional art history courses chosen under departmental advisement

**BACHELOR OF ARTS IN 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 51-credit program in addition to those courses specified in the College of Education elementary section of this catalog. Students who want to teach art only at any grade level take the 73-credit program in addition to the requirements presented in the College of Education, Secondary Education K-12 section.

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 — K-12 Specialist*

73 credits

- Foundation courses (12 credits): Art 109, 110, 120 and 130
- A selection of six courses from the following (24 credits): Art 201, 210, 220, 230, 240, 260, 270, 290, 370
- Studio specialization (10 credits)
- Art History (13 credits): Art History 220, 230, 240 and one art history elective
- Art Education (14 credits): Art 381, 383, 384, 388

*Major — Art — Elementary Education*

51 credits

- Foundation courses (24 credits): Art 109, 110, 120, 130, 220, 240 plus one studio elective
- Art History (13 credits) Art History 220, 230, 240 plus one art history elective
- Art Education (14 credits): Art 381, 383, 384, 388

**BACHELOR OF FINE ARTS***Studio Major*

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 no less than 180 undergraduate credits. Students are advised that a Bachelor of Arts studio 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 (Advanced Studio Seminar) or 10 credits of Internship for design area students
- 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
- A midterm review, to be scheduled before registration for spring quarter
- A final exhibition and evaluation

During the student's final quarter of Bachelor of Arts study, application should be made to the Department of Art faculty for admission to the Bachelor of Fine Arts program. Application consists of 15-20 labeled slides of work completed during their Bachelor of Arts study, a letter of application indicating a preference of the faculty members on your committee and your goals and/or theme of study, a grade point average of 3.00 or higher, and a transcript.

All students must begin their B.F.A. 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 B.F.A. program, students will choose a committee of at least three Department of Art faculty members to work with throughout the year.

## 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

For a concentration leading to the Master of Education degree, see the Graduate School section of this catalog.

## COURSES IN ART

*Courses numbered X37; X97; 300, 400; 417, 445 are described on page 31 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 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 and perspective studies as well as drawing from memory and the imagination. Various techniques, materials and surfaces are explored. Formal elements and organizing principles of design are introduced. Was Art 101 in previous catalog.

### 120 FORM AND CONTENT II: 2-D (3)

Prereq: Art 109, 110; Art pre-major status or Industrial Design and Fairhaven majors. Recommended to be taken concurrently with Art 130. Focuses on two-dimensional problem solving, visual and critical thinking, and the elements and organizing principle of design including an introduction to color theory and its application. Drawing skills are expanded as part of the visual thinking process.

### 130 FORM AND CONTENT III: 3-D (3)

Prereq: Art 109, 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. A wide range of materials and processes are explored. The relationship of drawing to three-dimensional construction is emphasized.

### 201 DRAWING CONCEPTS AND SYSTEMS (4)

Prereq: completion of Foundation courses: Art 109, 110, 120 and 130. A studio course committed to the study of various drawing concepts and systems, beyond the introductory level. Assigned projects emphasize more in-depth use of media and sophistication of concept.

### 202 COLOR THEORY (4)

Prereq: completion of Foundation courses: Art 109, 110, 120 and 130. Lecture/lab course. 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.

### 210 INTRODUCTION TO PRINTMAKING (4)

Prereq: completion of Foundation courses: Art 109, 110, 120 and 130. A lecture/lab course covering history, methods and practice of print concepts. Introduction to monotype, relief and intaglio process.

### 220 PAINTING (4)

Prereq: completion of Foundation courses: Art 109, 110, 120 and 130. Introduction to contemporary painting.

### 230 BEGINNING SCULPTURE (4)

Prereq: completion of Foundation courses: Art 109, 110, 120 and 130. Beginning problems in three-dimensional form and expression employing a variety of media. Introduction to contemporary concepts in sculpture.

### 240 CERAMICS (4)

Prereq: completion of Foundation courses: Art 109, 110, 120 and 130. Introduction to ceramics. Pottery and sculptural forms are hand-built using coil, slab and molded techniques. Introduction to glaze formulation, kiln loading and firing.

### 250 REPRESENTATIONAL DRAWING (4)

Prereq: completion of Foundation courses: Art 109, 110, 120 and 130. Required for designers and illustrators. Drawing what you see; for designers and illustrators. How to use line, shape and tone. Basics of light and perspective. Includes some drawing from the figure. Lecture studio format.

### 260 FIBERS/FABRICS I (4) OC

Prereq: completion of Foundation courses: Art 109, 110, 120 and 130. Required for designers and illustrators. A lecture/lab course that introduces 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.

### 270 GRAPHIC DESIGN I (4) OC

Prereq: completion of Foundation courses: Art 109, 110, 120 and 130. Introductory lecture studio class in layout and design with an emphasis on typography.

### 290 PHOTOGRAPHY (4)

Prereq: completion of Foundation courses: Art 109, 110, 120 and 130. Fundamentals of film developing, enlarging, print finishing. Basic elements of black and white composition and visualization.

### 301 EXPERIMENTAL DRAWING (5)

Prereq: completion of Foundation courses: Art 109, 110, 120 and 130 and 12 credits of 200-level studio practice, including Art 201. An intermediate-level lecture/lab course with emphasis on the pursuit of drawing as a creative mode of expression. Repeatable to a maximum of 15 credits.

### 302 LIFE DRAWING (5)

Prereq: completion of Foundation courses and 12 credits of 200-level studio practice, including Art 201. An intermediate-level lecture/lab course with emphasis on drawing from the model. A variety of drawing media are explored. Repeatable to a maximum of 15 credits.

### 311 PRINT — LITHOGRAPHY (5)

Prereq: completion of Foundation courses and 12 credits of 200-level studio practice, including Art 201 or 250 and Art 210. 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: completion of Foundation courses and 12 credits of 200-level studio practice, including Art 201 or 250 and Art 210. A lecture/lab course covering history, methods, criticism and practice of the intaglio print processes: drypoint, engraving and mezzotint, soft-ground etching and aquatint. Repeatable to a maximum of 15 credits.

### 313 PRINT — COLOR (5)

Prereq: completion of Foundation courses and 10 credits of 300-level print courses. 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 Foundation courses and 12 credits of 200-level studio practice, including Art 201 and 220. Intermediate problems in painting. Development of individual direction in form and expression. Repeatable to a maximum of 15 credits.

### 331 SCULPTURE — WOOD AS A RESOURCE (5)

Prereq: completion of Foundation courses and 12 credits of 200-level studio practice, including Art 230. Lecture/lab course exploring the possibilities and use of wood, wood products and a variety of new materials in the creation of sculpture with an emphasis on the use of

recycled products and the environmental effects of their use. Repeatable to a maximum of 15 credits.

### 332 SCULPTURE — METALS (5)

Prereq: completion of Foundation courses and 12 credits of 200-level studio practice, including Art 230. This course will explore metal fabrication and casting. This will include various welding techniques including gas, arc, MIG and TIG. A variety of cutting, forming and joining procedures will be demonstrated. Metal casting of bronze and aluminum will also be part of the content of this course. Although investment casting is the primary technique used in the foundry portion of this class, other procedures may be included.

### 333 SCULPTURE — MIXED MEDIA (5)

Prereq: completion of Foundation courses and 12 credits of 200-level studio practice, including Art 230. This course will explore the uses of a variety of media in contemporary sculpture. An emphasis will be placed on the juxtapositions of materials and processes as often seen in our 3-D environment. This course reflects sculpture's expanded field within the art world.

### 334 INSTALLATION ART (5)

Prereq: completion of Foundation courses and 12 credits of 200-level studio practice, including Art 230. The course will address the nature of artwork made for or relative to specific sites using a mixed media approach. Emphasis will be on the use of non-traditional forms of presentation.

### 341 CERAMICS II (5)

Prereq: completion of Foundation courses 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 Foundation courses 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.

### 350 BEGINNING ILLUSTRATION (4)

Prereq: Art 250. Concepts and techniques of black and white illustration; idea development, problem solving and printing considerations. Lecture studio format.

### 351 INTERMEDIATE ILLUSTRATION (4)

Prereq: Art 350. Cartooning and advertising problems, character development, movement and panel composition. Concepts and techniques of black and white and color illustration.

### 361 SURFACE DESIGN (5)

Prereq: completion of Foundation courses and 12 credits of 200-level studio practice, including Art 260. A lecture/lab course that explores the marking and manipulation of two- and three-dimensional textiles. Direct application of natural and synthetic dyes, embellishment, and image transfer, including silk screen, will be explored. Traditional and non-traditional fiber processes, forms, and media will be presented, discussed and investigated.

### 362 PAPERMAKING/MIXED MEDIA (5)

Prereq: completion of Foundation courses 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.

### 363 MULTI-DIMENSIONAL FORMS IN FIBER (5)

Prereq: completion of Foundation courses and 12 credits of 200-level studio practice, including Art 260 or Art 230. A lecture/lab course that explores structural and non-structural processes for developing multi-dimensional 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.

### 367 WOVEN STRUCTURES (5)

Prereq: completion of Foundation courses and 12 credits of 200-level studio practice, including Art 260. A lecture/lab course that focuses on loom woven structure as a means of personal expression. Technical explorations will be complemented by discussions of historical and contemporary precedents with the goal of fusing woven structures with personal expression.

### 370 INTRODUCTION TO COMPUTER GRAPHICS (4)

Prereq: Art 270 or permission of instructor. Introduction to the computer as a tool for artists, designers and illustrators. Lecture studio format.

### 371 GRAPHIC DESIGN II (4)

Prereq: Art 250, 270, 370. Intermediate lecture studio class in layout and design with an emphasis on conceptual issues.

### 372 DESIGN PRODUCTION PROCESSES (4)

Prereq: Art 370. Traditional and electronic techniques for preparing artwork for both single and multi-colored reproduction. Includes some presswork and critical review of technology's effect upon design.

### 373 ELECTRONIC PREPRESS (4)

Prereq: Art 372. Advanced topics in preparing digital artwork for reproduction. Repeatable to a maximum of 8 credits.

### 374 PUBLICATION DESIGN (4)

Prereq: Art 371. Publication design including editorial, newsletter and product catalogs, with emphasis on using the computer as a design tool. Lecture studio format.

### 377 BOOK ARTS PRODUCTION (4)

Prereq: Art 372. Lecture/lab course in the history, methods and practices of book design, structures and their application in the production of limited edition and unique formats employing primarily letterpress and offset printing techniques. Students produce a collaborative book project. Repeatable to a maximum of 12 credits.

### 379 TYPOGRAPHY (4)

Prereq: Art 371. Letter forms as design and illustrative elements. Advanced problems in typography. Lecture studio format.

### 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: Art 280. 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.

### 383 PUBLIC GENRE ART EDUCATION (4)

Prereq: junior status in art education or studio or art history and written permission. Opportunity to engage the community with art projects that foster diversity and public collaboration in conjunction with the study of the socio-political understanding of the site, population and audience.

### 384 CULTURAL DIVERSITY AND ART EDUCATION (3)

Prereq: completion of Foundation courses (Art 109, 110, 120, 130 and 381). The study of how culture affects the perception and construction of art. Emphasis on the development of curricula that addresses cultural diversity.

### 388 VISUAL CULTURE AND ART EDUCATION (3)

The study of visual culture, the impact of mass media, and art education methodology for teaching critical viewing skills. Emphasis placed on using critical thinking skills to analyze, interpret, and evaluate societal imagery.

### 390 PHOTOGRAPHY II (5)

Prereq: completion of Foundation courses and 12 credits of 200-level studio practice, including Art 290. Stresses photographic visualization and the development of personal style through concentrated studies of light and design, filters,

the zone system, view camera, specialized materials and processes, archival processing.

#### **391 COLOR PHOTOGRAPHY (5)**

Prereq: Completion of Foundation courses and 12 credits of 200-level studio practice, including Art 290 and 390. Fundamentals of color theory; techniques of producing color transparencies and prints.

#### **401 ADVANCED DRAWING WORKSHOP (5)**

Prereq: 15 credits of 300-level studio practice, including 10 credits of Art 301. A lecture/lab course pursuing individually motivated creativity with an emphasis on contemporary issues in drawing as related to art making. 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 lecture/lab course covering history, methods, processes, criticism and the practice of drawing from the model. Repeatable to a maximum of 15 credits.

#### **411 ADVANCED PRINT WORKSHOP (5)**

Prereq: 15 credits of 300-level print courses. A lecture/lab course investigating contemporary problems and individual directions in the production and criticism of the print as personal expression. 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. Advanced problems in three-dimensional form and expression employing a variety of media and materials. Students set their own problems in consultation with the instructor. Repeatable to a maximum of 15 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.

#### **450 ADVANCED ILLUSTRATION (5)**

Prereq: Art 351 and by portfolio review. Advanced problems in illustration. Concepts and techniques of text, advertising, display and cover illustration. Lecture studio format.

#### **454 COMPUTER ILLUSTRATION (5)**

Prereq: Art 350, 370 and by portfolio review. Concepts and techniques of computer illustration for print and Web applications.

#### **455 SENIOR PROJECTS IN ILLUSTRATION (5)**

Prereq: Art 450. Directed work in illustration aimed at preparing pieces for an illustration portfolio.

#### **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.

#### **470 ADVANCED GRAPHIC DESIGN (5)**

Prereq: Art 350, 372, 379 and by portfolio review. Advanced projects in logo design and graphic identity systems. Lecture studio format.

#### **471 THREE-DIMENSIONAL GRAPHIC DESIGN (5)**

Prereq: Art 470. Concepts and techniques of three-dimensional graphic design — packaging, point-of-purchase, signage, environmental graphic design, sequential graphic design. Lecture studio format.

#### **472 DESIGN PRODUCTION PRESSWORK (5)**

Prereq: Art 373 and by portfolio review. The study of design reproduction by lithography, relief and electrostatic processes.

#### **473 ADVANCED DESIGN PRODUCTION (5)**

Prereq: Art 472. Advanced projects relating to current trends in graphic arts production.

#### **474 ADVANCED COMPUTER GRAPHICS (5)**

Prereq: Art 370 and by portfolio review. Current topics in computer graphics. Advanced techniques and software. Lecture/lab format. Repeatable to a maximum of 15 credits.

#### **475 GRAPHIC DESIGN FOR THE INTERNET (5)**

Prereq: Art 370 and by portfolio review. Concepts and techniques of design for the Internet. Information design, prototyping, navigational structure, asset creation for designers, illustrators and artists.

#### **476 SENIOR PROJECTS IN GRAPHIC DESIGN (5)**

Prereq: Art 471. Directed work in graphic design aimed at preparing pieces for a graphic design portfolio.

#### **477 SENIOR PROJECTS IN DESIGN PRODUCTION (5)**

Prereq: Art 473. Directed work in graphic reproduction aimed at preparing pieces for a graphic reproduction portfolio.

#### **479 PROFESSIONAL PRACTICES IN GRAPHIC DESIGN, ILLUSTRATION AND DESIGN PRODUCTION (3)**

Prereq: concurrent enrollment in Art 455, 476 or 477. Current trends, professional issues and practices. Preparation of a professional portfolio.

#### **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. Emphasis on self-directed project development. Studio seminar format. Repeatable to a maximum of 15 credits.

#### **494 ADVANCED STUDIO SEMINAR (5)**

Prereq: senior status, BFA status or permission of instructor. Contemporary issues in studio art. Repeatable to a maximum of 15 credits.

### **Graduate Courses**

*Courses numbered 500; 517; 545; 597 are described on page 31 of this catalog.*

*Admission to Graduate School or special permission required. See the Graduate School section of this catalog.*

#### **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 B.A. 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.

### **COURSES IN ART HISTORY**

*Courses numbered X37; X97; 300, 400; 417, 445 are described on page 31 of this catalog.*

#### **220 SURVEY OF WESTERN ART HISTORY I (3)**

Issues and topics in ancient and medieval art.

#### **230 SURVEY OF ART WESTERN HISTORY II (3)**

Issues and topics in art, 15th-18th centuries.

**240 SURVEY OF WESTERN ART HISTORY III (3)**

Issues and topics in 19th- and 20th-century visual representation.

**270 SURVEY OF ASIAN ART, INDIA, CHINA, JAPAN (3)**

An introduction to art and culture of India, China and Japan to 20th century.

**275 INTRODUCTION TO WRITING AND CRITICAL THINKING (4)**

Prereq: 9 credits art history at the 200 level. A preparatory course to develop skills in writing and analysis for art history majors.

**301 MODERN ART AND MODERNISM (4)**

Prereq: art history majors: Art History 275; non-majors: 9 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. 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.

**310 INDIGENOUS CULTURES (4)**

Prereq: art history majors: Art History 275; non-majors: 9 credits in art history. Selected topics in the arts of indigenous cultures around the world.

**311 FOUNDATION OF GRAPHIC DESIGN HISTORY (4)**

Prereq: Art history 220 and 230. Issues and topics in graphic design, illustration and design production from ancient culture to 19th century with emphasis on the development of typographic and print cultures.

**312 GRAPHIC DESIGN IN THE 20TH CENTURY (4)**

Prereq: Art History 240 and 311. History of modern graphic design and illustration.

**315 CIVIC IDENTITY IN 15TH- AND 16TH-CENTURY EUROPE (4)**

Prereq: art history majors: Art History 275; non-majors: 9 credits in art history. Civic identity explored through ritual structures, urban society, and lay cultures.

**316 LAND AND LANDSCAPE (4)**

Prereq: art history majors: Art History 275; non-majors: 9 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.

**320 CONSTRUCTING THE CLASSICAL (4)**

Prereq: art history majors: Art History 275; non-majors: 9 credits in art history. Studies in the formation of classical and classicism; the use and manipulation of classical imagery in architecture and the arts.

**330 ART AND TEXTS OF THE SACRED (4)**

Prereq: art history majors: Art History 275; non-majors: 9 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.

**331 ENCOUNTERS WITH THE OTHER (4)**

Prereq: art history majors: Art History 275; non-majors: 9 credits in art history. Selected topics on the European configuration of the other in the age of discovery, conquest and imperialism, 15th to 19th century.

**340 CLASS AND GENDER IN EUROPEAN ART, 16TH-20TH CENTURIES (4)**

Prereq: art history majors: Art History 275; non-majors: 9 credits in art history. Hierarchies of class and gender produced and reproduced in the visual culture of early modern Europe.

**350 ARTS OF THE AMERICAS (4)**

Prereq: art history majors: Art History 275; non-majors: 9 credits in art history. Selected topics in arts of North, Central and/or South America, from pre-Columbian times to the present.

**360 NATIONALISM AND CULTURAL IDENTITY, 19TH AND 20TH CENTURIES (4)**

Prereq: art history majors: Art History 275; non-majors: 9 credits in art history. Studies in the relationship between ideas of nation and the formation of cultural identity.

**370 CULTURAL CONTACTS: MIDDLE EAST AND ASIA (4)**

Prereq: art history majors: Art History 275; non-majors: 9 credits in art history. Topics addressing the visual cultures in the Middle East and Asia. Studies in the contact made among cultures.

**371 ISLANDS: ISOLATION AND INTEGRATION (4)**

Prereq: art history majors: Art History 275; non-majors: 9 credits in art history. Studies in the arts of island cultures and nations; cultural politics of insularity and contact.

**375 METHODS IN ART HISTORY (4)**

Prereq: art history majors only. Contemporary methods in art history and criticism with practical application in student research projects.

**401 CONTEMPORARY ISSUES AND POST-MODERN CRITIQUES (4)**

Prereq: art history majors: Art History 375; non-majors: 9 credits in art history. Studies of recent issues in art production and criticism.

**410 RETHINKING THE PRIMITIVE (4)**

Prereq: art history majors: Art History 375; non-majors: 9 credits in art history. Examination of the construction of the category "primitive" through the work of cultures designated by that term, and/or primitivism as cultural appropriation and a fundamental concept in modernism.

**415 SPACE AND THE URBAN ENVIRONMENT (4)**

Prereq: art history majors: Art History 375; non-majors: 9 credits in art history. 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: Art History 375; non-majors: 9 credits in art history. Mapping artistic domains; implications of geographic borders; defining places and margins in cultural production.

**429 PATRONAGE AND POWER (4)**

Prereq: art history majors: Art History 375; non-majors: 9 credits in art history. 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: Art History 375; non-majors: 9 credits in art history. Studies in topics such as collecting, pilgrimage, touring and acquisition of the authentic.

**432 UTOPIAS AND THE VISIONARY (4)**

Prereq: art history majors: Art History 375; non-majors: 9 credits in art history. Issues on the ideology and aesthetics of utopias, visionaries and the imagination, myth, reality and hyper-reality.

**440 CULTURE POLITICS OF DESIRE (4)**

Prereq: art history majors: Art History 375; non-majors: 9 credits in art history. Theoretical approaches to the gaze, subjectivity and construction of desire.

**450 COLONIZATION AND CROSS-CULTURAL ENCOUNTERS (4)**

Prereq: art history majors: Art History 375; non-majors: 9 credits in art history. Studies in the effects of colonization on the cultural development of the Americas, Africa, Middle East, India and/or Oceania and post-colonial responses.

**460 INTERSECTIONS: ART AND TECHNOLOGY (4)**

Prereq: art history majors: Art History 375; non-majors: 9 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.

**471 CULTURAL CONTACTS: THE PACIFIC RIM (4)**

Prereq: art history majors: Art History 375; non-majors: 9 credits in art history. Studies of the visual cultures which comprise the Pacific Rim; examination of the interrelationships among nations and cultures.

**475 SENIOR PROJECTS/PRACTICUM (4)**

Prereq: 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.

**490 SEMINAR: EXHIBITION THEORY AND PRACTICE (4)**

Prereq: art history majors: Art History 375; non-majors: 9 credits in art history. 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 31 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 15 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 dance minor. The dance minor is centered in Modern Dance with companion courses in ballet. It is focused on performance and choreography. Students in the minor will have the opportunity to dance in faculty choreographed works that relate directly to principles that have been explored in course work. Students will also have the chance to see their own work performed in informal and studio settings. For more information and advisement contact Nolan Dennett, Dance Program director, Carver Gym 28, phone (360) 650-3129.

Students of the undergraduate dance minor are accepted into the minor by audition on the first day of technique class. Over the course of their studies they are prepared 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. At the conclusion of such performances there is a critical evaluation of the student's work by a juried panel consisting of the entire 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 minor 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.

### DANCE FACULTY

NOLAN DENNETT (1989) Director and Assistant Professor. BA, Brigham Young University; MA, Western Washington University.

#### *Minor — Dance*

36 credits

- Required courses: Dnce 235, 238, 255, 256, 257, 335, 336, 342, 431, 435; Biol 348
- Two courses selected from Dnce 232, 338, 434, 442, or electives under advisement.

### *Teaching Endorsement*

#### **Dance**

29 credits

- Dnce 232, 237, 238, 255, 256, 335, 336, 342, 431, 434, 435

Completion of the above courses leads to a supporting endorsement (elementary or secondary) in dance.

### **COURSES IN DANCE**

#### **135 MODERN DANCE I (2)**

The study of the basic principles of movement: space, time and effort. Emphasis on alignment and range of motion, creative movement and an appreciation of dance as an art form. Open to non-minors. Repeatable to a maximum of 6 credits. S/U grading.

#### **138 BALLETT I (2)**

An introductory study of 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-minors. Repeatable to a maximum of 6 credits. S/U grading.

#### **139 BEGINNING JAZZ DANCE (2)**

Exploration of a variety of jazz dance styles through development of beginning jazz movement vocabulary. Repeatable to a maximum of 6 credits. S/U grading.

#### **231 INTRODUCTION TO DANCE (3)**

An historical and cultural overview, from the primitive to the contemporary, of the development of dance as an art form.

#### **232 MOVEMENT AND CULTURE (3)**

An investigation of movement and dance as a vehicle for understanding culture. Ethnic dance, task oriented, and expressive movements that reflect class demographics.

#### **235 MODERN DANCE II (2)**

Prereq: 6 credits of Dnce 135 or equivalent. Further development of movement principles established in Dnce 135. Open to non-minors. Repeatable to a maximum of 6 credits.

#### **237 FLOOR BARRE TECHNIQUES (2)**

Prereq: one year dance technique or permission of instructor. An internal exploration of functional alignment and its practical application towards movement and dancing. Experiential exercises that will enable the development and increased awareness of anatomical alignment and its relationship to range of motion, flexibility, strength, and movement potential. Repeatable to a maximum of 6 credits.

#### **238 BALLETT II (2)**

Prereq: 6 credits of Dnce 138 or equivalent. Further development of principles of ballet. Increased difficulty and terminology; preparation for advanced levels. Open to non-minors. Repeatable to a maximum of 6 credits.

#### **255, 256 DANCE PRODUCTION (2 ea)**

For dance minors: practical experience in technical theatre: lighting, sound stage management, costumes, make-up, etc. S/U grading.

#### **257 DANCE PRODUCTION: PERFORMANCE (2)**

Prereq: permission of instructor. For dance minors: direct instruction and experience in performance work. S/U grading.

#### **335 MODERN DANCE III (3)**

Prereq: One year of Dnce 235 or permission of instructor. Advanced studies of movement principles established in Dnce 235. Repeatable to a maximum of 9 credits.

**336 MUSICAL RESOURCES FOR DANCE (3)**

Prereq: Dnce 235 or permission of instructor. Examines the use of music in teaching movement and music in relationship to the choreographic process. A companion course to Dnce 342 and Dnce 434.

**338 BALLET III (3)**

Prereq: permission of instructor. Comprehensive barre and center floor work with emphasis on strength, flexibility, stamina, musicality, and performance projection in all areas of the class enchainements.

**342 CHOREOGRAPHY AND IMPROVISATION (3)**

Prereq: 4 credits of Dnce 235 or permission of instructor. Fundamentals of choreography emphasizing the creation of a personal movement vocabulary, theme, development, form and design. The special aspects of solo and group studies. Also addresses how to create a scene or a movement sequence through improvisation. *Training the thinking performer*. Repeatable to a maximum of 6 credits.

**345 FUNDAMENTALS OF CONTEMPORARY PARTNERING (2)**

Prereq: one year of Dnce 235 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.

**431 HISTORY OF DANCE SINCE 1450 (3)**

Prereq: permission of instructor. Ballet and modern dance forms of Western cultures from the Renaissance into the era of contemporary movement art. Focusing on leading dance artists and the influence their work has had on culture and the related arts of music and theatre. Was Dnce 432 in previous catalog.

**434 DANCE ARTS IN EDUCATION (3)**

Prereq: demonstrated competency at the advanced level of technique or permission of the instructor. Materials and methods for teaching movement; creative movement in the public schools as well as the methodology of teaching the formal dance techniques of modern dance and ballet for students of the dance minor. Observation and teaching opportunities included.

**435 MODERN DANCE IV (3)**

Prereq: permission of instructor. A performance approach to dance techniques — phrasing, musicality and clarity of intentions are emphasized at this level. Repeatable to a maximum of 9 credits.

**442 ADVANCED CHOREOGRAPHY (3)**

Prereq: Dnce 342 or permission of instructor. Advanced studies in movement invention, theme and development, form and design. Repeatable to a maximum of 6 credits.

## MUSIC

A music degree from Western is highly regarded in our profession. We graduate successful teachers, performers, composers and leaders in all fields of music. The strength of Western's Department of Music is our forty-member music faculty, each of whom is deeply committed to serving music majors in achieving their aspirations.

We also encourage and promote 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 (B.A.) provides a liberal arts education with music as the major subject. The five professional undergraduate programs (B.Mus.) emphasize the development of proficiency in the major area: music education, performance, history and literature, composition, and jazz studies. The B.Mus. 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.

The Department of Music provides individual advisement and program planning for all students majoring in music. This takes place officially during the registration period. The department also provides individual advisement at any time prior to entrance 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. Anyone interested in an appointment is welcome to write or phone the Department of Music, Western Washington University, Bellingham, Washington 98225-9107, phone (360) 650-3130.

The department is a full member of the National

Association of Schools of Music.

### MUSIC FACULTY

DAVID WALLACE (1987) Chair and Professor. BM, University of Michigan; MM, University of Wisconsin; DMA, Eastman School of Music.  
 ROGER D. BRIGGS (1989) Professor. BM, Memphis State; MM, PhD, Eastman School of Music.  
 JACQUES C. DESPRÉS (1996) Assistant Professor. Premier Prix, Conservatoire de Québec; Artist Diploma, Indiana University; MA, Julliard; DMA, University of New York at Stony Brook.  
 DAVID FEINGOLD (1980) Assistant Professor. BA, Sarah Lawrence College; MA, Western Washington University.  
 JOHN FRIESEN (1998) Assistant 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) Associate Professor. BA, California State University, Stanislaus; MA, San Jose State University; DMA, University of Colorado, Boulder.  
 CHUCK ISRAELS (1986) Associate Professor. BA, Brandeis University.  
 JACK MORRIS (1985) Associate Professor. BA, Brigham Young University; MM, Indiana University.  
 CARLA J. RUTSCHMAN (1975) Professor. BA, University of Northern Colorado; MM, Arizona State University; PhD, University of Washington.  
 EDWARD R. RUTSCHMAN (1975) Associate Professor. BM, University of Northern Colorado; MM, Arizona State University; PhD, University of Washington.  
 WALTER SCHWEDE (1997) Assistant Professor. BM, University of Michigan; MM, Catholic University.  
 LESLEY SOMMER (1997) Assistant Professor. Bmus, Mmus, Indiana University.  
 MARY TÉREY-SMITH (1967) Professor. BA, Liszt Academy of Music, Budapest; MA, University of Vermont; PhD, University of Rochester.  
 BERTIL H. VAN BOER (1996) Professor and Dean of the College of Fine and Performing Arts. 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  
 LAURIE BRIDGE, Class Piano  
 CHERYL BRIGGS, Music Education  
 MARGARET BRINK, Piano  
 KRISTEN CAMPBELL, Horn  
 GREGORY COX, Trombone  
 ANNA DOAK, Double Bass  
 JOE GOTTESMAN, Viola  
 VINCE GREEN, Trumpet  
 VIRGINIA HUNTER, Voice  
 DAVIDA KAGEN, Voice  
 LISA MCCARTHY, Flute  
 JULIA NOLAN, Saxophone  
 FRANCINE PETERSON, Bassoon  
 LARRY PHILPOTT, Horn  
 MARVIN REGIER, Voice  
 PATRICK ROULET, Percussion  
 PATRICIA SCHREIBER, Voice  
 BEVERLY SHERMAN, Music Education  
 CHARLENE SUTTON, Music Education  
 PAUL TAUB, Flute  
 DAN WILLIAMS, Oboe  
 KEITH WINKLE, Low Brass  
 RACHEL ROULET, Professional Accompanist  
 DAVID STEEGE, Keyboard Technician  
 JUDITH WIDRIG, Professional Accompanist

## 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. **Jazz studies:** six quarters of major ensemble, remaining quarters either piano accompanying or jazz ensembles selected under advisement. **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. Jazz studies majors who play guitar or electric bass may substitute up to 12 credits in jazz ensembles for the major performing group requirement. Jazz studies majors who play instruments other than those listed above may substitute up to 12 credits in jazz ensembles *under strict advisement*. 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 music 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 music major status. 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** — Classic, Romantic and contemporary literature of the difficulty of Bach, "Short Preludes" and "Inventions;" Clementi, Haydn, Mozart and Beethoven "Sonatinas;" Bartok, "Mikrokosmos," Books 3 and 4. It is expected that three pieces be prepared from different style periods and that at least one be played from memory. Sight-reading will also be a part of the audition.

**Violin** — Mazas, "Special Studies," opus 36, Book 1, edited by Hermann or Saenger; Handel, Corelli, Vivaldi or other sonatas. Solo pieces through five positions; scales two octaves (major and melodic minor).

**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 Marcello. 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.

**Flute** — Any Handel sonata (except the E minor Sonata) [select at least one sonata]. Any etude from Anderson Etude 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 etudes from "Thirty-two Etudes for Clarinet" by C. Rose, or from "Preliminary Studies for the Accomplished Clarinetist," Vol. I, by R. Jettel. One solo work comparable in difficulty to the Weber "Concertino"

or Hindemith "Sonata." Major and minor scales and arpeggios through four sharps and four flats (two octaves when possible).

**Bassoon** — Three or four selected studies from the Weissenborn Complete Method. Any two studies from the Weissenborn Advanced studies. Mozart "Concerto in Bb" (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 Bb." 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 etudes 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 etudes from "34 Studies" by Brandt, edited by Nagel. Haydn "Concerto" (first and second movements), or Vidal "Concertino" or Thome "Fantasy in Eb" 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 Etudes" 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 BBb 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, etc.) Snare *Drum: The 40 Percussive Arts Society snare drum rudiments, a concert and a rudimental style etude or solo. Timpani:* Demonstrate the ability to tune various intervals and perform an etude 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 etude 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 (2nd position or higher) by Noad or "100 Graded Studies" (Noad), studies numbered 5-100.

**Jazz Guitar** — Scales — two octaves, major and minor, alternate picking; reading — melodic through and including 5th position, ability to read a chord "chart"; prepare two contrasting tunes from a fake book, both melody and chords; be able to solo over basic chord changes, i.e., blues changes.

## 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 (Music 121/122 through 225/226; 341 through 344; and 351 through 353) as a condition of admission. All students must also complete the audition in order to be eligible for music major advising. Contact Judy Korski, Undergraduate Adviser, at (360) 650-3132 for details.

## 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 B.Mus. degree programs will be required to take the Keyboard Competency Examination by the end of the sophomore year or, in the case of transfer students, after three quarters of full-time study.

## SCHOLARSHIPS

In addition to general University scholarships, several awards are available from off-campus music organizations through The Western Foundation. Scholarship awards to incoming music majors will be based upon quality of entrance audition. For further information, consult the Department of Music.

## PROGRAM ADVISEMENT

All undergraduate music majors are assigned to the departmental undergraduate program adviser 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

106 credits (plus School of Education professional courses)\*

#### Core Requirements

96 credits (common to all music education major emphases)

- Theory/Aural Skills: Music 121, 122, 123, 124, 125, 126, 221, 222, 223, 224, 225, 226
- Advanced Theory: Select two courses from Music 322, 324, 326, 328, 422
- Music History: Music 342, 343, and 341 or 344
- Conducting: Music 351, 352, 353
- Music Education: Music 362, 363, 462
- Pedagogy: 12 credits of Music 264, 265, 364 selected under 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 Music 276 and/or 476 (piano accompanying).

### K-12 General Music Emphasis

10 credits

- Music Education: Music 461
- Pedagogy: Music 164, 271
- Electives: 3 credits selected under advisement. Piano majors will take all elective credits in Music 466

### K-12 Choral Music Emphasis

10 credits

- Music Education: Music 463
- Electives: 8 credits selected under advisement. Piano majors will take at least 4 credits of Music 466 as part of their electives

### K-12 Instrumental Music Emphasis

10 credits

- Music Education: Music 464
- Pedagogy: Music 164, 271
- Electives: 4 credits selected under advisement. Piano majors will take all elective credit in Music 466

### Professional Major

122 credits

The Bachelor of Music (B.Mus.) 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 192 undergraduate credits.

#### Core Requirements

61-65 credits (common to all professional music major concentrations)

- Theory/Aural Skills: Music 121, 122, 123, 124, 125, 126, 221, 222, 223, 224, 225, 226
- Advanced Theory (each concentration selects courses as follows from Music 322, 324, 326, 328, 422):  
Performance — three courses; Composition — four courses; History and Literature — four courses; Jazz Studies — two courses
- Music History: Music 342, 343, and 341 or 344
- 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 Music 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; Jazz Studies — six quarters major performing ensemble, remaining quarters either accompanying or jazz ensembles selected under advisement.

#### Performance Concentration

59 credits

- Entrance by performance audition — student must expect to achieve upper-division applied instruction by sophomore year
- Applied music on major instrument or voice (minimum 30 credits); at least three credits in courses numbered Music 411-416
- Chamber Music: minimum 8 credits selected from Music 275, 475, 478, 480, 481, 483, 484, 485
- Music History: 3 credits beyond core requirement
- Conducting: Music 351
- Minimum of 4 credits in Music 466

\* Music education majors should consult the Education Admissions Office, Miller Hall 202, for information concerning the College of Education professional courses and admission to the Teacher Education program.)

- Senior Recital: Music 499
- Electives: 9 credits selected under advisement. Piano majors must take at least 6 credits in Music 467 and voice majors will take 3 credits in Music 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 Music 311-316 or 411-416
- Chamber Music: minimum 6 credits selected from Music 275, 475, 478, 480, 481, 483, 484, 485
- Music History: 3 credits beyond core requirement
- Conducting: Music 351, 352, 353
- Composition: minimum 21 credits from Music 231, 331, 431
- Senior Recital: Music 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 Music 311-316 or 411-416
- Chamber Music: minimum 8 credits selected from Music 275, 475, 478, 480 (minimum 4 credits), 481, 483, 484, 485
- Conducting: Music 351
- Notation: Music 441
- Music History: 3 credits beyond core requirement
- Advanced History: minimum 12 credits from Music 442, 443
- Thesis: Music 490
- Electives: 14 credits selected under advisement
- Students in music history and literature must pass a reading examination in French or German

*Jazz Studies Concentration*

61 credits

- Entrance by performance audition to include all major, dorian and mixolydian scales; all major seventh, minor seventh and dominant seventh arpeggios; sight reading and improvisation
- Applied music on major instrument or voice (minimum 12 credits); at least three credits in courses numbered Music 311-317 or 411-417
- Chamber Music: minimum 6 credits selected from Music 275, 475 (minimum 4 credits in 475)
- Jazz Ensembles: minimum 8 credits selected from Music 274, 474
- Jazz Studies: Music 202, 334, 335, 336, 434, 435, 436
- Conducting: Music 351
- Senior Recital: Music 499
- Electives: 9 credits selected under advisement

Jazz studies majors who play guitar or electric bass may substitute up to 12 additional credits in jazz ensembles (Music 274, 275, 474, 475) for the major performing

\* Additional course credits in applied music instruction beyond the required minimum of 6 may be obtained under the advisement of the appropriate area coordinator.

group requirement.

Jazz studies majors who play instruments other than those listed above may substitute up to 12 additional credits in jazz ensembles *under strict advisement*. Jazz studies majors may meet the chamber music requirement in Chamber Jazz Ensemble (Music 475).

**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.

- Theory/Aural Skills: 24 credits — Music 121, 122, 123, 124, 125, 126, 221, 222, 223, 224, 225, 226
- Music History: 9 credits — Music 342, 343, and 341 or 344
- Theory/Music History electives: 9 credits selected from Music 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\*
- Major Performance Ensemble: 12 credits minimum\*\*

\*\*Pianists will take three quarters of major performing ensemble and three quarters of Music 276 and/or 476 (piano accompanying).

*Minor — Music*

30 credits

- Theory/Aural Skills: 12 credits — Music 121, 122, 123, 124, 125, 126
- Music History and Literature: 6 credits — Music 104 or 105, 202 or 205
- Music electives: 9 credits selected under advisement

**BACHELOR OF ARTS IN EDUCATION**

*Major — Elementary Music*

47 credits (plus performance requirement\*\*\* and the School of Education professional elementary courses)

- Theory/Aural Skills: Music 121, 122, 123, 124, 125, 126, 221, 222, 223, 224, 225, 226
- Music History: select two courses from Music 341, 342, 343, 344
- Musical Survey: Music 105, 205
- Pedagogy: Music 164
- Music Education: Music 362, 363, 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 Music 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

Courses numbered x37; X97; 300, 400; 417, 445 are described on page 31 of this catalog.

### 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: Music 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.

### 104 THE ART OF LISTENING TO MUSIC (3)

Open to all students. Non-technical basis for enjoyable listening to music; performance practices relating to symphony orchestras, instrumental ensembles, opera, choral groups and solo performance.

### 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: 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 1 (3 ea)

Prereq: 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.

### 164 CLASS VOICE AND PEDAGOGY (2)

Prereq: music major status. Tone production, song repertoire interpretation and pedagogy for non-voice majors.

### 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.

211 ORGAN

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: Music 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: Music 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.

### 231 ELEMENTARY COMPOSITION (1-2)

Prereq: permission of instructor. Elementary craft of melodic, harmonic, rhythmic, instrumental and contrapuntal writing in traditional modes; participation in concomitant composition seminars. Repeatable for credit.

### 233 INTRODUCTION TO ELECTRONIC MUSIC PROCESSES (1)

Open to all students. An introductory overview of electronic processes in creating music: tape manipulation, *musique concrete*, the use of the synthesizer. Group instruction and studio time in the laboratory. Repeatable for credit.

### 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, 262, 263 CLASS PIANO (2 ea)

Prereq: music major status; each course prerequisite to the next. Sight-reading skills, functional application of material learned in theory class, accompanying and score reading.

### 264a-k INSTRUMENTAL LAB FOR SECONDARY INSTRUMENTS (1-2 ea)

Prereq: music major status. Pedagogy of and performance on secondary instruments, conducting, developing teaching strategies with goals and objectives.

264a FLUTE

264b OBOE

264c CLARINET

264d BASSOON

264e SAXOPHONE

264f HORN

264g TRUMPET

264h TROMBONE

264i EUPHONIUM

264j TUBA

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

### 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; Music 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 (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.

**281 APPLIED CHAMBER MUSIC (2)**

Prereq: by audition; permission of chamber music coordinator. Open to piano, string, wind, brass and percussion performers. Repeatable for credit.

**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.

**311-317 APPLIED INSTRUCTION (1-4)**

Prereq: music major status; upper-division examination. Repeatable for credit.

311 ORGAN

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: Music 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 (2)**

Prereq: Music 225, 226. Formal and stylistic analysis of works from the major historical periods up to 1900.

**324a MODAL COUNTERPOINT/324b TONAL COUNTERPOINT (2 ea)**

Prereq: Music 225, 226. Counterpoint in species and free style. Composition and analysis of pieces in two and three parts.

**326 ORCHESTRATION/ARRANGING (2)**

Prereq: Music 225, 226. Orchestration and arranging with special reference to the needs of the instrumental conductor and composer. Repeatable for credit.

**328 MIDI NOTATION AND SEQUENCING (2)**

Prereq: Music 225, 226. Computer-based notation and recording of music through MIDI keyboard system.

**331 COMPOSITION (3)**

Prereq: Music 226 and successful completion of upper-division competency examination in composition. Writing pieces in part forms, variation form and sonata form for solo instruments and small ensembles choral writing. Repeatable for credit.

**334 JAZZ IMPROVISATION I (3)**

Prereq: open to all accepted jazz majors or Music 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: Music 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: Music 335. Study of bi-tonal 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: Music 225, 226; music major status. Main styles, forms, terminology and composers up to 1600. Individual research projects.

**342 HISTORY OF MUSIC 1600-1750 (3)**

Prereq: Music 225, 226; music major status. Main styles, forms, terminology and composers from 1600 to 1750. Individual research projects.

**343 HISTORY OF MUSIC 1750-1900 (3)**

Prereq: Music 225, 226; music major status. Main styles, forms, terminology and composers from 1750-1900. Individual research projects.

**344 HISTORY OF MUSIC 1900 TO PRESENT (3)**

Prereq: Music 225, 226; music major status. Main styles, forms, terminology and composers from 1900 to present. Individual research projects.

**351 BASIC CONDUCTING (2)**

Prereq: Music 225, 226; music major status. Basic conducting techniques, score reading and interpretive analysis.

**352 INSTRUMENTAL CONDUCTING (3)**

Prereq: Music 351; music major status. Instrumental techniques, score reading, interpretive analysis and rehearsal techniques.

**353 CHORAL CONDUCTING (3)**

Prereq: Music 351; music major status. Choral techniques, score reading, interpretive analysis and rehearsal techniques.

**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: Music 126; music major status. Teaching techniques, materials and organization of the elementary music program. Introduction to Orff, Kodaly and MMCP methodology. Observations.

**363 FOUNDATIONS AND PRINCIPLES OF MUSIC EDUCATION (3)**

Prereq: music major status. Historical, philosophical and psychological foundations of music education; learning theory, curricular structures and applications to classroom and ensemble teaching.

**364 INSTRUMENTAL LAB FOR SECONDARY INSTRUMENTS/LAB BAND METHOD (2)**

Prereq: 3 credits in Music 264; music major status. Pedagogy of and performance on secondary instruments in an ensemble environment. Repeatable for credit.

**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

#### 411-417 APPLIED INSTRUCTION (1-4)

Prereq: music major status; upper-division examination. Repeatable for credit.

- 411 ORGAN
- 412 PIANO
- 413 STRINGS
- 414 WINDS AND PERCUSSION
- 415 VOICE
- 416 CLASSICAL GUITAR
- 417 JAZZ GUITAR

**422 ANALYTICAL TECHNIQUES: 20TH-CENTURY MUSIC (2)**  
Prereq: Music 225, 226. Formal and stylistic analysis of representative 20th-century works.

#### 431 COMPOSITION (3)

Prereq: minimum of 6 credits in Music 331. Writing pieces of broad proportions for various media. Repeatable for credit.

#### 432 ELECTRONIC MUSIC LABORATORY (2)

Prereq: Music 233 or permission of instructor. Instruction in the use of the ARP synthesizer, tape-recording techniques, audio generators and modifiers for use in electronic music. Equipment for teaching electronic music. Group instruction and studio time in the use of this equipment. Repeatable for credit.

#### 434 JAZZ ARRANGING I (3)

Prereq: Music 226 or 334. Writing and arranging for small jazz ensembles. Analysis of small jazz ensemble styles.

#### 435 JAZZ ARRANGING II (3)

Prereq: Music 434. Writing and arranging for a variety of instrumental combinations. Analysis of jazz ensemble styles.

#### 436 JAZZ ARRANGING III (3)

Prereq: Music 435. Writing and arranging for large jazz ensemble. Analysis of large jazz ensemble styles.

#### 441 NOTATION (3)

Prereq: Music 226, 341, 343; permission of instructor. Reading and interpreting early, contemporary or other extant systems.

#### 442 SEMINAR IN MUSIC HISTORY (4)

Prereq: Music 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 MEDIA (3 ea)

Prereq: Music 343; music major status. Development and literature of important musical media 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

#### 451 CONDUCTING PRACTICUM (1-3)

Prereq: Music 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: Music 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.

#### 462 SECONDARY SCHOOL MUSIC ADMINISTRATION (2)

Prereq: Music 363. Curriculum development, organizational and administrative procedures and supervision for secondary school music teaching. Must be taken prior to student teaching.

#### 463 SECONDARY CHORAL MUSIC EDUCATION (2)

Prereq: Music 363. Programmatic, curricular, organizational and instructional problems unique to teaching choral music at the secondary level. Must be taken prior to student teaching.

#### 464 SECONDARY SCHOOL INSTRUMENTAL MUSIC EDUCATION (2)

Prereq: Music 363. Programmatic, curricular, organizational and instructional problems unique to teaching secondary school instrumental music. Must be taken prior to student teaching.

#### 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.

#### 469 MUSIC TEACHING PRACTICUM II (2)

Prereq: permission of instructor. Observation, assisting and/or micro-teaching experience in K-12 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; Music 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 (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; Music 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 (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 31 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, Music 501 or 502 and permission of instructor. Individual instruction in conducting techniques and repertoire. Repeatable to a maximum of 6 credits.

**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: Music 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 M.Mus. degree.) Repeatable for credit.

**541-544 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.

541 MUSIC FROM 900-1600

542 MUSIC FROM 1600-1800

543 MUSIC FROM 1775-1900

544 MUSIC FROM 1900 TO 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 M.Mus. degree. Offered summers only. Repeatable for credit.

**556 ADVANCED STRING ORCHESTRA MUSIC WORKSHOP (2)**

Course not applicable to M.Mus. 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 M.Mus. 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

The Department of Theatre Arts offers a Bachelor of Arts and a Master of Arts in Theatre Arts as well as an English/Theatre degree in conjunction with the Woodring College of Education. These degrees combine academic rigor with practical work on theatre production. The Department of Theatre Arts strives to prepare broad-based artist generalists with additional specific skills in one or more areas. The students are encouraged to explore their creative spirit through involvement in practical theatrical experience which emphasizes cultural and artistic diversity in an atmosphere of productive cooperation.

The following are central to the undergraduate degrees in Theatre Arts:

1. Knowledge of major works of dramatic literature representative of diverse cultures.
2. Knowledge of the history of theatrical production — its styles, conventions and social context — from the ancients to the present day.
3. Knowledge of the means by which theatrical production is realized.
4. Knowledge of the role of theatre in forming the past, present and future of society.

In addition, students completing a degree in Theatre Arts will possess:

1. The ability to analyze and interpret dramatic literature and performance from the standpoint of a designer, performer, director, playwright or critic.
2. The ability to safely and efficiently use the tools and equipment basic to theatre production and design technology.
3. The ability to communicate with an audience through at least one of the components of the theatrical arts.
4. The ability to 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 a final evaluation of each student which may include the presentation of a written thesis, performance project or portfolio. Since the Theatre Arts comprise many fields, advanced projects will vary from student to student.

### MAJORS

At the present time, each undergraduate major is grounded in fundamentals and chooses one or more areas of specialization (acting, directing, dramatic writing, dramatic literature, dance, educational drama and/or technical theatre). In addition to preparing majors for careers in the academic or professional theatre, the lessons acquired through this course of study are readily transferable to careers in teaching, law, business and other areas where interpersonal and self-reliant skills are required.

It is the intent of the Department of Theatre Arts to offer a program of superior quality in the classroom and on stage; stay current with the demands of the discipline; and prepare majors and non-majors to engage successfully in

their private, public and professional lives.

For information and advisement contact Kay Reddell, Advisement Coordinator, Performing Arts Center 395, phone (360) 650-7310, e-mail kred@cc.wvu.edu.

### THEATRE ARTS FACULTY

THOMAS E. WARD (1977) Chair and Professor. BA, Western Maryland College; MFA, New York University, School of Arts.  
 ROGER GERMAIN (1970) Associate Professor. BA, Western Washington State College.  
 MARK KUNTZ (1997) Associate Professor. BA, University of Washington; MFA, University of Oregon.  
 VICTOR H. LEVERETT (1977) Associate Professor. BA, BA/Ed, Western Washington State College; MA, Washington State University.  
 JAMES E. LORTZ (1989) Assistant Professor. BFA, University of Montana.  
 PERRY F. MILLS (1981) Associate Professor. BA, Western Washington State College; MA, Western Washington University.  
 MAUREEN E. O'REILLY (1983) Professor. BA, Whitman College; MA, University of Washington; MFA, University of Cincinnati.  
 LEE H. TAYLOR (1967) Associate Professor. BA, Goddard College; MA, University of Washington.

### BACHELOR OF ARTS

#### Major — Theatre

83 credits

- Core requirements (57 credits): ThA 101, 160, 212, 213, 216, 222, 255, 270, 322, 351, 355, 380, 381, 384 or 385 and 496; two topics selected from ThA 428 plus 3 credits of dramatic literature
- Concentration (18 to 21 credits) selected from one of the following areas:
  - Acting: ThA 260, 261, 360, 361, 460 or 461; plus 4 credits under advisement. Dance and voice lessons recommended
  - Directing: ThA 210, 314, 370, 470 plus 6 credits under advisement
  - Dramatic Writing: ThA 385, 485, 486, 487, plus 3 credits
  - Dramatic Literature: ThA 325, 327, 328 plus 9 credits under advisement
  - Educational Drama: ThA 350, 450, 451, 452, plus 6 credits under advisement
  - Technical Theatre: ThA 210, 211, 310, 312, 314, 412 plus 3 credits under advisement
  - Design
    - Scenic Design: ThA 210, 211, 311, 411 plus 8 credits under advisement
    - Costume Design: ThA 210, 316, 382, 383, 416 plus 4 credits under advisement
    - Light Design: ThA 210, 211, 311, 313, 413 plus 4 credits under advisement
- Electives under advisement

#### Minor — Theatre

30 credits

- ThA 101, 160, 212, 222, 270

- One course selected from ThA 201, 260, 351, 384, 385
- One course selected from ThA 314, 322, 350, 370
- Electives under advisement

## BACHELOR OF ARTS IN EDUCATION

### *Interdisciplinary Major Concentration*

#### *Major — English/Theatre*

97 credits (English 49 credits/Theatre 48 credits)

#### Theatre

48 credits

- Core requirements: ThA 101, 160, 210, 212, 213, 216, 222, 270, 370, 380, 381, 384
- Recommended additional courses: ThA 260, 428, 452, 470
- Electives under advisement

#### English

49 credits

(See the *English Department* section of this catalog.)

Completion of this major will lead to a primary endorsement in English and a supporting endorsement in drama/theatre when taken in combination with a professional education program.

#### *Teaching Endorsement*

#### Drama/Theatre

26 credits

- ThA 101, 160, 212, 222, 255, 270, 314, 351 (elementary) or 452 (secondary), 370

Completion of the above courses leads to a supporting endorsement in drama/theatre arts.

## GRADUATE STUDY

For a concentration leading to the Master of Arts degree, see the *Graduate School* section of this catalog.

## A NOTE ON COURSE NUMBERING

In each level of course work (100, 200, 300, 400 and 500), the following numbering system has been used:

Technical Theatre . . . . .	11-20
Literature . . . . .	21-30
Educational Drama . . . . .	46-59
Acting . . . . .	60-69
Directing . . . . .	70-75
Playwriting . . . . .	80-90

600-level courses are not a part of this system.

## COURSES IN THEATRE ARTS

*Courses numbered X37; X97; 300, 400; 417, 445 are described on page 31 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. ThA 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 non-majors.

### **161 ACTING WORKSHOP FOR HIGH SCHOOL STUDENTS (2)**

Prereq: intended for, but not restricted to, students who have completed their junior year of high school. An intensive program to develop actor skills through daily physical, vocal and imagination training. Rehearsal and performance in a variety of theatre environments. Summers only. Recommendations required.

### **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 (5)**

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: ThA 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 (2)**

Theory and practice of applying make-up for the stage with emphasis on script analysis and character development.

### **216 INTRODUCTION TO COSTUMING (4)**

Prereq: ThA 101 recommended. Costume design and execution with specific emphasis on basic sewing; use of patterns, materials and costume crafts; costume plots; and wardrobe supervision. Required weekly two-hour lab.

### **222 UNDERSTANDING PLAYS (3)**

Prereq: ThA 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 THEATRE PRODUCTION (2)**

Prereq: permission of instructor. For theatre majors (before 50 hours in major) and non-majors: 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 non-majors: practical experience in rehearsal and performance. S/U grading.

### **257 THEATRE PRODUCTION: PERFORMANCE (2)**

Prereq: permission of instructor. For theatre majors and non-majors: direct instruction and experience in performance work. S/U grading.

### **260 ACTING STUDIO I: THEORY (3)**

Prereq: audition and permission of instructor. Exploration of the theory of the physical, vocal, intellectual and emotional instrument of the individual actor in relation to character demands of a scene or play through the studio approach. Students demonstrate their knowledge

of theory in both written and oral forms.

### 261 ACTING STUDIO I: SCENE STUDY (3)

Prereq: written permission of instructor. Application of the actor/character theory learned in ThA 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.

### 262 SUMMER STOCK COMPANY (15)

Prereq: for performers — ThA 260, 261 or equivalent experience; for technicians — ThA 212, 213, 311 or equivalent experience; written permission of director of summer stock. Offered summer quarter only. Contact director of theatre for details.

### 265 ORAL INTERPRETATION (3)

Basic theory and technique of effective oral presentation of poetry, prose and dramatic text.

### 266 MUSICAL THEATRE I: FUNDAMENTALS (3)

Prereq: ThA 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: ThA 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.

### 270 INTRODUCTION TO PLAY DIRECTION (2)

Prereq: Theatre Arts major or by permission. Theory and practice of stage direction. Students are required to perform in at least two student-directed scenes.

### 310 SCENE PAINTING (3)

Prereq: ThA 211 and 212. A survey of traditional scene painting with emphasis on color, technique, materials, tools and formulas.

### 311 BEGINNING SCENE DESIGN (3)

Prereq: ThA 210, 211 and 212. Theory and practical experience in communicating technical and artistic information through drafting and color-rendering.

### 312 INTERMEDIATE STAGECRAFT (3)

Prereq: ThA 212. In-depth exploration of technical theatre practices.

### 313 BEGINNING LIGHTING DESIGN (3)

Prereq: ThA 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 ThA 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 (4)

Prereq: ThA 211. 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. Was ThA 351 in previous catalog.

### 322 REPRESENTATIVE PLAYS (5)

Prereq: ThA 222. Introductory survey of historically significant and stageworthy plays from all periods.

### 325 MODERN EUROPEAN DRAMA (3)

Prereq: ThA 222. Selected European plays and playwrights since 1850.

### 326 ARTS INQUIRY (3)

Prereq: permission of instructor. An exploration of the major facets of art commentary, with discrimination made between theory and practical application. Content presents major problems of distinction between understanding and description of artistic methods and products, with the result that the student will engage philosophical positions at work in science and the arts.

### 327 MODERN AMERICAN DRAMA (3)

Prereq: ThA 222. Selected American plays and playwrights since 1920.

### 328 CONTEMPORARY DRAMA (3)

Prereq: ThA 222. Selected plays and significant trends in contemporary English, European and American drama.

### 350 THEATRE FOR YOUTH (3)

Exploration of the history, philosophy, literature and techniques for creating theatre for young audiences.

### 351 CREATIVITY ACROSS THE CURRICULUM (3)

Principles and methods for using creative activity as a method for teaching subjects across the curriculum.

### 355 THEATRE PRODUCTION (2)

Prereq: ThA 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: ThA 256 and permission. For theatre majors (after 50 hours in major) and non-majors: 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.

### 362 TOURING THEATRE (15)

An intensive and comprehensive involvement in the study and practice of theatre production. Participants prepare all aspects of a touring production and an accompanying educational theatre workshop offered in elementary and secondary schools throughout the state; 40 to 60 performances.

### 363 VOICE AND DICTION (3)

Sequence of exercises and drills challenging improvement in resonance, breath support, articulation, relaxation, placement and vocal work ranging from good stage speech (mid-Atlantic) to dialect.

### 366 MUSICAL THEATRE III: PRACTICUM (3)

Prereq: ThA 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: ThA 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 I (3)

Prereq: A minimum of 5 credits of acting course work; ThA 270 or equivalent. 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)

Development of the theatre arts from Classic Greek to 19th-century Romanticism.

### 381 THEATRE HISTORY II (4)

Prereq: ThA 380 or permission. Development of the theatre arts from the late 19th century to the present.

### 382 COSTUME HISTORY I (3)

Prereq: ThA 380. Evolution of costume from ancient Greece through Charles I and Commonwealth with reference to theatrical production.

### 383 COSTUME HISTORY II (3)

Prereq: ThA 382. Evolution of costume from the Restoration to 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: ThA 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: ThA 212 and 312. Technical analysis of scripts, special effects, computers and properties. Laboratory work on productions.

**413 ADVANCED LIGHTING DESIGN (3)**

Prereq: ThA 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: ThA 314; ThA 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.

**416 ADVANCED COSTUME DESIGN AND RENDERING TECHNIQUES (4)**

Prereq: ThA 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: ThA 222. The in-depth exploration of an individual playwright or group of playwrights who were influential in the development of a particular style of drama. Topics include Greek and Roman, British, Continental, North American, contemporary or individual playwrights. Repeatable under separate topics.

**450 THEATRE FOR YOUTH II (3)**

Prereq: ThA 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: ThA 351. Advanced techniques; supervised laboratory work with young people.

**452 SECONDARY THEATRE TECHNIQUES (3)**

Prereq: ThA 351; acting and directing courses strongly encouraged. Exploration of techniques and curriculum for use in secondary theatre classrooms. Creation of lesson plans and projects aimed specifically for theatre students.

**460 ACTING STUDIO III: STYLE (4)**

Prereq: written permission of instructor. Continued of refinement of skills and techniques presented in Acting Studio II. Devoted to advanced workshops and performance projects with directors and playwrights with an emphasis on theatrical style.

**461 ACTING STUDIO III: CHARACTER (4)**

Prereq: written permission of instructor. Continued refinement of skills and techniques introduced in previous studios, with special emphasis on individual acting problems.

**462 ADVANCED WORKSHOP IN SUMMER STOCK (15)**

Prereq: written permission of director of summer stock required before registering. Offered only summer quarter. Contact Director of Theatre for details. Repeatable once.

**463 AUDITION PREPARATION (2)**

Prereq: ThA 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.

**470 PLAY DIRECTION II (4)**

Prereq: ThA 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.

**472a,b HIGH SCHOOL DRAMA DIRECTORS INSTITUTE (2, 4)**

A workshop for those who are now engaged or who intend to become

engaged in the processes of play production, from script selection, production planning, casting and rehearsal to performance. Utilizes the resources of the concurrent acting workshop for high school students. Repeatable with permission of instructor. Offered summer only.

**485, 486, 487 DRAMATIC WRITING WORKSHOP (4 ea)**

Prereq: ThA 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 ThA 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 31 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 AND STAGE LIGHTING (4)**

Prereq: ThA 313 and 411. Topics in the practice and principles of the scenic arts with individual projects in design.

**512 ADVANCED SEMINAR IN SCENIC DESIGN AND STAGE LIGHTING (4)**

Prereq: Undergraduate major in theatre and permission of instructor. Advanced topics in the practice and principles of the scenic arts 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: ThA 550. Implementation of strategies and techniques for theatre production in the public schools.

**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: ThA 560. A continuation of ThA 560 with emphasis on contemporary approaches and application in production.

**570 PLAY ANALYSIS AND THEATRE PRODUCTION PLANNING (4)**

Theories of play analysis and theatre production organization from the point of view of the play director preparing to produce a play.

**571 SEMINAR IN PLAY DIRECTION (4)**

Prereq: ThA 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: ThA 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: ThA 585 or permission of instructor. Individual projects in playwriting.

### **595 INTERNSHIP IN THEATRE ARTS (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.

# HUXLEY COLLEGE OF ENVIRONMENTAL STUDIES

*Dr. Bradley F. Smith, Dean*

Huxley College is one of six colleges constituting Western Washington University, consistently recognized as one of the outstanding public institutions of higher education in the West. Located between Seattle, Washington, and Vancouver, British Columbia, the beautiful campus on the hill overlooks Bellingham Bay and the San Juan Islands to the west, while the rich resources of the North Cascades lie within an hour's drive to the east. All of Western's 10,000-plus students have access to modern library and computer facilities, as well as athletic and recreational facilities, theater, music, film, lectures and seminars.

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 600, 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 weekly *Huxley Hotline* 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. In 1992, the Department of Geography and Regional Planning joined Huxley College, which resulted in restructuring the College into two curricular centers: Center for Environmental Science and Center for Geography and Environmental Social Sciences. This has resulted in expanding Huxley's environmental curriculum to include new dimensions of study in urban and regional planning and human-environment interaction.

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 220,000 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.

The environmental studies major is also offered in Bremerton and Port Angeles. Not all courses are taught at all sites. The environmental studies programs are state-supported with the off-campus programs being offered as long as sufficient enrollment exists.

Admission to Huxley College is selective and early application is strongly recommended.

## CENTER FOR ENVIRONMENTAL SCIENCE

*Director: John T. (Jack) Hardy*

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 Center for Environmental Science. Requirements for this 90-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 SUN SPARC workstations provides state-of-the-art capabilities (see Minor — Geographic Information Systems). The Environmental Research and Education 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.

### **CENTER FOR GEOGRAPHY AND ENVIRONMENTAL SOCIAL SCIENCES**

*Director: John C. Miles*

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 Center's programs include within the B.A. in environmental studies: geography, planning and environmental policy, environmental education, environmental journalism, and environmental economics that allow students to link their interest in the environment with social science and humanities disciplines. These programs direct students to specific environmental career paths or provide an excellent background for advanced study in law, public administration and resource management.

#### *Faculty*

The work of this Center is largely interdisciplinary, though the discipline of geography maintains a strong presence. Center faculty are trained in anthropology, geography, education, planning, political science, and related fields. Active research work allows faculty to remain current in the rapidly evolving field of environmental management. Center 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 Center for Geography and Environmental Social Sciences. 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.

#### *Center Resources*

Center programs use computer labs, instructional centers for geographic information systems and cartography, studios, the Map Library and an environmental education lab as well as off-campus cooperating organizations. Experiential learning processes are emphasized in many programs, taking students into the field to learn and practice skills.

## **INSTITUTES**

### *Institute of Environmental Toxicology and Chemistry*

*Director: Wayne G. Landis*

The Institute of Environmental Toxicology and Chemistry, established at Huxley College in 1989, is engaged in research and education in the fields of both aquatic and terrestrial toxicology. Offices and laboratories of the Institute are located in the Environmental Studies building. A 23-acre field research facility, the Hannegan Environmental Center, augments laboratory and field facilities for studies in aquatic, terrestrial and microbial systems.

While centered at Huxley College, the work of the Institute involves faculty in several academic units at Western and is far-reaching in scope. The Institute's mission is to serve as a regional and national leader in environmental research, to train both students and professionals in the field, and to act as a nonpartisan resource for industry and government. In keeping with its mission, the Institute provides opportunities for graduate and undergraduate students to participate in ongoing research projects and to undertake thesis research through Huxley's programs in environmental science.

### *Institute for Watershed Studies*

*Director: Robin A. Matthews*

Institute for Watershed Studies is a research and academic support facility that is affiliated with Huxley College of Environmental Studies, Western Washington University, Bellingham, WA. The Institute for Watershed Studies takes an active part in sponsoring a wide variety of projects, including freshwater lake and stream studies, terrestrial, and estuarine studies. The Institute assists students and faculty who are interested in pursuing watershed-related research or environmental education projects. This assistance may include training in the use of the Institute's field or laboratory equipment, supervision of student projects, assistance with developing watershed projects and, on a limited basis, water quality and analytic services. It also includes contributing to the academic programs at WWU and in the community, by sponsoring seminars and presenting guest lectures on a wide range of topics relating to watershed studies. Finally, the Institute supports a variety of community service projects that provide a link between the University and the general public.

The Institute for Watershed Studies is certified by the

Washington State Department of Ecology to conduct a variety of water quality analyses.

### *Institute for Spatial Information and Analysis*

*Coordinator: John C. Miles*

The Institute is comprised of Huxley Map Library, GIS Projects Lab, the Spatial Analysis Lab, and a lab dedicated to spatial analysis for landscape ecology. These facilities provide spatial analysis using geographic information systems, remote sensing, transportation modeling, and other applications. A GIS minor is available through the College. The Map Library is considered a major collection in the United States and houses more than 235,000 maps and 1,000 atlases.

## FACULTY

### Center for Environmental Science

- BRIAN L. BINGHAM (1995) Assistant Professor. BS (zoology), MS (zoology), Brigham Young University; PhD (biology), Florida State University.
- LEO R. BODENSTEINER (1995) Assistant Professor. BA (biology), Moorhead State University; MA (zoology), PhD (zoology), Southern Illinois University at Carbondale.
- DEVON A. CANCELLA (1998) Assistant Professor. BS (general science), MS (chemistry), University of Iowa; PhD (environmental health sciences), University of California.
- JOHN T. (JACK) HARDY (1989) Professor and Director, Center for Environmental Science. BA (analytical biology), University of California, Santa Barbara; MS (biological oceanography), Oregon State University; PhD (marine botany and aquatic ecology), University of Washington.
- PETER S. HOMANN (1996) Assistant Professor. BA (natural sciences) and BS (chemistry), Case Western Reserve University; MS (forest ecology), Yale School of Forestry and Environmental Studies; PhD (forest soils, nutrient cycling), University of Washington.
- WAYNE G. LANDIS (1989) Professor and Director, Institute of Environmental Toxicology and Chemistry. BA (biology), Wake Forest University; MA (biology) and PhD (zoology), Indiana University.
- ROBIN A. MATTHEWS (1986) Professor and Director, Institute for Watershed Studies. BS (biology), University of California at Riverside; MS (environmental studies), Indiana University; PhD (botany/aquatic ecology), Virginia Polytechnic Institute and State University.
- J. RICHARD MAYER (1978) Professor. BS (chemistry), Union College; MA (chemistry), Columbia University; PhD (organic chemistry), Yale University.
- JOHN F. McLAUGHLIN (1996) Assistant Professor. BA (biological sciences), BA (biochemistry), BA (integrated science program), Northwestern University; MS (biological sciences) and PhD (biological sciences, population biology), Stanford University.
- BRADLEY F. SMITH (1994) Professor and Dean, Huxley College of Environmental Studies. 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.
- WILLIAM C. SUMMERS (1971) Professor. BME (mechanical engineering), PhD (zoology), University of Minnesota.
- DAVID O. WALLIN (1995) Associate Professor. BS (biology), Juniata College; MA (biology), The College of William and Mary; PhD (environmental science), University of Virginia.

### Center for Geography and Environmental Social Sciences

- ANDREW J. BACH (1995) Assistant Professor. BS, MA (geography), University of California, Davis; PhD (geography), Arizona State University.
- GIGI BERARDI (1995) Associate Professor. BA (biology), University of California at San Diego; MS (natural resources conservation), PhD (natural resources, policy and planning), Cornell University.
- PATRICK H. BUCKLEY (1987) Associate Professor. BS (civil engineering and geology), University of Notre Dame; MA (economic geography and South Asian studies), University of Washington; PhD (economic geography), Boston University.

- RABEL J. BURDGE (1996) Visiting Professor. BS (agriculture/economics) and MS (rural sociology), Ohio State University; PhD (sociology), Penn State University.
- JEAN O. MELIOUS (1996) Assistant 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 and Director, Center for Geography and Environmental Social Sciences. BA (anthropology), Dartmouth College; MA (recreation and park management), University of Oregon; PhD (education), The Union Institute.
- DEBNATH MOOKHERJEE (1961) Professor. BSc, MSc (geography), University of Calcutta; PhD (geography), University of Florida.
- O. EUGENE MYERS (1995) Assistant Professor. BS (human ecology), Western Washington University; MA, PhD (psychology and human development), University of Chicago.
- LYNN A. ROBBINS (1971) Professor. BA (anthropology), University of Utah; MA, PhD (anthropology), University of Oregon.
- DONALD T. SINGH-CUNDY (1996) Visiting Associate Professor. BA (political science and economics), University of Minnesota; MA (political behavior and social psychology), University of Hawaii; PhD (political behavior, social psychology, research methods), University of Oregon.
- BRADLEY F. SMITH (1994) Professor and Dean, Huxley College of Environmental Studies. 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.
- THOMAS A. TERICH (1973) Professor. BA, MA, California State University; PhD (geography), Oregon State University.
- WENDY WALKER (1991) Lecturer. BA and K-12 Teaching Certificate (geology), Western Washington University; MS (religion), Florida State University.
- HERBERT H. WEBBER (1970) Professor. BSc, PhD (zoology and marine biology), University of British Columbia.

### Adjunct Faculty

- JAMES D. ALLAWAY, Proprietor, Resources International. PhD (natural resources, policy, and planning), Cornell University.
- FELIX A. (TONY) BASABE, Western Washington University, Bellingham, Washington. PhD (air pollution/forest effects), University of Washington.
- LISA BRYCE LEWIS, LBL Consulting, Bellingham, WA. MS (forest resources), University of Washington.
- PATRICIA A. CIRONE, Chief, Health Environment Assessment Section, USEPA Region X. PhD (limnology), New York University.
- ERIC CRECELIUS, Senior Research Scientist, Battelle Marine Science Laboratory. PhD (oceanography), University of Washington.
- BEN EWING, Professor Emeritus of Environmental Engineering, University of Illinois at Urbana-Champaign. PhD, University of California at Berkeley.
- TIMOTHY HALL, National Council for Air and Stream Improvement, Marine Research Laboratory, Anacortes, WA. MS (biology), Central Washington University.
- NADEZHDAK K. KHRISTOFOROVA, Professor and Chair of Ecology, Far East State University, Vladivostok, Russia. PhD (electrical chemistry and ecology of animals), Far East State University.
- WALTER H. PEARSON, Environmental Research and Wildlife Agency, United Arab Emirates. PhD (oceanography), Oregon State University.
- MICHAEL G. STONER, Environmental Manager, Port of Bellingham, Bellingham, WA. MS (forest soils), University of Washington.
- SUZANNE STROM, Marine Scientist, Shannon Point Marine Center, Anacortes, WA. PhD (biological oceanography), University of Washington.
- PHILIP WATANABE, University of Washington School of Environmental Health, Seattle, WA. PhD (toxicology), Utah State University.
- PETER WILLING, Water Resources Consultant, LLC, Bellingham, Washington. PhD (water resources policy), Cornell University.
- NICHOLAS C. ZAFERATOS, Director of Planning and Community Development and General Manager, The Swinomish Indian Tribal Community, LaConner, WA. PhD (urban design and planning), University of Washington.

### Affiliated Faculty

- RANDALL S. BABCOCK, Professor, Department of Geology
- DANIEL L. BOXBERGER, Professor, Department of Anthropology
- GEORGE T. CVETKOVICH, Professor, Department of Psychology
- MELVIN G. DAVIDSON, Professor, Department of Physics
- DAVID T. MASON, Professor, Fairhaven College

DEBRA J. SALAZAR, Professor, Department of Political Science  
MAURICE SCHWARTZ, Professor Emeritus, Department of Geology  
MART A. STEWART, Associate Professor, Department of History  
STEPHEN D. SULKIN, Professor and Director, Shannon Point Marine Center  
DON C. WILLIAMS, Professor, Department of Biology  
WILLIAM H. WILSON, Professor, Department of Chemistry; Director, Scientific Technical Services

## 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) other factors which the applicant believes to be relevant to the qualifications for admission (e.g., job or community experience). Applications must be received by the Huxley College office by: May 1 for admission fall quarter; October 20 for admission winter quarter; and January 28 for admission spring quarter. Required preparatory courses are listed below:

### (A) All majors

- ❑ Introductory statistics course (e.g., Soc 207, Math 240, FMDS 205, Anth 335)
- ❑ Physical geography (Geog 203) preferred, or physical geology (Geol 211)
- ❑ Expository writing course above the 101 level (Eng 201)
- ❑ Economics, preferably microeconomics (Econ 206)
- ❑ Political science

### (B) All majors (other than environmental science)

- ❑ Math 114 (preferred) or Math 156
- ❑ One quarter of general chemistry (Chem 115 or 121)
- ❑ One quarter of introductory biology (Biol 101)
- ❑ And a second course in general biology, geology or physics including a laboratory (which does not duplicate courses used for A).

### (C) Environmental science majors

- ❑ One quarter of calculus (Math 124), second quarter (Math 125) recommended
- ❑ One year general chemistry (Chem 121, 122, 123)
- ❑ One year general biology (Biol 201, 202, 203)

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.

Courses listed in (A) and (B) are considered to be minimum admission requirements for students pursuing the degree of Bachelor of Arts in environmental studies. Courses listed in (A) and (C) are considered to be minimum admission requirements for students pursuing the degree of Bachelor of Science in environmental studies. 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, etc.

Students interested in the off-campus programs need to complete the Extension Undergraduate Application. Extension admission and registration information is available from University Extended Programs or at the off-campus program sites.

## 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 courses requires completion of all prerequisite courses for the major (see Huxley College *Admissions and Declaration of Major* section). Students are strongly encouraged to complete all prerequisites 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 advisers 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 planning 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

*Bachelor of Arts in Journalism*

- Environmental Studies/Journalism

*Bachelor of Arts in Economics*

- Environmental Studies/Economics

*Bachelor of Arts in Education*

- Environmental Studies
- Geography — Secondary
- Geography — Elementary

*Minors*

- Environmental Education
- Environmental Studies
- Environmental Science
- Geography
- Geographic Information Systems

*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 adviser.

**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 studies major (B.S. program), student/faculty-designed major, or the environmental studies major leading to the B.A. or a B.A. in Education.
- 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 (C) or better (no grades less than C- in Huxley background courses or courses that define a student’s major or minor).

**HUXLEY COMMON CORE REQUIREMENTS**

All degree programs of Huxley College (except the B.A. in education in geography) require completion of four core courses (16 credits). Admittance to core courses requires completion of preparatory course work as described under the Huxley College *Admissions and Declaration of Major* section of this catalog.

*Core Courses*

16 credits

- Envr 302
- Envr 303
- Envr 304
- Envr 305

Environmental studies degree programs also require completion of 10 credits minimum of 498a,b,c or d (see below). These must be approved and supervised by the

student’s adviser and relate to the student’s course of study at Huxley College. Students should follow guidelines supplied by the College. A report consisting of written (mandatory in 498a), taped, filmed or graphically portrayed form appropriate to the project must be submitted by the student, at least in draft form, by the third week of the student’s last quarter of study.

*Senior Thesis (498a)*

1-15 credits (10 credits minimum)

Normally completed in the senior year, the senior thesis is a special project carried out under the supervision of faculty advisers and written in thesis form according to guidelines supplied by the College. It may reflect a single study topic or form part of a major investigation which may take the form of field work or laboratory, library or community research. Two bound copies of the senior thesis are submitted by the student, one of which is kept on file in Wilson Library.

*Internship (498b)*

1-15 credits (10 credits minimum)

An internship is a supervised work experience typically of one to three months’ duration in a government agency, legislature, corporation, lawyer’s office or research laboratory, where the work involved is relevant to environmental studies. The student keeps records during the internship, which are then documented by a written report with such items as slides, drawings, graphs or tables.

*Senior Project (498c)*

1-15 credits (10 credits minimum)

The senior project may be a creative community project that falls outside the parameters of the senior thesis or internship in that it is not reported using thesis guidelines or is not a supervised work experience. Examples of a senior project might be the writing of a children’s book on ecology or the establishment of an interpretive nature trail in the community.

*Foreign Study (498d)*

1-15 credits (10 credits minimum)

While enrolled as a major in Huxley College, a student who has undertaken college-level foreign language study may study abroad for one quarter in a country utilizing that language. Foreign study must be approved in advance and carried out under the supervision of the student’s adviser, must follow the foreign study guidelines for the student’s major and relate to the student’s course of study at Huxley College. The results of the study must be reported in written, taped, filmed or graphically portrayed form.

**BACHELOR OF SCIENCE**

*Major — Environmental Science*

90 credits

The environmental science major is a two-year, upper-division B.S. degree program. It builds upon a substantial background in science and mathematics obtained through required lower-division prerequisite 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 — 26 credits*

- Envr 302, 303, 304, 305
- Envr 498a or 498b or 498c or 498d

*Major requirements — 23-35 credits*

Include one course from each area numbered 1 through 4 and two lectures plus associated laboratories from area number 5 below:

1. Ecology: Envr 325 or Biol 325
2. Organic Chemistry: Chem 251 or Chem 351, 352, 354\*
3. Planning, Assessment and Management: Envr 418, 436 or 490
4. Large-Scale Systems: Envr 321, 435a or 492; Geog 330, 331, 433
5. Laboratory/Field Courses (including lecture and lab): Envr 326; 328; 338; 361 a,b; 407; 421 a,b; 426; 429; 430a,b; 433a,b; 433a/408; 455/457; 456/458

Upper-division electives chosen under faculty advisement — 29-41 credits

For students wishing an area of emphasis, advisement plans are available for aquatic 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 from Bellingham.

### *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.

## BACHELOR OF ARTS

### *Major — Environmental Education*

90 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. Two options have been developed within the program: (1) outdoor education and interpretation, and (2) mass communication and environmental education. 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.

The major consists of several distinct parts. First, students seek to acquire a synthetic and holistic understanding of the content of environmental studies. Second, students

examine the process of education for the 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 may 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.

### *Option I — Outdoor Education and Interpretation*

90 credits

The goal of this option is to prepare students to pursue environmental education careers in non-formal educational and recreational settings.

Persons choosing this option will design programs of study to prepare them for work as outdoor education leaders and interpreters of various environments.

*Huxley common core requirements — 26 credits*

- Envr 302, 303, 304, 305
- Envr 498a or 498b or 498c or 498d

*Major requirements — 38 credits*

- Envr 301, 371, 372, 473, 474, 476, 477, 479, 483

Upper-division electives chosen under faculty advisement — 26 credits

### *Option II — Mass Communication and Environmental Education*

90 credits

This option allows students to combine their interests in education, environmental studies, mass communication and/or media technology utilizing extensive course work in other colleges at Western which specialize in various aspects of communications.

*Huxley common core requirements — 26 credits*

- Envr 302, 303, 304, 305
- Envr 498a or 498b or 498c or 498d

*Major requirements — 27 credits*

- Envr 301, 371, 372, 376, 477, 479, 481

Upper-division electives chosen under faculty advisement — 37 credits

Interested students should seek advisement early in order to formulate a degree program within either of the above options.

### *Major — Planning and Environmental Policy*

Advisers: Debnath Mookherjee and Lynn Robbins

90-97 credits

The Center for Geography and Environmental Social Sciences, drawing upon the strengths of a number of social and natural sciences, offers an interdisciplinary program in planning and environmental policy. This major addresses the growing awareness of and concern for the

\* All three courses complete the requirement; six credits may be counted toward electives.

multifaceted aspects of the environment. The program offers unique opportunities in understanding the nature and magnitude of growth, development and the environment. Secondly, it provides students with the knowledge and skills to meet the challenges of the future. The primary objective of this academic program is to prepare students for employment in planning and policy agencies and organizations as well as to provide a basic 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 90 to 97 credits including the Huxley common core of 26 credits. The program consists of a core, two tracks and electives. The cores are designed to provide a broader understanding of urban and regional environments in the context of planning and policy. The two tracks, planning and environmental policy are in-depth studies of a range of environmental phenomena emphasizing policy or the spatial pattern of planning. The 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. Also, the major has the provision for 10 elective credits of an internship at an established private or public agency. Majors are strongly recommended to pursue an internship.

#### *Huxley common core requirements — 26 credits*

- Envr 302, 303, 304, 305
- Envr 498a or 498b or 498c or 498d

#### *Major requirements — 21 credits*

- Geog 270, 314; Envr 301, 436, 464

#### *Planning Track — 25 credits*

- Geog 305, 351, 370, 470
- Econ 380 or 383
- Pol Sci 320 or 353

#### *Environmental Policy Track — 24 credits*

- Envr 418
- Envr 443 or 468
- Envr 444
- Envr 446 or 447
- Envr 466
- Econ 383
- Electives — 19 credits
- A minor under advisement (students choosing the minor option may need more than 19 credits), or one of the following elective emphases: urban planning, resource management, environmental design, environmental planning, international environmental policy, or students may choose other electives under advisement.
- Internship

### Major — Geography

Advisers: Thomas Terich and Debnath Mookherjee

88 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 adviser will recommend courses related to the student's career objectives. Students are urged to consult advisers at the earliest opportunity to plan their program. Background preparation prerequisites: See Huxley College *Admissions and Declaration of Major* section for preparatory courses to be completed prior to admittance to Huxley common core courses, and complete Soc 207, Math 240, or approved introductory statistics course.

#### *Huxley common core requirements — 26 credits*

- Envr 302, 303, 304, 305
- Envr 498a or 498b or 498c or 498d

#### *Major requirements — 25 credits*

- Envr 301
- Geography Core: Geog 201, 203, 301, 305, 351, 352

#### *Concentration in either Track A or B — 37 credits*

##### *A. Environmental and Resource Management Track*

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.

- Track requirements: Geog 330, 331; Geog 362 or 363; Geog 431 or 432; Geog 433 or 461 (19 credits minimum)
- Technical electives: three of the following: Geog 450, 451, 452; Envr 328, 436, 438, 490, 493; Geol 442, 443 (9 credits minimum)
- Physical science electives — two of the following: Geog 362, 363, 431, 432, 433, 461; Geol 413, 440, 455, 472, 473; Envr 407, 430a, 435, 462, 492 (6 credits minimum)
- Regional geography elective — one of the following: Geog 320, 321, 322, 323, 324, 326, 327, 328 (3 credits minimum)

##### *B. Human and International Geography Studies Track*

This option prepares students for public and private sector careers with a spatial and global emphasis; especially concentrating on the Pacific Rim. Students develop investigative skills to analyze issues relating to the environment and culture, spatial economics, urbanization, and development.

- Track requirements — three of the following: Geog 310, 312, 314, 340; plus one of the following two: Geog 412, 414; plus one of the following two: Geog 421, 423 (18 credits minimum)
- Regional geography electives — three of the following: Geog 320, 321, 322, 323, 324, 326, 327, 328 (9 credits minimum)
- General electives — three of the following with at least one at the 400 level: Geog 310, 312, 314, 330, 331, 340, 362, 412, 414, 421, 423, 431, 432, 450, 451, 452, 462; Envr 420; Geol 442, 443; Econ 388, 389, 462; Soc 421, 426; PolSci 468; Anth 475, 484; or full year of foreign language at 300-level or above (10 credits minimum)

*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*

81 credits

A combined major is offered cooperatively by Huxley College and the Department of Journalism. The degree awarded is a B.A. 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 common core courses.

*Environmental studies courses — 40 credits*

- Huxley core courses: Envr 302, 303, 304, 305 (16 credits)
- One of the following courses: Envr 301 or 325 (3 credits)
- Envr 480, 481
- Upper-division electives chosen under faculty advisement (15 credits)

*Journalism courses — 41 credits*

- Journ 207 (3 credits)
- Journ 190, 307, 309, 350, 430, 470 and 480 (30 credits)
- Journalism staff courses from the following list (A): Journ 214, 314, 414 (6 credits)
- One additional staff course from the following list (B), or list (A): Journ 221, 321, 421 (2 credits)

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*

90 credits

Cooperative program — Huxley College of Environmental Studies 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 B.A. in economics. Background preparation prerequisites: Biol 101 and a second course in general biology, geology, or physics including a laboratory; Chem 115 or 121; Math 114 or 156.

- Envr 302, 303, 304, 305, 436, 464, 468
- Econ 206, 207, 208, 303, 306, 307, 383, 384, 483
- FMDS 205 (or equivalent)
- One of the following: Geog 310 or 312 or 340
- Econ/Envr 493 or 4 credits of Envr 499
- 13 upper-division credits of electives in economics or environmental studies under faculty advisement
- One communication focus course must be taken

**BACHELOR OF ARTS IN EDUCATION**

*Major — Environmental Studies*

47 credits

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 adviser for clarification of course work applications. Prerequisites: Biol 101 and a second course in general biology, geology, or physics including a laboratory; Chem 115 or 121; Math 114 or 156.

*Huxley core courses — 16 credits*

- Envr 302, 303, 304, 305

One of the following courses: Envr 301 or 325 — 3 credits

Major requirement: Envr 371 — 4 credits

Environmental studies electives under advisement — 24 credits

Elementary Education Professional Program. See the Elementary Education section of this catalog.

*Major — Geography (Secondary)*

Adviser: Thomas Terich

50 credits

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.

*Geography core requirements — 19 credits*

- Geog 201, 203, 209, 301, 320, 351

*Regional Electives — 6 credits*

- Select two of the following: Geog 321, 322, 323, 324, 326, 327, 328

*Track Electives — 11 credits minimum*

- Select three of the following: Geog 310, 312, 314, 340

*General Electives — 14 credits minimum*

- Geography electives selected under faculty advisement

focusing on one or more of the following themes of geography:

- Cartography and GIS
- Environmental and Resource Management
- Human-Environment
- Human and International

This major must be accompanied by the professional preparation program in secondary education.

**NOTE:** Students must also complete the specific program requirements for social studies education, including the social studies minor. See the *Social Studies Education* section of this catalog.

### Major — Geography (Elementary)

Adviser: Thomas Terich

45 credits

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 — 26 credits*

- Geog 201, 203, 209, 301, 310, 320, 351, 406

Electives selected under faculty advisement — 19 credits

This major must be accompanied by the professional preparation program in elementary education.

## MINORS

### Minor — Environmental Education

28 credits

- Two courses from Envr 301 or 302 and 303 or 305 (7-8 credits)
- Envr 371 or 372 (4 credits)
- Electives under advisement in environmental studies (16-17 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.

- Envr 110 and 202 (6 credits)
- Two environmental studies core courses selected from 302, 303, 304, 305 (8 credits)
- Environmental studies electives under advisement (10 credits)

### Minor — Environmental Science

25 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.

- Envr 302, 303 and 325 (11 credits)
- One course from each of areas 5 and 6 of Science Major Requirements listed under Bachelor of Science Major — Environmental Science (7-10 credits)
- Upper-division environmental science electives under advisement (4-7 credits)

### Minor — Geography

Adviser: Thomas Terich

25 credits

- Geog 201, 203, 320, 351
- Electives under advisement to total 25 credits

### Minor — Geographic Information Systems

Adviser: Patrick Buckley

35 credits

- Geog 201 or 203, 305, 351, 352, 450, 451, 452; CS 140 or an approved programming course
- Electives selected under faculty advisement from the following: CS 145, 207 or an approved programming course; Art 370, 372; Geol 442, 443

## MASTER OF SCIENCE — ENVIRONMENTAL SCIENCE

The Center for Environmental Science offers a graduate program leading to the M.S. degree in environmental science. Three major areas of program emphasis are recognized: environmental toxicology and chemistry, freshwater ecology, and regional, global and terrestrial ecosystems. Cooperative areas of emphasis include environmental chemistry, a cooperative program with the Department of Chemistry, and marine and estuarine science.

Program options and requirements are described in the *Graduate School* section of this catalog.

## MASTER OF SCIENCE — GEOGRAPHY

The Center for Geography and Environmental Social Sciences offers a program leading to the M.S. degree in geography. The primary objective of this program is to provide a disciplinary foundation with emphasis on regional analysis focusing either on natural resources or regional development.

The College also participates in a cooperative program with the Department of Political Science, leading to an M.A. in political science with an emphasis on environmental studies. Another cooperative program is the M.Ed. in natural science/science education emphasizing environmental education.

Program options and requirements are described in the *Graduate School* section of this catalog.

## COURSES IN ENVIRONMENTAL STUDIES

*Courses numbered X37; X97; 300, 400; 417, 445 are described on page 31 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.

## 202 ENVIRONMENTAL STUDIES: A SOCIAL SCIENCE APPROACH (3)

An overview of the environmental macro-problem with emphasis on specific cases which reveal the complexity of environmental problems. Social, political, economic, humanistic and scientific issues in their environmental context. A basic introduction to environmental studies from the perspective of the social studies.

## 204 THE OCEANS: TOPICS IN MARINE SCIENCE (3)

Prereq: two quarters of natural science courses at the college level and Math 102. Selected topics of scientific inquiry that demonstrate the unique nature of the marine environment. Topics include waves, tides, origin of the ocean's salt and water, ocean and global climate, evolution of marine life, deep sea physiology, marine mammal intelligence and divisions of the marine environment.

## 301 ENVIRONMENTAL SYSTEMS (3)

Prereq: Huxley major prerequisites or written permission of instructor. 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 Envr 325 or Biol 325.

## 302 ENVIRONMENTAL DISTURBANCES (4)

Prereq: Huxley major prerequisites or written permission of instructor. A Huxley core course. Examination of human-induced environmental perturbations of air, land and water occurring on local, regional and global scales.

## 303 HUMAN ECOLOGY (4)

Prereq: Huxley major prerequisites or written permission of instructor. Interaction of biotic systems with earth's physical systems; principles of ecology and natural systems; ecosystem structure, function and management.

## 304 ENVIRONMENT AND RESOURCE POLICY (4)

Prereq: Huxley major prerequisites or written permission of instructor. A Huxley core course. 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 Huxley core course. A concern for nature has slowly emerged as human population has grown, understanding of nature has progressed, and the impact of human activity on natural systems has increased. This course reviews how various human activities have historically depended on and interacted with the natural world. It traces how these interactions have resulted in the emergence of what the ecologist Aldo Leopold termed the *land ethic*. The focus will be on how science and politics have interacted as a land ethic in American environmental history.

## 321 OCEANOGRAPHY (4)

Prereq: two quarters of biology; Chem 115 or 121; Math 115; physics recommended; Geol 340 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 coreq: Envr 321. A laboratory course supplementing lectures in oceanography, especially Envr 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.

## 326 INTRODUCTION TO MARINE POLLUTION AND TOXICOLOGY (5)

Prereq: one year biology and chemistry or permission of instructor. Types and sources of pollutants entering the marine environment. Effects in estuarine and oceanic environments at the individual, population and ecosystem levels. Mitigation options. Laboratory and field techniques for evaluating toxic effects. Offered at Shannon Point Marine Laboratory.

## 328 INTRODUCTION TO ECOSYSTEM MANAGEMENT (5)

Prereq: Huxley core courses 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 identifying resource values of parks, natural preserves and other areas with high resource values.

## 330 NATURAL HISTORY OF THE PACIFIC NORTHWEST (4)

Prereq: Envr 301 or one year 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.

## 338 INTRODUCTION TO ECOSYSTEM RESTORATION (5)

Prereq: Huxley core courses or permission of instructor. An overview of the restoration of ecologically damaged ecosystems. An examination of current techniques of restoration and the complex biological interaction that must be addressed. Topics include restoration of agricultural lands, coastal ecosystems, prairies and range lands. The regulatory framework managing ecological restoration will be equally stressed. The laboratory includes case studies.

## 340 BIOSTATISTICAL ANALYSIS (5)

Prereq: introductory statistics course, e.g. Soc 207, Math 240, FMDS 205, Anth 335 or equivalent. Study, at an intermediate level, of data analysis and statistical tests commonly used in the biological and environmental sciences. Analysis of variance, linear, non-linear and multivariate regression.

## 361a WATER QUALITY (3)

Prereq: a general chemistry and biology course; Envr 301 or 302; or permission of instructor. 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; Envr 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.

## 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: Envr 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.

## 376 THE HISTORY OF CONSERVATION IN AMERICA (4)

Prereq: junior status or permission of instructor. A review of the story of conservation in America from the colonial period to the present. Emphasis is on the development of ideas about land and natural resources in America—how they should be allocated, valued and used. What currents of thought and action led to the concept "conservation" in the late 19th century? How did this concept develop and appear in government policy, and how did policy and bureaucracy involving this concept evolve? These questions are explored through the writings of the principals involved.

## 385 ENVIRONMENTAL SOCIOLOGY (5)

Prereq: any of the following: Soc 221, 251, 255, 260, 268, Envr 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.

**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 TERRESTRIAL ECOLOGY (5)**

Prereq: Envr 325 or Biol 325; Envr 340 or Biol 340; or equivalents. Ecology and analysis of terrestrial ecosystems. Investigates the interactions of ecosystem components, specifically soil, plant and animal processes, with an emphasis on forest ecology. Includes investigative field and lab studies of local ecosystems.

**408 FIELD METHODS IN VERTEBRATE ECOLOGY (3)**

Prereq: Envr 325 or Biol 325; introductory statistics; or equivalents. Rationale and practice of methods to study vertebrates in the field. Emphasis on study of birds and mammals in terrestrial environments.

**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 technologies and policies to promote energy, soil and water conservation are discussed in terms of ecosystem structure and function as well as social and economic components of an agroecosystem. Includes case studies and field experience of sustainable agriculture and horticulture practices and principles.

**412 SUSTAINABLE COMMUNITY DESIGN: URBAN (4)**

Prereq: Envr 303 or ETec 313 or permission of instructor. Design of human settlements appropriate to post-industrial society living under conditions of energy scarcity/costliness. Orienting houses and development patterns for solar access; low-energy transportation systems; opportunities for urban agriculture and increased natural amenities. A studio course. Offered alternate years.

**413 SUSTAINABLE COMMUNITY DESIGN: RURAL (4)**

Prereq: Envr 303, or permission of instructor. Design of human settlements that are compatible and integral with the rural environment: design of solar-tempered dwellings and other structures, the use of alternative energy sources and waste disposal systems, agricultural potential of the land, and the social structure of the rural subsistence community. A studio course. Offered alternate years.

**415 ENVIRONMENTAL DESIGN: PROCESSES AND PROBLEMS (4)**

Prereq: senior status. Environmental design as a process of rational problem-solving and bringing about mutual adjustment of cultural and natural systems; design as a synthesis of conceptions of the environment and of society, the values and processes of society and the application of ethical criteria. Offered alternate years.

**418 SOCIAL IMPACT ASSESSMENT (4)**

Prereq: Soc 210 recommended. Utilizing sociological findings and research methods, this course prepares the student to do social impact assessment separately and with environmental, technical, economic as well as other types of assessments. Working in teams, students do an SIA project of a proposed project or policy change. The focus is on measuring and understanding community-level change in advance of the event. Also offered as Soc 418.

**420 ENVIRONMENTAL POLITICS (5)**

Prereq: Envr 202 or 303; Pol Sci 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 Pol Sci 420.

**421a AQUATIC ECOLOGY (3)**

Prereq: one year of biology; Envr 325 or Biol 325; a course in oceanography, estuaries or limnology recommended. A comparative examination of biological functioning in various aquatic habitats

ranging in scale from small ponds to the whole ocean system. Evaluation of energy flow through trophic levels and adaptations unique to particular aquatic regions.

**421b FISHERIES MANAGEMENT LABORATORY (2)**

Prereq: Envr 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.

**425 ENVIRONMENTAL BIOLOGY OF FISHES (3)**

Prereq: Envr 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: Envr 325 or Biol 325; Envr 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 laboratory exercises in sampling and analysis of stream ecosystems.

**430a LIMNOLOGY (3)**

Prereq: Envr 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. Lecture may be taken without laboratory (Envr 430b).

**430b LIMNOLOGY LABORATORY (2)**

Prereq: Envr 361a,b; concurrent with Envr 430a. Laboratory and field studies of the physical, chemical and biological processes in lakes.

**433a POPULATION BIOLOGY (3)**

Prereq: Envr 325 or Biol 325; Math 124. Introduction to theory and application of population genetics and population biology. Was Envr 431a in previous catalog.

**433b POPULATION BIOLOGY LABORATORY (2)**

Prereq: Envr 433a concurrent; Envr 340 or Biol 340. Companion laboratory for 433a. Was Envr 431b in previous catalog.

**434 INTRODUCTION TO PELAGIC ECOLOGY (3)**

Prereq: Envr 325 or Biol 325; Envr 321; Geol 340 and upper-division laboratory courses in limnology and oceanography recommended. Theoretical and applied topics in the evaluation of complex life cycles, migration and trophic ecology of zooplankton and free-swimming marine species.

**435a LANDSCAPE ECOLOGY (4)**

Prereq: Envr 325 or Biol 325; Envr 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.

**435b LANDSCAPE ECOLOGY LAB (1)**

Prereq: Envr 435a or concurrent; Envr 325, 340 or equivalents. Computer-based lab in landscape ecology.

**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.

**438 COASTAL ECOSYSTEMS MANAGEMENT (3)**

Prereq: Envr 325 or Biol 325. Human-induced impacts threaten the survival of coastal ecosystems in many areas of the world. Provides a background for wise coastal management decision-making. Examines the physical and oceanographic processes that maintain a variety of coastal ecosystems and landforms (beaches, mangroves, salt marshes, coral reefs and estuaries), the influence of direct and indirect human-induced disturbances on these systems and management

strategies necessary for the best use and conservation of these systems. Offered in alternate years.

#### **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 evaluation of conservation efforts directed at single species and at ecosystems. Optional field trips.

#### **440 ECOTOURISM AND SUSTAINABLE DEVELOPMENT (3)**

Prereq: Envr 301 or 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.

#### **441 PARKS AND PROTECTED AREAS (3)**

Prereq: Envr 301, 303, 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.

#### **442 INTRODUCTION TO REMOTE SENSING (5)**

Prereq: one of Geol 310, Envr 301, Geog 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.

#### **443 LAND USE LAW (4)**

Prereq: Geog 270 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 system's role in framing and resolving this dilemma. Provides an understanding of the legal framework that creates the unique "bottom up" land use regulatory system, in which state and local government share primary authority over most land use decisions. Also examines the practical and philosophical implications of federal constitutional restrictions on local government land use authority including Supreme Court "takings" cases and cases evaluating claims of housing discrimination.

#### **444 ENVIRONMENTAL DISPUTE RESOLUTION (4)**

Prereq: Envr 304 or 464 or 466 or 468 or permission of instructor. This course is a workshop in which students will practice a range of dispute resolution techniques. Students will participate in negotiations, mediation, "round table" discussions and/or other dispute resolution techniques. The course will consider 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 of the course 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.

#### **447 SURVEY RESEARCH METHODS AND ENVIRONMENTAL ISSUES (4)**

Prereq: introductory statistics or permission of instructor. What is survey research and how do you do it? This course focuses on the survey design and process from initial conceptualization and problem definition through focus groups, sample generation, attitude scaling, questionnaire construction and interviewing considerations, with a focus on environmental issues.

#### **448 ANALYSIS OF SURVEY RESEARCH DATA (4)**

Prereq: introductory statistics or permission of instructor. Envr 447 recommended. Introduces the student to concepts and procedures used to analyze survey data. Interpret those data and draw inferences via analysis with real data sets.

#### **450 ENVIRONMENTAL CHEMISTRY I (4)**

Prereq: Envr 302; Chem 251 or Chem 300 series; or permission of instructor. Understanding of chemistry principles related to the

environment. Enhancing the environmental quality through application of chemistry.

#### **451 ENVIRONMENTAL CHEMISTRY II (4)**

Prereq: Envr 302; Chem 251 or Chem 300 series; or permission of instructor. Continuing study of chemical principles related to undisturbed and disturbed environmental systems. Environmental problem solving based on the application of chemistry.

#### **454 NUTRITION AND HEALTH (4)**

Prereq: Huxley major prerequisites or permission of instructor. Current state of knowledge concerning nutrition and its relationship to human health. Reviews scientific evidence and stresses the relationship between dietary factors and chronic disease risk. Issues in nutrition such as diet and heart disease, hypertension, diabetes, obesity, cancer, skeletal diseases and dental diseases.

#### **455 ENVIRONMENTAL TOXICOLOGY I (4)**

Prereq: Envr 302 and Chem 371 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: Envr 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 (3)**

Co- or prereq: Envr 455 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 organisms at the biochemical level. One hour lecture and four hours laboratory.

#### **458 ENVIRONMENTAL TOXICOLOGY LABORATORY II (3)**

Co- or prereq: Envr 456 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 freshwater and marine organisms. One hour lecture and four hours laboratory.

#### **459 AQUATIC TOXICOLOGY (3)**

Prereq: Envr 302, 340 and 456, or permission of instructor; Envr 321 or 430a or Geol 472 recommended. 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.

#### **462 AIR POLLUTION (4)**

Prereq: Envr 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.

#### **464 UNITED STATES ENVIRONMENTAL POLICY (4)**

Prereq: Pol Sci 101 or 250 or Envr 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)**

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: Envr 304 or 464 or permission of instructor. This course introduces students to U.S. 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.

#### **468 ENVIRONMENTAL LAW (4)**

Prereq: Envr 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: Envr 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 non-governmental, in international environmental issues.

**473 ENVIRONMENTAL INTERPRETATION (4)**

Prereq: Envr 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: Envr 371 and 372; or permission of instructor; concurrent enrollment in Envr 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.

**476 EXPERIENTIAL LEARNING IN ENVIRONMENTAL EDUCATION (4)**

Prereq: Envr 371 and 372; or permission of instructor; concurrent enrollment in Envr 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: Envr 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 audio-visual presentations, displays and brochures.

**480 WRITING AND EDITING THE PLANET (2)**

Prereq: Journ 104 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: Journ 104; Envr 101 or 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: Envr 371, 372 or permission of instructor; concurrent enrollment in Envr 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: Envr 371, 372 or permission of instructor, concurrent enrollment in Envr 483, Envr 474 and Envr 476. Classroom and field study of the natural history of the Pacific Northwest as it relates to environmental education. A spring block course.

**490 ENVIRONMENTAL RISK ASSESSMENT (4)**

Prereq: Envr 455 or 456 or permission of instructor. Principles and

methods of quantitative environmental risk assessment, data analysis and risk communication.

**492 EFFECTS OF GLOBAL CLIMATE CHANGE (3)**

Prereq: Envr 325 or Biol 325; Envr 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.

**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.

**498a SENIOR THESIS (1-15)**

Prereq: permission of instructor. A special project carried out under the supervision of a faculty adviser and documented in thesis form according to guidelines supplied by the College. May reflect a single study topic or be part of a major investigation which may take the form of field work, or laboratory, library or community research. Repeatable to a maximum of 15 credits.

**498b INTERNSHIP (1-15)**

Prereq: permission of instructor. Supervised work experience relevant to environmental studies and appropriate to the student's program. The one- to three-month experience is documented by a written report prepared according to guidelines supplied by the College. S/U grading. Repeatable to a maximum of 15 credits.

**498c SENIOR PROJECT (1-15)**

Prereq: permission of instructor. A special project carried out under supervision of a faculty adviser and documented in non-thesis form suitable to the project. May take the form of some environmental or community activity having either a physical or programmatic result. Repeatable to a maximum of 15 credits.

**498d FOREIGN STUDY (1-15)**

Prereq: permission of instructor. While enrolled as a major in Huxley College, a student who has undertaken college-level foreign language study may study abroad for one quarter in a country utilizing that language. Foreign study must be approved in advance and carried out under the supervision of the student's adviser, must follow the foreign study guidelines for the student's major and relate to the student's course of study at Huxley College. The results of the study must be reported in written, taped, filmed or graphically portrayed form. 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.

**Environmental Science Graduate Courses**

*Courses numbered 500; 517; 545; 597 are described on page 31 of this catalog.*

*Admission to Graduate School or special permission required. See the Graduate School section of this catalog.*

**501 RESEARCH IN ENVIRONMENTAL SCIENCE (4)**

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. Was Envr 532 in previous catalog.

**503 STATISTICAL ECOLOGY (4)**

Prereq: at least one 300-level biostatistics class and at least 10 credits of ecology. Covers graphica, descriptive and basic inferential statistics; nonparametric procedures; regression, correlation, and analysis of variance; and multivariate classification and ordination. Emphasis on using a variety of statistical tools to analyze ecological data sets. Uses advanced statistical software (e.g. SPSS-X); computer literacy is helpful but not required. Was Envr 531 in previous catalog.

**507 ADVANCED TERRESTRIAL ECOLOGY (5)**

Prereq: Envr 325 or Biol 325; Envr 340 or Biol 340; or equivalents. The advanced study of species interactions with one another and with abiotic components in terrestrial ecosystems.

**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.

**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 Pol Sci 524.

**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 Envr 429. Graduate students must enroll in graduate laboratory section.

**530a ADVANCED LIMNOLOGY (3)**

Prereq: graduate status; at least 10 credits of general chemistry. Advanced study of the physical, chemical and biological properties of lakes.

**530b ADVANCED LIMNOLOGY LAB (2)**

Prereq: graduate status; at least 10 credits of general chemistry; concurrent enrollment with Envr 530a. Field and laboratory analysis of the physical, chemical, and biological processes in lakes.

**533 ADVANCED POPULATION BIOLOGY (4)**

Prereq: Envr 325 or Biol 325; Math 124; Biol 321. Math 125 recommended. Study of the structure, distribution, and dynamics of populations. Emphasis is both empirical and theoretical approaches to studying populations.

**534 PELAGIC ECOLOGY (4)**

Prereq: upper-division oceanography; Envr 421a,b or Biol 407 recommended. Theoretical and applied topics in the evaluation of complex life cycles, migration and trophic ecology of zooplankton and free-swimming marine species.

**535a ADVANCED LANDSCAPE ECOLOGY (4)**

Prereq: Envr 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.

**535b ADVANCED LANDSCAPE ECOLOGY LAB (1)**

Coreq: Envr 535a. Computer-based lab in landscape ecology.

**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.

**538 COASTAL ECOSYSTEMS MANAGEMENT (4)**

Prereq: graduate status. Human-induced impacts threaten the survival of coastal ecosystems in many areas of the world. Examines the physical and oceanographic processes that maintain a variety of coastal ecosystems and landforms, the influence of direct and indirect human-induced disturbances on these systems, and management strategies necessary for the best use and conservation of these systems. Offered alternate years.

**539 ADVANCED CONSERVATION OF BIOLOGICAL DIVERSITY (5)**

Prereq: Envr 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.

**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.

**544 ADVANCED ECOLOGICAL METHODS (4)**

Prereq: Biol 325, Envr/Biol 340, or equivalents. Covers advanced ecological methods for the study of plant and animal populations and communities. Emphasis on statistical and quantitative approaches. Lectures and independent group field projects.

**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.

**555 ADVANCED ENVIRONMENTAL TOXICOLOGY I (4)**

Prereq: Envr 302 and Chem 371, 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: Envr 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: Envr 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 organisms 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: Envr 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: Envr 555 or 556 or equivalent. 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. Offered concurrently with Envr 560; lecture may be taken without laboratory (Envr 560).

**562 ADVANCED AIR POLLUTION (4)**

Prereq: graduate status, Envr 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.

**571 EDUCATION IN ENVIRONMENTAL MANAGEMENT (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, especially as it occurs in environmental and resource management.

**575 RESEARCH AND EVALUATION IN ENVIRONMENTAL EDUCATION (4)**

Prereq: admission to Graduate School or permission of instructor. Critical review and analysis of approaches to research and evaluation in environmental education. Study of methods of basic and applied research and evaluation in this field.

**590 ADVANCED ENVIRONMENTAL RISK ASSESSMENT (4)**

Prereq: Envr 555 or 556 or permission of instructor. 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.

**598 RESEARCH PROJECT (6)**

Prereq: completion of 15 credits at 500-level toward M.Ed in natural science/science education. Research in the field of environmental education for students pursuing the non-thesis option of the M.Ed. natural science/science education program (environmental education specialization).

**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 science under faculty direction, an integral part of the M.S. in environmental science.

**690b FIELD PROJECT (6-12)**

Prereq: completion of 15 credits at the 500 level and approval of student's committee in the M.Ed natural science/science education (environmental studies) 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.

**COURSES IN GEOGRAPHY**

*Courses numbered X37; X97; 300, 400; 417, 445 are described on page 31 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.

**270 INTRODUCTION TO PLANNING (5)**

Basic elements of urban, regional and resource planning; planning tools and techniques; careers in professional planning.

**301 RESEARCH AND WRITING (3)**

Prereq: Geog 201, 203. 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; Geog 201, 203. Intermediate level statistical techniques commonly used in solving geographic problems.

**310 DEVELOPING WORLD (4)**

Prereq: Geog 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: Geog 201 and Econ 206. Location analysis of economic activities; interrelationships of resources, industry, trade and transportation.

**314 URBANIZATION: PROCESSES AND PATTERNS (4)**

Prereq: Geog 201. Geographic focus upon the development, functions and problems of the modern city with emphasis on American patterns.

**320 THE UNITED STATES (3)**

Prereq: Geog 201 or 301 or permission. Topical and regional approaches to selected elements of the physical, cultural and economic characteristics of the nation.

**321 AFRICA (3)**

Prereq: Geog 201 or 301 or permission. Resources, people, regions; economic, social and political development of Africa. Emphasis on areas south of Sahara.

**322 THE MIDDLE EAST (3)**

Prereq: Geog 201. Environments, economies and societies of Southwest Asia and North Africa; emphasis on current problems.

**323 SOUTH ASIA (3)**

Prereq: Geog 201 or 301 or permission. Systematic analysis of the physical and human environments of South Asia; emphasis on developmental problems.

**324 EAST ASIA (3)**

Prereq: Geog 201 or 301 or permission. Survey of peoples, regions and resources of East Asia in their physical and cultural environments; problems and prospects.

**326 LATIN AMERICA (3)**

Prereq: Geog 201 or 301. Overview of the spatial pattern of the historical and geographical development of Latin America; emphasis on social and environmental landscapes.

**327 THE PACIFIC NORTHWEST (3)**

Prereq: Geog 201 or 203. Examination of distribution and character of economic activity, population plus settlement and role of climate, landforms and resources in distributions.

**328 CANADA (3)**

Prereq: Geog 201 or 301 or permission. Characteristics and distribution of population, economic activities, various aspects of the physical environment and the resource base are examined and analyzed to provide an understanding and appreciation of Canada.

**330 GEOGRAPHY OF LANDFORMS (4)**

Prereq: Geog 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: Geog 203; Physics 101 or 114 recommended. Climatic processes, including patterns of climates at various scales; applied climatology; climatic change.

**340 POPULATION AND RESOURCES (3)**

Prereq: Geog 201 or Soc 321. World distribution of population; patterns of population composition, fertility and mortality. Inter- and intra-regional migrations; resources and population growth.

**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 (4)**

Prereq: Geog 201 or 203; co-req: Geog 351; pre- or coreq: Geog 305.

Map layout, design and production using computer techniques. Methods and limitations of graphic communication are emphasized.

### **362 LAND RESOURCE ANALYSIS (3)**

Prereq: Geog 201 or 270. The physical, biological, economic and institutional factors affecting, conditioning and controlling man's use of land.

### **363 NATURAL HAZARDS PLANNING (3)**

Prereq: Geog 203, Geol 211. 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.

### **370 THE PLANNING PROCESS (3)**

Prereq: Geog 270. Nature of the planning process; survey and analysis; goal formulation; plan development and implementation.

### **406 THE TEACHING OF GEOGRAPHY (3)**

Prereq: Geog 201 and five additional credits in geography. Source materials and methods of geographic instruction.

### **412 REGIONAL ECONOMIC ANALYSIS (4)**

Prereq: Geog 312 and 314. Regional economic structures, changes and development. Application of cohort, shift share, multiplier and programming models for the analysis and projection of regional population and employment patterns, growth differentials and development.

### **414 THE URBAN ENVIRONMENT (4)**

Prereq: Geog 201, 203 and 314. Comparative patterns and processes of urban-economic change in the industrial and non-industrial world. Emphasis on urban environmental development issues and conflict.

### **421 BORDERLANDS (3)**

Prereq: Geog 301, 320, and either Geog 326 or 328; or permission. Investigation of issues associated with the growing importance of the United States' border regions; selected urban, environmental and economic topics.

### **423 PACIFIC RIM (3)**

Prereq: Geog 301, 320, and Geog 324 or 326 or 328, or permission. Investigation of issues associated with the growing importance of Pacific Rim nations; selected economic, environmental, urban and cultural topics.

### **431 WATER RESOURCES (4)**

Prereq: Geog 330 or 331; Geog 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.

### **432 GEOGRAPHY OF SOILS (4)**

Prereq: Geog 330. Soil characteristics and processes; description and classification; factors of soil development; spatial and temporal variation; application of soils in paleoenvironmental reconstruction. Field trips and laboratory study.

### **433 CLIMATE AND BIOPHYSICAL PROCESSES (4)**

Prereq: Geog 330; 331, Envr 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.

### **450 GEOGRAPHIC INFORMATION SYSTEMS (4)**

Prereq: Geog 351 (or concurrent) and Geog 305 (or concurrent); 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. Was Geog 358 in previous catalog.

### **451 GIS DATABASES (4)**

Prereq: Geog 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. Was Geog 359 in previous catalog.

### **452 ADVANCED GIS (4)**

Prereq: Geog 451. Analysis and application of cartographic techniques

and geographic information systems to practical mapping and resource management projects.

### **461 NATURAL RESOURCES MANAGEMENT (4)**

Prereq: Geog 305 and 362 or 363. Techniques for the biophysical and socio-economic 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: Geog 312. Locational and network analysis of local, regional and national systems; transportation and planning.

### **470 PLANNING STUDIO (6)**

Prereq: Geog 370. Analysis and synthesis of significant socio-economic biophysical and cultural resources used in planning; preparation of a land-use or other plan for a selected region.

## **Graduate Courses in Geography**

*Courses numbered 500; 517; 545; 597 are described on page 31 of this catalog.*

*Admission to Graduate School or special permission required. See the Graduate School section of this catalog.*

### **501 GEOGRAPHY AND ENVIRONMENTAL SOCIAL SCIENCES (3)**

Study of geography as a core discipline within the social science fields; its origins, trends and challenges. A cross-disciplinary approach toward understanding of multifaceted environmental problems and proposed strategies and solutions.

### **510 SPATIAL QUANTITATIVE TECHNIQUES AND PATTERN ANALYSIS (5)**

Prereq: Geog 305 or equivalent. Methods of gathering and analyzing data for the solution of geographic, regional planning and landscape problems.

### **521 RESOURCE ASSESSMENT AND MANAGEMENT IN THE HUMAN ENVIRONMENT (3)**

Prereq: Geog 501. Investigation and research in the spatial organization of human activity in relation to the environment, including an evaluation of the theories and analytical frameworks in human geography. Attention also given to procedures for assessment of resources within various social, economic and cultural contexts.

### **522 RESOURCE ASSESSMENT AND MANAGEMENT IN THE PHYSICAL ENVIRONMENT (3)**

Prereq: Geog 501. Investigation and research in the areas of geomorphology, climatology and biogeography, including an examination of the analytical framework employed in resource assessment and environmental management. Current trends and historical contexts of study of the physical environment will be surveyed.

### **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.

### **551 RESEARCH PROBLEMS (4)**

Prereq: Geog 521 or 522. Formulation and development of hypotheses for a thesis. Development of the necessary methodology; preparation of bibliography and review of literature.

### **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.

### **690 THESIS (1-12)**

Prereq: advancement to candidacy for the master's degree and appointment of thesis adviser and thesis committee.

# WOODRING COLLEGE OF EDUCATION

*Dr. Lawrence W. Marrs, Dean*

## *Mission Statement of the College*

Our programs lead to certification and/or to graduation of professionals who have entered the College with a sound knowledge of basic social sciences, humanities, sciences, mathematics and English and who exit as graduates who are professionals in all aspects of their behavior. It is our goal that all of our graduates will be excellent communicators who can work cooperatively and collaboratively with their colleagues and who are sensitive to human and social diversity and are leaders of change in education and society. Graduates of the Woodring College of Education will be skilled classroom leaders who understand children and youth, or they will be proficient human service professionals or adult educators. They will display mastery of state and national standards expected of a beginning teacher, administrator, counselor, human service professional, or adult educator by drawing upon what they know about pedagogy and academic content to demonstrate a positive impact on student learning and other human and organizational behaviors.

## *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, 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 adult and higher education administration. It serves as a clearing house for the exchange of information and as a coordinating agency for programs at both the undergraduate and graduate levels. The dean of the Woodring College of Education is responsible for coordinating programs which involve a wide variety of departments throughout the University. The Woodring College of Education faculty is comprised of those persons who teach professional education courses.

The Departments of Elementary Education, Secondary Education, and Special Education offer teacher education programs which lead to Washington State Certification. These departments, along with the Department of Instructional Technology and the Educational Foundations Program Area, offer both undergraduate and graduate course work in elementary, secondary, K-12, and special education. The Educational Administration Program Area offers programs which lead to Washington State Certification for school principals.

Professional education programs are developed and reviewed with the assistance of professional education advisory boards with representatives from cooperating school districts and professional associations.

The Department of Adult and Higher Education and the Department of Human Services offer programs which prepare professionals in the areas of adult education, higher education personnel administration, rehabilitation counseling, and human services.

Details about all of the Woodring College of Education programs may be found in the following departmental and program area sections. All programs were under review/revision at the time this catalog was being prepared. Students should consult with an adviser 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*

See departmental listings for academic area programs in  
 Elementary and Secondary Education . . . . BA/Ed, M/Ed  
 Special Education . . . . . BA/Ed, M/Ed  
 Human Services . . . . . BA  
 Education (various fields) . . . . . M/Ed  
 Graduate programs leading to certification in School  
 Administration and to Educational Staff Associate  
 Certification in School Counseling and Speech  
 Pathology/Audiology . . . . . M/Ed, MA  
 Graduate programs in Adult Education and Student  
 Personnel Administration . . . . . M/Ed  
 Graduate program in 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 the Disabled Student Services Office 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 OF THE WOODRING COLLEGE OF EDUCATION

### Administrative Services

- Applied Research and Development Center  
Dr. William Demmert, Director
- Certification  
Dr. Sheila Fox, Certification Officer (Teacher)
  - Initial Teaching Certification
  - Continuing CertificationDr. Marvin Klein, Certification Officer (Administrator)
  - Principal Certification
- Office of Field Experiences — Carolyn Dyson, Director
  - Teacher Education internship administration
- Center for Regional Services — Dr. Larrene Shannon, Director
  - Field-based programs and course offerings
- Center for Interactive Multimedia for Education and Training
- Center for Educational Pluralism
- Service Learning Programs
  - LINK
  - Native American Mentoring Program (NAMP)
  - Hispano-America Student Tutoring for Achievement (HASTA)

### Department Of Adult And Higher Education

Dr. Susan Mancuso, Chair

*Programs Offered*

- Adult Education
- Student Personnel Administration in Higher Education
- Rehabilitation Counseling

### Department of Elementary Education

Dr. Suzanne Krogh, Chair

*Programs Offered*

- Elementary Education/Certification (K-8) — Undergraduate and Post-Baccalaureate
- Elementary Education graduate programs

### Department of Human Services

Dr. Susan Mancuso, Chair

*Program Offered*

- Human Services

### Department of Instructional Technology

Dr. Les Blackwell, Chair

*Programs Offered*

- Instructional Technology in Schools
- Instructional Design and Multimedia Development
- Learning Resources

### Department of Secondary Education

Dr. Lee Dallas, Chair

*Programs Offered*

- Secondary Education/Certification — Undergraduate and Post-Baccalaureate
- K-12 Education/Certification — Undergraduate and Post-Baccalaureate
- Secondary Education graduate programs

### Department Of Special Education

Dr. Chuck Atkinson, Chair

*Programs Offered*

- Early Childhood Special Education/Certification
- Special Education (K-12) with Elementary Education
- Special Education (K-12) with Secondary Education
- Special Education graduate programs
- Special Education (K-12)/Certification

### Educational Administration Program Area

Dr. Marvin Klein, Chair

*Programs Offered*

- Graduate programs in School Administration (Elementary, Secondary, Instructional Technology)
- Principal Certification (Elementary, Secondary, and General)
- Certificate of Advanced Study

### Educational Foundations Program Area

Dr. Lorraine Kasprisin, Chair

*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.

## ADULT AND HIGHER EDUCATION

The Department of Adult and Higher Education is composed of several programs which represent a recognition of several broad areas of adult education and lifelong learning that go beyond traditional elementary and secondary education. Such adult learning takes place in numerous education and human services institutions in the community.

### ADULT AND HIGHER EDUCATION FACULTY

SUSAN MANCUSO (1995) Chair and Associate Professor. BA, University of California, Los Angeles; MA, Western Washington University; EdD, University of Washington.  
 EILEEN COUGHLIN (1995) Adjunct Professor. BS, MA, Central Michigan University; EdD, Northern Arizona University.  
 VIOLET M. MALONE (1991) Professor. BEd, Northeastern Illinois State University; MEd, Chicago State University; Advanced Master's, University of Chicago; PhD, Florida State University.  
 KUNLE OJIKUTU (1996) Adjunct Professor. BS, Clark Atlanta University; MFA, University of New Mexico; PHD, University of Nebraska-Lincoln.  
 GEORGE PIERCE (1998) Adjunct Professor. BA, Farleigh Dickinson University; MA, New School for Social Research; PhD, Claremont Graduate School.  
 JOHN F. UTENDALE (1972) Professor. BPE, University of Alberta; MEd, Eastern Washington State College; EdD, Washington State University.

The Department of Adult Education offers three graduate degree programs:

- Master of Education in Adult Education
- Master of Education in Student Personnel Administration in Higher Education
- Master of Arts in Rehabilitation Counseling.

The Adult Education program is designed to prepare both entry-level and advanced practitioners for work with adults in any organization or institution which sponsors educational, social or human services activities. Upon graduation, competence is expected in such areas as leadership, curriculum development, program planning, project management, training and development, lifelong learning and adult teaching. In Washington State, there is no certification for teaching adults. The Adult Education program is also offered at the Everett and South Seattle sites.

The Student Personnel Administration program prepares professionals for work in student affairs in higher education. The program emphasizes the development of competence in the areas of student development theory and practice, leadership and management, organization development, and approaches to managing current and persistent problems facing student affairs and higher education. Students customarily obtain positions in public or private universities or community colleges.

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 the psychological, social and medical impact of a disability on their lives, particularly in relation to employment. Graduates of the program are eligible to sit for the Certified Rehabilitation Counselor Examination that is required by many organizations.

For additional information, refer to Adult and Higher Education in the Graduate School section of this catalog.

The department office is located in Miller Hall 311 and the department telephone number is (360) 650-3190.

### COURSES IN ADULT AND HIGHER EDUCATION

*Courses numbered X37; X97; 300, 400; 417, 445 are described on page 31 of this catalog.*

#### 340a-d PARAPROFESSIONAL ADVISEMENT (4 ea)

Prereq: permission of instructor and anticipated employment in campus-based student services. Emphasizes the helping relationship; an overview of philosophical and theoretical issues which confront paraprofessionals. Development of specific job requirement skills in the following areas: (a) residence life; (b) Asia University America Program (AUAP); (c) Summer Motivational Academic and Residential Training (SMART); (d) general.

#### 341 PRACTICUM IN PARAPROFESSIONAL ADVISEMENT (1)

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.

### Graduate Courses

*Courses numbered 500; 517; 545; 597 are described on page 31 of this catalog.*

*Admission to Graduate School or special permission 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 and controversial issues in education. Repeatable with no maximum.

#### 555 FOUNDATIONS OF HIGHER EDUCATION (4)

Prereq: admission to Student Personnel Administration Program or permission of instructor. Studies of historical and philosophical foundations of higher education. Particular emphasis on the development and role of student personnel services with implication for current practice.

#### 556 THE COMMUNITY COLLEGE (3)

Prereq: admission to Student Personnel Administration Program or permission of instructor. History, objectives, organization and role of the public community college; special attention to the expanding system in the State of Washington.

#### 557a-c SEMINARS: COLLEGE STUDENT PERSONNEL ADMINISTRATION (4 ea)

Prereq: admission to Student Personnel Administration Program or permission of instructor. Intensive examination of current philosophies, theories and practices in higher education administration. Major emphasis is on human development and organizational administration.

#### 558 STUDENT DEVELOPMENT COUNSELING (3)

Prereq: admission to Student Personnel Administration Program or permission of instructor. Consideration of theories and techniques involved in student development counseling and advisement, including interviewing, interpersonal communication and crisis intervention; emphasis on skill acquisition through micro-training techniques.

#### 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:** AHE 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.

### **575 FOUNDATIONS OF ADULT EDUCATION (4)**

Prereq: graduate status or permission of instructor. Introductory seminar that provides an understanding of adult education's characteristics as a discipline and as a social movement. Topics include: scope, structure, philosophy, history and current factors influencing practice.

### **576 LEADERSHIP AND MANAGEMENT IN ADULT EDUCATION (4)**

Prereq: graduate status or permission of instructor. A study of contemporary theories of leadership and their application in private, public and nonprofit 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 FOR ADULT EDUCATION (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 THE NATURE AND USE OF POWER IN BUREAUCRACIES (4)**

Prereq: graduate status or permission of instructor. Study the sources of power in organizations, power acquisition and various kinds of power. Examine alternatives to traditional views of power and bureaucracy.

### **580 THEORY AND PRACTICE OF TEACHING (4)**

Prereq: graduate status or permission of instructor. Study and practice in effective teaching techniques for post-secondary and adult education settings. Special emphasis on instructional strategies designed to promote student learning.

### **581 READINGS IN ADULT AND HIGHER 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.

### **582 INTRODUCTION TO VOCATIONAL REHABILITATION (3)**

Prereq: graduate status or permission of instructor. An overview of the principles and practices of vocational rehabilitation which serves as the foundation for rehabilitation counseling. Various specialties within the field of rehabilitation and rehabilitation counseling as a profession.

### **583a THEORY OF REHABILITATION COUNSELING (3)**

Prereq: AHE 582 or permission of instructor. 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.

### **583b PRACTICE OF REHABILITATION COUNSELING (3)**

Prereq: AHE 583a or permission of instructor. Application of concepts and techniques which have been introduced from major counseling theories in EdAF 583a. 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: AHE 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)**

Prereq: graduate status or permission of instructor. An examination of the impact of disability on the individual, the individual's environment,

significant others and society in general. The adjustment process which 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 procedures and vocational implications of major disabling conditions. Includes an introduction to medical specialties, therapeutic services, restorative techniques, medical examinations and medical terminology.

### **587 UTILIZATION OF TESTS AND EVALUATION TOOLS (3)**

Prereq: AHE 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, as well as various situational assessment tools. Emphasis on a collaborative client-centered approach to assessment.

### **588 OCCUPATIONAL INFORMATION AND JOB DEVELOPMENT (3)**

Prereq: AHE 582 or permission of instructor. A comprehensive exploration of the process of assisting individuals with disabilities to find and maintain suitable employment. Includes career development theories, placement strategies and techniques, job analysis and modification, functional limitations and transferable skills, and computer-assisted career information systems.

### **589 CASE MANAGEMENT IN REHABILITATION (3)**

Prereq: AHE 582 or permission of instructor. A close examination of techniques and procedures related to individualized case management and caseload management. Emphasis is on selecting the services which will meet the unique needs of individuals with disability(ies) and assisting them in developing and implementing an individual rehabilitation plan. Techniques related to working simultaneously with multiple individuals will be examined.

### **592e FIELD EXPERIENCE IN HUMAN SERVICES (2-6)**

Prereq: permission of instructor. Supervised field experience in some facet of human services such as programming, advising, counseling, service provision. Repeatable to a maximum of 8 credits. S/U grading.

### **592f FIELD EXPERIENCE IN STUDENT PERSONNEL ADMINISTRATION (2-6)**

Prereq: admission to Student Personnel Administration Program or permission of instructor. Supervised field experience in developing leadership and management skills and competencies in student personnel administration. Students intern in various offices and programs of college student services or related activities. Repeatable to a maximum of 14 credits. S/U grading.

### **592g FIELD EXPERIENCE IN ADULT EDUCATION (2-6)**

Prereq: graduate status or permission of instructor. Supervised field experience in some facet of adult education such as: leadership, management, curriculum planning and development, learning, technology, distance learning. Repeatable to a maximum of 8 credits under advisement. S/U grading.

### **592h INTERNSHIP IN REHABILITATION COUNSELING (1-10)**

Prereq: AHE 592e 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.

### **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 adviser. 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 adviser. Graduate research under the direction of program adviser/committee. Repeatable to a maximum of 6 credits. S/U grading.

# APPLIED RESEARCH AND DEVELOPMENT CENTER

The Applied Research and Development Center is the arm of Woodring College which provides technical support to faculty and students interested in conducting research projects in area schools, working with schools and other agencies in developing grant applications, coordinating college-wide courses in research subjects, and providing symposia for faculty discussion and distribution of their scholarly work. Additionally, the Center serves as the contact point for school districts and other agencies and coordinates assistance in applied research and/or program planning activities.

For further information, phone (360) 650-3723, Miller Hall 301.

<http://www.wce.wvu.edu/resources/ardc/ardc.html>

## APPLIED RESEARCH AND DEVELOPMENT FACULTY

PEGGY ANDERSON (1996) Lecturer. BA, MEd, Western Washington University.

MARCIA R. DAVIDSON (1996) Associate Professor. BA, Webster College; MS, Central Florida University; PhD, University of Washington.

WILLIAM G. DEMMERT (1992) Associate Professor. BA, Seattle Pacific College; MEd, University of Alaska; EdD, Harvard University.

ROB LAWSON (1985) Lecturer. BA, MEd, Western Washington University.

JOHN C. TOWNER (1972) Professor. BS, MSE, Wisconsin State University; PhD, University of Minnesota.

## COURSES IN APPLIED RESEARCH AND DEVELOPMENT

*Courses numbered X37, 300, 400, 417, 445 are described on page 31 of this catalog.*

### 473 EDUCATIONAL STATISTICS (4)

Prereq: completion of the Mathematics GUR. An introduction to statistics as it applies to education. Stresses understanding, application and interpretation of key concepts. Topics include graphical representation of data, measures of central tendency, the normal distribution, correlation and causality, basic ideas of hypothesis testing, and computer applications.

### Graduate Courses

*Courses numbered 500; 517; 545; 597 are described on page 31 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; must be taken within the first 12-16 credit hours under advisement. Locating and interpreting quantitative research literature; formulating research problems and hypotheses; selecting research designs, including correlational, causal comparative, quasi-experimental, experimental and single subject designs; collecting and interpreting data; relationship of research to educational issues.

### 534 ASSESSING EDUCATIONAL QUALITY (3)

Prereq: Edu 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 administrative and instructional organization; for coordinators and research workers in the public schools.

### 676 INSTRUCTIONAL SYSTEMS THEORY AND COMMUNITY COLLEGE INSTRUCTION (4-6)

Prereq: master's degree and permission of instructor. Instructional systems theory with application to the development of competency-based programs for community college instruction. Students plan, write and evaluate a short competency-based program for an instructional problem in their own area of teaching. Repeatable to a maximum of 6 credits.

## ELEMENTARY EDUCATION

The Department of Elementary Education offers a wide array of programs that lead to certification in the state of Washington. The department offers courses and certification sequences on the Western campus and in several off-campus sites in western Washington. Students are encouraged to visit the departmental offices in MH 251 for information on program offerings that meet the needs of individual students.

### Information

Individuals interested in elementary certification should make initial inquiries through the Woodring Admissions Office, Miller Hall 206, phone (360) 659-3378, e-mail address [robinson@wce.wvu.edu](mailto:robinson@wce.wvu.edu). Applicants who wish to speak with a faculty adviser may request an appointment through the Elementary Education Office in Miller Hall 251, phone (360) 650-3336, e-mail address [Ellen.Kreider@wvu.edu](mailto:Ellen.Kreider@wvu.edu). Additional information may be obtained by visiting the Elementary Education Web site at <http://www.wce.wvu.edu/elem/>. Written inquiries may be addressed to the Woodring College of Education, Admissions Office, MS-9090, Miller Hall 206E, Western Washington University, Bellingham, WA 98225.

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 address [gradtemp@shuttle.admcs.wvu.edu](mailto:gradtemp@shuttle.admcs.wvu.edu). Written inquiries may be addressed to the Graduate School, Old Main 430, MS-9037, Western Washington University, Bellingham, WA 98225.

### ELEMENTARY EDUCATION FACULTY

SUZANNE KROGH (1990) Chair and Professor. BA, Florida State University; MEd, University of Maryland; PhD, University of Oregon.  
 DARCY BRADLEY (1994) Assistant Professor. BFA, California College of Arts and Crafts; MEd, Colorado State University; PhD, The Ohio State University.  
 ROB BRAND (1993) Affiliated Teaching Faculty. BA, University of Washington; MA, Western Washington University.  
 MARCIA DAVIDSON (1994) Associate Professor. BA, Webster College; MS, Central Florida University; PhD, University of Washington.  
 MICHAEL L. HENNIGER (1991) Professor. BA, Whitman College; PhD, University of Texas.  
 KAREN J. HOELSCHER (1992) Associate Professor. BS, Bemidji State University; MS, Mankato State University; EdD, Harvard University.  
 KAREN KLEIN (1995) Affiliated Teaching Faculty. BA, MA, California State University.  
 ODDMUND MYHRE (1997) Assistant Professor. BS, Telemark College of Education; MA, California State University, Sacramento; PhD, University of Washington.  
 CHRIS OHANA (1999) Assistant Professor. BA, University of California, Berkeley; MA, University of Oregon; PhD, Iowa State University.  
 LAURIE PHELAN (1996) Affiliated Teaching Faculty. BA, MEd, Western Washington University.  
 MELISSA J. RICKEY (1994) Assistant Professor. BA, MEd, EdD, University of Washington.  
 PHILIP RINER (1997) Professor. BA, University of North Carolina, Chapel Hill; MA, Lenoir-Rhyne College; EdD, University of North Carolina, Greensboro.  
 JOHN C. TOWNER (1972) Professor. BS, MSE, Wisconsin State University; PhD, University of Minnesota.

### BACHELOR OF ARTS IN EDUCATION WITH CERTIFICATION

The elementary education curriculum at Western is a carefully sequenced professional program that is firmly backed by current research on effective teaching. Each quarter includes attention to the four basic strands in education:

- Research, theory and philosophy
- Curriculum
- Methods
- Practical experiences

Students are exposed to young people and the classroom environment throughout their programs, which culminate in a full-time internship.

### 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 closer to five years. Following acceptance by the College of Education, which requires at least sophomore status, the student should expect to take eight to ten quarters to complete the teacher certification program. During these eight to ten quarters, the student has time to work on the academic major and General University Requirements, but it is advisable to have made progress in these areas prior to beginning the professional education sequence. Students who enter the College of Education as juniors (i.e., many transfer students) should have satisfied nearly all of the General University Requirements and should have a good start on their academic major.

### ELEMENTARY EDUCATION PROGRAMS

The Elementary Education Department offers the following programs:

- **Undergraduate and Traditional Post-Baccalaureate** — This program leads to a recommendation to the State of Washington for a teaching certificate with a K-8 Elementary Education endorsement. Requirements include completion of the Elementary professional education course sequence, a major in an approved endorsable area, and a one-quarter internship.
- **Field-based Post-Baccalaureate** — This is a concentrated, full-time, five-quarter Elementary Education certification program which leads to a K-8 teaching endorsement. This program involves collaboration with the Bellingham School District, extensive classroom experience, and also emphasizes technology.
- **Master of Education with a Concentration in Literacy** — This graduate program is designed for students who already have a teaching certificate and who wish to complete a master's degree which focuses on language and literacy development (for details about this program, see the Graduate School section of this catalog).

## CERTIFICATES AND ENDORSEMENTS

State of Washington teachers are allowed to teach only those subjects for which they have endorsements. One endorsement is required for initial certification; two endorsements are required for continuing certification.

**Elementary certificate candidates** must complete the program leading to a primary endorsement in Elementary Education and, in addition, must complete an approved 45- to 50-credit major designed specifically for Elementary Education candidates. The Woodring College of Education offers three academic majors. They are Special Education, Early Childhood Special Education, and Child Development (interdisciplinary). In addition, the following departments offer academic majors designed specifically for elementary education candidates: Anthropology, Art, Communication, Economics, English, Environmental Studies, Foreign Language, General Science, Geography, Geology (Earth Science), History, Humanities, Mathematics, Music, Physical Education, Psychology (Human Development), Social Studies, Sociology, Student/Faculty Designed Major, Theatre Arts.

Some of these majors for elementary candidates do fulfill the current requirements for a WWU recommendation for an additional supporting endorsement. See the departmental description and your adviser for additional information.

**Supporting endorsements**, which can be added to a primary endorsement, are offered in a number of subject areas. Check with a departmental adviser for requirements for the more than 20 endorsements offered in arts, sciences, and fine and performing arts. Supporting endorsements offered through the College of Education include Early Childhood, Learning Resources and Reading.

Additional supporting endorsements can be added after the initial certificate is granted. All Washington teachers are now required to obtain a second endorsement prior to the completion of the continuing certificate program. Contact the Continuing Certification Office in Miller Hall 206D, phone (360) 650-3388, for more information on the requirements for these supporting endorsements.

At the time the catalog was printed, the Board of Education was considering changes in the number and configuration of teaching endorsements, endorsement requirements, and certificates. State requirements for teacher certification at the time of the 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.

## ADMISSION TO ELEMENTARY EDUCATION

### *Pre-Admission Work*

The Woodring College of Education offers a number of courses such as EEd and EdF 109 or 311 that can give students who are considering teaching as a career early exposure to the profession. Of the above, EdF 311 can be taken as part of the General University Requirements (GURs). Several courses that are required for admission to or that fulfill competency requirements of the College of Education also fulfill GUR requirements. Eng 101 and Comm 101 are such courses. There may be other GUR courses that will apply to a student's major area. Students

should check with an adviser in their academic department for suggestions on specific GURs.

Students interested in pursuing a career in teaching can benefit by working with children and youth as much as possible. Such organizations as the YMCA, YWCA, Camp Fire, Scouts, church schools, Boys and Girls Club, youth sports teams and clubs, and summer camps provide good experiences with groups of young people.

### *Admission Procedures*

The Washington Administrative Code, Section 180-75-082, requires applicants for teacher certification in Washington to give evidence of "good moral character and personal fitness." The application for certification requires candidates to answer several questions dealing with sexual offenses, drug and alcohol offenses, and any other prior police records. Students with prior records must report to the WWU certification officer prior to admission to the WWU certification officer prior to admission to the College of Education.

Students must be admitted to Western Washington University in order to be considered for admittance to the Woodring College of Education. Post-Baccalaureate students must apply simultaneously to Western and the Woodring College of Education; transfer students may apply for simultaneous admission.

The Admissions Office, Miller Hall 206E, will assist students in receiving the proper information for admission to the College of Education.

***Students may not begin taking courses in the education sequence until admitted to the College of Education.***

## ADMISSION AND RETENTION

Admission to Western Washington University and to the Woodring College of Education are required before a student may begin taking courses in the program. Requirements include:

- ❑ Completion of a minimum of 45 credits
- ❑ Cumulative grade point average of 2.75 or higher for at least the last 45 credits
- ❑ Washington Pre-College Test or SAT or ACT scores (total test score requirements can vary year to year)
- ❑ Completion of an English composition course, with grade of B- or higher
- ❑ Completion of an acceptable public speaking course, with a B- or higher
- ❑ Classroom observation of five (5) days (form is available in Miller Hall 206E and Miller Hall 251)
- ❑ Evidence of strong interpersonal communication skills

Enrollment restrictions apply in the program. Meeting the above criteria makes the applicant eligible for admission, but does not guarantee admission. Applications from students who meet all the criteria are evaluated to determine those most qualified. Experiences with children and other skills helpful in teaching are given special emphasis. Interviews may be required.

Retention in the program requires continuous demonstration of competence in standard oral and written English in all course work. Retention also requires maintenance of at least a 2.75 quarterly GPA from the date of notification of admission to the Woodring College; no

academic probation for low GPA will be awarded. Students who fail to meet this standard will receive a letter advising them that they have been dropped from the program and they must contact the Elementary Education Office. Grade point average for the academic major or minor may differ among departments.

### *Additional Admission and Certification Requirements*

Upon admission to the Woodring College of Education, all students must immediately fulfill the following requirements. Admission to Woodring College of Education is provisional until these requirements are met. No exceptions will be granted.

- ❑ All Teacher Education students must complete an application for certification and must be fingerprinted by the Washington State Patrol. The results of the fingerprinting process must be cleared by the Woodring College of Education before any student may participate in a public school practicum. **Note:** There is a fee for fingerprinting.
- ❑ All students must complete the Woodring College of Education Sexual Harassment Prevention Education requirement. A one-hour training session is required and will be provided by WWU's Center for Equal Opportunity.
- ❑ Students need to obtain and read the Case Conference Handbook for the Department of Elementary Education. This handbook describes the professional code of ethics and behavioral expectations for student conduct during the preservice teacher education program. See the department office for details.

When students complete the professional preparation program, the dean of Woodring College of Education is required to forward an affidavit to the Office of the Superintendent of Public Instruction affirming that faculty within the College "have no knowledge of any relevant information related to the applicant's character or fitness that would adversely affect the applicant's ability to serve in a certificated role."

### **ADDITIONAL REQUIRED COMPETENCIES**

Competency in the Use of Instructional Technology in Education is required of all elementary education candidates prior to the final internship.

- ❑ Completion of IT 444 with a grade of C or higher demonstrates this competency. There will be assigned sections of IT 444 for Elementary students.
- ❑ Entrance into IT 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.

Contact the Department of Instructional Technology in Miller Hall 204 for further information.

**English competency** is expected of all elementary education students. They 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 their internship.

**Multicultural competency** is required of all elementary education students. Students must complete a set of readings and activities in the Center for Educational Pluralism, located in Miller Hall 250, and are encouraged to do so prior to the end of the second quarter after admission to Woodring College of Education. Completion of these activities is required before a student intern placement will be sought, a process that begins approximately one year before the quarter a student plans to student teach. Students also are required to maintain records documenting their ability to work effectively with students from racial and ethnic populations other than their own and with special education students. The form to be used for this purpose is distributed in practica.

**Parental involvement competency** is required of all elementary education students. Students must complete a set of readings and activities in the Center for Educational Pluralism, located in Miller Hall 250, prior to the final internship.

*While in the College of Education, it is the student's responsibility to ascertain and meet all prerequisites for course work required within and outside the College of Education.*

### **PROGRAM AND SEQUENCE**

#### *Advisement*

Students may schedule an appointment to meet with their adviser before beginning the education sequence and attend a required orientation prior to beginning their first quarter courses. Appointments may be arranged by contacting the Elementary Education department office in Miller Hall 251, (360) 650-3336.

In certain situations, a case conference may be called by the department chair to determine the student's qualifications for admission or retention.

Students also must successfully complete a minimum of one professional education studies course each calendar year. Those who do not meet this requirement will be dropped and must reapply to Woodring College of Education before continuing with professional studies courses.

#### *Learning Community*

Students entering Elementary or Special Education programs may enroll in a 16-credit block of courses that have been designed to link course content across Educational Foundations, Instructional Technology, Psychology, and Special Education disciplines. Students who enroll in the learning community are guaranteed a full load of required courses, and are asked not to register for other courses outside of the block. Newly admitted Woodring College of Education students who are interested in this program should seek information from departmental advisers.

#### *Professional Development Schools*

The Professional Development Schools (PDS) project is a collaborative partnership between public schools and the Woodring College of Education. A substantial amount of course work is delivered on site in the public schools, allowing for a unique opportunity for blending theory and

practice. Applications for this program are available in the Elementary Education Office.

## ELEMENTARY PROGRAM

Requirements for completion of the professional program in Elementary Education are outlined below.

### *Elementary Education Professional Program*

88 credits

This program leads to a K-8 certificate and must be accompanied by an approved academic major. The courses listed below are not in the sequential order students will follow.

#### *Professional Studies Core*

28 credits

- Psychological Foundations
  - Psych 351
  - Psych 352
- Social/Philosophical Foundations
  - EdF 310
  - EdF 411
- Instructional Foundations
  - SpEd 363a
  - EEd 320
  - EEd 429
  - IT 444

#### *Elementary Program — Methods and Curriculum Content*

36 credits

- Art 380
- Music 361
- Math 381, 382
- PE 306
- Sci Ed 390
- Sci Ed 391
- EEd 425
- Eng 440 or EEd 424
- EEd 485
- HEd 455

#### *Elementary Internship*

24 credits minimum

- EEd 394a, 394b
- EEd 494

## MIDDLE SCHOOL TRACK OPTION

A concentration in middle school education is offered for students accepted in either the elementary or secondary education programs who want to teach in middle schools. Currently, Washington State does not have a middle school certification or endorsement. The middle school track leads to a certificate from Woodring indicating a special focus on middle level issues. The concentration consists of three courses designed to introduce the philosophy and practices of middle schools and prepares students for the challenges of working with early adolescents. All courses in the elementary education professional program must be completed with the following options:

- EEd 350 — an elective course

- EEd 451a — replaces EEd 394a
- EEd 451 — replaces EEd 320

## ELEMENTARY EDUCATION SUPPORTING ENDORSEMENTS

### *Supporting Endorsement — Elementary Education K-8*

#### *Admission Requirements*

- Valid Washington State Teaching Certificate
- An approved liberal arts major of at least 45 quarter credits
- Course work in child growth and development
- Course work in classroom organization and management

#### *Core Requirements*

- EEd 425
- Sci Ed 390
- Sci Ed 391
- EEd 485
- PE 306
- Music 361
- Art 380
- Eng 440 or EEd 424
- Math 381, 382
- EEd 591
- HEd 455

### *Minor/Endorsement — Early Childhood Education*

24-26 credits

This program leads to a supporting endorsement (P-3) in Early Childhood Education to be added only to an Elementary certificate.

#### *Early Childhood Core*

16-21 credits

- EEd 390 or 592d
- EEd 430 or 530
- EEd 431 or 531
- EEd 432 or 433
- EEd 438

#### *Early Childhood Electives*

- By advisement to a total minimum of 24 credits in the minor

### *Supporting Endorsement — Reading*

24 credits minimum

This program covers the designated essential areas of study for the supporting endorsement (K-12) in Reading to be added to an Elementary or Secondary teaching certificate.

#### *Essential Areas of Study*

- Reading Development
  - EEd 385 or 489
- Reading Diagnosis and Prescription
  - EEd 486 or 594e,f
  - SpEd 463a or 462a
- Children and Adolescent Literature
  - Lib Sci 405 or 407 or Eng 441 or 444 or EEd 583

- Instructional Methods in Reading
  - EEd 485 or 587 or Sec 425, EEd 485a or 583
- Instructional Methods in Content Reading
  - EEd 484

To fit individual needs, all courses should be selected after advisement. Courses applied toward endorsement may combine undergraduate and graduate credits and courses from different institutions.

### INTERNSHIP

An important experience for teaching certification candidates is the one quarter student teaching internship. Students must apply for their internship assignment in January of the year prior to the internship. They are expected to have completed a credit evaluation, a multicultural competency requirement, the documentation of their ability to work effectively with students from racial and ethnic populations other than their own, the sexual harassment prevention education requirement, certification paperwork and a Washington State Patrol/FBI fingerprint check. These requirements must be completed before the Office of Field Experiences will seek an internship placement. Anyone who has been out of school for a quarter or more must meet the deadline for filing a returning student application. Students with incomplete course work or who fail to meet qualifications are subject to withdrawal from the internship.

During the internship, students teach under the direct supervision of a certified teacher in a school setting. They have intensive practice at integrating methods, content area knowledge and classroom organizational strategies. For the final portion of the internship, students take full responsibility for their classrooms.

The Office of Field Experiences is the service agency of the College of Education which seeks placements for prospective interns. It does not guarantee placements. Placement in a school is contingent on:

- Meeting all requirements (satisfactory academic work, education program course work, and practica and faculty recommendations)
- Availability of placements in specific grade/subject areas
- Acceptance by K-12 school personnel

Students are required to interview with the public school teacher to whom they have been assigned for final placement approval.

A maximum of three initial interviews for placement are arranged by the Office of Field Experiences.

Any subsequent placement after a voluntary or non-voluntary 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 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 the Office of Field Experiences.

Placement locations are listed on the map available in the department office or the Office of Field Experiences. The

Office of Field Experiences 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 206D.

### CERTIFICATION

#### *Initial Teacher Certification*

The Initial Certificate is awarded by the State of Washington to candidates who hold a baccalaureate degree from an accredited college or university and who receive a recommendation for certification from a college/school of education. The candidate must satisfy the following:

- Completion of a professional studies program
- Completion of a baccalaureate degree program with an endorsable major in an appropriate discipline
- A cumulative grade point average of 2.75
- Washington State Patrol and FBI clearance

The Initial Certificate is endorsed for both grade level and subject matter area. Initial Certificates are valid for four years and may be renewed once for a three-year period provided state criteria are met. For further information, contact the Woodring College of Education, Continuing Certification Office, phone (360) 650-3388, Miller Hall 301.

Application for the Initial Teaching Certificate must be made in the Office of the Registrar by May 1 prior to student teaching.

#### *Continuing/Professional Certification*

The Continuing Certificate is required by the State of Washington of all career teachers. To earn the Continuing Certificate, the teacher must satisfy the following requirements:

- At least two teaching endorsements
- Teaching experience
- College credit requirement
- Child abuse course

The teaching experience requirement may be met by 180 days of teaching. Substitute teaching may be counted provided at least 30 days are in the same school district. The college credit requirement may be met by completing 45 credits upper level.

The Continuing Certificate is valid as long as the teacher is in educational service and meets state requirements for formal course work.

For further information, contact the Woodring College of Education, Certification Office, phone (360) 650-3388, Miller Hall 206D.

The following criteria must be met to receive a recommendation for continuing Washington certification from Western:

- All planned course work must be taken post-baccalaureate and be upper-division (300-400) or graduate-level unless it is to be counted toward the addition of a supporting endorsement.
- At least half of the program shall be earned through Western; the remaining credits may be earned under

WWU advisement through other approved four-year institutions. Correspondence study is allowed.

- No grades below C are acceptable for certification purposes.

When all requirements have been met, formal application for the Continuing Certificate may be made through the Woodring College of Education, Continuing Certification Office, Miller Hall 206D, phone (360) 650-3388.

## BACHELOR OF ARTS IN EDUCATION

### Major — Child Development

45 credits

Program Advisers:

Suzanne Krogh, PhD

Michael Henniger, PhD

The Child Development major is an academic major offered through the Woodring College of Education.

This major must be taken with the Elementary Certification program. The major is organized into topical strands of child development. Selections of options under each topic should be made in consultation with an adviser.

### Teaching Endorsements — Additional Course Work

Students completing this major may be endorsed to teach in early childhood (preschool through grade three) or psychology (fourth through twelfth grades) by completing the appropriate additional course work. The early childhood endorsement requires EEd 390, 430, 431, 432 or 433, and 438. For an endorsement in psychology: 1) you must take 24 credits in psychology. Any psychology class you take, including Intro Psych, 316/352, and 321/351, can all count toward these 24 credits; 2) make sure that these 24 credits in psychology include at least one of the following psychology courses: 219, 315, 322, 355, 403 or 456b.

Core

34-40 credits

- Learning
  - Psych 351 or 321
- Development
  - Psych 352 or 316
- Motor Development
  - PE 485c
- Language Development
  - SPA 354 or EEd 489 or Eng 370
- Exceptional Children in the Classroom
  - SpEd 360 or 363a
- Child in the Family
  - Psych 355 or Anth 351 or EEd 438
- Child and Family in Society and Culture
  - EEd 435 and HS 335 or Soc 260 or Anth 351 or 481 or 484
- Statistics
  - Psych 306 or Soc 207
- Advanced Topics in Developmental Psychology
  - Psych 456a or 456b or 456d

Elective Courses (selected to total 45 credits)

- Anth 353

- EEd 430, 431, SpEd 467a
- Eng 442
- Psych 219, 353
- Soc 210, 268, 368, 380

## COURSES IN ELEMENTARY EDUCATION

Courses numbered X37; X97; 300, 400; 417 445 are described on page 31 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.

### 320 EFFECTIVE TEACHING (3)

Prereq: admission to the Woodring College of Education or permission of the instructor. Coreq: EEd 394a, 429, IT 444a and SpEd 363a. Teacher behaviors positively affecting student achievement.

### 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.

### 390 PROFESSIONAL PRACTICUM AND SEMINAR (3)

Prereq: permission of instructor. Observation, participation and related seminars to enable each student to make a suitable professional decision. S/U grading.

### 394a ELEMENTARY PRACTICUM (1-4)

Prereq: admission to Woodring College of Education. Coreq: EEd 320, 429, IT 444a and SpEd 363a. In-school observation and participation focusing on effective teaching. Required for recommendation to student teach. S/U grading.

### 394b PRACTICUM IN LITERACY (2-4)

Prereq: EEd 424 (or Eng 440) and EEd 485 complete or concurrent. In-school experience observing and teaching reading and language arts. Required for recommendation to student teach. S/U grading.

### 421 INSTRUCTION IN THE ELEMENTARY SCHOOL (1-5)

Organizing learning experiences, selecting methods or processes and materials appropriate to the maturation and rate of development of children.

### 421a-m INSTRUCTION IN THE ELEMENTARY SCHOOL (1-5)

Organizing learning experiences, selecting methods processes, curriculum and materials appropriate to the maturation and rate of development of children. Repeatable with no maximum. S/U grading.

### 422 THE ELEMENTARY CURRICULUM (3)

Historical and analytical study of the curriculum of the elementary school.

### 424 LANGUAGE ARTS IN THE ELEMENTARY CURRICULUM (4)

Prereq: EEd 320. Functions and programs of language arts in the curriculum including reading, writing, speaking, listening.

### 426a,b SOCIAL STUDIES IN THE ELEMENTARY CURRICULUM (4)

Functions, programs and materials in the social studies. Letters indicate grade level of emphasis in various sections of the course: (a) Primary; (b) Intermediate.

### 429 ELEMENTARY CLASSROOM MANAGEMENT AND DISCIPLINE (3)

Coreq: EEd 320, 394; IT 444a and SpEd 363a. Development of strategies designed to prevent and/or solve behavior problems; discussion of effective classroom management techniques; analysis of related child development and learning theory.

### 430 CREATIVITY AND PLAY IN CHILDHOOD (3)

Prereq: permission of instructor. Definitions, theories and developmental characteristics of creativity and play. Examination of the role of creativity and play in the development of the child.

### 431 EDUCATION OF THE YOUNG CHILD (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 PRE-KINDERGARTEN EDUCATION (3)**

Prereq: EEd 430 or permission of instructor. Development of curriculum for pre-kindergarten age children, emphasizing experiences which develop language, cognitive, motor, affective and social competencies.

### **433 KINDERGARTEN AND PRIMARY EDUCATION (3)**

Prereq: EEd 430 or permission of instructor. Historical background; recent trends; organization of facilities and materials for kindergarten and primary programs; curriculum development based upon research in this area.

### **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.

### **435a-m CHILD ABUSE AND NEGLECT (1-4)**

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. Repeatable with no maximum. S/U grading.

### **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.

### **438a-m SCHOOL-HOME COMMUNITY RELATIONSHIPS (1-4)**

Problems of communication and interaction among teachers, parents and paraeducators, administrators, and community; conferencing, planning meetings, community survey. PR publications, use of mass media. Repeatable with no maximum. S/U grading.

### **439 IMPROVEMENT OF WRITING SKILLS FOR CHILDREN (2-4)**

Appropriate sequence of skills in composition for children; techniques implementing creative writing and improving fundamental skills.

### **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.

### **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 with no maximum. 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.

### **451a INTENSIVE MIDDLE SCHOOL PRACTICUM (3)**

Prereq: admission to the Woodring College of Education; EEd 350. 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.

### **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, etc.

### **458a-m MANAGING CONFLICT AND STRESS IN TEACHING (1-4)**

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, etc. Repeatable with no maximum. S/U grading.

### **463c STUDENTS AT RISK (4)**

Prereq: admission to 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.

### **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.

### **465b 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.

### **482 THEORY AND PRACTICE IN LITERACY EDUCATION (12-16)**

Prereq: permission of the instructor. Theory, instructional strategies, and assessment in literacy education; integrated planning; application of literacy education principles in an applied setting.

### **484 THE TEACHING OF READING IN CONTENT FIELDS (4)**

Techniques of teaching reading and applying reading to study skills in social sciences, mathematics, English and other content areas in upper intermediate and secondary grades.

### **485 BASIC READING INSTRUCTION (3-4)**

Prereq: EEd 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.

### **485a PRACTICUM IN BASIC READING INSTRUCTION (4)**

Prereq: concurrent enrollment in off-campus section of EEd 485. Practice in offering basic reading instruction in grades K-8. Methods and materials for teaching reading in areas of readiness, word attack skills and comprehension. Lesson plans developed and used with specific children. Evaluation of trade books and reading achievement.

### **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.

### **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 adviser. Diagnosis of students, lesson preparation, video-taped 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.

### **493e,f INDIVIDUALIZED INSTRUCTION IN READING — LANGUAGE ARTS IN THE ELEMENTARY SCHOOL (6 ea)**

Integration of reading, writing, speaking, listening and use of children's books as functional tools of the communication process; laboratory experience in developing individualized language activities with children in school settings. 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.

**494a 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 31 of this catalog.*

*Admission to Graduate School or special permission is required. See the Graduate School section of this catalog.*

**502 REFERRAL AGENCIES AND RESOURCE PERSONNEL (3 ea)**

Study of agencies and resources available to aid teachers and schools. Involves visits to community agencies. Students complete workbook for use in their school. **NOTE:** This course is not applicable to a master's degree. It is for continuing certification only.

**518 CURRENT ISSUES IN EDUCATION (1-5)**

Prereq: graduate status or permission of instructor. Examination and discussion of several current issues in Elementary Education.

**518f 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.

**518g 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.

**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.

**525 HISTORY OF NATIVE AMERICAN EDUCATION AND POLICY DEVELOPMENT (4)**

A seminar designed to give students an understanding of the historical events surrounding the development of schools and schooling for the Native American. The historical context of education will be discussed and explored to give students an understanding of how those events influenced the development of past and contemporary federal policy affecting the education programs and school systems that exist for Native American students today.

**526 NATIVE AMERICAN LITERATURE/ART/MUSIC (4)**

A class designed to develop in students an appreciation and understanding of the fine arts of Native America, with a priority for teaching students how to design and implement fine arts programs for elementary and secondary students and schools. Each student will be taught the skills necessary to bring technology, community fine arts experts and students together for developing a fine arts program and curriculum.

**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: EEd 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.

**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, EEd 501, EdF 512, 513, EEd 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.

### **590 SEMINAR IN ANALYZING TEACHING AND SUPERVISION (3)**

Prereq: EEd 442 or permission of department. Advanced studies in the principles of supervision; utilization of instructional resources and the evaluation and improvement of teaching.

### **591 RESIDENCY IN ELEMENTARY TEACHING (8 or 16)**

Recommended for supervised teaching. Supervised teaching experience to develop and demonstrate teaching competence at the primary and/or intermediate grades; action research including case study and single subject projects. May be repeated. S/U grading.

### **592d FIELD EXPERIENCE IN EARLY CHILDHOOD EDUCATION (2-6)**

Prereq: graduate status and permission of instructor. Supervised field experience in developing, directing and evaluating early childhood education programs.

### **592e FIELD EXPERIENCE IN ELEMENTARY SCHOOL LEADERSHIP (2-6)**

Prereq: permission of instructor. Designing, field testing and evaluating innovative school programs, practices and materials for the elementary school.

### **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.

### **596a ADVANCED PRACTICUM: EARLY CHILDHOOD EDUCATION (2-6)**

Prereq: graduate status or permission of instructor. Individualized

practicum in early childhood programs for experienced teachers. S/U grading.

### **596b ADVANCED PRACTICUM IN TEACHING: ELEMENTARY SCHOOL (2-6)**

Prereq: graduate status and 20 quarter hours of approved course work. Supervised experience for the improvement of teaching. Participants select an area of concentration, develop plans and procedures for improvement of instruction, and submit a plan for classroom implementation and evaluation. S/U grading.

### **599 FIELD STUDY OF ELEMENTARY EDUCATION ABROAD (2-5)**

An in-depth study of the primary school system with research focus on one specific aspect. Examines schools, philosophy, materials, environment and application to U.S. classrooms.

### **639 CURRENT TOPICS IN EDUCATION (1-5)**

Prereq: master's degree and permission of instructor. Studies of current topics in any one of the following areas: (a) Elementary Education; (b) Early Childhood Education; (c) Reading.

### **686 ADVANCED SEMINAR FOR READING RESOURCE SPECIALISTS (4)**

Prereq: master's degree and Initial ESA Certificate as a reading resource specialist; currently employed as reading specialist. Emphasis on problems faced by the reading specialist/consultant in working with children, parents, teachers, other specialists and 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. S/U grading.

### **691 RESEARCH SEMINAR (1-6)**

Prereq: approval of the student's graduate committee or program adviser. Graduate research under the direction of a program adviser/committee. S/U grading. Repeatable to a maximum of 6 credits.

## HUMAN SERVICES

Human Services courses are offered at five locations: Bellingham, Kitsap, Everett, Seattle and on the Internet (cyber). Cyber course work is completed through weekly participation in course conferencing on the Internet. Not all courses are taught at all locations. The department is self-sustaining, enrollment-driven, and will be offered as long as sufficient student enrollment exists.

Human Services, as a profession and an area of study, is concerned with efforts to aid persons in fulfilling their physical, mental, emotional and societal needs. The human services major is designed to provide an understanding of helping and healing relationships and of the agencies, organizations and societal context within which these relationships take place. Students emphasize concentration areas including: human services and education, pre-counseling, human services and management, human services and law and justice, or learner designed.

### HUMAN SERVICES FACULTY

SUSAN MANCUSO (1995) Acting Chair and Associate Professor. BA, University of California, Los Angeles; MA, Western Washington University; EdD, University of Washington.

PEGGY ANDERSON (1996) Lecturer. BA, MEd, Western Washington University.

SANDRA CROSS (1997) Lecturer. BEd, Western Washington University; MEd, University of Washington; EdD, Seattle University.

JUDITH ANNE DEIRO (1997) Lecturer. BA, Oklahoma State University; MA, University of Florida; PhD, University of Washington.

SUSAN KINCAID (1995) Lecturer. BA, MEd, Western Washington University.

ROBERT LAWSON (1985) Lecturer. BA, MEd, Western Washington University.

MARY MORGAN LIVINGSTON (1997) Lecturer. BA, MA, University of Oregon.

TRULA NICHOLAS (1994) Lecturer. BA, MS, Western Washington University.

JANE VERNER (1994) Lecturer. BS, New York University; MBA, University of Toronto.

The human services major is an upper-division program within the Woodring College of Education leading to a Bachelor of Arts degree. Admission to the department requires a transferable associate degree or 90 credits that include the General University Requirements (sciences, mathematics, communications, social sciences, humanities, non-Western and minority cultural studies), and a 2.50 GPA for the last 45 credits of course work.

The helping professions often appeal to people recovering from their own personal issues, and it sometimes becomes evident that, even though a person has maintained a satisfactory academic record, he or she is not suited to work in a job which demands consistent interpersonal competencies. Please be advised that Western Washington University's human services program is not designed to replace an individual's own recovery program. The faculty of the human services program reserve the right to counsel students with this in mind and may ask the student to initiate a program of counseling and/or recovery before the student can proceed further in the program of study.

The curriculum in the human services major is interdisciplinary, based on concepts and skills from the social and management sciences and philosophy. Curricular goals emphasize continued integration between

theory and practice in human service organizations. Courses are scheduled to minimize conflict with work schedules. Most classes meet in the evening with some classes in the afternoon or on weekends.

Because the human services department at all locations is now self-sustaining (not funded by legislative appropriation and dependent on student tuition revenue), the tuition rate may be different than for state-supported courses. Admissions and registration information is available in Miller Hall 405 or at the off-campus program sites.

### Grading and Evaluation

The evaluation system for the human services program is a non-graded, competency-based portfolio method. Classes are graded satisfactory/unsatisfactory on the basis of student and faculty assessment of whether the competencies for a course have been met. The assessments generated for each course are placed in student portfolios as a record of progress in the human services program.

### 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. A prerequisite for admission to the human services program is successful completion of a basic computer course from an academic institution or the equivalent.

## BACHELOR OF ARTS

### Major — Human Services

90 credits

#### Program Requirements

The human services curriculum consists of six areas of study:

- Core courses (24 credits): HS 301, 303, 305, 402, 404, 406, taken one per quarter for six quarters, providing a foundation in intrapersonal, interpersonal, small group, organizational, community, societal and global dynamics as they relate to the human services profession.
- Professional internship experience (24 credits): HS 390a,b,c; HS 490a,b,c, taken one per quarter for six quarters, which provides at least 16 hours per week of professional experience in an approved human service setting. Students may meet this requirement either as (a) salaried employees of a human service agency or as (b) volunteers or interns who have, or can obtain, placements in approved human services settings. (Students are responsible for finding their own placements, subject to program approval. HS 320a provides a structured process for selecting an internship site. Assistance is available and recommended.)
- Internship seminar (6 credits): HS 320a,b,c; HS 420a,b,c, taken one per quarter for six quarters, which

- provides students the opportunity to discuss their professional internship experiences and receive weekly consultation from the faculty and their peers.
- ❑ Human Services and Management (3 credits): HS 383, which offers an introduction to the field of management in public and non-profit agencies and organizations.
  - ❑ Group Facilitation and Interventions (3 credits): HS 447, which provides students with skills necessary to understand and facilitate group interactions.
  - ❑ Caseload Management and Interviewing (3 credits): HS 448, which reviews case management and provides basic interviewing skills.
  - ❑ Survey of Addictions and Dependencies (3 credits): HS 450, which trains human service workers in concepts and techniques that will assist and support them in working more effectively within systems impacted by addicted individuals.
  - ❑ Seminar in Cultural Awareness (3 credits): HS 477, which responds to the humanistic values attendant to working and living in pluralistic and global societies.
  - ❑ Applied Research Methods (4 credits): HS 482a, which provides students with the knowledge and skills required to examine human service agencies and services.
  - ❑ Seventeen credits are required with advisement. Students emphasize concentration areas as follows: human services and education, pre-counseling, human services and management, human services and law and justice, or learner designed.
  - ❑ Independent study: Students are limited to 6 credits of independent study and workshops.
  - ❑ For scholarship standards refer to the *University Academic Policies* section of this catalog.

### COURSES IN HUMAN SERVICES

*Courses numbered X37, X97, 300, 400; 417, 445 are described on page 31 of this catalog.*

#### 301 HUMAN SERVICE PROFESSIONALS AND PERSONAL SYSTEMS (4)

Introduction to the helping role, with emphasis on motives, values, ethics and professional practice. Self-awareness and personal communication are fostered.

#### 303 HUMAN SERVICE PROFESSIONALS AND INTERPERSONAL SYSTEMS (4)

Prereq: HS 301 or permission of instructor. The dynamics of interpersonal systems in relation to other human service systems. Emphasis on developing interpersonal communication skills and effective helping strategies.

#### 305 HUMAN SERVICE PROFESSIONALS AND SMALL GROUP SYSTEMS (4)

Prereq: HS 303 or permission of instructor. The dynamics of small group systems in relation to other human service systems. Emphasis on participation in and facilitation of task-oriented or decision-making groups and leadership theory.

#### 310a-c EFFECTIVE PRESENTATIONS TO HUMAN SERVICE AGENCIES (1)

Explores methods of developing human service presentations, including: researching the topic, understanding the audience, and preparation. Students will have the opportunity to gain speaking proficiency and receive constructive evaluations. **NOTE:** HS 310a,b and c need not be taken in sequence, nor is it required that students take all three courses.

#### 320a-c INTERNSHIP SEMINAR — FIRST-YEAR (1 ea)

Prereq: must be taken concurrently with HS 390a,b,c, and first-year core — HS 301, 303, 305. Readings and discussion on the application of human services concepts, with emphasis on individuals and groups.

#### 331 DEVELOPMENTAL PATTERNS: CHILDREN/ ADOLESCENTS (3)

Developmental theories and current issues of children and adolescents. Integration of concepts with the problems of service delivery.

#### 333 DEVELOPMENTAL PATTERNS: ADULTS/SENIORS (3)

Developmental theories and current issues of adults and seniors. Integration of concepts with the problem of service delivery.

#### 335 DEVELOPMENTAL PATTERNS: FAMILY (3)

Theories and historical and current issues of family systems. Integration of concepts with the problem of service delivery.

#### 350 HUMAN SERVICES ON-LINE COMMUNICATION (2)

Prereq: admission to Human Services program or permission of instructor. The Internet can offer powerful ways of teaching and learning. This course covers the technical information needed to be successful utilizing on-line resources. It presents an introduction to the basics of on-line communication including e-mail, file transfer, Internet search tools, computer-mediated instruction and other types of distance education.

#### 371 ISSUES AND CONCEPTS IN HUMAN SERVICES SYSTEMS (3)

Current issues and concepts are considered, with emphasis on providers, clients and diverse socio-cultural influences.

#### 373 LAW AND HUMAN SERVICES (3)

Legal processes and their effect on human services client populations and delivery systems. Legislative, judicial, administrative, and policy and procedural processes.

#### 383 HUMAN SERVICES AND MANAGEMENT (3)

An introduction to the field of management in public and non-profit agencies and organizations.

#### 390a-c PROFESSIONAL INTERNSHIP — FIRST-YEAR (4)

Prereq: must be taken concurrently with HS 320a,b,c, and first-year core — HS 301, 303, 305. Field experience for first-year students in human services. Staff and agency supervision.

#### 402 HUMAN SERVICE PROFESSIONALS ORGANIZATIONAL SYSTEMS (4)

Prereq: HS 305 or permission of instructor. The dynamics of human service organizations in relation to other human service systems. Emphasis on knowledge of factors that influence organizational behavior, the skills useful in influencing organizational outcomes and the characteristics of effective human service professionals in human services organizations.

#### 404 HUMAN SERVICE PROFESSIONALS AND COMMUNITY SYSTEMS (4)

Prereq: HS 402 or permission of instructor. The dynamics of community systems and the relationship of these systems to other human service systems. Emphasis on factors that influence community systems, skills of influencing community structure and process, and the characteristics of effective human service professionals in community settings.

#### 406 HUMAN SERVICES PROFESSIONALS AND SOCIETAL AND GLOBAL SYSTEMS (4)

Prereq: HS 404 or permission of instructor. The dynamics of societal and global systems and their effects on the other subsystems of human services. Emphasis on the factors influencing societal and global outcomes, and the characteristics of effective human service professionals in societal and global settings.

#### 411 HUMAN SERVICES IN THE EMERGING HEALTH CARE SYSTEM (3)

Examines values and economic factors that give rise to managed care and other major changes in the health care system. Looks at the possibilities that are created within the changing system and assesses different organizational models that are emerging in response to the changing system. Provides an overview of the kinds of skills that are likely to be necessary for human service professionals to work in the emerging health care environment.

#### 412 HEALTH CARE ACROSS THE CONTINUUM: CARING FOR PEOPLE WHERE THEY LIVE (3)

Reviews the complete set of resources, community and institution based, that may need to be coordinated on behalf of the patient/client. Compares and contrasts acute care with chronic disease/illness management, discusses the various levels of case/care

management and identifies the essential components of a care management system.

#### **413 RESOURCES FOR HEALTHY AGING (3)**

Examines the demographics, economics and values/attitudes of our aging society. With this foundation, students learn first-hand about services/institutions that exist to address needs of older citizens, their limitations and possibilities for future service development.

#### **414 DIFFERENT TYPES OF HEALING (3)**

Explores the different types of alternative healing techniques as part of a comprehensive health-care program. Students have the opportunity to compare and contrast the philosophies and methods of various health professionals and how they complement each other in a holistic health-care system.

#### **415 TOPICS IN PUBLIC HEALTH (3)**

An overview of basic public health topics with a special emphasis on the role and function of the public health system as the State of Washington moves into outcome-based program planning, evaluation and service delivery. The Washington State Public Health Improvement Plan will serve as the primary context for an interdisciplinary approach to community system development.

#### **420a-c INTERNSHIP SEMINAR — SECOND-YEAR (1 ea)**

Prereq: HS 320a,b,c. Must be taken concurrently with HS 490a,b,c, and second-year core — HS 402, 404, 406. Readings and discussion on the application of human services concepts with emphasis on agencies and organizations.

#### **421 INTRODUCTION TO CIVIL LAW IN HUMAN SERVICES (3)**

Survey of legal processes and their effect on human services client populations and delivery systems. Judicial, administrative and legislative processes considered.

#### **422 INTRODUCTION TO CRIMINAL LAW IN HUMAN SERVICES (3)**

Survey of the criminal justice system from arrest through sentencing in a context of political and social change impacting human services agencies and clients.

#### **423 CONFLICT RESOLUTION IN HUMAN SERVICES (3)**

Survey of the nature of conflict; styles of conflict resolution including negotiation, mediation, conciliation and facilitation.

#### **424 LAW AND ETHICS IN HUMAN SERVICES (3)**

Exploration of ethical issues in our legal system generated by political and social change affecting human services agencies and clients.

#### **425 CHILDREN AND FAMILY LAW IN HUMAN SERVICES (3)**

Survey of laws applicable to clients of human services in the area of children and family law, including child abuse and parenting laws.

#### **426 HUMAN RESOURCES LAW IN HUMAN SERVICES (3)**

Focus on issues of human services agencies in relationship to discrimination, compensation and benefits, labor relations and employee rights.

#### **427 POLICE AND COMMUNITY RELATIONS IN HUMAN SERVICES (3)**

Survey of relationship between law enforcement, community and human service agencies.

#### **428 CORRECTIONS THEORY AND PRACTICE IN HUMAN SERVICES (3)**

Survey of history and philosophy of corrections at federal, state and county levels with emphasis on emerging trends and the role of human service professionals.

#### **429 POLICE MANAGEMENT AND SUPERVISION IN HUMAN SERVICES (3)**

Survey of organization and management issues of law enforcement agencies and their coordination with human service agencies.

#### **430 PERSISTENT PROBLEMS IN HUMAN SERVICES (1-4)**

Seminars in contemporary social problems which impact the roles of human services workers. Different seminars deal with different problems and related treatment theories. Repeatable to a maximum of 6 credits.

#### **431 JUVENILE JUSTICE THEORY AND PRACTICE IN HUMAN SERVICES (3)**

Analysis of juvenile justice system including effects on victims, perpetrators, families, law enforcement and human service agencies.

#### **432 PERSONALITY THEORY (3)**

Theories of personality, the philosophical problems of personality theory formulation and the impact on service delivery.

#### **434 WOMEN AND MEN IN TRANSITION (3)**

Examination of changes occurring in women's/men's roles. Emphasis on personal awareness as well as social, political and economic issues of particular interest to women/men.

#### **438 HOLISTIC HEALTH (3)**

Health from a systems approach and the interplay of body/mind/spirit, with emphasis on the roles which human service delivery systems (including major health systems) play in fostering or discouraging holistic health practices.

#### **447 GROUP FACILITATING AND INTERVENTIONS (3)**

Types of groups, group dynamics and group facilitation and skills. Understanding, planning and evaluating interventions. Includes lab for skill practice.

#### **448 CASELOAD MANAGEMENT AND INTERVIEWING (3)**

Models and theories of caseload management including program design. Basic interviewing skills and techniques. Includes lab for skill acquisition and practice.

#### **450 SURVEY OF ADDICTIONS AND DEPENDENCIES (3)**

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.

#### **451 PHILOSOPHY OF HELPING (3)**

A philosophical exploration of various concepts of the helping relationship and the ethical issues inherent in that process.

#### **460 INTRODUCTION TO SCHOOL, FAMILY, AND COMMUNITY PARTNERSHIPS (3)**

Explores collaboration and partnership design between schools, families and communities. Examines cultures and foundations of human services and education, strengths-based and family-centered practice, community partnership, and community-based schools.

#### **461 COLLABORATIVE SKILLS IN FAMILY, SCHOOL, AND COMMUNITY PARTNERSHIPS (3)**

Examination, analysis, and synthesis of research on collaboration. Strategies necessary in the creation, facilitation, assessment, and evaluation of various collaborations and partnerships between human services, education, public health, the private sector and higher education.

#### **462 CREATING EFFECTIVE SCHOOL AND COMMUNITY-BASED PROGRAMS (3)**

Research, analysis, and assessment of effective practices in integrated services for families, schools, and communities. Topics include asset mapping, resiliency and protective factors, prevention and intervention strategies, the university role in program design and partnership, and design of effective outcome.

#### **463 INTERPROFESSIONAL PRACTICUM: SERVICE LEARNING (1-3)**

Prereq: HS 460, 461, 462 or permission of instructor. Field/service learning experience for students enrolled in the Integrated Collaboration Program. Students may meet this requirement in the field or as a volunteer. Students find their own placements which reflect collaboration between human services and the schools subject to program approval. Supervision provided by agency/school personnel and staff.

#### **464 SCHOOL-BASED ASSESSMENTS AND PROGRAM EVALUATION IN HUMAN SERVICES AND EDUCATION (3)**

Prereq: HS 460 or permission of instructor. Theories, methodology of assessment and evaluation in community and school-based projects and the role of the human service worker will be studied. Related topics include asset mapping, community and school-based needs assessments, program evaluation and analysis, focus groups and report writing. Topics will be integrated into the following areas: service learning, action research, cultural competency, technology, social issues and field application.

#### **465 COMMUNITY DEVELOPMENT AND ADVOCACY (3)**

Theories and techniques of community development and advocacy planning in promoting community change. Related topics: community organizing, community assessment, large group and community

facilitation and interventions, community building strategies and community-based collaborations.

### **466 CAPSTONE COURSE IN HUMAN SERVICES AND EDUCATION (3)**

Prereq: HS 460 or permission of instructor. Provides capstone experience for students in the human services and education concentration. Readings, research and discussion to assist in the integration of knowledge of the human services and education collaboration field.

### **474 WORK AND HUMAN SERVICES (3)**

Work and career patterns in contemporary culture, with a focus on workforce needs, unemployment patterns and the place of work as a political and lifestyle issue.

### **476 THE FUTURE SOCIETY AND HUMAN SERVICES (3)**

Theories and predictions about the future of society are examined as they impact the kinds, quality and theory of human services delivery.

### **477 SEMINAR IN CULTURAL AWARENESS (3)**

Readings and discussion of contemporary cross-cultural issues; culturally different groups and their interaction with human services systems; comparative ethnic issues, conflicts and institutional practices.

### **480 POLITICS OF HUMAN SERVICES (3)**

Examination of political forces affecting human services agencies, and the development of skills for intervention in the political process.

### **482a APPLIED RESEARCH METHODS (4)**

Study of theory and techniques involved in examining the effectiveness of human services agencies, including the application of techniques that lead to direct social action and agency intervention.

### **482b MICROCOMPUTER STATISTICAL APPLICATIONS (1)**

Prereq: HS 482a. Provides skill and understanding for use of

microcomputer-based applications for statistical treatments. Recommended for those considering graduate school.

### **483 INFORMATIONAL TECHNOLOGY AND HUMAN SERVICES (3)**

A study of the use of technology in human services.

### **484 PROGRAM FUNDING AND GRANT WRITING (3)**

Prereq: HS 383 or permission of instructor. Planning, writing, marketing and evaluating funding proposals. Elements of grant proposal preparation, including the methods of seeking grant funds, interpreting funding guidelines, designing marketing strategies and negotiating with funding agencies.

### **485 PROGRAM PLANNING AND BUDGETING (3)**

Prereq: HS 383 or permission of instructor. Fundamentals of planning, budgeting and financial management in non-profit agencies and organizations.

### **486 HUMAN RESOURCES DEVELOPMENT (3)**

Development of knowledge and skills in consultation, advocacy, organization and mediation in the human services professions.

### **487 LEADERSHIP (3)**

Modern theories of administration, management and leadership.

### **490a-c PROFESSIONAL INTERNSHIP — SECOND YEAR (4)**

Prereq: must be taken concurrently with HS 420a,b,c and second-year core — HS 402, 404, 406. Field experience for second-year students in human services. Staff and agency supervision.

### **499 GRADUATION SEMINAR (4)**

Prereq: HS 404, 420b, 490b. Provides a capstone experience for graduating seniors. Readings and discussion to assist integration of overall program experience, including core seminars, internship and concentration theoretical components. Preparation and presentation of a personal program portfolio. May be taken in lieu of final quarter internship experience.

# INSTRUCTIONAL TECHNOLOGY

## INSTRUCTIONAL TECHNOLOGY

The Department of Instructional Technology offers instruction and research opportunities in the areas of learning resources, instructional television and instructional technology in education, including interactive multimedia, on-line networking and information retrieval, and instructional design involving computer technology.

Instructional Technology programs include:

- K-12 Supporting Endorsement in Learning Resources
- Master of Education in School Administration — Instructional Technology
- Elective concentrations for instructional technology use (elementary and secondary)
- Elective concentrations within the M.Ed.-Elementary, M.Ed.-Secondary and M.Ed.-Specializations in Adult Education Administration programs (see the Graduate School section of this catalog)

For further information, contact the program advisement office, Miller Hall 204, phone (360) 650-3090, e-mail lblack@wce.wvu.edu.

## INSTRUCTIONAL TECHNOLOGY FACULTY

LESLIE BLACKWELL (1968) Chair and Professor. BA, Washington State University; MEd, EdD, University of Washington.

TERRESA GIBNEY (1998) Assistant Professor. BSEd, University of Missouri-St. Louis; Med, PhD, University of Missouri-Columbia.

ANTHONY JONGEJAN (1983) Associate Professor. BA, MS, Western Washington University; MS, PhD, University of Oregon.

TIMOTHY KEIPER (1997) Assistant Professor. BA, University of Northern Colorado; MA, EdS, PhD, University of Missouri, Columbia.

ODDMUND MYHRE (1997) Assistant Professor. BS, Telemark College of Education; MA, California State University, Sacramento; PhD, University of Washington.

MARK D. VELJKOV (1995) Lecturer. BA, MA, West Georgia College; PhD, Columbia Pacific 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 microcomputers. This program provides teachers with the background necessary to integrate instructional technology into their lesson plans. Because changes in technology are ongoing, please consult an adviser.

**NOTE:** Concentrations of instructional technology courses are also available to support most Woodring College of Education M.Ed. programs. For further information, contact Instructional Technology faculty (Miller Hall 204).

### *Elective Concentration*

24 credits

- Required courses (12 credits)
  - IT444a-d, 452, 453, 457
- Elective courses (12 credits)
  - IT 450, 454, 460, 461, 468
  - CS 145
  - Music 233, 432
  - Additional electives under advisement

### *Professional Certificate in Interactive Multimedia Development*

A professional certificate designed to prepare post-baccalaureate students for creating interactive multimedia for education and training is offered through the Woodring College of Education. Admission to the program requires students to have completed a baccalaureate degree program from an accredited institution. The program includes a seven-course sequence of 26 credits in the design and development of multimedia materials. Course topics include graphic production, audio and video digitization, authoring systems, desktop publishing and instructional design. Application materials and further information can be obtained by contacting the Department of Instructional Technology in 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 444a-d or HS 483 with a grade of C or higher demonstrates this competency.
- Entrance into IT 444a-d 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 Department of Instructional Technology (Miller Hall 204).

A Washington State Patrol/FBI fingerprint check is required of most students prior to their internship. Students should check with their program areas or advisers for details.

## COURSES IN INSTRUCTIONAL TECHNOLOGY

*Courses numbered X37; X97; 300, 400; 417, 445 are described on page 31 of this catalog.*

### **343 OPERATION OF LEARNING RESOURCE EQUIPMENT (1)**

Instruction in the operation of learning resource equipment including videotape recorders, 16mm projectors, slide/filmstrip projectors, overhead and opaque projectors, microcomputers. S/U grading.

### **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 444a-d. S/U grading.

### **431 COMPUTERS IN THE EDUCATIONAL FIELD (1-4)**

Application of computers in the field of education. Oriented toward specific educational content needs. Does not satisfy the Woodring College of Education's competency in instructional technology requirement. Repeatable with no maximum.

### **431a-d COMPUTERS IN THE EDUCATIONAL FIELD (1-4)**

Application of computers in the field of education. Oriented toward specific educational content needs. Does not satisfy the Woodring College of Education's competency in instructional technology requirement. Repeatable with no maximum. S/U grading. **NOTE:** 441a-d is identical to 441 with the exception of S/U grading.

## **431e-h APPLICATION SOFTWARE IN THE CLASSROOM (1-4)**

Examines the application of tools such as word processing, databases, spreadsheets, graphics, desktop publishing and presentation software in the classroom. Repeatable with no maximum. S/U grading.

## **431i-m TECHNOLOGY IN EDUCATION (1-4)**

Application of Internet, World Wide Web, multimedia and new emerging computer technology in the classroom. Repeatable with no maximum. S/U grading.

## **444a CLASSROOM USE OF INSTRUCTIONAL TECHNOLOGY (ELEMENTARY) (3)**

Prereq: IT 344 or portfolio of basic instructional technology skills. Coreq: EEd 320, 394a, 429 and SpEd 363a. 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.

## **444b 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.

## **444c 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.

## **444d CLASSROOM USE OF INSTRUCTIONAL TECHNOLOGY (GENERAL) (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.

## **450 INTRODUCTION TO LEARNING RESOURCES (3)**

Prereq: an introductory professional education course. The role and application of educational media and technology in the teaching-learning process.

## **451 PRACTICUM IN LEARNING RESOURCES (3)**

Prereq: IT 450. Preparation of instructional materials for classroom utilization; selection, evaluation, utilization of major types of audiovisual materials and equipment; organization and curricular integration of educational media; laboratory.

## **452 COMPUTER PROGRAMMING PROCEDURES (3)**

Prereq: IT 444a-d or permission of instructor. An introduction to the basic elements of computer program design, and classroom instruction utilizing appropriate programming languages (such as Logo and HyperCard).

## **453 EDUCATIONAL USES OF INSTRUCTIONAL TECHNOLOGY (3)**

Prereq: IT 444a-d or permission of instructor. A study of computer-based and interactive multimedia courseware. Introduction of planning strategies for the integration of instructional technology into schools and classrooms.

## **454 APPLICATION SOFTWARE FOR EDUCATORS (3)**

Prereq: IT 444a-d or permission of instructor. Examines the use of tools such as word processing, data bases, spreadsheets, graphics, desktop publishing and presentation software.

## **457a-d PRACTICUM IN INSTRUCTIONAL TECHNOLOGY (1-4)**

Prereq: IT 444a-d or permission of instructor. Supervised practicum for students to work in the design, implementation and evaluation of instructional technology activities with selected K-12 population. Repeatable to a maximum of 6 credits.

## **460 DESKTOP PUBLISHING AND TECHNICAL WRITING (3)**

Prereq: IT 444a-d 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 444a-d 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 GRAPHICS FOR MULTIMEDIA DEVELOPMENT (3)**

Prereq: IT 461 or permission of instructor. Principles and techniques for computer graphics for multimedia 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 444a-d or permission of instructor. An introductory study of interactive multimedia systems. Includes videodiscs, computer interfacing, CD ROM and multimedia authoring software.

## **470 TELECOMMUNICATIONS IN EDUCATION (3)**

Prereq: IT 444a-d or permission of instructor. Studies the nature of telecommunications; the technical side of telecommunications, including hardware needs, modems, communication software; ethics and problems of Internet communications; and implementation of telecommunications in the educational environment. Topics include e-mail, telnet, listservs, gopher, the World Wide Web and new emerging telecommunications technologies.

## **Graduate Courses**

*Courses numbered 500; 517; 545; 597 are described on page 31 of this catalog.*

*Admission to Graduate School or special permission 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 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 instructional courseware, teacher and student tools, presentation and development tools and administrative management tools. Emphasizes planning for their use. Satisfies the Woodring College of Education instructional technology education competency requirement.

## **550 LEADERSHIP AND MANAGEMENT OF INSTRUCTIONAL TECHNOLOGY PROGRAMS (4)**

Prereq: IT 544 or permission of instructor. Problems and principles in establishing and maintaining the use of instructional technologies in educational institutions, including staffing, financing, coordinating, evaluating and facilities management.

## **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.

**555a-d 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.

**560 INSTRUCTIONAL DESIGN FOR MULTIMEDIA DEVELOPMENT (3)**

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 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.

**562 DIGITAL VIDEO AND AUDIO PRODUCTION (3)**

Prereq: IT 461 or permission of instructor. Principles of audio and video production and methods of digitizing for multimedia development.

**563 GRAPHICS FOR MULTIMEDIA DEVELOPMENT (3)**

Prereq: IT 461 or permission of instructor. Principles and techniques for computer graphics for multimedia development.

**565 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. Independent research required.

**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 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.

**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.

**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 adviser. Graduate research under the direction of program adviser/committee. Repeatable to a maximum of 6 credits. S/U grading.

## LIBRARY SCIENCE

“Information” is one of the key words in education today, and educators in many settings are increasing their use of the library-media center to enhance their teaching and the learning of their students. The supporting endorsement in learning resources is intended to provide teachers with the skills to make efficient use of learning materials in print, non-print and electronic formats in their lessons. This program also offers excellent preparation for those who wish to eventually become directors of library media centers.

For further information, contact the program adviser: Dr. Les Blackwell, Miller Hall 202, (360) 650-3387, lblack@wce.wvu.edu.

### *K-12 Supporting Endorsement — Learning Resources*

25 credits

- Required (16 credits)
  - IT 450
  - IT 444a-d
  - Lib Sci 405 or Lib Sci 407
  - IT 453
  - Lib Sci 403
- 9 credits of electives selected from:
  - Lib Sci 309, 401, 402, 410
  - IT 452, 454, 457a-d
  - IT 451, 468

### *M.Ed. School Administration — Instructional Technology*

For a description of this program, please see the Graduate School section of this catalog.

## COURSES IN LIBRARY SCIENCE

*Courses numbered X37; X97; 300, 400; 417, 445 are described on page 31 of this catalog.*

### **304 INTRODUCTION TO CHILDREN’S LITERATURE (2)**

An overview of the field of literature for pre-school through middle school students.

### **309 STORYTELLING (3)**

Selection, adaptation and presentation of stories for elementary school children.

### **401 THE LIBRARY IN THE SCHOOL (3)**

The organization and maintenance of effective materials-centered libraries in elementary and secondary schools.

### **402 ORGANIZATION OF MATERIALS (3)**

Principles of classification and cataloging; making unit cards, adapting printed cards, and organizing a shelf list and dictionary catalog.

### **403 BASIC INFORMATION SOURCES (3)**

Evaluation of basic information sources and practice in their use.

### **404 THE LIBRARY IN THE SOCIAL ORDER (3)**

Social, educational and cultural implications of the role of the library in society.

### **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.

### **410 WRITING AND ILLUSTRATING CHILDREN’S BOOKS (4)**

Prereq: Lib Sci 405 or permission of instructor. Analysis of illustrations and writing of children’s and adolescents’ literature; techniques of composition and illustrations fundamental in writing; illustrating and binding.

## Graduate Courses

*Courses numbered 500; 517; 545; 597 are described on page 31 of this catalog.*

*Admission to Graduate School or special permission required. See the Graduate School section of this catalog.*

### **502 ADVANCED CATALOGING (4)**

Prereq: Lib Sci 402 or permission of instructor. Application of theories and principles of cataloging in classifying print and non-print materials for elementary and secondary schools and community colleges.

### **505 BOOKS AND MATERIALS: USE AND EVALUATION (4)**

Prereq: Lib Sci 405 or permission of instructor. Study and selection of children’s and adolescent literature (fiction and poetry). Literary criticism. Use of various media.

### **520 INSTRUCTIONAL DEVELOPMENT (4)**

Prereq: permission of instructor. Understanding and application of learning theory to library materials and media. Work with instructional clients (industrial or educational) in production of materials.

## SECONDARY EDUCATION

The Department of Secondary Education offers professional education programs which lead to recommendations to the Office of the Superintendent of Public Instruction for teacher certification in the State of Washington. The emphasis assigned to each of these programs is determined by the faculty with consideration of professional standards and individual student needs.

The secondary teacher education curriculum is a carefully sequenced professional program that is firmly backed by current research on effective teaching and reflects a conceptual framework which embraces three basic strands in education:

- artistic
- scientific
- professional

Programs which address initial 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 secondary certification should make inquiries through the Woodring College of Education, Admissions Office, Miller Hall 206, phone (360) 650-3378, e-mail [robinson@wce.wvu.edu](mailto:robinson@wce.wvu.edu). Applicants who wish to speak with a faculty adviser may request an appointment through the program coordinator in Miller Hall 306, phone (360) 650-3327, e-mail [proberts@wce.wvu.edu](mailto:proberts@wce.wvu.edu). **Additional information may be obtained by visiting the secondary education department Web site at <http://www.wce.wvu.edu/sec/>.** Written inquiries may be addressed to the Woodring College of Education, Admissions Office, MS-9090, Miller Hall 206E, Western Washington University, Bellingham, WA 98225-9090.

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 [gradtemp@shuttle.admcs.wvu.edu](mailto:gradtemp@shuttle.admcs.wvu.edu). Written inquiries may be addressed to the Graduate School, Old Main 430, Western Washington University, Bellingham, WA 98225-9037.

### SECONDARY EDUCATION FACULTY

LEE A. DALLAS (1968) Chair and Associate Professor. AB, Gettysburg College; MEd, EdD, Temple University.  
 LAURA COLLINS (1996) Visiting Assistant Professor. BSE, MEd, PhD, University of Nebraska, Lincoln.  
 ANGELA HARWOOD (1997) Assistant Professor. BA, University of Utah; MA, PhD, Emory University.  
 ROBERT KEIPER (1990) Associate Professor. BA, Kearney State College; MA, EdD, University of Northern Colorado.  
 TIMOTHY KEIPER (1997) Assistant Professor. BA, University of Northern Colorado; MA, EdS, PhD, University of Missouri, Columbia.  
 BRUCE LARSON (1996) Assistant Professor. BAE, Pacific Lutheran University; MEd, PhD, University of Washington.  
 ROBERT H. PINNEY (1971) Associate Professor. BA, University of Washington; EdD, Stanford University.

CHRISTINE SCHAEFER (1996) Affiliated Teaching Faculty. BA, Whitman College; MEd, PhD, University of Washington.  
 RAY WOLPOW (1994) Associate Professor. BA, Wagner College; MA, Columbia University; PhD, Pennsylvania State University.

### Secondary Education Certification Programs

The Secondary Education faculty offer two programs which lead to teacher certification by the State of Washington and one graduate degree program for certified teachers.

- 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 grades 4-12 or K-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 of Education Degree with Initial Certification
  - The "certification" track 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.
- Master of Education Degree for Certified Teachers
  - Certified teachers interested in obtaining a Master's in Education degree may focus on one of several graduate program tracks. These tracks are described in more detail in the graduate section of the catalog.

### CERTIFICATION

A *certificate* represents a license to teach and is issued by the Office of the Superintendent of Public Instruction upon the recommendation of an institution of higher education. The secondary education department recommends for "initial certification" students who have satisfactorily completed the secondary certification program. The recommendation for the initial certificate must be accompanied by a recommendation from an academic program for a *teaching endorsement*.

### ENDORSEMENTS

An *endorsement* identifies the subject matter a teacher is authorized by the state to teach. All secondary education students are required to complete an endorsable major which has been approved by the state certification office. Secondary teachers are permitted to teach, in grades 4 through 12, only those subjects for which they have endorsements. Students completing a major in art, foreign language, music, physical education or special education will receive a K-12 endorsement. One endorsement is required for initial certification; two endorsements are required for continuing certification.

At the time this catalog was printed, the Board of Education had approved changes in the number and configuration of teaching endorsements, endorsement requirements, and certificates. Students who enter the program prior to August 31, 2000, and complete

endorsement and certification requirement prior to August 31, 2003, may choose to follow old endorsement guidelines. Once new endorsement programs are in place, students are encouraged to consider new options. A list of new state-approved endorsements is available on the Secondary Education Web site. To determine whether a specific new endorsement is available and recommended, contact the academic department.

### 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 adviser early in their program.

Western Washington University academic departments offer the following majors which have been approved by the Office of the Superintendent of Public Instruction and lead to a recommendation by that department for a teaching endorsement:

- Anthropology/Social Studies
- Art
- Biology
- Biology/Chemistry
- Chemistry
- Chemistry/Mathematics
- Chemistry/Physics
- Communication
- Communication/English
- Computer Science
- Drama (see Theatre Arts)
- Earth Science
- Economics/Social Studies
- English
- English/Theatre (leads to endorsements in English and drama)
- English/Communication (endorsements in English and speech)
- Foreign Language
- General Science
- Geography/Social Studies
- History/Social Studies
- Mathematics
- Music Education
- Physical Education (Health and Fitness)
- Physics
- Physics/Mathematics
- Political Science/Social Studies
- Social Studies (student designed)
- Sociology/Social Studies
- Student/Faculty-Designed majors
- Technology Education

### ACADEMIC MAJOR METHODS COURSES

Listed below are the required academic major methods courses for each endorsable major. Secondary/K-12

students are required to complete the academic methods courses associated with their major.

#### Art

- 280 Introduction to Art Education (2)
- 381 Theories of Art Education (3)
- 382 Teaching Strategies and Resources ((3)

#### Communications

- 455 Teaching Speech in the Senior High School (3)

#### Engineering Technology

- 493 Technology Education Methods (3)
- 494 Technology Education Curricular Approaches (3)

#### English

- 443 Teaching Literature and Composition in the Secondary Schools I (4)
- 444 Teaching Literature and Composition in the Secondary Schools II (4)

#### Health

- 450 Methods and Materials in Health Education (4)

#### Mathematics

- 483 Methods of Teaching Secondary Mathematics

#### Modern and Classical Languages

- 410 Applied Linguistics (4)
- 420 Methods and Materials for Teaching Foreign Languages (4)
- 430 Teaching Practicum at the Elementary Level (3)

#### Music

- 362 Elementary Music Education (3)
- 363 Foundation and Principles of Music Education (3)
- 461 Elementary Music Education Methods II (3)
- 462 Secondary School Music Administration (2)
- 463 Secondary Choral Music Education (2)
- 464 Secondary School Instrumental Music Education (2)

#### Physical Education

- 320 Block I: Elementary Physical Education (5)
- 330 Block II: Elementary Physical Education (5)
- 320p Elementary Physical Education Practicum (3)
- 420 Block III: Secondary Physical Education (5)
- 420p Middle School Physical Education Practicum (2)
- 430 Block IV: Secondary Physical Education (5)
- 430p Senior High School Physical Education Practicum (2)

#### Science Education (includes majors in biology, chemistry, geology, physics, general science)

- 491 Methods in Secondary Education for Science Teachers (5)
- 492 Teaching Science for the Secondary School (4)

#### Social Studies (includes majors in anthropology, economics, geography, history, political science, sociology)

- 426 Social Studies for the Secondary School (4)

#### Theatre (Drama)

- 453 Secondary Drama: Methods and Curriculum (3)

### Supporting Endorsements

A *supporting endorsement* can only be obtained by an individual who has already received a *primary endorsement*. Supporting endorsements are offered by individual departments or through a direct application to the Office of the Superintendent of Public Instruction. Direct application for a *supporting endorsement* may be made at the time the application for the *primary endorsement* is submitted.

All Washington teachers are now required to obtain a continuing/professional teaching certificate within the first five to seven years of receiving their initial teaching certificate. A second endorsement is a requirement of the continuing/professional certificate.

### REQUIREMENTS FOR ALL PROGRAMS

- ❑ Admitted students must complete a training session addressing sexual harassment prevention education. This session will be provided by WWU's Center for Equal Opportunity.
- ❑ Admitted students are required by state law to be fingerprinted by the Washington State Patrol.
- ❑ Secondary certification requires a subject matter *endorsement* earned by completing an academic major in a subject normally taught in the public schools.

### GENERIC PROGRAM STANDARDS

- ❑ Students must maintain at least a 2.75 quarterly GPA following the quarter they are notified of admission to Secondary Education (graduate students a 3.0 GPA). 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 and that they must contact the secondary education departmental office.
- ❑ Students must successfully complete a minimum of one certification course each calendar year.
- ❑ Students must 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 their 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 532 for graduate students) course prior to the internship and will be made available to the student's cooperating teacher.
- ❑ Students must complete a set of activities in the Center for Educational Pluralism, located in Miller Hall 250, prior to applying for the internship. Students may take Anth 484 or EEd 464 as alternatives.
- ❑ 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 standards is necessary before beginning the internship. Students who, in the professional judgment of the faculty, fail to meet any of

the above standards may be dropped from the certification program.

## UNDERGRADUATE AND POST-BACCALAUREATE PROGRAMS

### TIME LIMITS

While it is possible, in some majors, to earn a bachelor's degree and initial teaching certificate in four academic years, most students require closer to five years. Students usually take *certification courses* while completing their *academic major* during their junior and senior years. Students who apply to the undergraduate certification program as juniors (i.e., many transfer students) should have satisfied all of the General University Requirements (preferably have received an AA degree) and should have completed some course work toward their academic major.

Students in the post-baccalaureate program usually complete the certification sequence in the three academic quarters plus a one semester internship. Applicants to the post-baccalaureate program who have an endorsable major and a 3.0 GPA are strongly recommended to apply, instead, to the Masters/Certification program outlined below.

### ADMISSION REQUIREMENTS

- ❑ Credits
  - Completion of at least 75 college quarter hour credits
  - Post-baccalaureate program requires a baccalaureate degree
- ❑ Grade Point Average
  - A 2.75 cumulative grade point average (GPA) based on the student's most recently completed 45 quarter credit hours
- ❑ Entrance Tests
  - Minimum scores are established annually by the state and are required by state law for admission to teacher education programs; Washington Pre-College Test (WPCT), or the Scholastic Aptitude Test (SAT) or the American College Test (ACT). A student who does not have minimum scores may arrange to take the TETEP through the Testing Center on campus.
  - Post-Baccalaureate program does not require test scores.
- ❑ 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.
- ❑ Student conduct
  - The *Student Conduct Requirements and Agreement* form must be completed as part of the application for admission to the College of Education.
- ❑ In-School Observation
  - Five full days of classroom observation in an accredited school are **recommended** for admission to the Secondary Education program. Students should request a *Five-Day Observation Packet* from the Admissions Office in Miller Hall 206E prior to participating in this activity.

As part of the application for certification, candidates will be required to answer several questions dealing with

sexual offenses, drug and alcohol offenses, and arrest records. Applicants are required by state law to be fingerprinted by the Washington State Patrol. The State Patrol charges a fee for this service. Students with prior arrest records must interview with the college certification officer prior to admission. **No certification student may participate in any university-sponsored activity in the public schools until a state patrol clearance has been received.**

### ADMISSIONS PROCEDURE

Students must be admitted to Western Washington University in order to be considered for admission to the Department of Secondary Education. Applications for admission to Western may be obtained from the Admissions Office, Old Main 200, MS-9009, Western Washington University, Bellingham, WA 98225-9009. Applications for the Department of Secondary Education may be obtained from the Woodring College Admissions Office, Miller Hall 206, Western Washington University, Bellingham, WA 98225. Post-baccalaureate students **must** apply simultaneously to Western Washington University and the Department of Secondary Education; transfer students **may** apply for simultaneous admission. Post-baccalaureate students should consult the WWU Office of Admissions about deadlines, as they are slightly different than Woodring deadline dates.

Completed applications, required transcripts and documentation are required by the following dates:

- April 30 for admission fall quarter
- October 31 for admission winter quarter
- January 31 for admission spring quarter

### ORIENTATION

Newly admitted Secondary Education certification students are required to attend an orientation meeting prior to beginning classes in their first quarter.

### CERTIFICATION PROGRAM

Course work: 41 credits

- Psych 351 Psychology of Human Learning (4)
- Psych 353 Adolescent Psychology (4)
- EdF 310 The Teacher and the Social Order (4)
- EdF 411 Foundations of Education (4)
- SpEd 363b Secondary Students with Special Needs (3)
- HEd 456 Abuse Prevention for Secondary Teachers (1) or
- HEd 455 Health Education Grades K-6 (alt. For K-12 students)
- IT 444 Classroom Use of Instructional Technology (3)
- Sec 410 Dynamics of Teaching (4)
- Sec 425 Developmental Reading (2)
- Sec 431 Instruction in Secondary Schools — Methods I (4)
- Sec 431a Middle Level Practicum (2)
- Sec 432 Instruction in Secondary Schools — Methods II (4)
- Sec 432a Secondary School Practicum (1)
- Sec 433 Peer Teaching Laboratory (1)

See *Academic Major Methods* courses in this section.

Internship: 24 credits

- Sec 495 (see *Internships* below)

**NOTE:** When students complete the professional preparation program, the dean of Woodring College of Education is required to forward an affidavit to the Office of the Superintendent of Public Instruction affirming that faculty within the College “have no knowledge of any relevant information related to the applicant’s character or fitness that would adversely affect the applicant’s ability to serve in a certified role.”

### MIDDLE SCHOOL EMPHASIS

An emphasis on middle schools is offered as a part of either the Elementary or Secondary certification programs. This set of courses leads to documentation from Woodring that the student has studied middle level issues.

- Sec 450 Introduction to Middle Schools
- Sec 451 Curriculum and Instruction in Middle Schools (replaces 431)
- Sec 451a Intensive Middle School Practicum (replaces 431a)

### MASTER’S DEGREE WITH CERTIFICATION PROGRAM

The Secondary Education department offers a Masters/Certification 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 masters. The graduate program adviser, 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 initial teaching certificate.

### TIME LIMITS

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 approximately two years.

### 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
- Entrance Tests
  - Minimum test scores on the GRE or the MAT. Test scores are established by the department: GRE General Test with combined total score of 1,500; MAT score of 45 (GRE preferred)
- Letters of Recommendation

- Three letters of reference from persons able to assess the applicant's academic or professional competence
- 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
- Written statement of professional/career goals which includes highlights of experience working with adolescents, as such will be given consideration in the selection process.
- Student Conduct
  - The *Student Conduct Requirements and Agreement* form must be completed and submitted with the supplemental Woodring College application.
- In-School Observation
  - Five full days of classroom observation in an accredited school are **recommended**. Students should request a Five-Day Observation Packet from the Woodring Admissions Office in Miller Hall 206E prior to participating in this activity

As part of the application for certification, candidates will be required to answer several questions dealing with sexual offenses, drug and alcohol offenses, and arrest records. Applicants are required by state law to be fingerprinted by the Washington State Patrol. The state patrol charges a fee for this service. Students with prior arrest records must interview with the college certification officer prior to admission. **No certification student may participate in any university-sponsored activity in the public schools until the state patrol clearance has been received.**

When students complete the professional preparation program, the dean of Woodring College of Education is required to forward an affidavit to the Office of the Superintendent of Public Instruction affirming that faculty within the college "have no knowledge of any relevant information related to the applicant's character or fitness that would adversely affect the applicant's ability to serve in a certificated role.

## ADMISSIONS PROCEDURES

Students who wish to pursue a Master of Education degree in Secondary Education and 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 obtain an application for admission by writing to: Graduate School Admissions, Old Main 430, MS-9037, Western Washington University, Bellingham, WA 98225. The deadlines for each respective quarter are as follows:

- April 1 — for admission fall quarter
- October 1 — for admission winter quarter
- January 15 — for admission spring quarter
- March 1 — for admission to the *Seattle program* summer quarter only

## Master's/Certification Program

- Foundations (12 cr)
  - Edu 501 Educational Research (4)

- EdF 512 Educational Philosophy (4)
- EdF 513 Psychology and Sociology of Education (4)
- Master's Requirements (16 cr)
  - Sec 531 Teaching Adolescents (4)
  - Sec 532 Instructional Design in Secondary Schools (4)
  - Sec 533 Curriculum in the Secondary Schools (4)
  - Sec 691 Research Seminar (1-6)
- Master's Electives Under Advisement (20 cr)
  - Sec 410 Dynamics of Teaching (4)
  - Sec 525 Content Reading, Writing and Communication (4)
  - IT 544 Instructional Technology and Education (4) *or* IT 444 Classroom Use of Instructional Technology (3)
  - SpEd 562b Learning Problems (4)
  - Sec 490 Teaching Laboratory (4)
  - Sec 534 Discipline, Management and Motivation (4)
- Certification Courses (8-9 cr)
  - Sec 431a Middle School Practicum (2)
  - Sec 432a High School Practicum (1)
  - Psych 351 Psychology of Human Learning (4)
  - HEd 456 Abuse Prevention for Secondary Teachers (1) *or* HEd 455 Health Education K-6 (2) (alternate for K-12 students)
- Internship (24 cr)
  - Sec 595 Graduate Internship (24) (See Internships)

## ACADEMIC MAJOR

Many Western Washington University academic departments have majors which have been approved by the Office of the Superintendent of Public Instruction and lead to a recommendation by that department for a teaching endorsement (see list). Graduate students must see an academic adviser and obtain written clearance of endorsement requirements.

## INTERNSHIPS

All secondary internships are a **semester** in length and require students to teach under the direct supervision of a certified teacher in a school setting. While sequences of activities differ within different placements, generally speaking, interns spend time early in the semester being acclimated to the school, students and affiliated clinical faculty (cooperating teacher), and begin teaching by assuming responsibility for one class per day for a period of time and gradually work toward assuming responsibility for teaching four to five classes per day for the final eight to ten weeks of the semester.

Teaching internships will begin upon completion of all certification course work and upon a recommendation of the secondary faculty. The secondary faculty review the list of interns for the forthcoming semester internship and review the portfolios of any students whom they feel may not be competent to student teach.

Recommendation by the secondary faculty is based on an evaluation of the student's competence:

- in written communication.
- in verbal communication.
- in presentation skills.
- in working with students from racial and ethnic populations other than his/her own, and with special needs students.

## SECONDARY EDUCATION

- as measured by the academic requirements of the program.
- as measured by the student's portfolio.

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.

### APPLICATION FOR INTERNSHIP

The Office of Field Experiences is a program support area of the College of Education which seeks placements for prospective interns. It does not guarantee placements in the semester for which the request is made. Placement is contingent on:

- availability of placements in specific subjects, grade levels, and specific geographic area. Students may request placement in any of several geographic areas. Placement locations are listed on the map in Miller Hall 206. The Office of Field Experiences reserves the authority to place students anywhere in the Woodring service area.
- acceptance by K-12 school personnel following a required interview with the certified teacher to whom a student has been assigned. A maximum of three interviews for placement are arranged by the Office of Field Experiences.

If a student has been required to withdraw from the internship, any subsequent placement will be based on the results of a case conference and a departmental recommendation.

The internship requires a time commitment of seven hours per school day, plus preparation time and attendance at scheduled seminars. Students may not register for other course work, hold jobs, or obligate themselves to time-demanding commitments without the approval of the chair of Secondary Education and the Office of Field Experiences.

Students **must** submit an application for an internship placement to the Office of Field Experiences, Miller Hall 206, in **January** of the year prior to registering for the course. (This early application date permits necessary projections related to placement sites and costs of supervision.) Applicants must have completed a credit evaluation with the Registrar's office and an application for certification. Students with **incomplete** course work or who fail to meet the qualifications of their programs are subject to denial of placement or withdrawal from the internship.

### COURSES IN SECONDARY EDUCATION

*Courses numbered X37; X97; 300, 400; 417 445 are described on page 31 of this catalog.*

#### 410 DYNAMICS OF TEACHING (4)

Prereq: admission to Woodring College of Education. Required of all secondary/K-12 students the first quarter in the program. Methods and means of communicating through printed text, other visuals, vocals and verbals. Topics and activities include teacher as actor, study skills, meanings of literacy and a required secondary practicum experience.

#### 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 (2)

Prereq: Sec 410. Developmental reading, writing and learning skills and strategies specific to content area instruction in the secondary school. Techniques for assessing reading and writing levels, making appropriate referrals and, if necessary, prescribing appropriate remedial action.

#### 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 preservice 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, EdF 310; Psych 351; Psych 353 or concurrent; coreq: Sec 431a. Secondary curricula, lesson and unit planning, instructional strategies.

#### 431a MIDDLE LEVEL PRACTICUM (2)

Coreq: Sec 431 or 532. Assist in a local middle school up to 5 hours per week. Various teacher roles are experienced. One-hour seminar per week. S/U grading.

#### 432 INSTRUCTION IN SECONDARY SCHOOLS — METHODS II (4)

Prereq: Sec 431. Coreq: Sec 432a. Management, motivation, discipline, assessment and evaluation strategies. Issues related to school law; teachers' rights and responsibilities.

#### 432a SECONDARY SCHOOL PRACTICUM (1)

Coreq: Sec 432 or 533. Students assist in a local high school up to 5 hours per week. Various teacher roles are experienced. S/U grading.

#### 433 PEER TEACHING LABORATORY (1)

Prereq: Sec 431; coreq: Sec 432. Videotaped lesson presentations; peer, instructor, and self-evaluations. 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 (4)

Prereq: admission to the Woodring College of Education; EdF 310, Psych 351 and either Psych 316, 352 or 353 (also Sec 410 for secondary students). Interdisciplinary middle school curricula; team planning strategies; thematic unit and lesson development; instructional and skill building strategies.

#### 451a 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 adviser. Diagnosis of students, lesson preparation, video-taped 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. Repeatable to 24 credits. S/U grading.

**Graduate Courses**

*Courses numbered 500, 517, 545, 597 are described on page 31 of this catalog.*

*Admission to Graduate School or special permission 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 current issues in contemporary education.

**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 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.

**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/Certification program or permission of graduate adviser. Techniques for assessing and teaching the Essential Academic Learnings in reading, writing and communication specific to content area instruction in the secondary school. Knowledge base for making appropriate referrals and, when necessary, prescribing remedial action.

**530 TEACHER AS COMMUNICATOR (4)**

Prereq: admission to graduate program or permission of program

adviser. Methods and means of becoming a more effective communicator. Examination and practice of communications skills: speaking, writing, reading and listening as a part of the teaching/learning process. Review of current research in area of teacher communication practices.

**531 TEACHING ADOLESCENTS (4)**

Prereq: permission of program adviser. Advanced study of adolescents in educational settings. Emphasis on recent research, including management and discipline models and development of an individual management plan. Includes volunteer component.

**532 CURRICULUM IN THE SECONDARY SCHOOLS (4)**

Coreq: Sec 431a. Planning and development of curriculum. Advanced study of curriculum design, instructional strategies, unit planning and lesson design. Emphasis on current studies and trends. Independent research.

**533 INSTRUCTIONAL DESIGN IN SECONDARY SCHOOLS (4)**

Prereq: Sec 532; coreq: Sec 432a. Design of effective lessons, study of alternative and authentic assessment. Student portfolio review, certification requirements, legal rights and responsibilities of the profession.

**534 DISCIPLINE, MANAGEMENT AND MOTIVATION IN THE SECONDARY SCHOOL (4)**

Prereq: admission to graduate school or permission of instructor. Current research on teacher effectiveness; systematic approaches, psychological bases, legal issues related to the creation of an effective, personally rewarding, learning environment in the middle and high school classroom.

**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.

**580 SEMINAR IN SECONDARY CURRICULUM (4)**

Prereq: admission to graduate school or permission of program adviser. 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. Repeatable to a maximum of 24 credits. S/U grading.

**598 ADVANCED PRACTICUM: SECONDARY EDUCATION (2-12)**

Prereq: permission of graduate adviser. 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.

**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. S/U grading.

**691 RESEARCH SEMINAR (1-6)**

Prereq: approval of the student's graduate committee or program adviser. Graduate research under the direction of a program adviser/committee. Repeatable to a maximum of 6 credits. S/U grading.

## SPECIAL EDUCATION

The Department of Special Education offers four professional education programs which lead to a recommendation to the Office of the Superintendent of Public Instruction for teacher certification in the State of Washington. The emphasis assigned to each of these programs is determined by the faculty with consideration of professional standards and individual student needs.

Programs which address initial teacher certification require students to complete an academic major, the teacher certification sequence and an internship. Special Education offers two such academic majors. 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).

### Information

Individuals interested in special education certification should make initial inquiries through the Woodring College of Education Admissions Office, Miller Hall 206, phone (360) 650-3378, e-mail robinson@wce.wvu.edu. Applicants who wish to speak with a faculty adviser may request an appointment through the Department of Special Education office in Miller Hall 320, phone (360) 650-3330, e-mail pamh@wce.wvu.edu. Additional information may be obtained by visiting the Department of Special Education Web site at [www.wce.wvu.edu/sped](http://www.wce.wvu.edu/sped). Written inquiries may be addressed to the Woodring College of Education, Admissions Office, MS-9090, Miller Hall 206E, Western Washington University, Bellingham, WA 98225-9090.

Those persons interested in graduate programs in exceptional children should consult the Graduate School section of this catalog or contact the Graduate School directly, phone (360) 650-3170, e-mail [gradtemp@shuttle.admcs.wvu.edu](mailto:gradtemp@shuttle.admcs.wvu.edu). Written inquiries may be addressed to the Graduate School, Old Main 430, Western Washington University, Bellingham, WA 98225-9037.

### SPECIAL EDUCATION FACULTY

CHARLES ATKINSON (1976) Chair and Associate Professor. BAEd, MEd, Central Washington State College; EdD, Utah State University.  
 LAURENCE ANTIL (1997) Associate Professor. BS, MA, Fitchburg State College; MEd, Charles Stuart University; PhD, University of Washington.  
 DONALD B. CRAWFORD (1996) Visiting Assistant Professor. BA, Occidental College; PhD, University of Oregon.  
 SHEILA FOX (1977) Associate Professor and Assistant Dean. 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) Visiting Assistant Professor. BS, University of Pittsburgh; MEd, Arizona State University; PhD, University of Washington.  
 LAWRENCE W. MARRS (1984) Professor, Woodring College of Education. BS, MS, University of Utah; PhD, University of Texas.  
 KARNA L. NELSON (1987) Affiliated Teaching Faculty. BA, MA, Arizona State University.  
 VICTOR NOLET (1997) Associate Professor. BA, MEd, University of Maine; PhD, University of Oregon.

KAY PRICE (1984) Affiliated Teaching Faculty. BA, MA, Western Washington University.

KRISTINE A. SLENTZ (1989) Associate Professor. BA, State University of New York; MA, PhD, University of Oregon.

SARA WOOLVERTON (1995) Affiliated Teaching Faculty. BA, BAEd, Western Washington University; MA, PhD, University of Washington.

### MAJOR PROGRAMS

Students at Western Washington University may choose from four teacher preparation programs that result in an initial certification with an endorsement to teach special education.

- Early Childhood Special Education Major
  - Completion of this major and the required professional education courses result in a B.A. in Education with a teaching certificate and an endorsement in Early Childhood Special Education — Preschool through Grade 3 (P-3).
- Special Education K-12 Major
  - Completion of this major and the required professional education courses result in a B.A. in Education with a teaching certificate and an endorsement in Special Education Kindergarten through Grade 12 (K-12).
- Special Education K-12 Major and Elementary Education Endorsement
  - Completion of this major and the elementary professional courses results in a B.A. in Education with a teaching certificate and endorsements in Special Education K-12 and Elementary Education (K-8).
- Special Education K-12 Major and Secondary Education Endorsement
  - Completion of this major and the secondary professional education courses results in a B.A. in Education with a teaching certificate and endorsements in Special Education K-12 and Secondary Education (4-12) in one of the subject areas (i.e., science, math, social studies, etc.) taught in the secondary schools in the State of Washington. In most cases, this Secondary endorsement (4-12) will require a second academic major.

### CERTIFICATION

A *certificate* represents a license to teach and is issued by the Office of the Superintendent of Public Instruction upon the recommendation of an institution of higher education. The Department of Special Education recommends for *initial certification* students who have satisfactorily completed the Special Education major or the Early Childhood Special Education major and the accompanying professional education courses.

### ENDORSEMENTS

An *endorsement* identifies the subject matter a teacher is authorized by the state to teach. One endorsement is required for initial certification; two endorsements are required for continuing certification. Completion of one of the Special Education majors results in an endorsement to

teach either K-12 Special Education or P-3 Special Education.

At the time this catalog was printed, the Board of Education was considering changes in the number and configuration of teaching endorsements, endorsement requirements, and certificates. State requirements for teacher certification at the time of the 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.

## REQUIREMENTS FOR ALL PROGRAMS

- Admitted students will be sent instructions regarding procedures for fingerprinting.
- Admitted students must complete a one-hour training session addressing Sexual Harassment Prevention Education. This session will be provided by WWU's Center for Equal Opportunity.

## GENERIC PROGRAM STANDARDS

- Students must maintain at least a 2.75 quarterly GPA beginning the quarter they are notified of admission to Special Education (graduate students a 3.0 GPA). 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 and they must contact the Special Education office.
- Students must 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 their internship.
- Students must complete a set of readings and activities in the Center for Educational Pluralism, located in Miller Hall 250, prior to applying for the final internship.
- Students must complete all certification and endorsement course work prior to the internship.

Students who fail to meet any of the above standards may be dropped from the certification program.

## ADMISSION AND CERTIFICATION REQUIREMENTS

Students must be admitted to Western Washington University in order to be considered for admittance to the Woodring College of Education. Post-baccalaureate students must apply simultaneously to Western Washington University and the Woodring College of Education; transfer students *may* apply for simultaneous admission. Contact the WWU Admissions Office, (360) 650-3440, for an application packet.

The requirements listed below are minimum application criteria. Meeting the following requirements makes the applicant eligible for admissions consideration, but does not guarantee admission to the Woodring College of Education. All requirements must be met prior to the deadline date.

Students who meet all criteria are further evaluated to determine the most qualified applicants. Students applying for special education will be evaluated on the information

provided on the application form. **It is recommended that all students seek advisement from the Department of Special Education prior to submitting an application to best satisfy the selection criteria.**

- Credits
  - Completion of at least 45 college quarter hour credits
  - Post-baccalaureate program requires a baccalaureate degree
- Grade Point Average
  - A 2.75 cumulative grade point average (GPA) determined on the basis of the student's most recent 45 quarter hour credits
- Testing Requirement
  - Minimum scores are established annually by the state and are required by state law for admission to teacher education programs: Washington Pre-College Test (WPCT) or the Scholastic Aptitude Test (SAT) or the American College Test (ACT). A student who does not have minimum scores may arrange to take the TETEP through the Testing Center on campus.
  - Post-baccalaureate program does not require test scores
- 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.
- Speech Competency
  - Completion of an acceptable speech competency course, with a B- or higher.
- Mathematics Courses
  - Students are urged to complete Math 102, Intermediate Algebra, at WWU, or successfully complete the Algebra Placement Exam prior to admission. If Math 102 is not taken at WWU, the student must pass the Algebra Placement Exam.
- Student Conduct
  - The Student Conduct Requirements and Agreement form must be completed and submitted with the application for admission to the College of Education.
- Five Day Observation
  - Five full days of classroom observation in an accredited school are required for admission to the Special Education programs. Students should request a Five Day Observation Packet from the Admissions Office in Miller Hall 206E prior to participating in the activity.

The Washington Administrative Code, Section 180-75-082, requires applicants for teacher certification to give evidence of "good moral character and personal fitness." The application for admission requires candidates to answer several questions dealing with sexual offenses, drug and alcohol offenses, and arrest records. Applicants are required by state law to be fingerprinted by the Washington State Patrol and the FBI. There is a fee for this service. Students with prior arrest records must interview with the college certification officer prior to admission. **No certification student may participate in any university-sponsored activity in the public schools until a state patrol clearance has been received.**

## TIME LIMITS

Most students require three years to complete the Special Education major and teacher certification after completion

of all GUR requirements or an AA degree from a State of Washington community college. Western students who apply to Woodring College of Education should have satisfied most of the General University Requirements (GURs). Transfer students from a community college should have satisfied all of the GURs and preferably have received an AA degree.

### ADMISSIONS PROCEDURES

Western students obtain an application for admission from the Woodring College of Education Admissions Office, Miller Hall 206E, and submit the completed application, required transcripts and documentation by the due dates published by that office.

Transfer students who indicate an interest in education will be sent a Woodring College of Education application with the application for admission to WWU.

Newly admitted students (or those anticipating transfer) should attend the Western Washington University Academic Advisement sponsored sessions held at WWU and should see a Special Education adviser while on campus. Be sure to call ahead of time to schedule an appointment.

### ORIENTATION

Special education students are required to attend an orientation meeting prior to beginning classes in their first quarter.

### BACHELOR OF ARTS IN EDUCATION

#### *Major — Special Education*

47 credits

This major must be completed with one of the professional education programs outlined below:

- SpEd 360, 460, 462a, 462b, 463a, 463b, 463d, 465a, 465b, 465c, 465d, 466a, 468, 469a, 469b
- Three credits of electives by advisement

#### *K-12 Special Education Certificate*

When taken alone as an academic major, this program leads to a certificate to teach Special Education K-12. Graduates are not certified to teach in the regular education classroom. The major must be accompanied by a 30-credit concentration in a liberal arts area. See an adviser for additional information.

#### *Special Education Major*

47 credits

#### *Professional Studies Core*

21-22 credits

- Psychological Foundations
  - Psych 351, 316 or 352
- Social Foundations/Philosophical
  - EdF 310
- Instructional Foundations
  - SpEd 320
  - SpEd 394a

- IT 444 (**Note:** IT 344 is a prerequisite)

#### *General Methods*

14 credits

- Math 381, 382
- EEd 424 or Eng 440
- HEd 455

#### *Liberal Arts Concentration*

- 30 credits (see approved list on current Special Education program sheet)

#### *Special Education Internship*

16 credits (one quarter)

- SpEd 498b or 498c

#### *Special Education with Elementary Certificate*

Students wishing to complete the Elementary endorsement (K-8) with the Special Education major and certificate (K-12) also must complete a 30-credit concentration in a liberal arts area and must complete the following professional course work:

#### *Special Education Major (K-12)*

47 credits

#### *Professional Studies Core*

21-22 credits

- Psychological Foundations
  - Psych 351, 316 or 352
- Social Foundations/Philosophical
  - EdF 310
- Instructional Foundations
  - SpEd 320
  - SpEd 394a
  - IT 444 (**Note:** IT 344 is a prerequisite)

#### *Elementary Program (K-8)*

32 credits

- HEd 455
- SciEd 390, 391
- Math 381, 382
- Soc St 425
- Eng 440 or EEd 424
- Music 361, Art 380, PE 306

#### *Liberal Arts Concentration*

- 30 credits (see approved list on current Special Education program sheet)

#### *Internship (two quarters)*

- 16 credits of EEd 494 (one quarter)
- 16 credits of SpEd 498b (one quarter)

#### *Special Education with Secondary Certificate*

This major leads to a certificate and endorsements to teach Special Education (K-12) and regular Secondary (4-12) programs. It must be accompanied by an approved major for Secondary education candidates.

*Major — Special Education*

47 credits

*Professional Studies Core*

19-20 credits

- Psychological Foundations
  - Psych 351, 316 or 353
- Social Foundations/Philosophical
  - EdF 310
- Instructional Foundations
  - IT 444 (**Note:** IT 344 is a prerequisite)
  - Sec 410

*Secondary Program*

10-12 credits

- Sec 425 or EEd 484
- Sec 431, 432

*Combined Internship (one semester)*

24 credits

- Sec 495/SpEd 498c

*Major — Early Childhood Special Education*

92-98 credits (additional 20 credits of practicum/internship for teacher certification)

This major is designed to prepare personnel to work with children ages birth to eight years identified as at-risk for developmental delay and disability, and their families.

The major combines studies in Early Childhood with Special Education course work. Teacher certification candidates must complete a public school practicum, a student teaching internship and select electives to complete a 30-credit liberal arts concentration.

*Professional Studies Core*

28-30 credits

- Psychological Foundations
  - Psych 351, 352 or 316
- Social Foundations/Philosophical
  - EdF 310
- Instructional Foundations
  - SpEd 320
  - SpEd 394a
  - Math 381, 382
  - IT 444 (**Note:** IT 344 is a prerequisite)
  - EEd 435 or HEd 455

*Early Childhood Studies*

28-30 credits

- EEd 390, 430, 431, 432, 433, SpEd 467a
- Soc 260 or HS 335
- PE 485c or 496
- SPA 351 or 354

*Special Education Studies*

36-38 credits

- SpEd 360, 460, 462a, 462b, 465a, 465b, 466a, 467b, 468, 469a, 469b

*Electives*

- Electives under advisement from psychology, sociology, anthropology, speech pathology/audiology, special education, and elementary education

*Teacher certification**Public School Practicum*

4 credits

- SpEd 465c and 465d

*Internship*

16 credits

- SpEd 498a

**INTERNSHIP**

An important experience for teaching certification candidates is the internship. Students must apply for their internship assignment in January of the year prior to the internship. They are expected to have completed a credit evaluation, a multicultural competency requirement, the documentation of their ability to work effectively with students from racial and ethnic populations other than their own, the sexual harassment prevention education requirement, certification paperwork and a current Washington State Patrol/FBI fingerprint check before the Office of Field Experiences will seek an internship placement. Anyone who has been out of school for a quarter or more must meet the deadline for filing a returning student application. Students with incomplete course work or who fail to meet qualifications are subject to withdrawal from the internship.

Special Education and Early Childhood Special Education majors are required to complete one quarter of internship for 16 credits. Students enroll in either SpEd 498a, 498b or 498c.

Those students combining one of the Special Education majors with endorsements in Elementary Education (K-8) or a Secondary Education subject area (4-12) must also complete an internship in a general elementary or secondary education classroom and should refer to the Internship section of this catalog under the Department of Elementary Education or Department of Secondary Education.

Students should note that the one quarter Elementary internship is completed prior to the one quarter Special Education internship. The Secondary internship is for one semester, and is normally completed as a split assignment with a portion of the student's day in the Secondary subject area classroom, and a portion of the day in the Special Education setting.

During the internship, students teach under the direct supervision of a certified teacher in a school setting. They have intensive practice in integrating methods, content area knowledge and classroom organizational strategies. For the final portion of the internship, students take full responsibility for their classrooms.

The Office of Field Experiences is the service agency of the College of Education which seeks placements for prospective interns. It does not guarantee placements. Placement in a school is contingent on:

- Meeting all requirements (satisfactory academic work, education program course work, and practica and faculty recommendation)
- Availability of placements in specific grade/subject areas
- Acceptance by K-12 school personnel

Students are required to interview with the public school teacher to whom they have been assigned for final placement approval.

A maximum of three initial interviews for placement are arranged by the Office of Field Experiences.

Any subsequent placement after a voluntary or non-voluntary 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 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 the Office of Field Experiences.

Placement locations are listed on the map available in the Office of Field Experiences. The Office of Field Experiences 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 206D.

### COURSES IN SPECIAL EDUCATION

*Courses numbered X37; X97; 300, 400; 417 445 are described on page 31 of this catalog.*

#### **320 EFFECTIVE TEACHING (3)**

Prereq: admission to the Woodring College of Education or permission of the instructor and concurrent enrollment in SpEd 394a. Teacher behaviors positively affecting student achievement.

#### **360 INTRODUCTION TO EXCEPTIONAL CHILDREN (3)**

An introduction to the categories of exceptionality and the rules and regulations concerning provision of special education and related services. Includes both Washington state and federal legislation pertaining to special education.

#### **363a ELEMENTARY STUDENTS WITH SPECIAL NEEDS (3)**

Prereq: admission to the Woodring College of Education. Coreq: ELed 320, 429, 394a and IT 444a. Introduction to the characteristics and needs of elementary students with special needs; pertinent federal and state laws; curricular and behavior management adaptations in the regular classroom; assessment of learning problems; instructional techniques; behavior management strategies.

#### **363b SECONDARY STUDENTS WITH SPECIAL NEEDS (3)**

Pre- or coreq: admission to the Woodring College of Education, Sec 431, 431a. 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.

#### **394a SCHOOL PRACTICUM (1-4)**

Prereq: admission to Woodring College of Education; SpEd 320, SpEd 460 concurrent. In-school observation and participation focusing on effective teaching. Required for recommendation to student teach. S/U grading.

#### **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.

#### **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 with no maximum. 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.

#### **460 BEHAVIOR MANAGEMENT (3)**

Prereq: SpEd 360 or permission of instructor. Behavior management strategies with an emphasis on applied behavior analysis, cognitive strategies and teacher behaviors that enhance pupil motivation.

#### **461 EDUCATION FOR THE GIFTED AND TALENTED (4)**

Prereq: SpEd 360 or permission of instructor. Exploration of characteristics, identification and special needs of the gifted and talented. In-depth analysis of the application of major theoretical models to the development of programs and curricula for the gifted and talented.

#### **462a READING INSTRUCTION FOR STUDENTS WITH SPECIAL NEEDS (4)**

Prereq: SpEd 466a, 469a. Coreq: SpEd 465b. Basic reading instruction for K-12 students in inclusive classrooms; emergent literacy, instructional methods, curriculum and materials; accommodating for individual differences.

#### **462b CURRICULUM AND METHODS IN SPECIAL EDUCATION (4)**

Prereq: SpEd 469a, 462a. Coreq: SpEd 465c. Curriculum selection and adaptation of methods and materials for students who receive special education services. Includes direct instruction, survey and adaptation of instructional materials, task analysis, unit objectives, peer teaching and transition services.

#### **463a INTERVENTIONS FOR LEARNING PROBLEMS (3)**

Prereq: SpEd 320, 360. Learning characteristics of students with academic problems. Focuses on attention, motivation and self-monitoring. Emphasis on teaching the task-related skills and strategies needed for students to learn efficiently and effectively.

#### **463b TEACHING SOCIAL SKILLS (3)**

Prereq: SpEd 460, 466a, 469a. Assessment, methods and curriculum for children with emotional/behavioral difficulties. Emphasis on teaching social skills.

#### **463c STUDENTS AT RISK (3)**

Prereq: admission to 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.

#### **463d LOW INCIDENCE DISABILITIES (4)**

Prereq: SpEd 320, 360, 466a. History, philosophy, characteristics and services; empirically based design of instruction and monitoring of functional curricula for people who need some level of continual support.

#### **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.

#### **465a SPECIAL EDUCATION PRACTICUM I (2)**

Special education majors only. Practicum experience in school/community settings. Designed to provide opportunities for students to observe/demonstrate effective educational practices. S/U grading.

#### **465b SPECIAL EDUCATION PRACTICUM II (2)**

Special education majors only. Practicum experience in school/community settings. Designed to provide opportunities for students to observe/demonstrate effective educational practices.

#### **465c SPECIAL EDUCATION PRACTICUM III (2)**

Special education majors only. Practicum experience in school/community settings. Designed to provide opportunities for students to observe/demonstrate effective educational practices.

#### **465d SPECIAL EDUCATION PRACTICUM IV (2)**

Special education majors only. Practicum experience in school/community settings. Designed to provide opportunities for students to observe/demonstrate effective educational practices.

**466a ASSESSMENT, EVALUATION AND IEP (4)**

Prereq: SpEd 360, 320, 469a. 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.

**467a TYPICAL AND ATYPICAL EARLY DEVELOPMENT (3)**

Prereq: SpEd 360 or permission of instructor. Typical sequences of development from birth to age eight, and educational implications of atypical patterns.

**467b INTRODUCTION TO EARLY CHILDHOOD SPECIAL EDUCATION (4)**

Prereq: SpEd 360 or EEd 431. Addresses Early Childhood Special Education as a unique specialty area with foundations in both Early Childhood and Special Education traditions. Philosophy, intervention strategies, populations, service delivery approaches and legal issues are presented as a comprehensive overview of the field.

**468 FAMILIES, PROFESSIONALS AND EXCEPTIONAL CHILDREN (3)**

Prereq: SpEd 360. Techniques for communicating with and counseling disabled and gifted children and their parents, and working with interdisciplinary teams.

**469a CURRICULUM-BASED EVALUATION (3)**

Prereq: SpEd 360, 320. Coreq: SpEd 466a. Curriculum-based procedures for formative evaluation. Determining present levels of educational performance, developing associated goals and objectives and monitoring progress.

**469b 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.

**490 TEACHING LABORATORY (4)**

Prereq: permission of program adviser. Diagnosis of students, lesson preparation, video-taped 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.

**498a 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.

**498b 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.

**498c 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 31 of this catalog.

Admission to Graduate School or special permission required. See the Graduate School section of this catalog.

**518 CURRENT ISSUES IN EDUCATION: SPECIAL EDUCATION (1-5)**

Prereq: graduate status or permission. Examination and discussion of current issues in special education.

**561 ETIOLOGY AND LEGAL FOUNDATIONS OF SPECIAL EDUCATION (3)**

Prereq: admission to graduate program or permission. Etiology of disabilities, service models and the laws that influence service and

funding. Introduces foundations of assessment and evaluation, a theme developed later in the graduate sequence in the context of learning and social behavior development.

**562a LEARNING PROBLEMS (4)**

Prereq: admission to graduate program and certification in special education or successful completion of special education internship. Information processing and learning theory as it applies to disabled learners. Discusses assessment and evaluation of cognitive strategies and academic skill development. Designed for students who have a teaching certificate or endorsement in special education.

**562b LEARNING PROBLEMS (4)**

Prereq: admission to graduate program or permission. 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.

**563 CURRICULUM AND METHODS IN SPECIAL EDUCATION (3)**

Prereq: admission to graduate program and certification in special education or successful completion of special education internship. Models of curricular organization selection and adaptation of content to facilitate mainstreaming, instructional aids, including computers and adaptive equipment will also be discussed along with writing IEPs with computer assistance.

**564 SOCIAL SKILLS (4)**

Prereq: admission to graduate program or permission. Applied behavior analysis and cognitive intervention strategies for disabled children and high-risk children. Emphasis on functional assessment and evaluation of social skill development.

**565 COMMUNICATION AND COLLABORATION IN SPECIAL EDUCATION (4)**

Prereq: admission to graduate program or permission. 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 (3)**

Prereq: admission to graduate program and certification in special education or successful completion of special education internship. Intensive study of legal, intervention and ethical issues in special education.

**568 CURRICULUM-BASED EVALUATION AND DECISION MAKING (4)**

Prereq: admission to graduate school or permission. Functional 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.

**569a ISSUES IN INCLUSIVE EARLY EDUCATION (3)**

Prereq: admission to graduate school or permission. 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 TO 8 YEARS) (4)**

Prereq: admission to graduate school or permission. 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. 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.

## SPECIAL EDUCATION

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### **590 SEMINAR IN DEMONSTRATION TEACHING AND SUPERVISION (3)**

Prereq: EEd 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.

### **690 THESIS (1-9)**

Prereq: approval of the student's graduate committee. Research study under the direction of a faculty committee. S/U grading.

### **691 RESEARCH SEMINAR (1-6)**

Prereq: approval of the student's graduate committee or program adviser. Graduate research under the direction of a program adviser/committee. S/U grading. Repeatable to a maximum of 6 credits.

# EDUCATIONAL ADMINISTRATION

The Educational Administration program is designed to prepare elementary and secondary school teachers to assume the leadership role of principal or vice principal. Upon successful completion of the program, candidates are recommended for the master's degree and/or principal certification. The program emphasizes leadership and management related to school instruction, personnel, staff/community relations, financial and legal matters. The requirements for principal certification include a master's degree, Washington State teaching certificate and at least three years (540 days) of certificated teaching experience. Candidates are directed to the Graduate School section of this catalog for more information; the program area office is located in Miller Hall 204A, phone (360) 650-3708, e-mail mklein@wce.wvu.edu.

This program is also offered at the Seattle site. Because this program is self-sustaining (not funded by legislated appropriation and dependent upon student tuition revenue), the tuition rate will be different than for state-supported courses. Specific program, admissions and registration information is available at the extension site.

## EDUCATIONAL ADMINISTRATION FACULTY

MARVIN L. KLEIN (1978) Program Area Chair and Professor. BS, MS, Southern Illinois University; PhD, University of Wisconsin, Madison.  
 WARREN ALLER (1996) Lecturer. BS, University of Idaho; MEd, Western Washington University.  
 LAWRENCE W. MARRS (1984) Professor and Dean, Woodring College of Education. BS, MS, University of Utah; PhD, University of Texas.  
 LINDA ZURFLUH (1984) Professor. BA, MA, Pacific Lutheran University; EdD, University of Washington.

## DEGREES GRANTED

- Master of Education in School Administration (Elementary, Secondary, Instructional Technology)
  - Principal's (Initial or Continuing) Certificates
  - Certificate of Advanced Study (CAS)

**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

*Courses numbered X37; X97; 300, 400; 417, 445 are described on page 31 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.

### 240a-m PARAEDUCATORS IN EDUCATION (1-4)

Prereq: employment or anticipated employment as a paraeducator. Course work emphasizes the nature of the helping relationship: an overview of philosophical and theoretical issues which confront paraeducators; the development of specific job requirement skills. 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, etc., are included. Repeatable with no maximum. S/U grading.

## Graduate Courses

*Courses numbered 500; 517; 545; 597 are described on page 31 of this catalog.*

*Admission to Graduate School or special permission 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 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.

### 538a-d 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 responsibilities of persons serving as members of the leadership team in public schools.

### 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. Major administrative theories.

**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.

**546a-d 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.

**547a-d 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.

**556a-d 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).

**592a-c 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.

**594a,b,c 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 ADMINISTERING THE IMPROVEMENT OF CURRICULA (3)**

Prereq: MA or MEd and EEd 521 or equivalent. Systematic analyses of curricular offerings, development of guidelines for curriculum design and development of curricular screening devices.

**642 SEMINARS IN EDUCATIONAL MANAGEMENT — ADVANCED SYSTEMS THEORY: ADVANCED EDUCATIONAL SYSTEMS ANALYSIS (5)**

Prereq: master's degree and permission of instructor. Identification of high-priority needs within a school system and application of systems theory.

**643 SEMINARS IN EDUCATIONAL MANAGEMENT — ADVANCED SYSTEMS THEORY: EDUCATIONAL CHANGE — THEORY AND PRACTICE (5)**

Prereq: master's degree and EdAd 643. Analysis of appropriate strategies and tactics for effecting planned change in public schools and/or districts.

**644 SEMINARS IN EDUCATIONAL MANAGEMENT — ADVANCED SYSTEMS THEORY: MANAGEMENT BY OBJECTIVES — ACCOUNTABILITY (5)**

Prereq: master's degree and EdAd 644a. Establishment of management objectives at various levels (system-process, input, output, etc., for the express purpose of evaluating people and/or programs thus affecting accountability).

**646a-d 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.

**647a-d SEMINARS FOR SCHOOL PRINCIPALS (4 ea)**

Prereq: master's degree, applicant for a Washington State Principal'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. S/U grading.

**691 RESEARCH SEMINAR (1-6)**

Prereq: advancement to candidacy and approval of the student's graduate committee or program adviser. Research study under the direction of a faculty committee. Repeatable to a maximum of 6 credits. S/U grading.

**692a-c FIELD EXPERIENCE IN ADMINISTRATION FOR THE PRINCIPAL (2-6)**

Prereq: master's degree and written permission of instructor. Applicants for the Washington State Administrative Certificate. Repeatable with no maximum. S/U grading.

# EDUCATIONAL FOUNDATIONS

The Foundations program provides a sequence of transition courses between a student's general education at Western and the areas of professional specialization in the Woodring College of Education. Major purposes are: (1) to enhance a student's general education; (2) to synthesize and consolidate a student's general knowledge and focus it on the problems and challenges of the teaching profession; (3) to provide the necessary depth and breadth prerequisite to teaching in any of the several areas of specialization; and (4) to acquaint the student with the moral, ethical and political challenges faced by the profession. The program area office is located in Miller Hall 324.

## EDUCATIONAL FOUNDATIONS FACULTY

LORRAINE KASPRISIN (1979) Program Area Chair and Professor. BSEd, MA, The College of the City of New York; MPhil, PhD, Teachers College, Columbia University.

PAUL ENGLERBERG (1995) Lecturer. BA, University of California, Berkeley; MAT, University of New Hampshire; MA, Yale University; EdD, University of Massachusetts at Amherst.

LAWRENCE ESTRADA (1989) Adjunct Professor. BA, University of California at Santa Barbara; MA in Ed, Whittier College; PhD, University of California at Los Angeles.

ROBERT H. KIM (1971) Professor. BA, Hanguk University for Foreign Studies; BA, MA, EdD, George Peabody College.

WILLIAM H. LAY (1986) Lecturer. BA, University of Montana; MEd, Western Washington University.

SHELBY SHEPPARD (1997) Visiting Assistant Professor. MA, BGS, PhD, Simon Fraser University.

PHILIP B. VANDER VELDE (1967) Associate Professor. BA, Calvin College; MA, PhD, Michigan State University.

KATHRYN ROSS WAYNE (1997) Assistant Professor. BA, MFA, PhD, University of Oregon.

## COURSES IN EDUCATIONAL FOUNDATIONS

*Courses numbered X37; X97; 300, 400; 417, 445 are described on page 31 of this catalog.*

### 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.

### 310 THE 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.

### 311 GLOBAL ISSUES AND AMERICAN EDUCATION (4)

Examination of issues and problems facing mankind in a global village and of ways and means of coping with them in our world community through education.

### 391 HUMAN RELATIONS (1-4)

A study and practicum in interpersonal relationships as they affect teacher-student interaction. Repeatable with no maximum.

### 410a-m TEACHING/LEARNING PROCESSES IN MULTICULTURAL EDUCATION (1-4)

Provides understanding of cultural forces that influence children, families, community values, and school curriculum. Examines learning/teaching styles in cultures; issues of home school-community linkage, attitude vs. resources; minority student achievement; and

multiculturally inclusive curriculum for cultural identity. Repeatable with no maximum. S/U grading.

### 411 FOUNDATIONS OF EDUCATION (4)

Prereq: EdAF 310 and admission to Woodring College of Education. Differing views of human nature and learning as they relate to educational aims, methods and content.

### 413 HISTORY OF AMERICAN EDUCATION (4)

Historical development of formal education emphasizing the impact of cultural forces on evolution of the American system of public education.

### 414 GLOBAL EDUCATIONAL SYSTEMS (4)

Examination of the role of education in creating global citizens for an interdependent world.

### 416 PERSISTENT PROBLEMS IN EDUCATION (1-4)

Seminars in socio-philosophical problems relating to education; different seminars deal with different problems and related sociological and philosophical theory. Repeatable with no maximum.

### 416a-m PERSISTENT PROBLEMS IN EDUCATION (1-4)

Seminars in socio-philosophical problems relating to education; different seminars deal with different problems and related sociological and philosophical theory. Repeatable with no maximum. S/U grading. **NOTE:** 416a-m is identical to 416 with the exception of S/U grading.

## Graduate Courses

*Courses numbered 500; 517; 545; 597 are described on page 31 of this catalog.*

*Admission to Graduate School or special permission required. See the Graduate School section of this catalog.*

### 510 CULTURAL AND LINGUISTIC DIVERSITIES IN AMERICAN EDUCATION (4)

Prereq: must be a practicing teacher. Development of the knowledge and skills necessary to understand culturally different children. A review of methods for teaching such children in school settings.

### 511 SEMINARS IN SOCIAL THEORIES AFFECTING EDUCATION (3)

Studies in various aspects of social theory as it relates to education. Different seminars deal with different topics and related theory.

### 512 SEMINAR IN EDUCATIONAL PHILOSOPHY (4)

Prereq: Edu 501 or permission of instructor. Differing concepts on the nature of human beings and their education; historical and philosophical development of these concepts, their basic premises, implicit assumptions and issues.

### 513 SEMINAR IN PSYCHOLOGY AND SOCIOLOGY OF EDUCATION (4)

Prereq: Edu 501 or permission of instructor. Differing concepts of the nature of the individual and society; psychological and sociological development of these concepts; basic premises and implicit assumptions.

### 516 SEMINARS IN PHILOSOPHY OF EDUCATION (3)

Prereq: EdF 411 or equivalent. Studies of the works of one man, a problem or a movement; implications for schooling.

### 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.

### 640 CURRENT TOPICS IN EDUCATION (1-5)

Prereq: master's degree and permission of instructor. Studies of current topics in foundations, interprogram topics. Repeatable with no maximum.

# LIBRARY

The Library program contributes to the University's educational mission through courses which provide for understanding major issues relating to: (1) the parameters of information, (2) the discourse cultures around it, and (3) the ability to access, analyze and evaluate its usefulness. Current instruction is consistent with both the traditional understanding of the Library's service ethic, that is, the responsibility to provide access to information — and an expanded commitment to teach students to select and use accessed information appropriately. The courses pivot on an awareness that, in this age of exponentially growing informational resources, students, for their professional careers as well as for their obligations as responsible citizens, require more than access to the information materials themselves.

## LIBRARY FACULTY

JUDITH SEGAL (1996) University Librarian and Professor. BA, Brooklyn College of the City University of New York; MA, Brandeis University; MSIS, DIS, Columbia University.

MARIAN E. ALEXANDER (1970) Associate Professor. Library Systems Coordinator. AB, Occidental College; MLS, University of California, Los Angeles.

ROBIN ANGELEY (1997) Assistant Professor. Coordinator for Reference and Instruction Services. BS, University of Florida; MLS, Florida State University.

JEANNE ARMSTRONG (1997) Assistant Professor. Librarian for the College of Arts and Sciences. BA, University of Dayton; MA, Rosary College Graduate School; PhD, University of Arizona.

SHEILA BONNAND (1998) Assistant Professor. Librarian for the College of Arts and Sciences. BS, Montana State University; MEd, University of Montana; MA, University of Arizona.

MARGARET FAST (1997) Assistant Professor. Librarian for the College of Arts and Sciences. BA, Mills College; MA, University of British Columbia; MLS, State University of New York.

ROBERT LOPRESTI (1987) Associate Professor. Librarian for Huxley College and Government Information. BA, Juniata College; MLS, Rutgers, The State University.

RAYMOND G. MCINNIS (1965) Professor. Extended Day Services/Fairhaven College Librarian. BA, University of British Columbia; MLS, University of Washington.

DONNA E. PACKER (1982) Associate Professor. Librarian for the College of Business and Economics. BA, BIS, University of British Columbia; MBA, Western Washington University.

DIANE C. PARKER (1984) Professor. Coordinator for Collection Development. BA, University of California, Berkeley; MLS, University of Washington.

ANDREA PETERSON (1999) Assistant Professor. Electronic Resources/Systems Librarian. BA, University of Utah; MLS, Indiana University.

PAUL PIPER (1997) Assistant Professor. Librarian for the College of Arts and Sciences. BS, MFA, University of Montana; MLIS, University of Hawaii.

KAREN B. RICE (1989) Associate Professor. Coordinator of Cataloging Services. BS, University of Wisconsin; MSLS, University of North Carolina at Chapel Hill.

MARIAN A. RITTER (1969) Associate Professor. Librarian for the College of Fine and Performing Arts. BME, MLS, University of Portland.

PETER A. SMITH (1990) Associate Professor. Librarian for the College of Arts and Sciences. BA, MA, MLS, Wayne State University.

SYLVIA TAG (1997) Visiting Assistant Professor. Collection Development Services/Reference Librarian. BA, The Colorado College; Teaching Certificate, University of Washington; MLIS, University of Iowa.

## Courses in Library Information

### 125 BASIC INFORMATION-SEEKING SKILLS (2)

Intended for freshmen, this course introduces freshmen to basic

research skills using print and electronic resources. This course will provide hands-on experience in using information technologies including the Internet, HTML (Hypertext Markup Language), library databases and an online discussion group.

### 201 INTRODUCTION TO RESEARCH STRATEGIES (2)

Intended for sophomores and transfer students who have not taken Lib 125 or its equivalent, Lib 201 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.

### 202 APPLIED RESEARCH STRATEGIES FOR THE HUMANITIES (1)

Prereq: Concurrent enrollment in a 200-level humanities course and permission of instructor. This course is offered for GUR credit and is intended to be linked with 200-level humanities GUR courses. The course advises students on library research methods that will enable them to successfully do their research and writing assignments in the linked or cluster courses. Students may produce a research log entry or annotated bibliography.

### 203 APPLIED RESEARCH STRATEGIES FOR THE SOCIAL SCIENCES (1)

Prereq: Concurrent enrollment in a 200-level social science course and permission of instructor. This course is offered for GUR credit and is intended to be linked with 200-level social science GUR courses. The course advises students on library research methods that will enable them to successfully do their research and writing assignments in the linked or cluster courses. Students may produce a research log entry or annotated bibliography.

### 204 APPLIED RESEARCH STRATEGIES FOR COMPARATIVE, GENDER, AND MULTICULTURAL STUDIES (1)

Prereq: Concurrent enrollment in a 200-level comparative, gender and multicultural studies course and permission of instructor. This course is offered for GUR credit and is intended to be linked with 200-level comparative gender and multicultural GUR courses. The course advises students on library research methods that will enable them to successfully do their research and writing assignments in the linked or cluster courses. Students may produce a research log entry or annotated bibliography.

### 302 APPLIED RESEARCH STRATEGIES (1-4)

Prereq: Concurrent enrollment in a 300-level writing intensive course and permission of instructor. Familiarizes 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. Repeatable to a maximum of 4 credits.

### 370 INTRODUCTION TO LITERACY IN SCHOLARLY CULTURES (4)

Prereq: Lib 125, 201, 302 or permission of instructor. This course is designed for scholars-in-the-making. The student will develop an understanding of the structures and genres of scholarly discourse; learn about the ways in which scholars communicate and about what scholars mean when they speak of "craft skills," "discourse community," "the social construction of knowledge," and "multicultural issues" in the contest of their shared vocabularies and values. The student will learn the skills needed to read and/or write scholarly texts in the social sciences, the humanities, and the sciences. Emphasis will be upon small writing projects, journal keeping, and group work.

# UNIVERSITY PERSONNEL

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### Huxley College of Environmental Studies

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University Librarian, Judith Segal, BA, MA, MSLS, DLS

### Office of Institutional Assessment and Testing

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### Shannon Point Marine Center

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

### University Extended Programs

Ken M. Symes, BA, MA, PhD

### University Writing Center Program

Director, Barbara Sylvester, BA, MA, PhD

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### The Western Foundation

Executive Director, Jean Rahn, BA, MS

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### Human Resources

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### Fiscal Services

Director, Mary Carlson, BA

### Human Resources

Director, Michael Becker, BA, MA, PhD

### Planning, Facilities and Operations

Director, Philip P. Sun, AIA, NCARB

### Public Safety

Director, James E. Shaw, BA

### Capital Budget

Director, Renée Y. Roberts, BBA, MBA

## UNIVERSITY PERSONNEL

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Director, Karen Copetas, BA, MS

Assistant Vice President for Student Affairs

Kunle Ojikutu, BS, MPA, PhD

Assistant Dean for Student Affairs/Academic Support Services

Connie L. Copeland, BS, MEd, EdD

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Director, Lynda M. Goodrich, BA, MEd

Career Services Center

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Budget and Administration — Student Affairs/Academic Support Services

Director — Linda P. Beckman, BA, MBA

Registrar

Registrar, Joseph St. Hilaire, BA, MA

Student Financial Resources

Director, Clara Capron, BS, MEd

Student Support Services

Director, Theodore W. Pratt, Jr., BA, MEd

University Residences

Director, Kathleen F. Rich, BA, MEd

Viking Union/Student Activities

Director, John J. Smith, BA, MA

### RETIRED FACULTY — EMERITUS

#### A

HENRY L. ADAMS

Professor Emeritus of Psychology. BA, MA, University of Kentucky; PhD, University of Illinois.

PHILLIP R. AGER

Associate Professor Emeritus of Music. BAEd, Western Washington State College; MA, University of Washington.

MARGARET H. AITKEN

Professor Emeritus of Physical Education. BA, University of Washington; MA, EdD, Teachers College, Columbia University.

ANGELO ANASTASIO

Professor Emeritus of Anthropology. Diploma, The Juilliard School; AA, Boston University; MA, PhD, University of Chicago.

M. CHAPPELLE ARNETT

Professor Emeritus of Physical Education. BS, Centenary College; MS, Purdue University; EdD, University of Missouri.

#### B

HERBERT L. BAIRD, JR.

Associate Professor Emeritus of Foreign Languages and Literatures. AA, Santa Ana Junior College; AB, Pomona College; AM, PhD, University of Chicago.

LUCILLE E. BARRON

Associate Professor Emeritus of Home Economics. BA, Washington State University; MA, University of Washington.

MYRL E. BECK, JR.

Professor Emeritus of Geology. BA, MS, Stanford University; PhD, University of California, Riverside. (1969-1997)

HORACE O. BELDIN

Professor Emeritus of Educational Curriculum and Instruction. BS, MS, University of Oregon; PhD, Syracuse University.

MARION BESSERMAN

Associate Professor Emeritus of Chemistry. BS, University of Washington; MS, Purdue University; PhD, University of Washington.

JOSEPH D. BETTIS

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Dillman, Steven H. / Technology  
Dinnel, Dale L. / Psychology  
Donovan, Deborah / Biology  
Donovan, Todd A. / Political Science  
Downing, Thomas E. / Philosophy  
Duke, Shearleen / Journalism  
Dwight, Lucy / Sociology

### E

Eaton, Marie D. / Fairhaven  
Eblen, Anna / Communication  
Eerkes, Gary L. / Computer Science  
Elich, Peter J. / Psychology  
Emmerson, Richard K. / English  
Engebretson, David C. / Geology  
Englesberg, Paul / Educational Foundations  
Estrada, Lawrence / Educational Foundations/Fairhaven  
Eurich, Susan Amanda / History

### F

Fast, Margaret / Library  
Faulkner, Constance P. / Fairhaven  
Feinberg, Richard / Physics and Astronomy  
Feingold, David / Music  
Fewings, David R. / Finance, Marketing and Decision Sciences  
Field, John J. / Geology  
Fiero, Petra / Modern and Classical Languages  
Flint, James / Adult and Higher Education  
Foisy, Maurice H. / Political Science  
Fonda, Richard W. / Biology  
Forgays, Deborah K. / Psychology  
Fox, Sheila / Special Education  
Friday, Christopher C. / History  
Friesen, John / Music  
Froderberg, Albert J. / Mathematics  
From, Milton / Physics and Astronomy

### G

Gaard, Greta / Fairhaven  
Gallay, Alan / History  
Garcia, Joseph E. / Management  
Gardner, Richard J. / Mathematics  
Gauthier, Anne H. / Sociology  
Geisler, Marc S. / English  
Georgiades, Aristotle / Art  
Gerard, Greg / Adult and Higher Education  
Gerhold, George A. / Chemistry  
Germain, Roger / Theatre Arts  
Ghali, Moheb A. / Economics  
Gibney, Teresa / Instructional Technology  
Gilbertson, David / Accounting  
Gilliam, Jeffrey P. / Music  
Gleeson, Madge / Art  
Goebel, Bruce / English  
Gogroef-Voorhees, Andrea / Liberal Studies  
Grady, Thomas / Engineering Technology

Green, Gaye Leigh / Art  
Grote, Frederick W., Jr. / Psychology  
Guelker-Cone, Leslie / Music  
Guess, Carol / English  
Gynan, Shaw N. / Modern and Classical Languages

### H

Hagen, Daniel A. / Economics  
Hall, Pamela L. / Finance, Marketing and Decision Sciences  
Halme, Kathleen / English  
Hamblin, Vicki L. / Modern and Classical Languages  
Hammond, Joyce D. / Anthropology  
Hansen, Julia / Economics  
Hansen, Thor A. / Geology  
Harder, K. Peter / Economics  
Hardman, Pamela / English  
Hardy, John T. / Environmental Science  
Harris, F. David / Engineering Technology  
Harris, Lyle E. / Journalism  
Hartsfield, Nora A. / Mathematics  
Harwood, Angela M. / Secondary Education  
Haug, Peter / Management  
Hayden, Davis C. / Psychology  
Hayes, Susanna A. / Psychology  
Hearne, James W. / Computer Science  
Helfgott, Leonard M. / History  
Hemley, Robin C. / English  
Henniger, Michael L. / Elementary Education  
Henson, Steven / Economics  
Hoekstra, Nicole / Engineering Technology  
Hoelscher, Karen J. / Elementary Education  
Hoffman, Joan M. / Modern and Classical Languages  
Hogan, Eugene J. / Political Science  
Homann, Peter S. / Environmental Science  
Hoover, Kenneth R. / Political Science  
Horn, Thomas C. R. / History  
Housen, Bernard A. / Geology  
Howard-Snyder, Frances / Philosophy  
Howell, Kenneth W. / Special Education  
Hudson, Hud / Philosophy  
Hutton, Marguerite R. / Accounting  
Hyman, Ira E. Jr. / Psychology

### I

Inverarity, James / Sociology  
Israels, Chuck / Music

### J

Jack, Dana C. / Fairhaven  
Jack, Rand F. / Fairhaven  
Jaye, Cara / Art  
Janson, Carol / Art  
Jewett, Robert I. / Mathematics  
Jimerson, Randall C. / History  
Johnson, Brad L. / Physics and Astronomy  
Johnson, James L. / Computer Science  
Johnson, Jerry L. / Mathematics  
Johnson, Mildred / Mathematics  
Johnson, Nancy J. / English  
Johnson, Ronald W. / English  
Johnson, Vernon D. / Political Science  
Johnston, Thomas A. / Art  
Jongejan, Anthony / Instructional Technology

Jusak, Debra S. / Computer Science

## K

Kanhai, Rosanne D. / English

Kaplan, Edward H. / History

Kasprisin, Lorraine / Educational Foundations

Keiper, Robert / Secondary Education

Keiper, Timothy / Instructional Technology and Secondary Education

Keleman, Kenneth / Management

Kelley, David / Engineering Technology

Kennedy, Kathleen A. / History

Khan, Saera / Psychology

Kim, Robert H. / Educational Foundations

Kimball, Linda A. / Anthropology

Kincaid, Susan / Human Services

King, Donald M. / Chemistry

King, Rosalie Rosso / Art/Engineering Technology

Kitto, Kathleen L. / Engineering Technology

Klein, Karen / Elementary Education

Klein, Marvin L. / Educational Administration

Kleinknecht, Ronald A. / Psychology

Knutzen, Kathleen / Physical Education, Health and Recreation

Koetje, Todd A. / Anthropology

Krieger, Milton H. / Liberal Studies

Kriz, George S. / Chemistry

Krogh, Suzanne L. / Elementary Education

## L

Laffrado, Laura / English

Lampman, Gary M. / Chemistry

Landis, Wayne G. / Environmental Science

Larner, Daniel M. / Fairhaven

Larson, Bruce E. / Secondary Education

Lawson, Robert / Applied Research and Development Center/Human Services

Lay, William H. / Educational Foundations

Leaf, David S. / Biology

Leonard, Kevin A. / History

Leverett, Victor H. / Theatre Arts

Levin, Richard G. / Mathematics

Lewis, Arleen C. / English

Lewis, L. Floyd / Finance, Marketing and Decision Sciences

Lindquist, Norman F. / Mathematics

Lippi-Green, Rosina / English

Lippman, Louis G. / Psychology

Lippman, Marcia Z. / Psychology

Livingston, Mary Morgan / Human Services

Lobeck, Anne / English

Lockhart, Julie A. / Accounting

Lonner, Walter J. / Psychology

Lopresti, Robert / Library

Lortz, James E. / Theatre Arts

Loucky, James / Anthropology

Lundeen, Kathleen / English

Lynne, William / English

## M

McClendon, John C. / Fairhaven

McCormick, Patrick F. / Art

McDonald, Kelly / Communication

McDonald-Miszczak, Leslie / Psychology

McInnis, Raymond / Library

McKay, Floyd / Journalism

McKell, Eric K. / Engineering Technology

McLaughlin, John F. / Environmental Science

McRandle, Carol C. / Speech Pathology and Audiology

Mahoney, Eldon R. / Sociology

Malone, Violet M. / Adult and Higher Education

Mana, Michael / Psychology

Mancuso, Susan K. / Adult and Higher Education

Mariz, George E. / History

Markosian, Ned / Philosophy

Marrs, Lawrence W. / Special Education and Educational Administration

Marshall, Robert C. / Anthropology

Martin, Lea Ann / Physical Education, Health and Recreation

Mascioni, Vania / Mathematics

Mathers-Schmidt, Barbara / Speech Pathology and Audiology

Matthews, Geoffrey B. / Computer Science

Matthews, Robin A. / Environmental Science

Mayer, J. Richard / Environmental Science

Meehan, J. Michael / Computer Science

Melious, Jean O. / Geography and Environmental Social Sciences

Menninga, Larry D. / Computer Science

Merrifield, David E. / Economics

Mese, Chikako / Mathematics

Metzger, Mary J. / English

Miles, John C. / Geography and Environmental Social Sciences

Miller, Brenda / English

Miller, John A. / Chemistry

Miller, Laurence P. / Psychology

Mills, Perry / Theatre Arts

Miner, Ralph E. / Political Science

Mitchell, Robert J. / Geology

Mobus, George / Computer Science

Montague, Phillip / Philosophy

Mookherjee, Debnath / Geography and Environmental Social Sciences

Moore, James E. / Physical Education, Health and Recreation

Morgan, David R. / Biology

Morris, Jack / Music

Morse, Joseph G. / Chemistry

Morton, Todd / Engineering Technology

Moskowitz, Steven M. / Engineering Technology

Moyer, Craig L. / Biology

Muller-Parker, Gisèle / Biology

Murphy, Dennis R. / Economics

Myers, O. Eugene / Geography and Environmental Social Sciences

Myhre, Oddmund / Elementary Education and Instructional Technology

## N

Napoli, James / Journalism

Naylor, Michael / Mathematics

Naughton, Eileen Momi / Art

Nelson, David M. / Economics

Nelson, Karna L. / Special Education

Nelson, Philip A. / Computer Science

Newcomer, Jeffrey / Engineering Technology

Newport, Mark / Art

Nicholas, Trula / Human Services

Nolet, Victor / Special Education

## O

Ohana, Chris / Elementary Education

Olney, Thomas J. / Finance, Marketing and Decision Sciences

Olscamp, Paul / Philosophy

O'Reilly, Maureen E. / Theatre Arts

Ortega, William R. / Accounting

## UNIVERSITY PERSONNEL

---

Osborne, Martin L. / Computer Science  
Oslapas, Arunas P. / Engineering Technology  
Ottaway, Scott A. / Psychology

### P

Packer, Donna / Library  
Paola, Suzanne L. / English  
Parakh, Jal S. / Biology  
Park, Douglas / English  
Parker, Diane C. / Library  
Parris, Kristen D. / Political Science  
Patrick, David L. / Chemistry  
Pavia, Donald L. / Chemistry  
Payton, Rodney J. / Liberal Studies  
Pearce, Scott / Liberal Studies  
Peele, Emily R. / Biology  
Pekoz, Erol / Finance, Marketing and Decision Sciences  
Peterson, Andrea / Library  
Peterson, Glen / Adult and Higher Education  
Peterson, Merrill A. / Biology  
Phelan, Laurie / Elementary Education  
Pierce, George / Adult and Higher Education  
Pilgrim, Tim A. / Journalism  
Pinney, Robert H. / Secondary Education  
Piper, Paul / Library  
Plumlee, E. Leroy / Management  
Price, Kay / Special Education  
Prim, Merle M. / Psychology  
Prody, Gerry A. / Chemistry  
Pultz, Mary Anne / Biology  
Purdy, John / English

### Q

Qualley, Donna J. / English  
Quigley, Robert J. / Physics and Astronomy

### R

Rangel-Guerrero, Daniel / Modern and Classical Languages  
Raudebaugh, Robert A. / Engineering Technology  
Read, Thomas T. / Mathematics  
Reay, John R. / Mathematics  
Resnick, Adam / Political Science  
Reynolds, Mary Ann / Accounting  
Rice, Karen B. / Library  
Richardson, John G. / Sociology  
Richardson, Peter / English  
Rickey, Melissa J. / Elementary Education  
Riggins, Ronald D. / Physical Education, Health and Recreation  
Riner, Phillip / Elementary Education  
Ritter, Harry R., Jr. / History  
Ritter, Marian B. / Library  
Robbins, Lynn A. / Geography and Environmental Social Sciences  
Rodriguez, Marian / Fairhaven College  
Roehl, Thomas / Finance, Marketing and Decision Sciences  
Roelofs, Matthew R. / Economics  
Ross, June R. P. / Biology  
Ross, Steven C. / Finance Marketing and Decision Sciences  
Rupaal, Ajit S. / Physics and Astronomy  
Russo, Salvatore / Chemistry  
Rutan, Gerard F. / Political Science  
Rutschman, Carla J. / Music  
Rutschman, Edward / Music  
Rystrom, David S. / Finance, Marketing and Decision Sciences

### S

Safavi, Farrokh / Finance, Marketing and Decision Sciences  
Sailors, William M. / Accounting  
Salazar, Debra J. / Political Science  
Sanders, George D. / Accounting  
Savey, Ronald N. / Accounting  
Savolainen, Jukka K. / Sociology  
Schaeffer, Christine / Secondary Education  
Schermer, Elizabeth R. / Geology  
Schneider, David E. / Biology  
Schreiber, Sebastian J. / Mathematics  
Seal, Michael R. / Engineering Technology  
Segal, Judith / Libraries  
Seilo, Michael T. / Speech Pathology and Audiology  
S'eiltin, Tanis M. / Fairhaven  
Senge, Steven V. / Accounting  
Shaffer, Ronald W. / Psychology  
Shen, Yun-Qiu / Mathematics  
Sheppard, Shelby / Educational Foundations  
Sigler, Tracey H. / Management  
Simpson, Carl H. / Sociology  
Singh-Cundy, Anu / Biology  
Singleton, William R. / Accounting  
Sleeman, Allan G. / Economics  
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, William E. / English  
Sommer, Lesley / Music  
Spanel, Leslie E. / Physics and Astronomy  
Springer, Mark C. / Management  
Standifird, Stephen / Finance, Marketing and Decision Sciences  
Stevenson, Joan C. / Anthropology  
Stewart, James E. / Physics and Astronomy  
Stewart, Mart / History  
Stoever, William K. B. / Liberal Studies  
Stoops, Robert F., Jr. / Liberal Studies  
Storer, Paul A. / Economics  
Subramaniam, Vega / Sociology  
Suczek, Christopher A. / Geology  
Sue, David / Psychology  
Suess, Walter F. / Modern and Classical Languages  
Sulkin, Stephen / Shannon Point Marine Center / Biology  
Summers, William C. / Environmental Science  
Sylvester, Charles D. / Physical Education, Health and Recreation  
Symes, Ken M. / English

### T

Tag, Stan / Fairhaven  
Takagi, Midori / Fairhaven  
Taylor, Lee H. / Theatre Arts  
Teachman, Jay / Sociology  
Terey-Smith, Mary / Music  
Terich, Thomas A. / Geography and Environmental Social Sciences  
Thorndike, Robert M. / Psychology  
Tomas, Massimiliano / Modern and Classical Languages  
Tomlonovic, Kathleen / Modern and Classical Languages  
Towner, John C. / Applied Research and Development Center and Elementary Education

Trent, Carol / Biology  
 Trimble, Joseph E. / Psychology/Educational Administration and Foundations  
 Truschel, Louis W. / History  
**U**  
 Underwood, John H. / Modern and Classical Languages  
 Ural, Saim / Computer Science  
 Urso, Robert A. / Art  
 Utendale, John F. / Adult and Higher Education  
**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  
 Veljkov, Mark / Instructional Technology  
 Vernacchia, Ralph A. / Physical Education, Health and Recreation  
 Verner, Jane / Human Services  
 Verosky, John M. / Mathematics  
 Vyvyan, James R. / Chemistry  
**W**  
 Wallace, David / Music  
 Wallace, William L. / Liberal Studies  
 Wallin, David O. / Environmental Science  
 Wang, Jialong / Communication  
 Ward, Thomas E. / Theatre Arts  
 Warner, Daniel M. / Accounting and Management  
 Wayne, Kathryn Ross / Educational Foundations  
 Webber, Herbert H. / Geography and Environmental Social Sciences  
 Weir, Sara J. / Political Science  
 Weiss, Rudolf / Modern and Classical Languages  
 Werstler, David / Engineering Technology  
 Weyh, John A. / Chemistry  
 Weymark, Diana N. / Economics  
 Whisenhunt, Donald W. / History  
 Whitmer, John C. / Chemistry  
 Wicholas, Mark L. / Chemistry  
 Williams, Don C. / Biology  
 Williams, Terrell G. / Finance, Marketing and Decision Sciences  
 Wilson, H. William / Chemistry  
 Wise, Christopher / English  
 Wodzicki, Antoni / Geology  
 Woll, John W. / Mathematics  
 Wolpov, Ray / Secondary Education  
 Woolverton, Sara / Special Education  
 Wonder, Bruce D. / Management  
 Wright, Diana E. / History  
 Wright, Paul / Physical Education, Health and Recreation  
**Y**  
 Young, Jeff / Biology  
 Young, Kathleen / Anthropology  
 Ypma, Tjalling J. / Mathematics  
 Yu, Ning / English  
 Yusa, Michiko / Modern and Classical Languages  
**Z**  
 Zeine, Lina / Speech Pathology and Audiology  
 Ziegler, David W. / Political Science  
 Zoro, Eugene S. / Music

Zurfluh, Linda / Educational Administration

**LIBRARIES**

**Librarians**

JUDITH SEGAL (1996) University Librarian and Professor. BA, Brooklyn College of the City University of New York; MA, Brandeis University; MSLS, DLS, Columbia University.  
 MARIAN L. ALEXANDER (1970) Associate Professor. Library Systems Coordinator. AB, Occidental College; MLS, University of California, Los Angeles.  
 ROBIN ANGELEY (1997) Assistant Professor. Extended Day Services Librarian. BS, University of Florida; MLS, Florida State University.  
 JEANNE ARMSTRONG (1997) Assistant Professor. Librarian for the College of Arts and Sciences. BA, University of Dayton; MA, Rosary College Graduate School; PhD, University of Arizona.  
 SHEILA BONNAND (1998) Assistant Professor. Librarian for Woodring College of Education and Library Educational Technology. BS, MEd, University of Montana; MA, University of Arizona.  
 MARGARET FAST (1997) Assistant Professor. Librarian for the College of Arts and Sciences. BA, Mills College; MA, University of British Columbia; MLS, State University of New York at Albany.  
 ROBERT LOPRESTI (1987) Associate Professor. Librarian for Huxley College and Government Information. BA, Juniata College; MLS, Rutgers, The State University.  
 RAYMOND G. McINNIS (1965) Professor. Library Instruction Coordinator/Fairhaven College Librarian. BA, University of British Columbia; MLS, University of Washington.  
 DONNA E. PACKER (1982) Associate Professor. Librarian for the College of Business and Economics. BA, BLS, University of British Columbia; MBA, Western Washington University.  
 DIANE C. PARKER (1984) Professor. Coordinator for Collection Development. BA, University of California, Berkeley; MLS, University of Washington.  
 ANDREA PETERSON (1999) Assistant Professor. Systems and Electronic Resources Librarian. BA, University of Utah; MLS, Indiana University.  
 PAUL PIPER (1997) Assistant Professor. Librarian for the College of Arts and Sciences. BS, MFA, University of Montana; MLIS, University of Hawaii.  
 KAREN B. RICE (1989) Associate Professor. Coordinator of Cataloging Services. BS, University of Wisconsin; MSLS, University of North Carolina at Chapel Hill.  
 MARIAN A. RITTER (1969) Associate Professor. Librarian for the College of Fine and Performing Arts. BME, MLS, University of Portland.  
 PETER A. SMITH (1990) Associate Professor. Librarian for the College of Arts and Sciences. BA, MA, MLS, Wayne State University.  
 SYLVIA TAG (1997) Visiting Assistant Professor. Reference Librarian. BA, The Colorado College; Teaching Certificate, University of Washington; MLIS, University of Iowa.

**DEGREES AND CERTIFICATES**

Degrees granted from August 1997 to June 1998, inclusive:

Master of Education . . . . .	189
Master of Arts . . . . .	81
Master of Science . . . . .	61
Master of Music. . . . .	7
Master of Business Administration. . . . .	21
Bachelor of Arts in Education. . . . .	325
Bachelor of Arts . . . . .	1,750
Bachelor of Science . . . . .	404
Bachelor of Fine Arts. . . . .	7
Bachelor of Music . . . . .	17
Total . . . . .	2,862

*Recommended for certification to the State Superintendent for Public Instruction — August 1997 to June 1998, inclusive:*

Initial Teacher Certificate . . . . .	462
Continuing Teacher Certificate . . . . .	10

# APPENDICES

## Appendix A WWU POLICIES ON EQUAL OPPORTUNITY/NONDISCRIMINATION, AFFIRMATIVE ACTION, SEXUAL HARASSMENT, REASONABLE ACCOMMODATION AND SEXUAL MISCONDUCT

### 1. 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, sexual misconduct, 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 Administrators Handbook, the Washington State Code of Ethics, and Executive Orders from the Governor.

There are a number of terms throughout the document that are defined by federal and state laws. A complete glossary of terms and definitions may be found in *Appendix "B"*.

### 2. Dissemination Of Policies

The University's policies are disseminated to the University community in the following manner:

#### Internal Dissemination

- a) All students are provided with copies of sections of these policies and procedures relevant to students through the Western Washington University General Catalog.
- b) 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.
- c) The policies, procedures and a review of associated supervisory responsibilities are given by the Equal Opportunity Center to participants in supervisory training programs provided by that office.

d) The policies and procedures are included in the Faculty Handbook, the Administrators Handbook, and the Classified Staff Handbook.

e) 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 Equal Opportunity Center also meets with each search committee to provide information regarding its responsibilities under the policies.

f) Equal employment opportunity posters are displayed in conspicuous places throughout the University.

g) All bargaining unit agreements contain nondiscrimination statements and adhere to non-discrimination policies and practices.

h) The Policies and Procedures are available 24 hours a day, 7 days a week, on the EOC's hotline at (360) 650-7704.

#### External Dissemination

a) All position announcements and advertisements for position openings contain a statement regarding the institution's commitment to equal opportunity and affirmative action.

b) The University's two, 24-hour job telephone lines include a statement regarding the institution's commitment to equal opportunity and affirmative action.

c) All institutional contracts contain a nondiscrimination clause. The appropriate Vice President is responsible for ensuring that the clause is included.

d) All promotional and application materials regarding employment opportunities, events, and program offerings are reviewed by the Equal Opportunity Center.

e) Notification of institutional policy is provided to all vendors, subcontractors and suppliers with each contract that is accepted.

### 3. 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. 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 1978, the Vietnam Era Veteran's Readjustment Assistance Act of 1974, the Americans with Disabilities Act of 1990, the Civil Rights Act of 1991, 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 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, the employment of faculty and staff, and 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 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.

### 4. 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 Compliance Program includes an equal employment opportunity policy and methods for its dissemination, internal audit and reporting systems, procedures for program implementation, and identification of problem areas. In addition, the Affirmative Action Compliance Program calls for result-oriented actions designed to recruit, employ and promote qualified members of the following groups when they are underutilized in the work force: certain ethnic minorities, women, persons over age 40, individuals with disabilities, disabled veterans, and Vietnam-era veterans.

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 Compliance Program.

**Policy.** It is the policy of Western Washington University to develop and implement an effective and defensible Affirmative Action Compliance 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.

The University shall report annually the results of its Affirmative Action Compliance 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 Compliance Program to the President of the University.

The President shall carry out this responsibility by:

- designating the Director of the Equal Opportunity Center as the official responsible for preparation of the Affirmative Action Plan and overall implementation of the Affirmative Action Compliance Program.
- delegating responsibility for ensuring the success of the Affirmative Action Compliance 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 Compliance Program**

The President of the University has overall responsibility for promoting and enforcing the Affirmative Action Compliance Program. The Director of the Equal Opportunity Center reports to the Provost through the Vice Provost for Diversity, makes periodic reports directly to the President, and has the authority to administer the Affirmative Action Compliance 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 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 anti-discrimination 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;
- 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.

## **5. 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 Appendix G, Section A. Such reports will be treated with respect and diligence.

## **6. 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.

The University has adopted the "State Policy on Reasonable Accommodation of Persons with Disabilities Related to State Employment" (see Appendix G).

For more information regarding reasonable accommodation, call Robbi Ferron, ADA coordinator, at (360) 650-3306 (voice) or (360) 650-7606 (TTY).

## 7. Nondiscrimination In Applying Nepotism Rules

**Preamble.** Federal Executive Order #11246, as amended, requires federal contractors to ensure that their personnel policies and practices do not discriminate against employees or applicants on the basis of race, color, religion, sex or national origin. Among those practices which may have the effect of discriminating against individuals on the basis of sex are anti-nepotism policies.

**Policy.** Western Washington University is committed to ensuring that anti-nepotism policies do not discriminate against individuals on the basis of their sex. The institution may set reasonable restrictions on an individual's capacity to function as judge or advocate in specific situations involving a member of his or her immediate family. Those restrictions, however, shall not have the effect of denying equal employment opportunity to one sex over the other.

## 8. Sexual Misconduct

**Preamble.** Western is required to adopt policies and programs aimed at preventing and responding to allegations of sexual misconduct in accordance with the 1992 Federal Higher Education Act Amendment. Sexual misconduct has a serious impact on the quality of the educational and work experience. Western is committed to the prevention of sexual misconduct on campus and to the timely resolution of complaints.

**Policy.** It is the policy of Western Washington University to provide an environment in which students, staff, and faculty can work, live and study free from all types of sexual misconduct. The range of sexual misconduct includes sexual harassment, sexual intimidation, sexual coercion, sexual assault, and rape. The University will act to prevent and eliminate such behavior. Individuals who engage in such behavior will be subject to sanctions, including written reprimand, termination, or expulsion.

The University is committed to a comprehensive educational program to promote awareness and prevent the full range of sexual misconduct. The University will provide a range of on-campus or referral services to students, faculty, and staff who have experienced sexual misconduct. Services may include short-term personal counseling, health care assistance, and assistance in changing academic, employment, or living arrangements as appropriate. The campus community will be informed of appropriate reportage procedures for individuals who wish to bring a criminal charge, including the need to preserve physical evidence to document the situation.

The University will maintain a comprehensive response system for addressing individual cases of sexual misconduct. The system includes support and guidance services, as well as an integrated response system for reports received by the University. Those systems are referred to in the Sexual Misconduct Procedure section (Appendix G, Section B) of this document. Recognizing that individuals involved in situations of alleged sexual misconduct may have differing perceptions, the University has established clear definitions, processes, and consequences for addressing cases.

## Appendix B STUDENT RIGHTS AND RESPONSIBILITIES CODE

**WAC 516-23-005 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 incumbent upon all citizens, as well as the responsibilities of their particular roles within the academic community. The student is expected to abide by University policies and regulations as well as federal, state and local laws. Those who are charged with a violation are assured of a fair judicial process and, when found in violation, appropriate disciplinary action.

The judicial system at Western Washington University is a process within the

University that facilitates student developmental growth while maintaining the standards of the University to ensure academic integrity, campuswide safety, and adherence to the University mission. The student judicial process is intended to provide positive and educational experience paired with fair and well-considered sanctions for misconduct.

**WAC 516-23-010 Definitions.** STUDENT includes all persons taking courses at the University, both full- and part-time. Non-matriculated international students attending language institutes or foreign study programs at the University shall also be considered students under the terms of this Code.

UNIVERSITY refers to the facilities, property, programs, activities, and members of the Western Washington University community.

**WAC 516-23-115 Jurisdiction.** The *Student Rights and Responsibilities Code* is a guideline for expected student behavior at the University. 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.

Individual students alleged to have violated this Code, policies, or regulations of Western Washington University will be subject to disciplinary action under the Code. Sanctions against student organizations are governed 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 independently of action taken against the student organization.

**WAC 516-23-020 Relationship Between Civil and Criminal Law and University Disciplinary Proceedings.** Many offenses actionable under this code are also violations of federal, state or local laws. A student may face criminal and civil prosecution as well as University disciplinary action for violation of these laws. The University reserves the right to take action on offenses that have an impact on the educational or administrative functions or the general well-being of the University. Proceedings under this Code may be carried out prior to, simultaneously, or following civil or criminal proceedings in the courts. University proceedings are not subject to challenge on the ground that criminal charges involving the same incident have been dismissed or reduced.

**WAC 516-23-025 Actionable Offenses.** A violation of University policy or regulation that has a significant impact upon the educational or administrative functions of the University can be grounds for disciplinary action. A student may also be subject to disciplinary action for violation of federal, state, or local civil or criminal law. The Code does not contain an exhaustive list of all offenses or misconduct for which a student may be disciplined. Those offenses which disrupt integral aspects of University mission and are most commonly acted upon are listed in the Code.

**WAC 516-23-030 Disruptive Behavior.** The educational mission of Western Washington University requires the freedom to teach, conduct research and administer the University. A student shall be subject to disciplinary action if he/she 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.

**WAC 516-23-035 Academic Dishonesty.** Maintaining academic honesty is the joint responsibility of students and the faculty. Incidents of academic dishonesty reported to the Office of the Provost shall make the student subject to disciplinary action. Academic dishonesty shall include, but is not limited to: Plagiarism, misrepresentation of identity, and/or giving or receiving unauthorized information prior to or during any type of examination. See Academic Dishonesty Policy. Students found to have violated canons of ethical research and scholarship, as defined in the Policy and Procedural Guidelines for Misconduct in Research and Scholarship, may also be subject to disciplinary action.

**WAC 516-23-040 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. Any student:

- (1) falsely making, completing, or altering any University document, record or identification;
- (2) possessing or presenting as authentic any falsified document, record, or identification; or
- (3) giving to any University official information known to be false or incomplete shall be subject to disciplinary action.

**WAC 516-23-045 Interference with Freedom of Expression.** The rights of freedom of speech, petition and assembly are fundamental to the democratic and academic process. The United States Constitution guarantees these freedoms to all members of the Western Washington University community. The University recognizes, respects and protects all expressions of opinion and ideas, whether individual or collective, that are within the limits of the law and/or University regulations.

Any person, or persons, may speak at the University when invited to do so by a member of the University community. An exercise of the right to speak requires the freedom of the speaker to make his/her statement. Both the

speaker and the audience are entitled to proceed without being subjected to substantial interference. Use of University buildings and public spaces is subject to University policies and procedures. See Viking Union Policies: Exterior space use; reservations and scheduling.

Students engaging in acts of violence, threats of violence or other behavior which materially or substantially disrupts the right of freedom of expression on campus are subject to disciplinary action. Such conduct includes, but is not limited to, blocking or impeding vehicular or pedestrian traffic; blocking access to or from campus buildings or offices; and activities of observers or participants that substantially disrupt classes, meetings or any other normal function of the University.

**WAC 516-23-050 Alcohol and Other Drugs Policy Violations.** Substance abuse by members of the University community impacts the quality of the educational experience of all students. Violations of alcohol or drug policies including, but not limited to, the possession, use or distribution of controlled or illegal substances, or violence to others and/or destruction of property while under the influence of alcohol/drugs, shall make the student subject to disciplinary action. See Alcohol and Other Drugs Policy.

**WAC 516-23-055 Misuse of Computers, Electronic Data or Communications.** The performance of normal University business, research, education, and other vital functions is dependent upon the appropriate use of computing and the integrity of electronic data. Students shall be subject to disciplinary action if they:

- (1) interfere with University computing or communication functions or with the work of another student, faculty member, or University official;
- (2) gain unauthorized access, alter data, or misuse computing facilities; or
- (3) use University computing facilities to send harassing messages (as defined in WAC 516-23-070, Violence and Harassment).

**WAC 516-23-060 Hazing.** Any act which endangers, or is likely to endanger, the mental or physical health or safety of a student, or which destroys or removes public or private property, for the purpose of initiation, admission into, affiliation with, or as a condition for continued membership in a group or University organization shall make a student subject to disciplinary action. See Hazing Policy.

**WAC 516-23-065 Sexual Misconduct.** The University strives to provide an environment in which students, staff, and faculty can work, live and study free from all types of sexual misconduct. Students engaging in sexual misconduct shall be subject to disciplinary action. The range of sexual misconduct includes sexual harassment, sexual intimidation, sexual coercion, sexual assault, and rape. See Sexual Misconduct Policy.

**WAC 516-23-070 Violence and Harassment.** A quality educational experience can only occur in an environment free of intimidation, harassment, or physical assault. Any student creating a hostile or threatening educational or working environment shall be subject to disciplinary proceedings. These behaviors include, but are not limited to, the following:

The use of physical force or violence to endanger the physical or mental health and safety of another person or to restrict freedom of action or movement of another person.

Behavior that involves an expressed or implied threat to interfere with an individual's personal safety, academic efforts, employment, or participation in University activities and causes the person to have a reasonable apprehension that such interference is about to occur.

Threatening to cause bodily harm at present or in future to any person, or to cause physical damage to another's property, or to maliciously do any act which is intended to substantially harm another person's physical or mental health or safety.

Intentionally and repeatedly following or contacting another person in a manner that intimidates, harasses or places another in fear for their personal safety or for their property.

**WAC 516-23-075 Judicial Structure.** The Vice President for Student Affairs/Dean for Academic Support Services or designee is responsible for administration of this Code. A Judicial Officer, who shall have authority to adjudicate and administer sanctions for violations of this Code, shall be appointed by the Vice President for Student Affairs/Dean for Academic Support Services.

A six-member Judicial Appeal Board shall be appointed Fall Quarter: two faculty (appointed by the Vice President for Academic Affairs), three students (appointed by the Associated Students Board) and one member of the Student Affairs/Academic Support Services staff (appointed by the Vice President for Student Affairs/Dean for Academic Support Services). An alternate for each position shall be appointed at the same time by the same authority. Student appointments shall be for one academic year. Faculty and staff appointments shall be staggered for two-year terms. The Judicial Appeal Board shall have authority to hear appeals based upon the Judicial Officer's decision and to adjudicate and administer sanctions for violations of this Code. The Vice President shall assure that the Judicial Appeal Board appointment process is initiated annually and shall assure that allegations of Code violations and appeals are properly referred.

Should the need arise during Summer Session, an ad hoc Judicial Board shall be appointed subject to the same composition and procedures as the academic year Judicial Board.

**WAC 516-23-080 Conduct Proceedings.** A primary objective of the disciplinary process is to promote the personal and social development of those students found responsible for misconduct. Charges are investigated and resolved in an atmosphere of candor, truthfulness, and civility. Conduct hearings and other related proceedings do not follow the same procedures used in courtrooms, nor do they use the same rules of evidence as in a civil or criminal trial.

The conduct process shall proceed as follows:

Any student, faculty, or staff member of the University alleging a violation of this Code shall deliver to the Office of the Vice President for Student Affairs/Dean for Academic Support Services a written statement of the charges against the student. The Judicial Officer will investigate the accuracy of the charge.

If in the Judicial Officer's judgment there is sufficient basis to consider the charge(s), the Judicial Officer shall notify the accused student and those bringing the charges in writing of the time and place of their respective hearings and the availability of advisement to assist the student in their understanding of the judicial process. The hearing shall occur no less than five nor more than fifteen calendar days from the date of notification. The accused student will be informed of that portion of the code he/she is alleged to have violated and the nature and date of the alleged violation. The student will also be provided with the *Student Rights and Responsibilities Code*, chapter 516-23 WAC. If there is insufficient basis to consider the charge, the individual initiating the charge will be so informed.

The Judicial Officer shall meet in separate hearings with the student and those bringing the charges and shall weigh appropriate evidence. Within ten business days, the Judicial Officer shall notify the student in writing of his/her decision, including the sanction if a violation is determined to have occurred. Written notification shall include a statement of the student's option to appeal to the Judicial Appeal Board and the opportunity to seek advisement on the judicial process.

**WAC 516-23-085 Appeals.** An accused student may appeal a decision of the Judicial Officer to the Judicial Appeal Board. The student is allowed one appeal to the University Judicial Appeal Board. The appeal must be made in writing to the Vice President for Student Affairs/Dean of Academic Support Services or designee within ten (10) business days of receiving the Judicial Officer's written decision. An extension of an additional ten business days will be granted upon the student's request. The appeal must indicate the basis for the appeal. The Vice President shall notify the Judicial Appeal Board Chair of the pending appeal. No sanction may be invoked while an appeal is pending, except as provided in "Interim Suspension," WAC 516-23-135.

**WAC 516-23-090 Basis for Appeal.** Allowable reasons for an appeal are:

- (1) The original conduct hearing was not conducted in conformity with prescribed procedures or the Code was misinterpreted by the Judicial Officer.
  - (2) The decision reached regarding the accused student was based on insufficient evidence.
  - (3) The sanction(s) imposed is/are disproportionate to the violation of that section of the Code which the student is found to have violated.
- A student bringing an appeal based upon any of the preceding three reasons shall be provided the opportunity to present his/her case to the Judicial Appeal Board. The Chair of the Judicial Appeal Board may, at his/her discretion, choose to limit any part of the case that requires review.
- (4) To consider new substantive evidence because such evidence was not presented by the person appealing at the time of the original conduct hearing. Appeals based on new evidence will be heard by the University Judicial Officer.

**WAC 516-23-095 Appeal Hearing Procedures.** The Judicial Appeal Board Chair shall notify the student of the date of the appeal hearing. The hearing shall be set not less than five nor more than fifteen business days from the date of notification or as mutually agreed upon by student and University. A student who does not appear before the Judicial Appeal Board at his/her appeal hearing waives the privilege to have the appeal heard at another time. The Judicial Appeal Board may proceed with the appeal based upon consideration of the evidence available to them without the student's presence, or the appeal may be dismissed at the discretion of the Judicial Appeal Board.

- (1) Notification of the appeal hearing shall include:
  - (a) Time, date and location of hearing.
  - (b) Identification of the section of the *Student Rights and Responsibilities Code* which the student is alleged to have violated.
  - (c) Nature and date of the alleged violation.
  - (d) Copy of the Code.
  - (e) Name of the University office where procedural advice can be sought.
  - (f) Statement of the student's right to call witnesses, to speak on his/her own behalf, to be accompanied by an advocate of his/her choice.

- (g) Statement of the student's right to review written or tape recorded evidence prior to the appeal hearing.
- (2) Appeal hearings shall be conducted in a manner which is informal and at the same time assures fundamental fairness of procedure. Appeal hearings shall be closed to the public unless the accused student requests an open hearing.
- No student who is charged with violation shall be asked to give information or to answer questions concerning an alleged violation of this Code unless the student has received notification of a hearing in accordance with the notification provision above.
  - The student may bring witnesses, speak in his/her own behalf and may have present an advocate of his/her own choice. The advocate's function is to provide support to the student but may not address the board.
  - The student may have an attorney present at the appeal hearing to advise the student in the presentation of his/her appeal. The attorney may not address the Judicial Appeal Board unless he/she is called as a material witness in the case.
  - An accused student has the option to present questions to the Judicial Appeal Board to be asked of the person(s) making the allegation and those who present testimony.
  - The Judicial Appeal Board Chair and the accused student may call any person to speak concerning the alleged violation. The Board Chair may limit or exclude testimony which is irrelevant, immaterial or repetitious.
  - Five members shall constitute a quorum of the Judicial Appeal Board. Actions by the Board require support by a majority of those members present at the time of the hearing and during presentation of the testimony. A Board member may be excused from listening to part of the testimony with the Chair's approval, if the testimony is preserved by tape recording and the absence is due to extenuating circumstances.
  - Any member of the Board who considers himself/herself unable to render an impartial decision in a particular case shall excuse himself/herself from the Board's deliberations in advance and may be replaced by an alternate.
- (3) The Judicial Appeal Board Chair shall notify the accused student in writing of the disposition of the case within ten business days from the conclusion of the appeal hearing.

**WAC 516-23-100 Interference of the Judicial Process.** Student rights and responsibilities contained within this Code are assured through the orderly functioning of the judicial process. The failure of a student formally charged with a violation of this Code to appear at a hearing after receiving appropriate notice is still subject to disciplinary action. A student formally charged with a violation of this Code may not excuse himself/herself from judicial proceedings by withdrawing from the University and shall be prohibited from enrolling for subsequent quarters until such time as he/she does appear for a hearing. Other abuse of the University judicial system includes, but is not limited to, making reports or claims known to be false or attempting to influence the impartiality of witnesses or judicial members. Such behavior may make a student subject to disciplinary action.

**WAC 516-23-105 Disciplinary Sanctions.** The following penalties are disciplinary sanctions which the Judicial Officer or Judicial Appeal Board may give a student found to have violated the Code. Measures imposed may include any one or a combination of the sanctions. Sanctions may be modified to meet the circumstances of a particular case.

- Warning* — A notice in writing to the student that the student has violated the *Student Rights and Responsibilities Code*.
- Disciplinary Probation* — A written reprimand for violation of the *Student Rights and Responsibilities Code*. Probation is for a designated period of time and includes the probability of more severe disciplinary sanctions if the student is found to have violated the Code during the probationary period.
- Loss of Privileges* — Denial of specified privileges (i.e., participation in specific activities, restriction from specific areas of campus) for a designated period of time.
- Educational Activities* — Activities designed to foster student development may include, but are not limited to: Community service, attendance at educational programs, or written assignments.
- Restitution* — Compensation for loss, damage, or injury. This may take the form of appropriate service and/or monetary or material replacement.
- Residence Hall Relocation* — Transfer of living arrangements to another University residence hall or apartment.
- Termination of University Residences Agreement* — Separation of the student from University Residences.
- Disciplinary Suspension* — Separation of 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.
- Disciplinary Expulsion* — Permanent separation of the student from the University.

**WAC 516-23-110 Administrative Withdrawal Due to Mental Disorders.** As provided in Chapter 516-28 WAC, a student may be involuntarily withdrawn

from the University 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. 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. Those standards include:

- lacking the capacity to respond to pending disciplinary charges due to a mental disorder; or
- not knowing the nature of the wrongfulness of the conduct at the time of the alleged offense.

Students otherwise subject to disciplinary charges who wish to introduce relevant evidence of any mental disorder must so inform the Vice President for Student Affairs/Dean for Academic Support Services in writing at least two business days prior to any judicial hearing. The Vice President shall make determination within five business days after the student's written submittal. Evidence of any mental disorder may not be admitted as evidence or considered in a judicial hearing by the Judicial Officer of Judicial Appeal Board. See "Involuntary Withdrawal Due to Mental Disorders," chapter 516-28 WAC.

**WAC 516-23-115 Record of Proceedings.** Records prepared by the Judicial Officer or Judicial Appeal Board shall be maintained in a conduct file in the Office of the Vice President for Student Affairs/Dean for Academic Support Services for six years. Records shall be destroyed at the end of the period, which commences upon adjournment of the conduct hearing. If an accused student has been found not in violation of this Code, no record of either the charges or the proceedings will be entered into the conduct file.

The University shall not make the records of judicial proceedings or sanctions available to any member of the public except upon informed written consent of the student involved. Certain exceptions are authorized. See the "Student Records Policy," chapter 516-26 WAC.

**WAC 516-23-120 Statement of Accused Student's Rights** — The University is committed to ensuring the rights of the accused student throughout the judicial process. A student accused of misconduct under this code has certain, specific rights in the disciplinary process.

An accused student:

- Is entitled to a fair judicial process.
- Will receive written notice of the charge(s) against them.
- Will receive a thorough description of the basis for the charge(s).
- Has the right to a hearing with the Judicial Officer.
- May obtain information and procedural advice from the University.
- May expect sanction(s) and discipline proportionate to the gravity of the misconduct.
- May have one advocate present at their hearing(s). The advocate may give advice to the student but may not address the Judicial Officer or the Judicial Appeal Board.
- May present questions to be asked of witnesses.
- Will receive written notification of the Judicial Officer's decision within ten business days from the date of the hearing.
- May appeal the Judicial Officer's decision to the Judicial Appeal Board.

**WAC 516-23-125 Statement of Rights of Those Subjected to Student Misconduct.** The University is committed to ensuring the rights of those that suffer from student misconduct, that is, a person who has been physically, psychologically, and/or financially injured by the student responsible for the misconduct.

Subjects of student misconduct:

- May obtain information and procedural advice from the University.
- May decline to participate in University conduct proceedings.
- When appropriate, will be advised of their option to bring civil or criminal charges against the accused.
- May 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 or Judicial Appeal Board.
- May make a statement regarding the impact of the incident/misconduct, either orally or written, to be considered during the sanctioning portion of the conduct and/or the appeal hearing.
- Will be informed when an appeal is made of the Judicial Officer's decision.
- Will not be subjected to discussion of his/her history or behavior that does not bear instrumentally on the case being heard.
- In cases involving violence, including sexual misconduct/assault, will be informed of the finding of the Judicial Officer or the Judicial Appeal Board within ten business days of its conclusion.

**WAC 516-23-130 Relationship to University Residences Conduct System.** As an integral component of the University conduct system, the University Residences conduct system is responsible for adjudicating the majority of

conduct violations that occur by residence hall students on University Residence premises or at University Residences sponsored events. Conduct cases may be referred may be referred to the University Judicial Officer as determined by the appropriate University Residences staff. The basis for such referrals include, but are not limited to:

(1) Violations which include, but are not limited to, physical violence, sexual assault, harassment, and the distribution or sale of illegal drugs or other controlled substances.

(2) Violations of University Residences' or University conduct codes and policies by non-residential students while on University Residences' premises or at University Residences sponsored events.

(3) Cases when a student moves out of University Residences prior to completion of a University Residences conduct process.

**WAC 516-23-135 Interim Suspension.** In order to prevent danger to individuals, substantial destruction of property or significant disruption of teaching, research or administrative functions, the Vice President for Student Affairs/Dean for Academic Support Services or designee may temporarily suspend a student for stated cause subject to such limitation as the Vice President/Dean shall deem appropriate.

In all cases, the student is entitled to a hearing before the appropriate Judicial Officer or Judicial Appeal Board as soon as such hearing can be held, but not to exceed five business days after the beginning date of interim suspension unless the student should request an extension in writing. During the interim suspension period, the student shall be allowed on University property only to the extent deemed permissible by the Vice President for Student Affairs/Dean for Academic Support Services.

**WAC 516-23-140 Interpretation and Revision.** Any question of interpretation regarding the *Student Rights and Responsibilities Code*, whether in content, procedure, or intent, shall be the responsibility of the Vice President for Student Affairs/Dean for Academic Support Services for final determination.

The *Student Rights and Responsibilities Code* shall be reviewed every five years by the University Services Council's Student Rights and Responsibilities Committee.

**WAC 516-23-145 Committee on Student Rights and Responsibilities.** There is established a committee on Student Rights and Responsibilities to be composed of five students: Three appointed by the Associated Students Board of Directors including at least one graduate student, and two appointed by University Residences' Interhall Council; one member of the Student Affairs staff appointed by the Vice President for Student Affairs; one faculty member appointed by the Faculty Senate; the University Conduct Officer; one member of the University security staff appointed by the Director of Public Safety; and one member of the University Residences' staff.

The purpose of the committee on Student Rights and Responsibilities shall be to evaluate the University's *Student Rights and Responsibilities Code*. The committee may recommend changes in policy concerning Student Rights and Responsibilities.

## Appendix C ACADEMIC DISHONESTY 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 thoughts of others, nor shall they be a party to such claims.

It is the responsibility of the faculty to prevent and to detect acts of academic dishonesty. It shall be 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

Compromises the instructor's ability to fairly evaluate a student's work or achievement. It includes, but is not limited to, the following acts:

- Giving unauthorized information to another student or receiving unauthorized information from another student during any type of examination or test.
- Obtaining or providing without authorization questions or answers relating to any examination or test prior to the time of the examination or test.

- Using unauthorized sources for answers during any examination or test.
- Asking or arranging for another person to take any examination or test in one's place.
- Plagiarizing, which is presenting as one's own in whole or in part the ideas, language, creations, conclusions, or scientific data of another without explicit acknowledgment. Examples include, but are not limited to:
  - Submitting a paper purchased from a term-paper service.
  - Paraphrasing, which is the close restatement of another person's ideas in similar words without acknowledging the source of the ideas.
  - Claiming credit for someone else's artistic work, such as a musical composition or arrangement.
  - Using someone else's lab report as a source of data or results.
  - Collaborating with others in a required assignment without the approval of the instructor.
  - 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

- 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) class days after discovering the alleged violation. 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 Office of the Registrar. If the incident occurs at the end of a quarter, the instructor within ten (10) class days of the beginning of the following quarter or within a reasonable time thereafter shall arrange to discuss the matter with the student. Should the instructor be unable to contact 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 and refer the student to the section of the General Catalog addressing "Student Rights and Responsibilities." Should the student not respond to the faculty member or respective department chairperson by the 10th 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. If in the instructor's judgment there has been a violation, the instructor shall assign a grade of F for the work involved or for the course and notify the Vice President for Academic Affairs and the Registrar. A record of the violation is maintained in the Office of the Vice President for Academic Affairs. Repeated acts of academic dishonesty shall make a student subject to disciplinary action — including possible dismissal — through the "Student Rights and Responsibilities Code," available from the Office of Student Life.

No student shall be allowed to withdraw from a course or from the University to avoid receiving a failing grade based upon academic dishonesty.

- Appeal: A student who receives an F grade for academic dishonesty and who feels wrongly accused by an instructor may appeal to the dean of the school or college involved. The appeal must be lodged within ten (10) class days of receiving notice of the instructor's decision, and if not, any right of appeal is deemed waived. 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 within ten (10) class days of receiving the appeal. Either side may appeal a decision of the dean to the Student Academic Grievance Board and from the Board to the Academic Vice President, whose decision is final. Procedures followed shall be those provided in the "Student Academic Grievance Policy and Procedures" (Section B, Appeal to the Board), which is printed in Appendix F of the University's General Catalog.

## Appendix D 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 E STUDENT ACADEMIC GRIEVANCE POLICY AND PROCEDURES

Note: This section is currently under review. For the most recent draft, please check with Student Support Services, Associated Students, or the Provost Office.

### 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 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 H, Affirmative Action Student Grievance Procedures).

## 3. Procedures

### A. Informal Resolution

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. Grade changes require the approval of the department chairperson (in Fairhaven) or the appropriate center director (in Huxley), 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 with i n 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. 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 represented by an advocate.

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 Huxley or Fairhaven college or a department within the colleges of Arts and Sciences, Fine and Performing Arts, Business and Economics, or School of Education.
- (2) "Unit head" is the department chairperson, or, in the case of Fairhaven college, the chairperson of the college personnel committee, or, in the case of Huxley, the appropriate center director.
- (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 F 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

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 G 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 Director of the Equal Opportunity Center has overall responsibility for assuring University compliance with nondiscrimination laws and regulations, and receives formal complaints.

The Equal Opportunity Center 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 Equal Opportunity Center 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 Equal Opportunity Center 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 Equal Opportunity Center 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 Equal Opportunity Center 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 three 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 Director of the Equal Opportunity Center (EOC). 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 Director, at his or her discretion, or upon written application to the EOC Director by the complainant, respondent, or the unit Vice President. The 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 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 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 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 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 Equal Opportunity Center. 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 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 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 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 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) A copy of the investigative report and findings will be provided 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.

#### C. Sanctions

Sanctions to be considered by the Vice President can vary in type, intensity and duration, depending on the specifics of each case. All sanctions, with the exception of termination or dismissal, may include mandatory training sessions. Upon request from a faculty respondent, the Vice President may seek the advice of selected members of the Senate Executive Council in determining a sanction. Dismissal procedures will conform to the specifications in the Faculty Handbook, including the AAUP guidelines referenced therein. Examples of sanctions to be considered are:

- Letters of reprimand;
- Community/public service;
- Monetary compensation to complainant;
- A reduction of job responsibility or demotion;

- Denial or postponement of leaves or salary increases;
- Suspension from employment;
- Dismissal or suspension from the University.

#### D. Complaint Initiated by Administration

The President, Provost, Vice Presidents, Deans, Directors, Supervisors or Chairs, if given sufficient cause, may request that the Equal Opportunity Center 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.

#### E. Investigative Record

(1) *Records custodian.* The Equal Opportunity Center 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 Director, other written materials considered in the course of the investigation, the EOC 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 Equal Opportunity Center.

(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 three (3) 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.

#### F. 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.

#### G. Alternative Complaint Process

(1) *Internal.* The complainant may not elect to use other internal grievance procedures (such as the faculty grievance procedure, student conduct code, or labor agreement grievance procedure) for complaints pertaining to claims of illegal discrimination.

(2) *External.* A person who believes that s/he has been the subject of discrimination prohibited by state or federal law may choose to file a discrimination complaint by contacting one of the following agencies within their established time limits.

Washington State Human Rights Commission  
1511 Third Avenue  
Melbourne Tower, Suite 921  
Seattle, WA 98101  
Phone: (800) 605-7324

U.S. Department of Education  
Office of Civil Rights  
915 2nd Avenue  
Room 3310  
Seattle, WA 98174-1099  
Phone: (206) 220-790

U.S. Department of Health and Human Services  
Office for Civil Rights  
2201 Sixth Avenue, Suite 900  
Seattle, WA 98121-1831  
Phone: (206) 615-2287

Office of Federal Contract Compliance  
Regional Director, Region X  
71 Stevenson St., Suite 1700  
San Francisco, CA 94105  
Phone: (415) 975-4720

Equal Employment Opportunity Commission  
Seattle District Office  
909 First Avenue, Suite 400  
Seattle, WA 98104-1061  
Phone: (206) 220-6883

U.S. Department of Labor, Wage and Hour Division  
909 First Avenue, Room 1060  
Seattle, WA 98174  
Phone: (206) 553-4482

### B. PROCEDURE FOR REQUESTING REASONABLE ACCOMMODATION

Employing officials, search committee chairs, supervisors, program directors, deans and department chairs may all receive requests for reasonable accommodation by persons with disabilities. Such requests may be submitted by employees, students, applicants, individuals seeking admission to academic programs, and persons wishing to use University services or participate in University activities and events.

Generally, it is the obligation of an individual with a disability to request reasonable accommodation. The appropriate contact varies, depending on whether the person with a disability is a student, employee/applicant, or a member of the general public.

- a) **Students.** Students with documented disabilities who are enrolled at the University and seek reasonable accommodation shall contact the Disabled Student Services Office for assistance and advice.
- b) **Employees.** Current employees who seek reasonable accommodation may discuss the issue with their immediate supervisor, or contact the ADA Coordinator.
- c) **Applicants.** Applicants who seek reasonable accommodation during the application or interview process may contact the search committee chair, or the ADA Coordinator.
- d) **Members of the General Public** seeking accommodation for a specific university activity, service or event open to the public must submit their request to the program's director in advance of the date upon which the accommodation is sought.

University officials who receive accommodation requests shall contact the ADA Coordinator for assistance and advice. The ADA Coordinator is responsible for ensuring that requests for accommodation are considered on a case-by-case basis, and that appropriate University officials are involved in evaluating the request, identifying funds 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 Robbi Ferron. She may be reached at (360) 650-3306 (voice) or (360) 650-7606 (TTY).

### C. SEXUAL MISCONDUCT

#### 1. 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.

#### 2. 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.

#### 3. 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.

#### 4. 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.

#### 5. 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 H PARKING AND TRANSPORTATION

The University is committed to reduce the number of vehicles coming to the campus. The supply of parking spaces is not adequate to accommodate all requests. It is recommended that vehicles not be brought to the campus unless absolutely necessary. The use of alternate forms of transportation is encouraged.

WWU's Transportation Management Program (TMP) is designed to manage University parking resources and to provide a variety of transportation options — riding the bus, carpooling, bicycling and walking. The use of one or a combination of these options will provide reasonable access to campus. Major elements of the TMP include preferential assignments for registered carpools, rideshare matching, commuter permit packets, and free Campus Express transit serving the Civic Field park and ride. Details about participating in transportation options may be obtained by calling Parking and Transportation at (360) 650-2945. In addition, Whatcom Transportation Authority (WTA) provides convenient transit service to and through campus. Average hours of operation (subject to change) are weekdays 6 a.m. to 7:30 p.m. and Saturday 9 a.m. to 6:30 p.m. with evening service running through campus to shopping and recreational centers from 6:50 p.m. to 11:15 p.m. Monday through Saturday. An evening shuttle service (W.E.S.T.) operated by University Residences is also available seven nights per week from 7 p.m. to 11 p.m. This route serves all of the on-campus residence halls and the Sehome Village shopping mall.

Western Washington University has established rules and regulations governing parking under Washington State Administrative Code 516-12. All students who use parking facilities on campus are required to purchase a parking permit and register their vehicles, motorbike or motorcycle. Violators of parking regulations are subject to citation and impound. Early parking permit application is recommended given that there is traditionally more demand than spaces. Forms are available beginning late spring quarter for an assignment for the subsequent school year. For further information, please contact the Parking and Transportation Services Office on campus (360) 650-2945.

## Appendix I 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 therefore required to meet satisfactory academic progress requirements toward their degree or certificate programs to receive aid. Financial aid programs include grants, tuition and fee waivers, work-study employment, need-based and non need-based loans, and scholarship programs. Specialized academic progress requirements associated with specific scholarship programs may exceed the general policy requirements outlined below. If you have questions about the academic progress requirements of individual scholarship programs, please obtain clarification from the Scholarship Center.

Effective fall quarter 1999, the academic progress of all financial aid recipients will be measured on a quarterly basis. Students who do not meet academic progress requirements for aid programs will be among the first to receive word that their academic goals are at risk. Student Financial Resources staff 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 undergraduate 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**

**Prior Academic Progress Requirements**

Prior to receiving any financial aid, any transfer credits and course work you have enrolled for at Western will be examined to determine whether you have met academic progress requirements expected of aid recipients. Aid regulations specify that even periods of enrollment for which financial aid was not received must be measured according to academic progress criteria required of aid recipients. Students who have enrolled for course work at Western and have not received financial aid but have applied for aid effective fall quarter 1999 are expected to have satisfactorily completed at least 80 percent of the credits they have attempted at Western. Minimum credit requirements associated with prior academic standards for students who have a past academic history at Western and have not received aid but have applied for aid for periods of enrollment beyond fall quarter 1999 will consist of the current academic progress requirements described below.

**Current Quarter Academic Progress Requirements**

Academic progress is reviewed for financial aid purposes at the end of each quarter. To maintain financial eligibility, you are expected to satisfactorily complete the minimum number of credits associated with the enrollment status for which you received aid. The following grades do not indicate successful completion of academic credit: F, Z, U, NP, K, I, W, X, an audited class or absence of a grade. All credits must be completed at Western or through an exchange program endorsed by Western.

If you wish to have Student Financial Resources re-examine your academic progress upon satisfactory completion of a K grade, you must first confirm that the Registrar has made the grade change and then notify Student Financial Resources 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 Student Financial Resources at any time and a determination made as to the reasonableness of counting credits derived from repeated course work toward academic progress requirements for aid purposes. Aid recipients who wish to repeat course work while receiving aid are strongly advised to provide justification and obtain approval from Student Financial Resources prior to receiving aid for such course work.

Undergraduate and graduate credit completion requirements are provided below:

<b>Enrollment Status</b>	<b>Undergraduate Students (Class 1, 2, 3, 4, 8)</b>
	<i>Minimum quarterly credit requirements</i>
Full time . . . . .	12
Three-quarter time . . . . .	9
One-half time . . . . .	6
Less than one-half time . . . . .	All credits attempted

<b>Enrollment Status</b>	<b>Graduate Students (Class 5, A)</b>
	<i>Minimum quarterly credit requirements</i>
Full time . . . . .	10
Part time (Between half time and full time) . . . . .	5

Students who fail to meet satisfactory academic progress criteria for a given quarter will be placed on financial aid probation or suspension.

**Maximum Timeframe Requirements**

For purposes of receiving financial aid, students are expected to complete degree or certificate programs within maximum allowable timeframes. Students who meet or exceed the maximum allowable timeframes that apply to them are ineligible for financial aid. Western measures whether students have met or exceeded their maximum timeframes by adding the number of credits they have attempted. Attempted credits are defined as credits for which the student has enrolled as of the add/drop deadline each quarter. Should students receive financial aid, the total hours attempted would consist of the minimum credits associated with the enrollment status for which financial aid was calculated or actual hours enrolled, whichever is higher. Credits earned from repeated courses are counted as attempted credits each time courses are taken.

**Undergraduate students**

- May attempt 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 90 credits for completion of their graduate degree.

**Post-baccalaureate Students Pursuing a Second Undergraduate Degree or a Certificate Program**

- May attempt up to 90 credits for completion of the additional degree or certificate.

Upon reaching maximum timeframe limitations, students are no longer eligible for financial aid. If you believe that unusual circumstances prevented you from completing your degree within the timeframe allowed, you may petition for aid reinstatement. Reinstatement is not guaranteed. Your petition should: a) explain why you were unable to complete your degree within the allowable timeframe; b) provide the number of remaining credits needed to complete your degree or certificate; c) specify the quarter and year you plan to graduate; and d) include a senior evaluation performed by the Registrar's Office.

**Financial Aid Probation**

Financial aid probation results from failure to satisfactorily complete the minimum number of credits associated with the enrollment status for which aid has been received. Although aid will be disbursed for a probationary quarter, failure to meet minimum credit requirements associated with the enrollment status for which aid was received during the probationary quarter will result in financial aid suspension.

Undergraduate students who have satisfactorily completed at least 6 credits but have not completed the minimum quarterly credit requirements associated with the enrollment status for which aid was received will be placed on financial aid probation. Scheduled aid will 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 five credits but have not completed the minimum quarterly credit requirements (10 credits) associated with full-time enrollment status 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 unless eligibility is regained.

Undergraduate students who have satisfactorily completed less than six credits while receiving financial aid will automatically be placed on financial aid suspension.

Graduate students who have satisfactorily completed less than five credits while receiving financial aid 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**

If you are placed on financial aid suspension, you may petition for financial aid reinstatement if unusual circumstances beyond your control prevented you from meeting satisfactory academic progress requirements. Reinstatement is not guaranteed.

If your petition for financial aid reinstatement has not been granted, you may re-petition for aid reinstatement after you have successfully completed a full-time quarter on your own, without the benefit of financial aid funding. A full-time credit load for undergraduate students would consist of 12 credits; for graduate students, this would consist of 10 credits.

If you are a part-time student, you may contract with Student Financial Resources for the number of credits you would need to complete to reinstate your aid eligibility.

If you are unable to reinstate yourself using the above options and have been unable to attend Western for a full academic year, you may re-petition for aid reinstatement. Your petition for reinstatement should explain why you have not been able to reinstate yourself using the above options and how continued ineligibility would constitute an undue hardship.

If your eligibility for financial aid is reinstated, the amount of financial aid you receive will be based on available funds. It is possible that you will not receive your original financial aid award.

**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 who have unofficially withdrawn may be required to pay tuition and fees for the applicable quarter through sources other than financial aid.

### Specific Requirements for Alaska Loan Recipients

Satisfactory academic progress requirements for continued receipt of Alaska Student and Alaska Family Education loans differ slightly from those associated with federal student aid. Undergraduate students must register for a minimum of 12 credits to receive their quarterly Alaska loan disbursements and satisfactorily complete the quarter with a minimum of six credits to receive the next disbursement of their Alaska loan proceeds. Graduate students must register for a minimum of nine credits and satisfactorily complete the quarter with a minimum of five credits to receive the next disbursement of their Alaska loan proceeds. If students fail to meet these Alaska loan-specific requirements, they will be placed on Alaska probation or suspension, as outlined in the standard satisfactory academic progress policy for financial aid recipients. Students may petition for Alaska loan reinstatement through Student Financial Resources.

## Appendix J POLICY CONCERNING ALCOHOL AND OTHER DRUGS

*The Federal Drug-Free Workplace Act of 1988 and the Federal Drug-Free Schools and Communities Act amendments of 1989 require that universities promote a drug-free environment through adoption and implementation of a policy and program designed to educate the university community about the dangers of substance 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.*

Western Washington University values a substance abuse-free lifestyle for students, faculty and staff. It holds this value 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.

Ninety percent of adult Americans, including college students, use drugs (including alcohol). A significant number (32-40%) of adults have drug (including alcohol) abuse or dependency problems. Improper use of drugs affects academic ability, work performance, health and personal safety. Additionally, the safety of others may be placed at risk by an individual under the influence of substances and both personal and professional relationships can suffer.

Differences 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 drugs (including alcohol). It also requires personal responsibility for dealing with one's own abuse when it is identified.

Western Washington University acknowledges its responsibility to guarantee that appropriate information and support are easily accessible to all members of the university community. Western Washington University accepts its obligation to foster awareness about the use and misuse of these substances, to provide appropriate intervention when alcohol or other drugs are misused by members of the community and to support members of this community in managing the consequences of drug (including alcohol) misuse.

At the same time, the University will uphold those state and federal laws which prohibit the unlawful manufacture, distribution, dispensing, possession, sale or use of controlled substances (which include but are not limited to marijuana, LSD, psilocybin mushrooms, cocaine, heroin and other opiates and steroids) and the misuse of alcohol and prescription drugs. It is required that all students and employees comply with these laws. Action will be taken on any violation of State and Federal law or University regulations which occurs in or on property controlled or owned by Western Washington University or while involved in University business or activities.

In meeting these responsibilities, Western Washington University has established this policy regarding the use of alcohol and other drugs and will annually distribute this information to all students, staff and faculty.

A complete set of University guidelines regarding implementation of this policy may be obtained from the Office of the Vice President for Student Affairs.



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