



WESTERN

WASHINGTON UNIVERSITY



1996
1997

B U L L E T I N

NOTICE TO READERS

Every effort has been made to provide accurate information in this catalog. Policies and information contained herein, however, may have changed subsequent to the time of publication. Readers are therefore advised to consult with the appropriate University department or office for any possible revisions. For information, call the University at (360) 650-3000.

Alternate formats of this publication are available on request. For information, call (360) 650-3757.

NON-DISCRIMINATION POLICY

Western Washington University is committed to assuring that all programs and activities are readily accessible to all eligible persons without regard to their race, color, religion, national origin, sex, age, disability, marital status, sexual orientation, Vietnam Era or disabled veteran status. The laws under which the University operates include:

Title VI of the Civil Rights Act of 1964, which prohibits discrimination based on race, color or national origin in any program or activity receiving federal financial assistance.

Title IX of the Education Amendments of 1972, which prohibits sex discrimination in all federally assisted education programs.

Section 504 of the Rehabilitation Act of 1973, which prohibits discrimination against persons with disabilities by the recipients of federal financial assistance.

The Washington State Law Against Discrimination, RCW 49.60, which prohibits discrimination on the basis of race, creed, color, national origin, sex, marital status, age or disability.

The Americans with Disabilities Act of 1990, which prohibits discrimination on the basis of disability by any public entity, and which requires reasonable accommodation for qualified persons with disabilities.

The Civil Rights Act of 1991, which amends Title VII and other federal civil rights statutes.

Persons with questions regarding the University's policies relating to these laws should contact the Center for Equal Opportunity, Old Main 375, (360) 650-3306 (voice/TDD).

COVER PHOTO — Western's new science quadrangle — located in the South Campus area — includes state-of-the-art chemistry and biology buildings, as well as a science, mathematics and technology education facility that is scheduled to open in fall, 1996. The free-flowing design of the quadrangle's landscaping was inspired by the nearby San Juan Archipelago and the existing spontaneous channels of foot traffic. Photo by Phil Schofield.

PHOTO CREDITS — Photo of President Karen W. Morse by Jon Brunk. Other interior photography by (in alphabetical order) Steve Kennedy, Melissa Marteny, Phil Schofield and Michael Ziegler. For more information on individual photographs or on the Publication Services Photo Library Collection, call (360) 650-7434.



WESTERN WASHINGTON UNIVERSITY (USPS 679-900)

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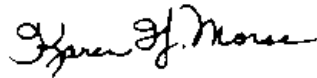
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President's Message

It is my pleasure to welcome you to Western Washington University. As a higher education institution which is both contemporary and grounded in history, Western is committed to offering the highest quality undergraduate academic education in the Northwest.

Stressing academic excellence and individual development, Western provides students with the tools which will enable them to fulfill their greatest potential as individuals, and as members of their local, state, national and world communities. We give the students the opportunity to mature, to formulate ideas, and to think independently. Our graduates are prepared to meet the challenges of the 21st century. We 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 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 is developing a solar-electric commuter car for the 21st century. Diverse educational programs are offered in conjunction with Northwest Indian College, Whatcom Community College and other area groups.

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.



CONTENTS

INTRODUCTION TO WESTERN WASHINGTON UNIVERSITY.....	1
THE UNIVERSITY	4
Academic Programs and Degrees, Extension Programs, Accreditation, Assessment, Research, Academic Facilities	
UNIVERSITY CALENDAR	6
UNDERGRADUATE ADMISSION	8
REGISTRATION.....	12
TUITION AND FEES	13
STUDENT FINANCIAL RESOURCES	16
UNIVERSITY RESIDENCES	19
STUDENT AFFAIRS	21
UNIVERSITY ACADEMIC POLICIES	29
UNIVERSITY GRADUATION REQUIREMENTS.....	36
ALL-UNIVERSITY PROGRAMS	43
GRADUATE SCHOOL	51
COLLEGE OF ARTS AND SCIENCES	85
American Cultural Studies; Anthropology; Biology; Canadian-American Studies; Chemistry; Communication; Computer Science; East Asian Studies; Engineering Technology; English; Foreign Languages and Literatures; General Science; Geology; History; Journalism; Liberal Studies; Linguistics; Mathematics; Philosophy; Physical Education, Health and Recreation; Physics and Astronomy; Political Science; Psychology; Science Education; Social Studies Education; Sociology; Speech Pathology and Audiology; Student/Faculty-Designed Major; Teaching English as a Second Language; Women Studies.	
COLLEGE OF BUSINESS AND ECONOMICS	209
Accounting; Economics; Finance, Marketing and Decision Sciences; Management; Master of Business Administration.	
FAIRHAVEN COLLEGE.....	229
COLLEGE OF FINE AND PERFORMING ARTS	238
Art; Music; Theatre Arts.	
HUXLEY COLLEGE OF ENVIRONMENTAL STUDIES	260
Center for Environmental Science; Center for Geography and Environmental Social Sciences.	
WOODRING COLLEGE OF EDUCATION.....	275
Educational Administration and Foundations; Human Services; Library Science; Educational Curriculum and Instruction.	
UNIVERSITY PERSONNEL	301
APPENDICES	310
CAMPUS MAP	325
INDEX	326



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 *Extension Programs* 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 — American Assembly of Collegiate Schools of Business; Chemistry — American Chemical Society; Computer Science — Computing Sciences Accreditation Board, Inc.; Music — National Association of Schools of Music (NASM); Psychology (mental health and school counseling programs) — Council for Accreditation of Counseling and Related Educational Programs; Recreation — National Recreation & Parks Association; Speech Pathology — American Speech & Hearing Association; Engineering Technology — Technology Accreditation Commission/Accreditation Board for Engineering & Technology; Woodring College of Education — National Council for the Accreditation of Teacher Education (NCATE), and the Office of Superintendent of Public Instruction (OSPI for Washington State).

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, Office of Naval Research, 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 throughout Western's service region.

The University has on-campus residence halls and student

apartments for over 3,600 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 Mabel Zoe Wilson Library houses 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. There are more than 5,500 subscriptions. 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 reference, computerized information retrieval and document delivery services. The online library information system offers access to library holdings, databases in many disciplines, and the catalogs of regional and national libraries. Members of the library faculty offer instruction in effective use of the library.

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.

Equipment supporting academic computing includes a network of Unix computers, comprised of DEC and SUN systems, a research server using DEC-VMS, and equipment supporting Internet connectivity.

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.

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, Isamu Noguchi, 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 provides facilities and programs for undergraduate and graduate students to study the marine and estuarine environments. Programs include a spring quarter in residence in which WWU students can register for a full credit load of marine science courses, a Summer Research Experiences for Undergraduates Program, a Minorities in Marine Science Undergraduate Program during winter and spring quarters, participation in a marine and estuarine sciences graduate option, and workshops on specialized research techniques. Facilities also support the research of graduate students and faculty from WWU, as well as visiting scientists from around the country. Facilities include wet and dry laboratories, an analytical chemistry laboratory, a radioisotope laboratory, 50 seawater tanks supplied by a running seawater system, a wide variety of analytical instrumentation, a research vessel fleet, gear for field sampling and lecture rooms. 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 Shannon Point Marine Center Consortium of Eastern Washington University and Skagit Valley, Everett and Edmonds community colleges.



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UNIVERSITY CALENDAR

1996-97 ACADEMIC YEAR*

Fall Quarter 1996

September 23 —
Registration for new students

September 25 (Wednesday),
8:00 a.m. — Classes begin

November 27, Noon, to December
2, 8:00 a.m. — Thanksgiving recess

December 9-13 —
Final examination week

December 14 (Saturday) —
Commencement

Winter Quarter 1997

January 6 (Monday) —
Registration for new students

January 7 (Tuesday), 8:00 a.m. —
Classes begin

January 20 (Monday) —
Martin Luther King, Jr., Day

February 17 (Monday) —
Presidents Day Holiday

March 17-21 —
Final examination week

March 22 (Saturday) —
Commencement

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

Spring Quarter 1997

March 31 (Monday) —
Registration for new students
April 1 (Tuesday), 8:00 a.m. —
Classes begin
May 26 (Monday) —
Memorial Day Holiday
June 9-13 —
Final examination week
June 14 (Saturday) —
Commencement

Summer Quarter 1997

June 24 to August 1 —
Six-Week Session
June 24 to August 22 —
Nine-Week Session
June 23 (Monday) —
Registration
June 24 (Tuesday) —
Classes begin
July 4 (Friday) —
Independence Day Holiday
August 23 (Saturday) —
Commencement

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UNDERGRADUATE ADMISSION

Old Main 200, (360) 650-3440

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 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 an undergraduate or postbaccalaureate student must submit the Returning Student Application for Readmission. All applications must be accompanied by a non-refundable \$35 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
 - 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

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 if 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 at (360) 650-3861.

The off-campus extension program sites offer informational visits for prospective students. For specific program information, see the Extension Programs 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 13.1 percent of Western's fall, 1994, 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.

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 565 TOEFL score and proof of full financial support for all expenses. No financial assistance is provided to international students. Due to application processing time constraints, out-of-country international student applications are not accepted for winter and spring quarters.

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.

Off-campus extension programs are generally designed for transfer students. For specific program information, see the Extension Programs section in this catalog.

Minimum freshman requirements include a 2.5 GPA, a 13 Admissions Index, and the following high school course pattern. However, since the number of qualified applicants greatly exceeds the number of available enrollment spaces, meeting minimum requirements is no guarantee for admission. Students who do not meet minimum eligibility requirements are exempt under certain circumstances. 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. College coursework may also be used to fulfill high school requirements. See *College Credit for High School Students* section.

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 calligraphy, 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 electives and advanced

study beyond the 15-credit minimum course requirements. Academic course work exceeding the minimum requirements will strengthen the application for admission.

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. Those with higher probabilities for success are assigned higher indices as determined by a formula which weights GPA (75 percent) and test scores (25 percent). When interpreting the Admissions Index, the Admissions Committee considers nature and difficulty of course selection.

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 admissions standards, including completion of the high school course requirements. College Board Advanced Placement Examination acceptable scores are listed in the Academic Policy section of this catalog. The University generally will award no more than 45 quarter credits for the International Baccalaureate.

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.

ADMISSION OF HOME SCHOOLED STUDENTS

Home schooled students must demonstrate academic preparation comparable to general freshman admission requirements. Contact the Director of Admissions for specific guidelines.

TRANSFER ADMISSION

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 admissions standards. Meeting minimums is no guarantee for admission as the number of qualified applicants greatly exceeds the number of available enrollment spaces.

UNDERGRADUATE ADMISSION

Admission priority is given to Washington state residents transferring directly from a Washington state community college with the Direct Transfer Agreement 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, individual circumstances, residency and space availability also may be considered.

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.

The total number of credits which may be transferred from another institution may not exceed the level of accreditation granted to that institution. For example, the maximum credit transferable from two-year institutions is 90 quarter credits, one half of the minimum number required for a baccalaureate degree at Western. (**Note:** Although the total transfer credit granted from two-year institutions is limited to 90, course work that exceeds that number will be considered for its appropriateness in satisfying General University Requirements or particular subject area requirements at Western.)

Regardless of the number of transfer credits awarded, the student must earn a minimum of 90 credits at an accredited four-year institution and 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
- Sectarian religion courses
- Credit for life experience
- 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 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.

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.

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 *Academic Policies* section of this catalog.

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

EXTENSION ADMISSIONS 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 *Extension Programs* section in this catalog.

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.

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



REGISTRATION

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

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 will be sent complete information about this program.

Transitions, a special orientation and advisement program for new 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.

LATE REGISTRATION

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 Extension Programs section in this catalog).

Contact Extension Credit at (360) 650-6100 or 800-649-4342 for specific course registration information.

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."

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.

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

At Western the various expenses of a student who is single and a resident of the State of Washington are about \$3,487 each quarter.

Approximate Quarterly Expenses, 1996-97

Tuition and Fees	\$ 871
Room and Board	1,538
Books and Supplies	230
Personal Expenses	848

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.)

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.

Quarterly Tuition and Fees — Ten or more credits

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.

1996-97

Student Classification	Quarterly Total
Resident ¹ , General	\$ 811
Non-Resident, General	2,872
Resident ¹ , Graduate Degree	1,295
Non-Resident, Graduate Degree	3,940

* Plus a \$15 non-refundable registration fee.

For each credit taken in excess of 18 (19 or more), the following schedule is applicable:

Student Classification	Quarterly Total
Resident ¹ , General	\$ 71
Non-Resident, General	277
Resident ¹ , Graduate Degree	119
Non-Resident, Graduate Degree	384

Quarterly Tuition and Fees — Nine or fewer credits 1996-97

For each credit (minimum charge is for two credits)

Resident ¹ , General	\$ 81
Non-Resident, General	287
Resident ¹ , Graduate	130
Non-Resident, Graduate	394

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 extension programs due to their self-supporting status.

Extension program and course fees:

Undergraduate	\$108 per credit
Graduate	\$140 per credit
Independent Learning	\$58 per credit*

(pending approval)

DESCRIPTION OF TUITION AND FEES

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

¹ 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.

TUITION AND FEES

or the University Cashier.

1996-97

	Tuition	Service & Activities Fee	Operations Fee
Res., Gen.	\$ 27.30	\$99.00	\$ 654.70
Non-Res., Gen.	106.70	99.00	2,557.30
Res., Grad.	28.70	99.00	1,119.30
Non-Res., Grad.	110.70	99.00	3,579.30

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.

MISCELLANEOUS SERVICE CHARGES

The following charges also apply to extension students.

Orientation Fee

A mandatory fee of \$45 is charged to all newly matriculated students (not including extension students) upon registration for their first quarter of attendance. This fee is non-refundable.

Counseling, Health and Wellness Fee

A mandatory fee of \$40 is charged per quarter to each student who registers for six or more credits of on-campus courses.

Building Fee

A mandatory fee of \$10 is charged per quarter to each student who registers for six or more credits of on-campus courses.

Technology Fee

A mandatory fee of \$10 is charged per quarter to each student who registers for six or more credits of on-campus courses.

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.

* 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.

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

Parking

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

	Quarterly Total*
Campus resident parking	\$ 40
Adjacent (C zone) commuter permit	36
Peripheral (CR) commuter/resident	22
C-carpool permit	24
C-carpool permit	21
Motorcycle parking	9

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	\$ 20
Master's degree	20
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
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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*.

REFUNDS OF 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 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 program 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 fees and who adds courses bringing the total credits to 10 or more will pay the balance between fees already paid and the full-time fee. A full 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 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), Stafford, 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.* They help students understand their rights and responsibilities and different



repayment plans. Contact the Student Fiscal Services Loan Repayment Office at (360) 650-2943 to receive the latest exit interview schedule.

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 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.

Exceptions to the above policy are addressed by the Western Washington University Tuition/Fees Exception Petition Form.

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 \$45 mandatory orientation fee which is charged to all newly matriculated students also is non-refundable.

STUDENT FINANCIAL RESOURCES

Old Main 240, (360) 650-3470

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. WWU students who enroll in an approved program of study abroad can be considered for financial aid (though not all aid types are available). 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.

Applicants who submit the FAFSA form to the federal processor by the priority deadline 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. Individual scholarships are available through University departments and colleges. Through the Minority Achievement Program Scholarship Award the University recognizes outstanding students who contribute to the overall diversity of WWU. A list of scholarships, with brief descriptions of eligibility requirements, is available in the Scholarship Center, Old Main 260, (360) 650-3471.

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, Direct Stafford/Ford and PLUS loan programs. The Perkins loan is targeted to undergraduate students with "exceptional need" who are dependent or who 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 greater eligibility.

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 and Service Learning, Old Main 110, (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 and Service Learning.

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 must 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 1996-97 academic year.

To be considered for priority funding for the 1997-98 academic year, students must mail the FAFSA to the federal processor by February 15, 1997. Applications made after this date will be considered for available funds.

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, including financial aid transcripts from all prior schools.
- Are admitted through the admissions office 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, Direct Stafford/Ford 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 March 1

* 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.



immediately prior to the start of summer quarter.

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 EXTENSION PROGRAMS

Financial aid may be granted for extension courses and programs. Contact Student Financial Resources for eligibility requirements and aid procedures.

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 30 days to solve minor cash-flow problems. Signature loans accrue interest at the rate of 6 percent and must be paid in full within 30 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 accrues interest at the rate of 6 percent and 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 Stafford/Ford 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. Interest accrues at 6 percent. 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 an overpayment is withdrawal of 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 withdraws prior to aid disbursement. The student is not held to satisfactory progress requirements for the quarter.
- A student who withdraws after aid is disbursed may be required to repay a portion of the aid disbursed. The Satisfactory Academic Progress policy is enforced.

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

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 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

Western Washington University's residential system provides a great variety of living options, a varied program and live-in staff committed to the development of a positive living environment. All residence halls and apartments are coeducational. Assignments are made without reference to race, age, creed or national origin.

Students are not required to live in University residences. However, living on campus offers many advantages including convenience, value and increased opportunities to fully participate in the social and educational life of the campus community.

UNIVERSITY RESIDENCE HALLS 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 pillow and case, sheets, blankets, 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 Hall.

Regardless of meal plan or residence, students may eat in any of the dining halls, although most tend to eat in the dining area nearest their residence hall. No meals are served during vacation periods.

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.

Space is limited, so apply immediately for admission for highest priority in 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 application, but must be



UNIVERSITY RESIDENCES

made when a housing agreement is signed. Space in a particular hall is assigned according to the date of the receipt of the application for admission to the University. Actual room assignments are computer-made and based upon student responses to the roommate assignment questionnaire.

Deposits, Cancellations and Refunds

Students making application 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. An assignment to housing does not guarantee a parking space or permit.

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 residence hall property which is assigned to the student's custody, damage to other hall 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.

APARTMENTS FOR SINGLE AND MARRIED STUDENTS

Binnam Wood consists of 132 apartments for 528 students

on a wooded seven-acre site near the campus. Each apartment has a living room, dining room, kitchen, outside deck, divided bath, storage area, and two bedrooms furnished for four students with the usual furnishings, drapes and wall-to-wall carpeting. Utilities are provided as well as television-FM cable and local phone service.

Assignments to *Binnam Wood* apartments are made by date of application. Each apartment can accommodate up to four persons, or a family. In cases where students cannot find a full complement of roommates, the Office of University Residences will assist but *is not responsible* to complete student contractual obligations. A deposit is required from each person assigned to an apartment.

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

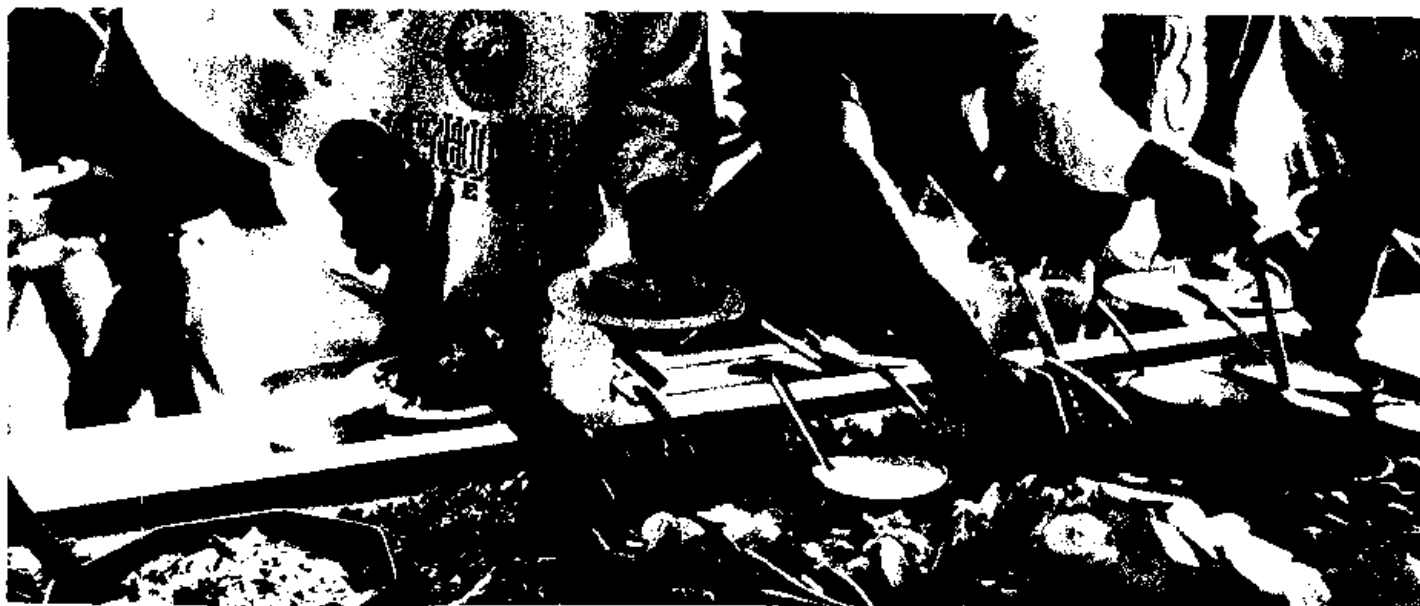
COSTS

The Trustees of Western Washington University set room-and-board rates and apartment rents. The room-and-board rate for a double room with 21 meals per week was \$4,308 for the 1995-96 academic year. Residence hall rates include room, food and utilities. Apartment rates do not include the cost for food service.

Housing rates increase each year. For the actual annual residence hall and quarterly rental rate for *Binnam Wood* apartments, 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 on-going 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.

University Conduct System

Also housed in this office is the University Judicial Officer, who is responsible for the administration of the University's conduct system. Designed to instill self-responsibility, 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. The complete text of the Student Rights and Responsibilities Code is included as Appendix C of this catalog.



ACADEMIC ADVISING SERVICES

Academic Advising Center

Old Main 380, (360) 650-3850

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 use effectively the academic and supporting resources of the University.

One of the emphases of the Center is working with students who have not yet chosen a major. Students are helped to explore Western's curriculum and clarify 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 (GURs) and other pre-major concerns.
- Assistance with the registration process.
- Help with choosing a major.
- Assistance with establishing and successfully implementing academic goals.

STUDENT AFFAIRS

- Advising support programs 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 weekdays for drop-in questions. Appointments can be made by calling (360) 650-3850.

Tutorial Center

Old Main 387, (360) 650-3855

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
- 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

Intercollegiate athletics involve many students as participants and spectators. Men's sports include basketball, crew, cross-country, football, golf, soccer, tennis, and track and field; women's sports include basketball, cross-country, tennis, golf, soccer, track and field, crew, volleyball and fastpitch softball. The University Athletic Program is a member of, and governed by, the National Association of Intercollegiate Athletics (NAIA) and National Collegiate Athletics Association (NCAA). 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

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 and abilities
- 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), Holland's Self-Directed Search and the Myers-Briggs Type Indicator.

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 weekly 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 Opportunity boards contain announcements for current position openings in business, industry, government, non-profit organizations and education.

In addition, computer workstations are available for

student use and include the following software: WordPerfect, WordPerfect for Windows, Résumé Maker, and the Federal Career System).

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 may be 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

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, the Student Health Assessment and Information Center, and initial assessment in the Stress Management/Biofeedback 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.*

Primary Prevention and Wellness Center

Miller Hall 271, (360) 650-3074

The goal of the Primary Prevention and Wellness Center 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.

The Primary Prevention and Wellness Center offers free individual and group assessment and 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 harassment, and unhealthy relationships. Peer health educators, called "Lifestyle Advisers," are Western students trained in a three-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.

The Primary Prevention and Wellness Center also challenges Western students to expand their educational classroom experience into the world of work by becoming a supervised practicum or internship student with the Center focusing on disease prevention and health promotion activities.

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 health concerns, and a health resource library. SHAIC is located at High Street Hall, (360) 650-2961.

Counseling Center

Miller Hall 262, (360) 650-3164

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.

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 math anxiety and healing from traumatic events. There also are many emotional-health 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.

Alcohol and Drug Counseling and Assessment Services

Miller Hall 267, (360) 650-3642

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 accidents, forced and/or regretted sex, poorer academic performance, 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 are here to 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.

Stress Management and Biofeedback Center

Miller Hall 262, (360) 650-3164

Part of staying well at Western means learning to handle the stress of growth, change and challenge that is a natural part of college life. When personal skills at managing such stress are rusty or underdeveloped, a wide range of physical or emotional reactions may surface, such as anxiety, sleep disturbance, headaches, poor concentration, irritability, suppressed immune system or gastrointestinal problems.

The Stress Management and Biofeedback Center's primary mission is to minimize negative reactions to stress by equipping students with the necessary insight and skills to manage stress in effective and healthy ways. The first step in this process is a free evaluation to assess for possible causes and the impact of stress. This assessment also includes an overall health history review and an evaluation of current health difficulties. A number of service and resource options — some free and some at a reduced cost — also are discussed. These options may include:

- Participation in a stress management class
- One-to-one training in stress management skills
- Self-guided work with relaxation and stress management
- Use of the Drop-In Relaxation Room
- Use of the Relaxation Tape Library
- Referral to other health service resources on or off campus

In both group and one-to-one training, a variety of self-management techniques are taught, such as time management strategies, autogenics, progressive relaxation and imagery. Biofeedback training also is used to facilitate learning. Biofeedback is a training process which involves the use of physiological monitoring equipment to measure and display specific information about bodily processes such as heart rate, muscle tension or blood flow. This added information tends to enhance the ability to learn relaxation skills, resulting in increased control over stress-related symptoms.

The Stress Management and Biofeedback Center also offers Western students the opportunity to enroll in an internship for three quarters. Biofeedback and advanced stress management skills are systematically studied and then applied in a supervised clinical setting. Credit is available through a cooperative arrangement with the Department of Psychology.

Student Health Center

High Street Hall 25, (360) 650-3400

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.

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 and when recipient was at least one year of age, or medical proof of immunity to the disease. Any questions may be directed to the Student Health Center at (360) 650-3400.

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 trained 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 through Whatcom Medical Bureau 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.

While it is not mandatory, the Student Health Center encourages a complete physical examination before enrollment in classes. *The confidential physical examination is required of all entering international students.*

NEW STUDENT PROGRAMS/FAMILY OUTREACH

Edens Hall 115, (360) 650-3846

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).
- Family and community contacts with students in case of emergency.
- Advice on University policies and procedures such as academic and administrative grievances.
- Emergency leaves of absence from campus that are of a non-medical nature.
- 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 285, (360) 650-3843

Offices encompassing Student Support Services (SSS) strive to provide the support necessary for students to succeed in their university experience.

The offices comprising SSS are Disabled Student Services and Multicultural Services Center. SSS is dedicated to promoting increased attention to student retention. Specific programming is offered to students with disabilities, students of color and international students. SSS is committed to providing proactive, student-centered service delivery. Integral to this mission is cultivating an environment which actively promotes an appreciation for pluralism and cultural sensitivity.

Multicultural Services Center

Old Main 285, (360) 650-3843

The Multicultural Services Center is central to the provision of a variety of academic support programs and services for students of color and international students. The Multicultural Services Center provides advising, orientation, assistance with immigration processes, mentoring programs, a host family program and referral to other campus/community resources. The Center also



maintains resources on scholarships, internships, study abroad and graduate school opportunities.

Disabled Student Services

*Old Main 275, (360) 650-3083 (voice),
(360) 650-3725 (TTY)*

Disabled Student Services (DSS) 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.

UNIVERSITY RESIDENCES

Edens Hall, (360) 650-2950

See the University Residences section of this catalog.

Residence Life

Edens Hall 113, (360) 650-2960

The primary purpose of the Office of Residence Life, a department within University Residences, is to facilitate a living/learning community which promotes the academic, personal, social, and cultural growth and development of Western's resident students. The Residence Life staff provides a wide variety of educational and social programs designed to complement the classroom experience for on-campus residents.

Living in a residence hall or on-campus apartment is a unique experience which provides an opportunity to meet new 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 and 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.

VIKING UNION/STUDENT ACTIVITIES

Viking Union 202, (360) 650-3450

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 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 student parents from 7:30 a.m. to 5:30 p.m. on the days Western is in session. 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 worldwide on the Internet. KUGS is also now available on cable 102.5 on campus and within Bellingham city limits. A student staff

assists the general manager in all facets of station operation and coordinates the efforts of 100 volunteers. 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 rafts, 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.

Associated Students Productions

From socializing to social issues, A.S. Productions coordinates and presents a large part of Western's entertainment, educational and social activities. Weekly films, art exhibits, concerts, noted speakers, coffee houses, dances, symposiums, festivals and cultural events are regularly provided by A.S. Productions.

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. 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.

Clubs and Organizations

Clubs and student organizations offer involvement in a wide range of activities. Approximately 100 different organizations exist within the Associated Students, including groups such as the Swing Kids Club; Bragging, Lying and Mountaineering Club; Amnesty International; Cesar Chavez Student Organization; Campus Outreach Opportunity League; Electronics Club; Science Fiction and Fantasy Club; Fairhaven Musicians Coalition; Seinfeld Club; Student Washington Education Association; Chess Club, and various departmental clubs. Many religious groups also are active at Western.

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, a juice bar, Plaza Pizza, art gallery, games room, computer lab, KUGS-FM, an activity center, a publicity center/print shop, cashier service and program areas.

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 merchandise is discounted at the register, 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, Native American Student Union, MEChA, Asian/Pacific Islander Student Union, Chinese Culture Club, Korean American Student Association, Latino Student Coalition, Filipino American Student Association, Samoan Student Association, Taiwanese Student Association, Vietnamese Student Association and the International Club, Hui 'O Hawai'i, Japanese American Culture Club, Japanese Student Association, Khmer Student Association, Lao and Thai Students Association, Latino Student Coalition, and Multi-Cultural Club. 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

The Office of Campus Recreation provides each student, faculty and staff member the opportunity to become actively involved in an organized sports and recreation program. Services provided by Campus Recreation include intramural sports, sport clubs, open recreation and instructional classes.

Intramurals

Carver Gym 101, (360) 650-3766

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

Carver Gym 101, (360) 650-3752

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. The sport club program is co-recreational and allows 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, handball, ice hockey, judo, lacrosse, rugby, sailing, skiing, snowboarding, swimming, volleyball, tennis, water polo and water skiing.

Instructional Classes

Carver Gym 101, (360) 650-3766

Instructional classes include aerobic dance, water aerobics and fencing. 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

Carver Gym 101, (360) 650-3766

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, eight athletic fields, one track and eight tennis courts. There is organized open recreation time for volleyball and badminton as well as racquetball challenge ladders. The pool is scheduled for lap, recreation, family and alumni swims throughout the day. 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:

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 Ensemble, 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 program offers a rich variety of opportunities both on stage and off in faculty- and student-directed productions to write, choreograph, act, dance and design. Productions during the academic year cover a broad range, including musicals, dramas, comedies and dance concerts. The touring theatre and the annual Summer Stock programs provide a concentrated applied theatre experience for beginners and advanced students. The program is affiliated with the American Association of Theatre in Higher Education and participates in the American College Theatre Festival. Previous experience is not required for participation. Auditions are announced to the campus community. Contact the Department of Theatre Arts, Performing Arts Center 395, for more information.

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:

College Board Advanced Placement Examinations

Department	Minimum Score	Subject Examination	WWU Courses/Credit
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 120 (5 credits)
Economics	4	Micro Economics	Economics 206 (4 credits)
	4	Macro Economics	Economics 207 (4 credits)
English	3	*English composition and literature or *English composition and language	English 101 (4 credits) plus Humanities (4 credits) or English 101 (4 credits) plus Humanities (4 credits)
History	3	U.S. History European History	History 103, 104 (10 credits) History 113 (5 credits)
Mathematics	3	Mathematics Calculus AB Mathematics Calculus BC	Math 124 (5 credits)
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)

Please see your high school counselor for more information on Advanced Placement. If you have questions about Western Washington University's policies, please call or write Western Washington University, Office of Admissions, Old Main 200, Bellingham, WA, 98225-9009, (206) 650-3440.

**Student may receive credits for either test but not both.*

- Students desiring to challenge a course should apply to the director of the Testing Center by the fourth week of the quarter. The time and procedure to be followed in completing the evaluative process will be announced by the director. A special fee is charged for each challenge examination (see Tuition and Fees section).
- The result of the challenge is recorded as "Satisfactory" or "Unsatisfactory" on the student's permanent record and is not used in computing grade point averages.
- The challenge application will normally be denied:
 - If the student is currently enrolled in the course.
 - If the student has previously established credit for a similar course at this or another university.
 - If the student has previously failed the course.
 - If the student has previously challenged the course and failed.
 - If the student has previously audited the course.
 - If, in the judgment of the director of the Testing Center, in consultation with the department concerned, the challenge procedure is inappropriate.
 - If the student is in his/her final quarter prior to graduating and the course is part of the General University Requirements.
 - If, in the judgment of the academic department, the student has not demonstrated sufficient familiarity or understanding to have a reasonable chance of passing a challenge examination.

3) *International Baccalaureate (IB)*. The appropriate department determines acceptance and application of IB exams. Only higher level exams with a score of 4 or above may be considered for credit in certain subjects.

4) *College Board Advanced Placement Examinations* in certain subjects. The department concerned has determined the minimum acceptable score and credit as shown on previous page.

COURSE NUMBERING

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

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

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

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

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

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

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 and the University Extended Programs' bulletins.

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 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 extension programs due to their self-supporting status.

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., eligible 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).

COURSE 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.



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 leaves of absence, the faculty member will inform the students in his/her classes of that fact in the course syllabus. Non-medical personal leaves of absence are available through the Family Outreach Office and medical leaves through Health Services.

While a leave of absence generally makes it possible for the student to make up work missed, in some instances the amount of time lost makes course completion impractical. In those cases, withdrawal or incomplete grades may be appropriate. The student should consult with course instructors and/or the Office of Student Affairs.

WITHDRAWAL FROM A COURSE

To withdraw from (drop) a course, a student must complete the drop transaction on RSVP (Registration for Students Via Phone). Discontinued attendance without official withdrawal results in a failing grade (Z).

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 after the first week results in a grade of W. (Deadline dates are published in the *Timetable of Classes* or *Summer Bulletin*.)

After the first week of the quarter, the student is committed to earn a grade in each registered course unless he or she has withdrawal privileges that have not been used or unless he or she withdraws from the University.

A limited number of course withdrawals with a grade of W is permitted from the beginning of the second week of instruction each quarter to the end of the seventh week. These withdrawal privileges are allowed only in accordance with the following schedule:

Total credits earned*	Withdrawal Permitted
0-44	3 during this 45-credit period
45-89	2 during this 45-credit period
90-134	2 during this 45-credit period
135 and beyond	1 during each successive 45-credit period

Graduate and post-baccalaureate students are allowed one withdrawal privilege every 45 credits.

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 *Extension Programs* section in this catalog.

For non-program course withdrawal, contact Continuing Education at 650-2841 or the Center for Regional Services at 650-3308.

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

NOTE: Late withdrawal during the summer quarter is allowed during weeks two and three of the six-week session and during weeks two through six of the nine-week session. See the *Summer Bulletin* for a description of summer withdrawal policies and deadlines.

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.

* includes credits transferred to Western.

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.

PROGRESS TOWARD DEGREE AND EXCESSIVE WITHDRAWALS

Due to enrollment limitations, the University reserves the right to deny or limit 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.

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 (superior), 4.00; A-, 3.70; B+, 3.30; B (high pass), 3.00; B-, 2.70; C+, 2.30; C (pass), 2.00; C-, 1.70; D+, 1.30; D (low pass), 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.
- 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.)

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, 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.
- Both grades earned 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 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.

Master's degree students should contact the Graduate Office for information about 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.

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 and Huxley College of Environmental Studies. Fairhaven College, which employs a different grading system, may develop alternate ways to honor outstanding graduates, subject to approval of the Academic Coordinating Commission.

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 college 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.

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 Continuing Education or the Center for Regional Services, 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 GRIEVANCE POLICY

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

STUDENT RECORDS POLICY

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

UNIVERSITY GRADUATION REQUIREMENTS

STUDENT RESPONSIBILITY FOR COMPLETION OF REQUIREMENTS

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

GENERAL REQUIREMENTS FOR BACHELOR'S DEGREES

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. A maximum of 90 transfer credits from two-year colleges may apply to the 180 credit minimum. 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.
- At least one full year of residence study (45 credits**

minimum), including the final quarter before issuance of a degree. 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).
- Satisfy University writing proficiency requirements.**
 - A. Pass the Junior Writing Exam after completing 60-90 credits.
 - B. Complete an approved writing proficiency course at WWU prior to graduating.
- 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.
- 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).

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, senior evaluation forms and the student advisement process.

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.

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

* 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.



degree must pass the Junior Writing Exam (JWE) and a writing proficiency course at WWU.

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 passed the Junior Writing Exam (JWE) and a writing proficiency course at WWU, 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-level writing-proficiency courses offered throughout the University.

- English 101, Language and Exposition (4) (waived for students demonstrating high English competency on college entrance exams). English 101 must be completed with a C- or better. Students whose college admission scores indicate a need for additional work in English composition will be notified that they are required to pass English 100, "Review of Syntax and Usage," before registering for English 101. All students must satisfy Block A of the GUR Communications requirement during their freshman year, except Fairhaven College students who must take Fairhaven 101 and 208 or Fairhaven 301 and 208.
- Pass the Junior Writing Exam after completing 60-90 credits. The Junior Writing Exam (JWE) evaluates language and writing skills. The JWE should be taken at the end of the sophomore year or no later than the first quarter of the junior year. Students who have not passed the JWE by the time they accumulate 120 credits will be blocked from registering. This exam is given several times each quarter by the Testing Center. Off-campus sites offer quarterly testing for extension program students. Students who pass the JWE may enroll directly in a writing proficiency course, usually but not necessarily in their majors. Students who do not pass the JWE should not attempt it again without improving their writing skills by enrolling in a composition course or by attending tutorial sessions at the Writing Center. Extension program students have access to a variety of writing resource materials at each off-campus site.
- Pass an approved writing proficiency course at WWU prior to graduation. All writing proficiency courses should follow these University-wide requirements:
 - students write multiple drafts of papers,
 - instructors provide suggestions for revision, and
 - instructors base 75-100 percent of the course grades on revised versions of writing assignments.
 These upper-division courses emphasize research and writing above all other aspects of the course. In writing proficiency courses, students learn the style of writing and the mechanics and assembling of evidence into scholarly papers characteristic of their disciplines. 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.

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 General University Requirements except from the Department of Liberal Studies.

Although more than 12 credits may be taken from the Liberal Studies Department to apply toward the total General University Requirements, the maximum for individual areas must be observed.

Grades in GUR Courses

Courses which are to apply to General University 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.

GRADUATION REQUIREMENTS

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 of 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. ENGLISH 101, Writing and Critical Inquiry (4) English 101 must be completed with a C- or better (waived for students demonstrating high English competency on college entrance exams).

B. One course from the following:

- ENGLISH 201, Expository Writing (4); 202, Writing About Literature (4).
- FOREIGN LANGUAGE 103 (5) or 104 (5).
- PHILOSOPHY 107, Logical Thinking (3).
- COMMUNICATION 101, Fundamentals of Communication (4); 235, Exposition and Argumentation (4).

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.

Course work must be distributed among at least three departments with no more than 10 credits from any one department.

(Exception: Students may take all three sections of either Liberal Studies 121, 122, 123 or History 111, 112, 113 for 15 credits toward the 20-credit Humanities GUR, thereby completing the Humanities GUR with the sequence and 5 credits from another department.)

(Exception: Liberal Studies 121a, 122a, 123a will satisfy Block B of the Communication GUR and 15 credits of the Humanities GUR. Thus, freshmen may complete the Humanities GUR with this sequence and 5 credits from another department.)

Select a minimum of 20 credits from the following:

- ART 190, 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).

ENGLISH 214, Introduction to Shakespeare (4); 215, Introduction to British Literature (4); 216, Introduction to American Literature (4); 238, Society Through its Literature (4); 231, Western World Literature: Classical and Medieval (4); 242, Western World Literature: Renaissance and Neoclassical (4); 283, Western World 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 (5); 104, Introduction to American Civilization (5); 111, Introduction to Western Civilization (Prehistory to 476) (5); 112, Introduction to Western Civilization (476-1713) (5); 113, Introduction to Western Civilization (1713 to Present) (5); 195, 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).

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); 201, 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); 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); 231, Dance and World Cultures (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.

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).

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.)

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

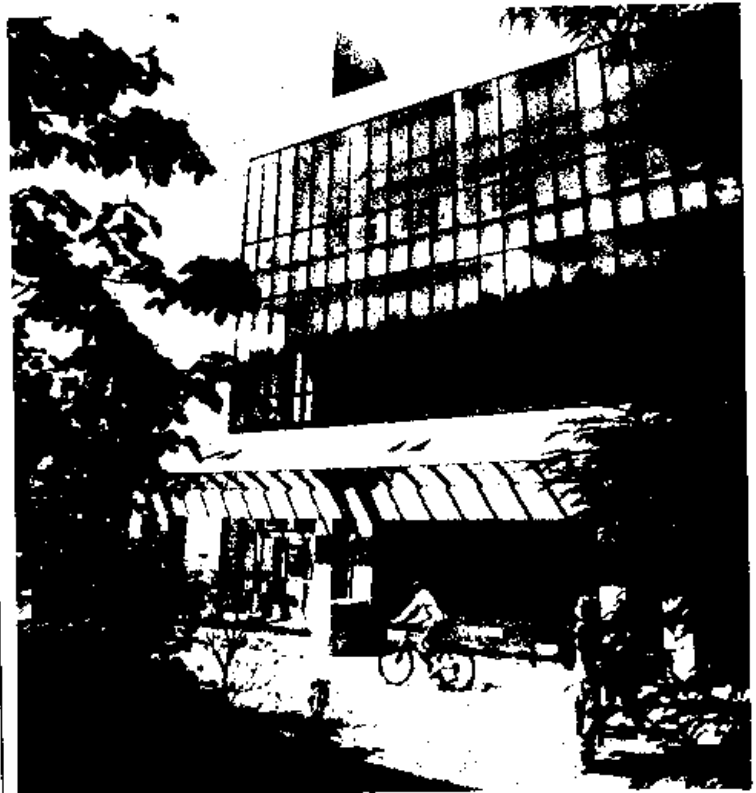
SOCIOLOGY 201, Evolution of Society (5); 221, World Population Issues (5); 251, Society of Deviant Behavior (5); 255, Social Organization of Criminal Justice (5); 260, The Family in Society (5); 268, Gender and Society (5); 302, History of Social Thought (5).

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).

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 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).

LIBERAL STUDIES 271, Humanities of India (4); 272, Mythology/Religion and Society in China and Japan (4);

GRADUATION REQUIREMENTS

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).

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

POLITICAL SCIENCE 346, Politics of Inequality (5).

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

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

MATHEMATICS

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, 124, 156, 157, 240, or any mathematics course for which one of these courses is a prerequisite, except Math 381 or 382.
- Any computer science course numbered 110 or higher.
- 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.

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

I. 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 II.

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).
- ENVIRONMENTAL STUDIES 110, Environmental Studies: A Scientific Approach (3); 204, The Oceans: Topics in Marine Science (3).
- GEOGRAPHY 203, Physical Geography (5).
- GEOLOGY 212, Historical Geology (4); 214, Environmental Geology (3); 252, The Earth and Its Weather (4); 302, Plate Tectonics and Continental Drift (4); 315, Minerals, Energy, and Society (4).
- PHYSICS 122, Physics with Calculus II (4); and 132, Physics with Calculus II Lab (1).
- SPEECH PATHOLOGY/AUDIOLOGY 253, Speech and Hearing Sciences for the Liberal Arts (4).

II. 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.

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:

- University Extended Programs
- Extension 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.

UNIVERSITY EXTENDED PROGRAMS

Dr. Ken M. Symes, Vice Provost for Undergraduate and Extended Programs, Old Main 400

University Extended Programs (UEP) links the University to a diversity of lifelong learners by offering a variety of credit and non-credit educational opportunities. Contact the following programs for information:

Continuing Education

(360) 650-2841

Individual Courses. Continuing Education delivers a wide range of credit courses to sites throughout Puget Sound. These courses and workshops are designed for students interested in personal and professional enrichment and are generally offered evenings and weekends to accommodate working people. Formal admission to WWU is not required.

Programs. WWU's Woodring College of Education, the College of Arts and Sciences, Huxley College of Environmental Studies and the Graduate School offer degree programs at sites in Western Washington. Each program requires formal admission, is structured around a core curriculum and awards a certificate or degree upon completion. The programs are designed for students seeking bachelor's or master's degrees, teacher certification, post-baccalaureate preparatory study or professional development with certificate of completion. For program descriptions, see the Extension Programs section in this catalog.

SPAN Program. 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.



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.

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.

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. Students choose an area of concentration in management/leadership, human services, and adult teaching and learning.

- 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

*The Seattle program offers a B.A. in Special Education/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

Gerontology

This two-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. The program will begin fall, 1996. Courses are non-credit. For information, call (360) 650-6854.

- 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 • Bremerton • Everett • Oak Harbor • Seattle

Industrial Technology

This program offers a Bachelor of Science degree in industrial technology. The program prepares graduates to enter supervisory and management positions within technical industries such as electronics, plastics and metals production, as well as service industries such as utility companies.

- Bremerton

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. Courses are non-credit. For information, call (360) 650-6854.

- Bellingham

School Administration (elementary, Secondary, Learning Resources)

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

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 Speech Pathology and Audiology Department 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

Technical Communications

Offered collaboratively through Western's journalism and English departments, this 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. Courses can be taken on a non-credit or credit basis.

- Bellingham

Vehicle Design

The Vehicle Research Institute (VRI) offers a post-baccalaureate program in vehicle design for students with a background in engineering. The program is a three-quarter lockstep program beginning fall quarter; courses are taken sequentially through spring quarter. The courses are based at the undergraduate level with additional content and an emphasis on applied laboratory experience. Students may also become involved in the ongoing research of VRI.

- Bellingham

CONTACT INFORMATION

Bellingham

Western Washington University, 516 High St., Bellingham, WA 98225

- Electronic Engineering Technology (360) 650-3380
- Elementary Teacher Education (360) 650-3416
- Gerontology (360) 650-6854
- Human Services (360) 650-7487
- Project Management (360) 650-6854
- Speech Pathology/Audiology (360) 650-2841
- Technical Communications (360) 650-6854
- Vehicle Design (360) 650-2841

Bremerton

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

- Industrial Technology (360) 792-2114
- 101 National Ave. N., Bremerton, WA 98310
- Human Services (360) 478-5181

Everett

Everett Community College, 801 Wetmore Ave., Everett, WA 98201, (206) 339-3808

- Adult Education course work
- Elementary Teacher Education and Certification
- Human Services

Oak Harbor

Skagit Valley College, 1200 E. Pioneer Way, Oak Harbor, WA 98277, (360) 679-5352

- Elementary Teacher Education and Certification
- Human Services

Port Angeles

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

- Environmental Studies

Seattle

Seattle Central Community College, 1801 Broadway, NP 101, Seattle, WA 98122

- Adult Education course work (206) 464-6103
- School Administration (206) 464-6086
- Secondary Teacher Education and Certification (206) 464-6677
- Special Education/Elementary Certification (206) 464-6677

Seattle Central Community College
1701 Broadway, MA 410, Seattle, WA 98122

- Human Services (206) 587-6330

For information on the Electronics Engineering Technology Program, call (360) 650-3380.

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 focus 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.*

Requirements

To fulfill the major, students must complete 60 credits of upper division courses within one or more of the three areas. 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.

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 from a list of General Studies advisers, available in the Academic Advising Center.

A minimum cumulative grade point average of 2.00 or higher is required for graduation. The required writing proficiency class can be taken in any department after passing the Junior Writing Exam (JWE).

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 the copy kept by the student.

NOTE: Students should be aware that some departments give their own majors priority in the first phase of registration; 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 at least six months prior to graduation; they must be 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; English; Foreign Languages And Literatures; History; Journalism; Liberal Studies; Music; Philosophy; Theatre Arts; Fairhaven College.

Social Sciences. Accounting; American Cultural Studies; Anthropology; Canadian-American Studies; East Asian Studies; Economics; Environmental Studies; 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 Studies; 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, (206) 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 155, Modes of Knowing (Part B of the Communications requirement)
- Any four 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
- Senior project. Completion of a senior project (mathematics majors may substitute a comprehensive examination, administered by the Mathematics Department, for the senior project)

Transfer students entering with AA degrees, and other students who have completed their General University Requirements:

- Completion of 12 credits in Honors seminars
- Completion of a senior project (mathematics majors may substitute a comprehensive examination administered by the Mathematics Department for the 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 (mathematics majors may substitute a comprehensive examination administered by the Mathematics Department for the 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 11th to the 19th centuries. Emphasizes the study of historical and philosophical writing, literature, the plastic arts and

music in their historical milieu.

105 MODES OF KNOWING (4)

An introduction to the principles and meaning of human inquiry. Includes the study of inductive and deductive reasoning, the major schools of philosophical thinking, and an investigation of the methods of the sciences, the social sciences and the humanities.

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 (2-4 ea)

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 of each student will be determined in consultation with participating faculty and approved by the International Studies Advisory Committee. For program advisement, contact the Center for International Studies and Programs, Old Main 530F, (360) 650-6580, fax (360) 650-6818.

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 at the 300 level or above; 200 level accepted for languages not commonly taught
- Additional credits from courses approved by the International Studies Advisory Committee 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
- A minimum 3.00 grade for each course applying to the minor

Courses in International Studies

201 Introduction to International 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, co-sponsored 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.)

International Programs and Exchanges

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 co-sponsors semester and academic-year programs at universities in China, Japan 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 125 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 530E, (360) 650-3298, or via e-mail at pbruland@cc.wvu.edu for further information on study, travel and work abroad.

LIBRARY INSTRUCTION

The faculty of the libraries offer instruction in library

research in several ways: Library 201, team-teaching with faculty in various departments, tours and workshops.

Library Instruction

201 INTRODUCTION TO LIBRARY STRATEGIES (2)

Introduces students to the nature of library research with emphasis upon strategies for carrying out inquiry, evaluating electronic and print sources and incorporating the results into subsequent written assignments. Offered by members of the library faculty.

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 three 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.

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

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.

Careful selection of electives may enhance performance in law school, and undergraduate course selection should reflect the interests and professional objectives of individual students. Therefore, early consultation with the program advisers on course and program decisions is recommended.

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. 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

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. Jerry Kraft, Department of Biology (through fall quarter, 1996)

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 Allied Health Professions Test or 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.

Required courses for physical therapy programs:

- Biol 348, 349
- Chem 121, 122, 251
- Physics 114, 115, 116
- Psych 201 plus an additional course

Additional courses highly recommended:

- Chem 123
- Biol 340 or Math 240
- Biol 201, 202, 345
- Phys Ed 301, 302, 303, 485
- Psych 314, 316

Adviser: Dr. Kathleen Knutzen, Department of Physical Education, Health and Recreation

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 advisers listed below are 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 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, 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 120

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 (physics/astronomy)

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 and by the National Council for the Accreditation of Teacher Education. The University is a member of the Council of Graduate Schools in the United States and adheres to the general policies and criteria established by this national association.

Western Washington University is a member of the Western Interstate Commission for Higher Education (WICHE). Two of WWU's graduate programs have been identified as unique or exemplary. Candidates from designated Western member states who are admitted to the master's program in history (archives and records management) or environmental science (environmental toxicology and chemistry) have a portion of their non-resident fees waived. Contact the Graduate Office for further details.

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.

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. Graduate students also are eligible for several types of financial aid; information can be obtained from the University's Office of Student Financial Resources.

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.

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

Official test scores must be received by August 1 for fall, December 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 an 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. One recent, official transcript 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.
- 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. Contact the Graduate School for clarification. 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. MBA applicants must provide the Graduate Management Admissions Test (GMAT), not the GRE, within the MBA program deadlines.

Applicants are advised to plan for the GRE/GMAT four to six months prior to the program deadline date. Registration for the GRE/GMAT 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. The computer-based test (CBT) substantially shortens the time frame for both registration and score reporting.

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 Testing Center, (360) 650-3080.

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.

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 of at least 565 on the TOEFL. The TOEFL scores must be on file

in the Graduate School prior to receipt of the application for graduate study.

International students must submit official translations 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 \$20,000 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.

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. For provisional admission to be granted, there must be strong reasons for waiving general admission requirements. 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 that offers the student special admission to graduate study. No K (incomplete) grades are allowed until provisional status is removed.

PROGRAM REQUIREMENTS

Graduate programs at WWU require a minimum of 45 credits with thesis/field project and 48 credits without thesis/field project. 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 thesis or non-thesis option 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 independent study be applied toward the degree.

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.)

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. *However, for purposes of certain kinds of financial aid, the definition is 10 credits because of state or other regulations.* Graduate assistants are governed by other regulations and should request a special information sheet from the Graduate Office. All graduate teaching assistants must enroll for a minimum of eight credits.

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 coursework and, in most programs, a comprehensive examination). Check the program descriptions that appear later in this catalog. The Graduate Office approves thesis/field project committees upon request of the department chair and the program adviser. 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 until all course work has been completed upon request by the student and agreement by the graduate adviser. 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 grades 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 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 (in French, 280 may be substituted) or (b) passing a reading competency examination in the language. The examinations in French, German and Spanish will be administered by the Testing Center during the academic year, using the Princeton-ETS examination. Contact the Testing Center for schedule information. The examinations in other languages taught at Western — i.e. Chinese, Japanese, Russian, classical Greek and Latin — will be set by the Department of Foreign Languages and Literatures. Contact that department for further information. Each department will set its own minimum score 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.

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, then Graduate Office	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	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."

Advancement is granted by the Graduate School upon the recommendation of the student's program adviser and 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 and/or thesis/field project committee. 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. 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. For information, contact the Teacher Education Admissions Office in Miller Hall 206E, (360) 650-3378.

UNDERGRADUATE ENROLLMENT IN 500-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.

NOTE: Undergraduate students may not 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 PROGRAMS AND ADVISERS

Anthropology (MA): Dr. Daniel Boxberger.
Art (MEd): Dr. Gaye Leigh-Green.
Biology (MS): Dr. Emily Peele.

Business Administration (MBA): Dr. Stephen Senge.
Chemistry (MS): Dr. Mark Bussell.
Computer Science (MS): Dr. Gary Eerkes.
Education (Administration and Foundations) (MEd): Adult — Dr. Susan Mancuso, Dr. Violet Malone, Dr. Tony Jongejan; School Administration — Dr. Marv Klein; Instructional Technology — Dr. Les Blackwell, Dr. Tony Jongejan, Dr. Frank Roberts; Student Personnel Administration — Dr. John Utendale.
Education (Curriculum and Instruction) (MEd): Elementary — Dr. Theodore Mork; Exceptional Children — Dr. Kenneth Howell; Secondary — Dr. Howard Evans; Reading — Dr. Theodore Mork.
English (MA): Dr. Marc Geisler.
Environmental Science (MS): Huxley College — Dr. Jack Hardy, Chair, Graduate Program Committee.
Foreign Languages (MEd): Dr. John Underwood.
Geography (MS): Dr. Patrick Buckley.
Geology (MS): Dr. James L. Talbot.
History (MA): Dr. Peter Diehl.
Mathematics (MS): Dr. Edoh Amiran.
Music (MMus): Dr. Ed Rutschman.
Physical Education (MS): Human Movement and Performance — Dr. Lorraine Brilla.
Political Science (MA): Dr. Todd Donovan.
Psychology (MS): Dr. Dale Dinnel.
School Counselor (MEd): Dr. Arleen Lewis.
Science Education (MEd): Dr. John Miller.
Sociology (MA): Dr. Carl Simpson.
Speech Pathology and Audiology (MA): Dr. Lina Zeine.
Technology (MEd): Dr. Robert Raudebaugh.
Theatre (MA): Prof. Dennis Catrell.

Anthropology

College of Arts and Sciences

GRADUATE FACULTY

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.
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, 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.

Basic Requirements

- Anth 501 (5)
- Anth 502 (5)
- Anth 503 (5)
- At least one upper-division or graduate course in each of the four major fields of anthropology (12-20)
- 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.

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.

Electives in Specialization

- Courses selected under advisement from 400- or 500-level courses in anthropology, at least 35 credits must be from courses open only to graduate students (only 10 credit hours are allowed from 400-level courses)

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)

Special Skills Competency

Competency in a special skill must be acquired through one of the following options:

- Reading or speaking knowledge of a foreign language, demonstrated by: (a) successful completion of a second-year university language course sequence, or (b) completing an accepted course designed to provide a reading knowledge of the language, or (c) passing a foreign language competency test
(Note: Foreign students whose native language is not English are considered to have already fulfilled the foreign language special skills competency)
- A series of courses in linguistics in addition to Anth 540
- Computer science/statistics competency, preferably two courses at the junior or senior level (excluding Anth 335)

In special cases where unique skills are needed, a coherent series of courses may be taken which lead to a specific skill. This option requires written permission from both the student's adviser and from the program adviser.

Advancement to candidacy is granted upon successful completion of:

- Anth 501
- Anth 502
- Anth 503
- One course in each of the subfields of anthropology, which in the area of physical anthropology shall be chosen from either Anth 520 or 525
- Participation in the instruction of an introductory anthropology course where appropriate

Art

College of Fine and Performing Arts

M.Ed. — THESIS AND NON-THESIS

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

GRADUATE FACULTY

Bereal, Edmond, alternative education, professional artist.
 Clark-Langager, Sarah, BA, MA, PhD.
 Crary-Ortega, Laura, BFA, MA.
 Embrey, Robert E., MFA, MA, photography.
 Georgiades, Aristotle, BFA, MFA.
 Gleeson, Madge, MFA, graphic design.
 Janson, Carol L., PhD, art history.
 Jensen, Robert A., MFA, drawing and painting.
 Johnston, Thomas A., MFA, printmaking.
 Leigh-Green, Gaye, BA, PhD, art education
 McCormick, Patrick F., MFA, ceramics.
 McIntyre, Mary A., MFA, fabric and fibers.
 Reed, Michael L., BS, MA.
 Smeins, Linda E., PhD, art history.
 Smith, Kenton D., BFA, MA, MFA.
 Urso, Robert, MA, computer graphics.
 Vassdal-Ellis, Elsi M., PhD, graphic design

ADMISSION DEADLINE

Please see Graduate School deadlines.

GRADUATE TEACHING ASSISTANTSHIP (TA) DEADLINES

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

Prerequisites

- An undergraduate major or 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.

Specific Test Requirements

- Graduate Record Examination — General Test.

Basic Requirements

- EdAF 501, 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 (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)

Biology

College of Arts and Sciences

GRADUATE FACULTY

Anderson, Roger A., PhD, animal physiology.
 Brown, Herbert A., PhD, vertebrate zoology.
 Fonda, Richard W., PhD, plant ecology.
 Köhn, Hubertus, PhD, plant physiology.
 Kraft, Gerald F., PhD, aquatic entomology.
 Leaf, David S., PhD, cell and developmental biology.
 Morgan, David R., PhD, systematic botany.
 Muller-Parker, Gisèle, PhD, marine phytoplankton ecology.
 Parakh, Jal S., PhD, science education.
 Peele, Emily R., PhD, aquatic microbial 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.
 Sulkin, Stephen D., PhD, invertebrate larval biology.
 Trent, Carol, PhD, molecular and developmental genetics.
 Williams, Don C., PhD, cellular and molecular biology.

APPLICATIONS

Deadlines

Please see Graduate School deadlines. Applications for fall admission should be completed by February 1.

Graduate Teaching Assistantship (TA) Deadlines

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

M.S. — BIOLOGY, THESIS ONLY

Program Adviser: Dr. Emily R. Peele, Biology Building 407

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.

Specific Test Requirements

Graduate Record Examination, General.

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 Coordinator: Dr. Stephen D. Sulkin, Shannon Point Marine Center

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 should 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 Dr. Stephen Sulkin, Director, Shannon Point Marine Center, 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 383 and 492 (or the equivalents). 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.
 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.
 Hung, Ken, PhD, business statistics.
 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.
 Mocre, John S., PhD, business policy.
 Murphy, Dennis R., PhD, managerial decisions/international finance.
 Nelson, David M., PhD, macroeconomics/money markets.
 Olney, Thomas J., PhD, marketing.
 Petersen, Lois E., EdD, business communications.
 Plumlee, E. Leroy, DBA, business environment.
 Ross, Steven C., PhD, management information systems.
 Ruble, Michael R., PhD, auditing/financial accounting.
 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.
 Singleton, William R., PhD, taxation.
 Sleeman, Allan G., PhD, economic theory/quantitative methods.
 Spich, Robert S., PhD, international business.
 Springer, Mark, PhD, operations management.

Warner, Daniel M., JD, business law.
 Weymark, Diana N., PhD, money/macro/international.
 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

Applications and Admission

A new class is admitted to start the program in June of each year. Some students may be able to have the first summer quarter classes waived and start the program in the fall. The program is offered on either a part-time or full-time basis.

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). Letters of reference may be submitted or requested.

Preferred consideration is given to applications received by March 15.

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

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.
 Weyh, John A., PhD, analytical chemistry, computer applications.
 Whitmer, John C., PhD, physical chemistry, science education.
 Nicholas, Mark, PhD, inorganic and organometallic chemistry.
 Wilson, H. William, PhD, environmental analytical chemistry, spectroscopy.

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

Program Adviser: Dr. Mark E. Busell

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 EdAF 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 EdAF Community College Faculty Preparation Program. Two years should be allotted for the completion of the community college internship option.

See Educational Administration and Foundations' description of the Community College Faculty Preparation Program for further details.

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.

Computer Science*College of Arts and Sciences***GRADUATE FACULTY**

Eerkes, Gary L., PhD, computer graphics, scientific visualization, image processing.
 Hearne, James W., PhD, distributed systems, artificial intelligence, computational linguistics.
 Ives, Fred M., PhD, compiler design, VLSI design.
 Johnson, James Lee, PhD, database theory, VLSI design.

Jusak, Debra S., PhD, distributed systems, parallel systems.
 Matthews, Geoffrey B., PhD, artificial intelligence, pattern recognition.
 Menninga, Larry D., PhD, computer architecture.
 Nelson, Philip A., PhD, parallel and distributed computing.
 Osborne, Martin L., PhD, object oriented computing.
 Urzi, Saim, PhD, computer graphics, image processing, cryptography.

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

Program Adviser: Dr. Gary L. Eerkes, Bond Hall 301B

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 120, 221, 222, 223, 224 and 310. 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, 538
- Hardware/Computer Systems Organization: CS 420, 555, 560, 561, 565
- 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)

A student's M.S. program will be tailored according to the general requirements and the student's background and career intentions. Please refer to 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 eerkes@wwu.edu. Admission to the program is through the Graduate School.

Education

Woodring College of Education

Courses in the Woodring College of Education's graduate programs which are offered by either the Department of Educational Curriculum and Instruction or the Department of Educational Administration and Foundations are designated according to the department from which each originates.

Curriculum and Instruction courses are designated EdCI.

Administration and Foundations courses are designated EdAF.

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.

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 write a general education comprehensive examination. See "Thesis and Comprehensive Examinations" in the Graduate School section. Students must apply to take this examination no later than the end of the second week of the quarter in which they wish to take the exam.

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 credit.

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 or adviser for details.

Educational Administration & Foundations

Woodring College of Education

GRADUATE FACULTY

Blackwell, Leslie, EdD.
 Jongejan, Anthony, PhD.
 Kasprisin, Lorraine, PhD.
 Kim, Robert H., EdD.
 Klein, Marvin, PhD.
 Malone, Violet M., PhD.
 Marrs, Lawrence W., PhD.
 Roberts, Franklin, PhD.
 Schwartz, Sy, EdD.
 Trimble, Joseph E., PhD.
 Utendale, John F., EdD.
 VanderVelde, Philip B., PhD.
 Zurfluh, Linda, EdD.

GENERAL ADMISSION REQUIREMENTS

Students must meet Graduate School requirements before being considered for admission to a specific program. Contact the program adviser for specific information. For admission requirements to a specific certificate program, refer to the program of interest.

M.Ed. — ADULT EDUCATION ADMINISTRATION

Program Advisers:

Dr. Violet M. Malone, Miller Hall 314B, (360) 650-7318, vmalone@wce.wvu.edu (concentrations in adult teaching and learning; human services administration; management/leadership)

Dr. Susan Mancuso, Miller Hall 329, (360) 650-6552, smancuso@wce.wvu.edu (concentrations in adult

teaching and learning; human services administration; management/leadership)

Dr. Anthony Jongejan, Miller Hall 204B, (360) 650-3381, tonyj@wce.wvu.edu (concentration in instructional design and multimedia development)

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. Upon graduation, competence is expected in such areas as leadership, curriculum development, programming, project management, training and development, life-long learning and distance education.

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

Students may, under advisement, select concentrations of elective courses in:

- Adult teaching and learning
- Human services administration
- Management/leadership
- Instructional design and multimedia development
- Vocational 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. For working adults, however, their jobs often provide opportunities for these experiences or self-designed projects.

Completion time for the program is a minimum of one year. Average completion time is three 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 deadlines
- Current personal resume
- A 300- to 500-word typed statement of purpose
- A personal interview may be requested
- Basic level 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
- Basic Requirements: EdAF 501, 512, 513 [12]
- Specialization Requirements: EdAF 576, 577, 578, 599 [13]
- Field Experience Requirements: EdAF 592g (2-6) and/or EdAF 592e (2-6) [6-8]

- Thesis Requirement: EdAF 690 [6-9]
- Electives selected with advisement, primarily from courses in Educational Administration and Foundations [7-12]. Groupings of elective courses may provide concentrations in: adult teaching and learning; human services administration; instructional design and multimedia development; management/leadership; and vocational rehabilitation counseling.
- Option II: Non-Thesis — 49 credits
- Basic Requirements: EdAF 501, 512, 513 [12]
- Specialization Requirements: EdAF 576, 577, 578, 599 [13]
- Field Experience Requirements: EdAF 592g (2-6) and/or EdAF 592e (2-6) [6-8]
- Comprehensive examinations
- Electives selected with advisement primarily from courses in Educational Administration and Foundations [16-18].

Groupings of elective courses may provide concentrations in: adult teaching and learning; human services administration; instructional design and multimedia development; management/leadership; and vocational rehabilitation counseling.

M.Ed. — STUDENT PERSONNEL ADMINISTRATION IN HIGHER EDUCATION

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

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 theories and practice, leadership and management, and organization development. Further, it addresses abilities necessary to manage current and persistent problems facing student affairs and higher education.

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 paper and completion of the M.Ed. comprehensive exam (II:7). Total graduation requirements are listed below.

Admission

Graduate School admission plus a bachelor's degree and experience in student personnel or related human services work 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 deadline — February 1

- Personal résumé
- A 300- to 500-word typed statement of purpose
- Personal interview with admissions committee
- Elementary 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.

Basic Requirements

- EdAF 501, 512, 513 (I and II:12)

Requirements in Specialization

- Core courses — EdAF 555, 556, 557a, 557b, 557c, 558, 559 (I) (I:23), plus EdAF 581 (2) (II:25)
- Research — EdAF 690 (I:7); EdAF 691 (II:5)
- Internship — EdAF 592f (I and II:14)

Graduation Requirements

- Thesis (I:56)
- Non-thesis (II:56) plus comprehensive examinations.

M.Ed. — SCHOOL ADMINISTRATION

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 Center: Dr. Linda Zurfluh, (206) 464-6759, lzurfluh@cc.wvu.edu

Instructional Technology: Dr. Les Blackwell, Miller Hall 202, (360) 650-3387, lblack@wce.wvu.edu; Dr. Frank Roberts, Miller Hall 204D, (360) 650-3395, froberts@wce.wvu.edu; Dr. Anthony Jongejan, Miller Hall 204B, (360) 650-3381, tonyj@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
- Two years 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 be an Administrator"
- 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 EdAF 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 EdAF 542a,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

- EdAF 501, 512, 513 (I, II and III:12)

Requirements in Specialization

- EdAF 541a, 543a*, 544c (I, II, and III:12)
- EdAF 542a,b,c,d (III:6)
- EdAF 690 (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 two consecutive years of certificated teaching experience in one district on at least a half-time basis (the service must cover the entire school year), a valid Washington State teaching certificate and a master's degree in school administration (program to include approved certification course work). A 12-credit internship 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 two consecutive years of certificated teaching experience in one district on at least a half-time basis (the service must cover the entire school year), 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 internship. Candidates for the initial certificate must pass an exit examination as prescribed in WAC 180-78-193-194.

* It is recommended that instructional technology students not pursuing administrative certification take EdAF 550 instead of EdAF 543a.

Applicants for admission to this program should contact the School Administration Office.

Principal's Standard/Continuing Certificate

For the Washington State Standard/Continuing Principal's Certificate, 12 to 15 credits of course work beyond the requirements for the Provisional/Initial Certificate are required. Transfer credits are not allowed. Course work must be done under advisement and after proper application has been made to the School Administration Office.

PROFESSIONAL CERTIFICATE PROGRAMS

Certificate of Advanced Study (CAS)

A specialized post-master's degree program at the sixth-year level is offered to a limited number of 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 204, (360) 650-3090.

Community College Faculty Preparation Program (Certificate Program)

A special certificate designed to prepare graduate students for community college faculty positions is offered through the Educational Administration and Foundations Department 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 Community College Programs Office, Miller Hall 314C, (360) 650-6891.

Educational Curriculum and Instruction

Woodring College of Education

GRADUATE FACULTY

Atkinson, Charles M., EdD, special education.
 Bradley, Darcy, PhD, elementary education.
 Dallas, Lee A., EdD, secondary education.
 Evans, Howard M., EdD, secondary education.
 Fennimore, Flora, EdD, elementary education, library science.
 Fox, Sheila L., PhD, special education.
 Henniger, Michael, PhD, elementary education.

Howell, Kenneth W., PhD, special education.
 Keiper, Robert W., EdD, secondary education.
 Krogan, Suzanne L., PhD, early childhood education.
 Mork, Theodore A., PhD, elementary education, reading, children's literature.
 Pinney, Robert H., EdD, secondary education.
 Rickey, Melissa, EdD, elementary education.
 Slentz, Kristine L., PhD, special education.
 Towrer, John C., PhD, reading, elementary education.

GRADUATE STUDY OPTIONS

Each program area offers the student two options for the master's degree: Option I, thesis, minimum 45 credits; and Option II, comprehensive examination and/or seminar paper, minimum 48 credits. The elementary, secondary and exceptional children programs offer a specialization for students who do not have either a background in education or teaching certification; this track is referred to as Teaching/Research, certification, or credential track under Option II.

Students in all programs take three courses in common: EdAF 501, 512, 513.

M.Ed. — ELEMENTARY

The graduate programs in Elementary Education and Reading are under review. No applications are currently being accepted for admission, either for certified teachers (except for applicants to the literacy concentration — see below) or for those seeking certification. For current information, contact the graduate program adviser for special program information.

The Elementary program consists of the systematic, scholarly study of research, theory and practice related to education of children. The degree program is intended for certified individuals who plan to continue teaching elementary and preschool children or work in a consultant, supervisory or administrative capacity with adults interested in the education of children. Within this program, two areas of specialization are available by advisement: early childhood and Native American education. General curriculum and instruction, consultant/supervisor, computer education, middle school education, library science, language arts (literacy), and science education are among the areas available as curricular emphases.

One specific program focuses on literacy learning and teaching and includes carefully sequenced courses and field-based projects to foster collaboration and collegiality among the participating students and the elementary education faculty. Students complete the sequence of classes offered over one summer and five academic-year quarters as a cohort. The school-year course schedule consists of approximately two weekends per month, while the summer session is a full-time, intensive course of study.

An option is also available for individuals who wish to earn initial certification while simultaneously working on the master's degree. This is the Teaching/Research track.

Graduate Program Adviser: Dr. Theodore Mork, Miller Hall 251F, (360) 650-3416

Prerequisites

- Options I and II(a): undergraduate preparation and teaching certification and experience
- Option II(b): admission to Woodring College of Education through Teacher Education Admissions Office

Courses

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

NOTE: Students seeking 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 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.

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

This is available only to certificated teachers.

- Option I: Thesis or Field Project (45 credits)
 - EdAF 501, 512, 513 (12)
 - EdCI 521, 533, 535, 690 (16-21)
 - EdCI 569a or 518b, 569b or 531a, 569c or 530, electives (12-17)
- Option II: Seminar Paper (48 credits)
 - EdAF 501, 512, 513 (12)
 - EdCI 521, 535, 539 (12)
 - EdCI 569a or 518b, 569b or 531a, 569c or 530 (10)
 - Electives by advisement (14)

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

This is available only for certificated teachers.

- Option I: Field Project only (45 credits)
 - EdAF 501, 512, 513 (12)
 - EdCI 518, 521, 525, 526 (16)
 - EdCI 690 (6-9)
 - Electives by advisement (8-11)

M.Ed. — SECONDARY EDUCATION

Graduate Program Adviser: Dr. Howard Evans, Miller Hall 306D, (360) 650-3329

Prerequisites

Graduate Record Examination, General Test (average score of 500 or better), GPA of 3.0 or better, three letters of recommendation, a statement of purpose and the approval of program adviser. Successful teaching experience in grades 7-12 required for the curriculum consultant, the high school/middle school, the instructional technology applications, and the Native American education track. For the M.Ed. certification track, a state-approved endorsable major as listed in the *Education* section of the current catalog is required.

NOTES: For those seeking the teaching credential and the master's degree (the teaching credential track), all applications and supporting materials (letters of reference, GRE scores, official transcripts, statement of purpose) must be received by the Graduate School by the following dates for the corresponding quarter of admission: April 1 for fall quarter, October 1 for winter quarter, and February 1 for spring quarter. No applications are accepted for summer quarter.

The secondary program area is not accepting applications to any graduate programs for certified teachers during the 1996-97 academic year *except* the Instructional Technology Applications specialization. The secondary program plans to accept applications for other certified teachers for entry Fall 1997. Certified teacher applicants should use Graduate School deadlines.

Students seeking certification must also be admitted to the Woodring College of Education teacher preparation program. This application process takes place after students are admitted to the graduate program. 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 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.

The Secondary Education graduate program offers two types of programs and five areas of specialization.

For those seeking teaching certification: the teaching credential track is offered for those students seeking the master's degree combined with a program which leads to a recommendation for State of Washington teacher certification.

M.Ed./Credential in Secondary Education, Option II Only

- EdAF 501, 512, 513 (12)
- EdCI 571, 572/555, 573, 596c, 691 (22-28)
- Electives by advisement (8-14)
- Plus additional courses required for certification

M.Ed. in Secondary Education for certified teachers with a selected emphasis in one of the following:

1. High School Curriculum and Instruction (Option I and II)
2. Middle School Curriculum and Instruction (Option I and II)
3. Instructional Technology Application (Option II only)
4. Native American Education (Option II only)

- EdAF 501, 512, 513 (12)
- EdCI 570, 572, 690 (Option I) or 691 (Option II) (18-21)
- Electives under advisement (12-15)

M.Ed. — READING

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. Theodore Mork, Miller Hall 251F, (360) 650-3416

Prerequisites

Teaching certification, teaching experience.

Courses

- Option I: Thesis (45 credits)
 - EdAF 501, 512, 513
 - EdCI 484, 584, 586, 589, 594e or 562, 594f or 568, 690
 - Electives by advisement
- Option II: Seminar Paper (48 credits)
 - EdAF 501, 512, 513
 - EdCI 484, 584, 586, 589, 594e or 562, 594f or 568, 539, 691
 - Electives by advisement
 - General comprehensive examination

M.Ed. — EXCEPTIONAL CHILDREN

Graduate studies in Special Education for Exceptional Children are designed to accommodate students with and without endorsement to teach special education. Students who are not yet endorsed to teach special education begin the program by taking a block of special education fundamentals prior to beginning more advanced course work. Students who already hold a Special Education endorsement begin the program with more advanced course work.

Currently certified special education teachers may choose to complete a thesis (Option I — minimum 45 credits); or write comprehensive exams (Option II — minimum 48 credits).

Students seeking initial teaching certification plus a master's degree will typically only have the option of taking comprehensive exams. They must complete a minimum program of 48 credit hours (although, in actuality, certification plus master's programs will exceed 48 credits).

NOTE: Enrollment in on-campus special education teaching credential graduate programs is limited.

NOTE: Master's plus certification students must also be admitted to the Woodring College of Education teacher preparation program. 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 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.

Graduate Program Adviser: Dr. Kenneth W. Howell, Miller Hall 318C, (360) 650-3971.

ADMISSION REQUIREMENTS

- Completion of the "Woodring College of Education Student Conduct Requirements and Agreement" form, (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.). Form available from Teacher Education Admissions office, MH 206E, (360) 650-3378. May submit with Graduate School application materials.
- Students seeking teacher certification in conjunction with their master's degree must also submit with their Graduate School application an essay addressing each of the following:
 - What are your past experiences related to working with disabled children or youth?
 - Why are you interested in pursuing a master's degree program in Special Education?
 - Why are you seeking certification in Special Education?

PROGRAM REQUIREMENTS

- Some undergraduate course work is required of non-certified teachers to meet Washington State initial certification requirements; these courses should be completed prior to beginning graduate course work. For advisement, see program adviser.
- Certification requirements — required for students who are not certified to teach:
 - Psych 316
 - HEd 455 or EdCI 463c
 - EdAF 344 or 444 or 544b
 - Effective teaching competency (see Special Education graduate adviser)
 - Multicultural Competency (see Special Education graduate adviser)
- Special Education certification requirements for students wishing to be certified to teach Special Education (34 credits)
 - EdCI 460
 - EdCI 462a
 - EdCI 462b
 - EdCI 465a
 - EdCI 465b
 - EdCI 466a
 - EdCI 469b
 - EdCI 498a or b or c
- Graduate Foundation Courses — required for all College of Education graduate students:
 - EdAF 501, 512, 513 (12)
- Special Education Fundamentals Block — required for all students who are not currently endorsed to teach

special education:

- EdCI 561 and 568 (7)
- Exceptional Children Master's Block — required for all Exceptional Children graduate students:
 - EdCI 562a, 563, 567 (10)
- Early Childhood Option

Students wishing to pursue an endorsement in Early Childhood Special Education may choose the following ECSE specialty courses as electives or substitutes:

- EdCI 569a, 569b, 569c (10)
- If Option I (thesis), 6 credits of EdCI 690 and electives to total minimum 45 credit program.
- If Option II (general education and area comprehensive examinations), 4 credits EdCI 691 and minimum 11 credits electives to total minimum 48 credit program.

Engineering Technology

College of Arts and Sciences

GRADUATE FACULTY

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*
 - EdAF 501; Tech 592g, 592e, 517 (12)
- Academic Year One*
 - Tech 593, 500 (12)
- Summer Two*
 - Tech 592a, 592n; EdAF 512, 513 (12)
- Academic Year Two*
 - EdAF 690b; Tech 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.
 Castañeda, Omar, MFA, creative writing (fiction), folklore (Maya studies), studies in arealistic fictions.
 Dietrich, Dawn, PhD, modern drama, performance studies, film studies, science and literature, postmodern theory.
 Emmerson, Richard K., PhD, Medieval literature, Medieval and Renaissance drama, history of the English language, literary theory.
 Geisler, Marc, PhD, Renaissance literature and culture, literary theory, politics and literature.
 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.
 Keep, William C., PhD, literature, creative writing (nonfiction).
 Laffrado, Laura, PhD, American literature, children's literature, gender studies.
 Lobeck, Anne, PhD, linguistics, literary theory, gender studies.
 Lundeen, Kathleen, PhD, British Romanticism, critical theory, poetry.
 Lyne, 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
 Skinner, Knute, PhD, creative writing (poetry), poetic forms.
 Smith, Allison, PhD, linguistics, discourse analysis, composition research and pedagogy.
 Smith, William E., PhD, Shakespeare, British Renaissance studies, composition and rhetoric.
 Symes, Ken, PhD, literature, rhetoric, nonfiction.
 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 specializations: (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 general GRE 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. Note Graduate School limitation of independent study to 10 credits total.

Other Requirements

Students in the English Studies option 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 Science

*Huxley College of Environmental Studies
Center for Environmental Science*

GRADUATE FACULTY

Albers, James R., PhD, alternative futures, population and environment.
 Berardi, Gigi, PhD, human geography, environment and society.
 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.
 Harcy, John T., PhD, environmental toxicology, global climate change, biological oceanography.
 Lancis, Wayne G., PhD, environmental toxicology and population biology.
 Matthews, Robin A., PhD, stream ecology, limnology, aquatic toxicology.
 Mayer, J. Richard, PhD, aquatic chemistry, ground water studies.
 Miles, John C., PhD, environmental education and history, outdoor education.
 Mookherjee, Debnath, PhD, comparative urbanization, regional development and planning.
 Robbins, Lynn A., PhD, social impact assessment, human ecology, environmental policy.
 Smith, Bradley F., PhD, global environmental policy, environmental education.
 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.
 Yu, Ming-Ho, PhD, environmental toxicology, plant toxicology, nutritional science.

M.S. — ENVIRONMENTAL SCIENCE, THESIS ONLY

Program Adviser: Dr. John T. (Jack) Hardy, Environmental Studies Center 524

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:

Aquatic Ecology. This specialization focuses on the study of physical, chemical and biological processes in freshwater and marine systems, including lakes, streams, watersheds, coastal, estuarine and pelagic marine systems (see also the

Marine and Estuarine Science option).

Specialization courses: Envr 522, 529, 530a, 530b, 531, 534, 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 510, 531, 551, 555, 556, 557, 558, 559

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 505, 507, 510, 531, 535, 536, 539, 544, 562, 592; Geog 510, 535, 552

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.

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.

Western Washington University is a member of the Western Interstate Commission for Higher Education (WICHE); this membership entitles out-of-state graduate students from participating Western states to a partial remission of out-of-state tuition when enrolling in the **environmental toxicology and chemistry** specialization of Huxley's M.S. in environmental science program.

Program Requirements

Forty-five credits minimum, including: Envr 501 (4); a diagnostic exam in environmental science; 12 credits or

more under advisement from within one of the above three 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.

The diagnostic exam will be taken during the student's first quarter. If not passed, the student's adviser will recommend one or two courses of independent study, etc., to correct the deficiency. This work will be in addition to the minimum of 45 credits required for completion of the degree and will be approved by the graduate program.

For further information, write or consult the chair, Graduate Program Committee, or the dean of Huxley College.

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 Coordinator: Dr. Stephen D. Sulkin, Shannon

Point Marine Center

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 select 12 credits of specialization in marine and estuarine science from the following list:

Envr 522, 531, 534, 538; Biol 503, 507, 508

Prerequisites

Students matriculated through Huxley College (M.S. in environmental science) must meet the prerequisites for admission described in the environmental science M.S. option. Students matriculated through the Department of Biology (M.S. in biology) must meet the prerequisites for admission described in the M.S. in Biology, Thesis Only option in this catalog.

For a complete list of participating faculty and their research interests, and for further information, write to Dr. Stephen Sulkin, Director, Shannon Point Marine Center, Anacortes, WA 98221.

Foreign 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.

Geography

Huxley College of Environmental Studies

Center for Geography and Environmental Social Sciences

GRADUATE FACULTY

- Bach, Andrew J., PhD, physical geography, cartography and water resources.
- Berardi, Gigi, PhD, human geography, environment and society.
- Buckley, Patrick H., PhD, economic and development, quantitative methods, GIS, East Asia.
- Miles, John C., PhD, resource management, environmental education and history.
- Mookherjee, Debnath, PhD, urban, South Asia, regional development, planning.
- Robbins, Lynn A., PhD, social impact assessment, human ecology, environmental policy.
- Terich, Thomas A., PhD, physical, urban and regional planning, coastal

studies, environmental hazards.

Webber, Herbert H., PhD, ecosystem management, environmental restoration, marine biology, sampling design and data analysis.

M.S. — GEOGRAPHY, THESIS ONLY

Program Adviser: Dr. Patrick Buckley, Arntzen Hall 222,
(360) 650-4773, (360) 650-3284

Program Goals

The Center for Geography and Environmental Social Sciences offers a graduate program leading to a Master of Science in geography. The primary objective of this program is to provide a disciplinary foundation with emphasis on resource geography — focusing on the study of environmental management and sustainable development. Among the essential components of the program are critical thinking in history and theory of geography, geographic techniques and applied spatial analysis. The program is designed for those students who wish to pursue careers in such diverse fields as business, government, planning, teaching or research/consulting, or for those students who desire to pursue advanced degrees.

Based on current faculty interests and expertise, studies can take place in a variety of geographic contexts ranging from the local to the international. The faculty's regional specializations include South Asia, Latin America and North America. Under this framework, the program focuses on land use and development, and resource assessment and management. Theory and empirical methods are used to study the interaction of land use and development, with attention to social, economic and cultural contexts. Students are encouraged to undertake resource-oriented investigations utilizing innovative geographical methodologies. Resource assessment and management studies center on the development and application of systematic methods to evaluate constraints and options in the human use of biophysical systems. A special focus is on the integration and evaluation of environmental systems for resource management. The program welcomes students interested in working in areas such as coastal management and water resources, and using tools like statistical techniques, optimization modeling and GIS.

Prerequisites

Students with a degree in geography or other fields such as planning, urban studies or environmental studies, who meet the requirements of the Graduate School and who show evidence of superior scholarship, are particularly encouraged to apply for admission to the graduate program. Students with degrees in fields other than geography will be considered if they have basic background in the discipline or are prepared to undertake 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, thesis option only

45 credits minimum, including:

Core Requirements (28 credits)

- Geog 501
- Geog 510
- Geog 521 or 522
- Geog 551
- Geog 590
- Geog 690

Additional Course Work (17 credits)

Under advisement and conditional approval by geography faculty, the student will choose 17 credits of electives and supporting courses.

Thesis

The M.S. degree in geography requires the satisfactory completion of a research project emphasizing original research and resulting in a comprehensive written thesis. The candidate will present a public seminar based on the project, to be followed by an oral defense and acceptance of the thesis by the candidate's thesis committee prior to completion of degree requirements.

The thesis committee will have a minimum of three members. Two will be drawn from the graduate faculty of the geography program, including the research adviser as the chair. One member will normally be drawn from elsewhere in the Center, College or University. The makeup of the thesis committee must be approved by the student's graduate program adviser.

Specific Test Requirements

Graduate Record Examination, General.

The qualifying examination should be completed by the end of the third quarter of residency, before advancement to candidacy. The graduate geography 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 the specific theoretical and empirical content of their intended research area.

Other Requirements

Demonstrated competence (by course work or by specially administered test, as appropriate) in one or more of the following techniques: statistics, computer science, cartography (including computer cartography), a foreign language.

Geology

College of Arts and Sciences

GRADUATE FACULTY

Babcock, R. S., PhD, geochemistry, petrology.
 Beck, M. E., Jr., PhD, geophysics, paleomagnetism.
 Brown, E. H., PhD, metamorphic petrology, geochemistry.
 Easterbrook, D. J., PhD, geomorphology, glacial geology.
 Engebretson, D. C., PhD, tectonics, paleomagnetism.
 Field, J.J., PhD, geomorphology.
 Hansen, T.A., PhD, paleontology.
 Schermer, E. R., PhD, tectonics, structural geology, geochronology.
 Suczek, C. A., PhD, stratigraphy, sedimentary petrology, tectonics.
 Talbot, J. L., PhD, structural geology, tectonics.
 Wodzicki, A., PhD, economic geology, geochemistry.

M.S. — GEOLOGY, THESIS AND NON-THESIS

Program Adviser: Dr. James L. Talbot, 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 non-thesis 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 must be completed in 12 months.

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). Students who have not completed these courses before entering the geology M.S. program must do so and gain grades of B or better in each course 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. non-thesis 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.

12-month Non-thesis 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, 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 — Non-thesis 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 446, 447, 514, 530, 562, 570, 572, 573, 578, 579 or under departmental advisement

Electives

- 10 credits from Geol 507, 540, 544, 561, 574, 575, and Envr 502, 522, 529, 536; or under departmental advisement

M.Ed. — NATURAL SCIENCE

Earth Science Specialization, Thesis and Non-Thesis

Program Adviser: Please contact department.

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.

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

History

College of Arts and Sciences

GRADUATE FACULTY

- Costanzo, Susan E., PhD, Russian/Soviet, Europe.
 De Lorme, Roland L., PhD, 20th-century American history, American West, Pacific Northwest.
 Diehl, Peter D., PhD, Medieval, Ecclesiastical, Social.
 Eunch, S. Amanda, PhD, early modern 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.
 Helljott, Leonard M., PhD, modern Middle East and modern Europe.
 Horri, 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, women's studies, U.S.
 Mariz, George E., PhD, intellectual history of 19th-century Europe, history of 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.

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.

* *Reading and Writing Seminars: Reading seminars (designated "r" in the Timetable of Classes) 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 (designated "w") are extensions of reading seminars in which students write major research papers based on previous preparation in a reading seminar.*

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 seminars* (16)
- Elective courses (13)

Option II (Non-Thesis): Basic Requirements

- Hist 501 (4)
- Four reading seminars* (16)
- Two writing seminars* (8)
- Elective courses (20)

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 the Princeton foreign language test and scoring 450 or higher; 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, accounting 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.

This program has been approved by the Western Interstate Commission for Higher Education (WICHE). Candidates from designated member states are charged a reduced tuition rate. Contact the Graduate Office for further details.

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 a master's 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.
 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.
 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 120 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

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. 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, 577.

The student's program must also include at least four of the following courses: Math 503, 511, 523, 525, 527, 528, 533, 539, 545, 560, 562, 564, 566, 570, 573.

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.

Music

College of Fine and Performing Arts

GRADUATE FACULTY

Briggs, Roger D., PhD, composition, orchestra.
 Gilliam, Jeffrey, MMus, piano accompanying, theory.
 Guelker-Cone, Leslie, DMA, choral music, conducting.
 Hill, Ford D., MMus, piano, keyboard pedagogy, performance studies.
 Iglitzin, Karen, MMus, violin, viola, chamber music, string pedagogy.
 Israels, Charles, BA, jazz studies, ensembles, string bass, electric bass.
 Marsh, Peter, Diploma, violin, viola, chamber music.
 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, graduate program adviser, theory/analysis, counterpoint, music history.
 Shaw, Albert C., DMus Ed, music education, conducting, instrumental music, percussion.
 Terey-Smith, Mary, PhD, music history and literature, musicology, analysis, Collegium Musicum.
 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

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 474, 475, 478, 481, 483, 540 (6)
- Music 511, 512, 513, 514 or 515 (9)
- Electives (2)

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

- Conducting Studies (9-17)
 - Music 501, 502 and approved 400-level and/or 500-level course(s)
- Basic Musicianship (0-9)
 - Courses to be selected from the following (any not selected under Basic Requirements): 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 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)
 - Music 501, 502, 525 or any approved 400-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 course(s)
- Applied Music (0-9)
 - Music 511-515, 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 an undergraduate major in music 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 comprehensive oral examination covering all course work taken for the degree, as well as material related to the thesis.

Natural Science/Science Education

College of Arts and Sciences

GRADUATE FACULTY

Barrett, W. Louis, PhD, physics.
 Dallas, Lee A.; EdD, educational curriculum and instruction.
 Field, John, PhD, geology.
 Miles, John, PhD, Huxley College of Environmental Studies
 Miller, John A., PhD, chemistry.
 Moscovici, Hedy, PhD, biology.
 Parakh, Jal S., PhD, biology.
 Slesnick, Irwin L., PhD, biology.
 Stewart, James E., PhD, physics.
 Whitmer, John C., PhD, chemistry.

M.Ed. — NATURAL SCIENCE/SCIENCE EDUCATION

Adviser: Science education coordinator with advisement in specialized areas:

Biology: please contact department
 Chemistry: Dr. J.A. Miller

Earth Science: please contact department
 General Science, Physical Science: Dr. J. A. Miller
 Elementary Science: Dr. J. 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 education 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.:

- 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.

Admission

In addition to the Graduate School required materials for admission (current references, official transcripts and GRE general scores), 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

- EdAF 501, 512, 513 (12)
- Sci Ed 501, 513 (7)

Specific Test Requirements

Graduate Record Examination, General, for applicants selecting this option.

Specializations — Secondary Programs

Biology, Thesis (45 credits) and Non-Thesis (48 credits)

- 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)

For prerequisites, see Biology Department listing.

Chemistry, Thesis (45 credits) and Non-Thesis (48 credits)

- 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)

For prerequisites, see Chemistry Department listing.

Earth Science, Thesis (45 credits) and Non-Thesis (48 credits)

- 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)

For prerequisites, see Geology Department listing.

General Science, Physical Science: Thesis or Field Project (45 credits)

- Requirements in specialization
 - Sci Ed 690a or 690b (6-12)
 - Electives: Courses selected under advisement from astronomy, biology, chemistry, geology, physics, science education, educational curriculum and instruction or educational administration and foundations. Specialization in physical science will include 5-15 credits in chemistry and 5-15 credits in physics (14-20)

General Science, Physical Science: Non-Thesis (48 credits)

- Requirements in specialization
 - Sci Ed 580a or 590 (4-5)
 - Electives: Courses selected under advisement from astronomy, biology, chemistry, environmental studies, physics, science education, educational curriculum and instruction, and educational administration and foundations. Specialization in physical science will include 5-15 credits in chemistry and 5-15 credits in physics (24-27)

Specialization — Elementary Program

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 Program, Thesis or Field Project (45 credits)

- Requirements in specialization
 - Courses selected under advisement from Sci Ed 500, 517 series, 582, 583, 584, 592, 593, 594 having a

- science content basis (12)
- Additional requirements for curriculum resource specialist
 - Sci Ed 511, 512 (6-9)
 - Sci Ed 690a or 690b (6-12)
- Electives: Courses selected under advisement from science education, educational curriculum and instruction or educational administration and foundations, biology, chemistry, geology or physics and related fields (0-8)

Elementary Program, Non-Thesis (48 credits)

- Requirements in specialization
 - Courses selected under advisement from Sci Ed 500, 517 series, 582, 583, 584, 592, 593, 594 having a science content basis (12)
- Additional requirements for curriculum resource specialist
 - Sci Ed 511, 512 (6-9)
 - Sci Ed 580 (4-5)
- Electives: courses selected under advisement from science education, educational curriculum and instruction or educational administration and foundations, biology, chemistry, geology or physics and related fields (3-17)

Specialization — Environmental Studies

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 (49-59 credits)

- Requirements in specialization
 - Envr 571 (4)
 - Envr 690 or 690b or Sci Ed 690a or 690b (6-12)
- Electives: courses selected under advisement from natural science, education and including at least 10 credits in environmental studies or geography (20-24)

Elementary or Secondary, Non-Thesis (49-59 credits)

- Requirements in specialization
 - Envr 571 (4)
 - Envr 598 and/or Sci Ed 598 (6-12)
- Electives: courses selected under advisement from natural science, education and including at least 10 credits in environmental studies or geography (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.

Clumpner, Roy, PhD, socio-cultural aspects of physical education/pedagogy.

Knutzen, Kathleen, PhD, biomechanics/kinesiology.

Tyson, 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 OR FIELD PROJECT

Program Adviser: Dr. Lorraine Brilla, CV 22
(360) 650-3056

Program Description

Graduate study leading to a Master of Science degree is offered in two areas: exercise science and sports 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 advancement to candidacy. 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 May 1.

Supporting Materials

Students must submit a written statement of purpose outlining areas of interest, goals for graduate study and future career plans relating to the degree.

Program Requirements

46-50 credits

Exercise Science (50 credits)

Sport Psychology (46 credits)

- Basic Requirements: PE 506, 520, 690 (13)

Exercise Science

- Requirements: PE 510, 513, 540, 543, 544; Psych 512 (24)
- Electives: Select 13 credits under advisement from the following: PE 502, 507, 511, 520, 533, 541, 546, 592; Psych 513 (13)

Sport Psychology

- Requirements: PE 507, 541, 542, 551, 592; Psych 511 (21)
- Electives: Select 12 credits under advisement from the following (6 credits must be from psychology): PE 502, 511, 513, 533, 540, 543, 544, 546; Psych 502, 504, 512, 513, 521, 524, 526, 527, 528 (12)

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, international and comparative 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. Todd Donovan, Arntzen Hall 418

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]

Comprehensive Examination

For thesis and non-thesis options, written and oral comprehensive examinations in two fields (see list following) are required. For public policy non-thesis specialization, see below.

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 to graduate students). The candidate is required to take the basic course in two of the following fields of concentration:

- 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 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:

- Public Policy: Pol Sci 503
- Comparative Government: Pol Sci 505
- American Politics: Pol Sci 540
- Political Theory: Pol Sci 560

Note that the Public Policy non-thesis specialization is separate.

Public Policy, Non-Thesis Specialization (minimum 48 credits)

- Pol Sci 501, 502, 503, 510, 520, 521, 540, 550
- 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)
- Environmental policy studies field to be constructed by the student in consultation with environmental policy studies adviser; must include two 500-level environmental studies courses and one other course (10-12)
- Comprehensive exam in the political science field (exam will include an applied section on environmental

policy studies)

- 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 4 credits in environmental policy field and 4 credits in the chosen political science field as required above; selected in consultation with environmental policy studies adviser)

Psychology

College of Arts and Sciences

GRADUATE FACULTY

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, S., PhD, school counseling, cross-cultural counseling, training and consultation with human services organizations.
 Hyman, Ira, PhD, cognitive psychology, social psychology, repressed memories.
 Kintz, B. L., PhD, general experimental, measurement and statistics, research design and computer uses in psychology.
 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.
 Miller, Laurence, PhD, experimental psychology, operant conditioning, psychological themes in films.
 Prim, Merle M., PhD, sub-human primate behavior, physiological psychology, sensory, comparative.
 Shaffer, Ronald W., PhD, learning, perception, phenomenology.
 Shaw, Laura, PhD, empathy, aggression, altruism.
 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 F., PhD, social, cross-cultural.
 Tyler, Vernon O., Jr., PhD, clinical psychology, adolescence.

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 either Psychology or Education recommended.

Course Requirements (80 credit minimum)

- Psych 502, 504, 532, 551, 553, 554, 555, 556, 557, 558, 560, 561, 564, 565 (I and II:42)
- EdAF 501, 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. Dale L. Dinnel, 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

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.

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.

Course Requirements

Each candidate is required to take the core, plus degree requirements. The core consists of Psych 501, 502, 511 and 512. Psych 690 is also required. Minimum of 45 credits is required for degree. Additional courses are required as specified in each of the curriculum descriptions.

Other 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.

Electives

Psych 500, 504, 514-516, 518, 519, 520-532 and any 400 and 500 courses in the departments of biological sciences, chemistry, education, Huxley College of Environmental Studies, mathematics, philosophy, physics and sociology or anthropology approved by advisement only.

M.S. IN PSYCHOLOGY — GENERAL PSYCHOLOGY CURRICULUM

Curriculum Coordinator: Dr. Richard Thompson, 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 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 general psychology curriculum must complete the core course requirements for the M.S. psychology program (501, 502, 511, 512 and 690).

In addition to course requirements of the M.S. program, students in the general psychology curriculum are required to take 503, 508, 513, and three seminars from two of the following three groups: Group 1: Psych 522, 525 and 528; Group 2: Psych 520, 521, 523 and 524; Group 3: Psych 526, 527, 529, 530 and 532. Psych 514-516, 518 and 519 are also offered as electives.

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 501-503, 508, 511-513, 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. David Sue, Miller Hall 266

This two-year (90-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, 502, 511, 512, 690). In addition, the following courses must be completed: Psych 504, 510, 532, 550, 553, 555, 557, 558, 560, 561, 564, 565, 570, 670 and one seminar from 520-531.

Sociology

College of Arts and Sciences

GRADUATE FACULTY

Bradley, Karen, PhD, stratification, formal organizations, comparative political sociology.

Bulcroft, Kris, PhD, family, research methods, aging.

Carmody, Dianne, PhD, criminology, deviance, family.

Forste, Renata, PhD, demography, population, methods and statistics.

Inverarity, James, PhD, research methods, criminology, methodology.

Mahoney, E. R., PhD, human sexuality, research methods, social psychology.

Richardson, John, PhD, education, historical sociology, contemporary theory.

Simpson, Carl (Chair), PhD, education, applied sociology.

Stephan, G. Edward, PhD, theory, demography, math applications.

Tedrow, Lucky, Adjunct Faculty, social and historical demography, computer applications.

For further information:

Contact: Dr. Carl Simpson, Graduate Adviser, Department of Sociology, Western Washington University, Bellingham, WA 98225-9081 (360) 650-3901

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 are organized around stages of the research process.

Sociology M.A. students will also 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. While room exists for strong students to forge their own area of specialization, most students are expected to select one of the areas in which the sociology faculty specialize or, under advisement, to develop an area of specialization in

conjunction with another department at Western.

The areas of specialization open to students may vary slightly from year to year. The areas currently available within the Sociology Department are demography, criminology/deviance/sociology of law, sociology of family, stratification, sociology of gender relations, sociology of education, sociology of aging, human sexuality, sociology of organizations, and historical sociology, as well as research methods and survey research.



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.

Prerequisites

A bachelor's degree, preferably 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. Within each course, a good deal of content is individualized, but

students must move through the curriculum together in sequence. Required courses include Soc 504, 505, 515, 551, 552, 561, 562, 563 and 690. Up to 12 elective credits may be taken from other departments if approved by the Sociology Department graduate adviser. Program is to total 45 credits (minimum); thesis is taken for 6 credits.

Procedures such as advancement to candidacy and the thesis defense are described in the *Guide to Graduate Study in Sociology*, available through the department.

Speech Pathology & Audiology

College of Arts and Sciences

GRADUATE FACULTY

Apel, Kenn, PhD, language disorders in children and adolescents.
Darling, Rieko M., PhD, audiology
Mathers-Schmidt, Barbara, PhD, fluency disorders, neuromotor speech disorders, research methodology.
McRandle, Carol C., PhD, audiology, aural rehabilitation.
Seito, Michael T., PhD, audiology, aural rehabilitation, speech acoustics perception.
Zeine, Lina, PhD, adult language disorders, voice/laryngectomee.

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 satisfactorily. A one-page statement of purpose is also required.

Admission

Enrollment is limited to 30 graduate students.

Deadlines

Completed applications are due by February 1 for priority consideration. 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 57 credits)

- Requirements: SPA 502, 510, 515, 550, 551, 552, 552a, 553, 554, 555, 556, 557, 558, 575, 580#, 581*, 582*, 585, 586, 598a#** or 599a**, 690 (6 credit minimum, thesis) or 691 (non-thesis)
- Electives: SPA 450, 462, 463, 465, 552b, 559, 560, 570, 598b#**, 599b**, and other 400- and 500-level courses selected under departmental advisement

Audiology and Aural Rehabilitation (minimum 62 credits)

- Requirements: SPA 502, 551, 561, 562, 563, 564a, 564b or 568d, 565, 566, 567, 568a, 568b, 568c, 570, 571, 572, 573, 574, 575, 577, 578, 598a** or 599a**, 690 (6 credits minimum) or 691***
- Electives: SPA 465, 465a, 545, 564c, 564d, 564e and other 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 Speech Pathology and Audiology 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.

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.

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.

Professional Certification Requirements

The Department of Speech Pathology and Audiology 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.

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. 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.

Theatre Arts

College of Fine and Performing Arts

GRADUATE FACULTY

Catrell, Dennis E., MA
 O'Reilly, Maureen, MFA.
 Taylor, Lee H., MA.
 Ward, Thomas, MFA.
 Vander Yacht, Douglas R., PhD.

M.A. — THEATRE

Program Adviser: Prof. Dennis Catrell, Performing Arts Center 389

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 committee. A personal interview is required, and evidence of qualifications will be requested of applicants.

Specific Test Requirements

Graduate Record Examination, General Test; Diagnostic Examination (administered by the Department of Theatre Arts).

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 (II) and 595 (II) and one key course outside specialty
- Design/Technical Theatre
 - *577*, 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 400- and 500-level courses in a collateral discipline. These courses must have the approval of both the student's advisory committee and the allied department.

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
Foreign Languages	
(French, German, Spanish)	BA
(French, German, Spanish)	BA/Ed
(French, German, Spanish)	M/Ed
General Science	BA/Ed
Geology	BA, BS, MS
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
Natural Science	M/Ed
Philosophy	BA
Physical Education	BA, BA/Ed, M/Ed
Physics	BA, 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
 Dr. Richard Fonda Biology
 Dr. Mark L. Wicholas Chemistry
 Communication
 Dr. James Johnson Computer Science

..... Engineering Technology
 English
 Dr. Darrel Amundsen Foreign Languages & Literatures
 Geology
 Dr. George E. Mariz History
 Floyd McKay Journalism
 Dr. William Stoeber Liberal Studies
 Dr. Tjalling Ypma Mathematics
 Dr. Phillip Montague Philosophy
 Dr. Kathleen Knutzen Physical Education,
 Health & Recreation
 Dr. Robert J. Quigley Physics/Astronomy
 Political Science
 Dr. Ronald A. Kleinknecht Psychology
 Dr. James Inverarity Sociology
 Dr. Michael Seilo Speech Pathology/Audiology

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.

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 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, Old Main 460.

BACHELOR OF ARTS

Major — American Cultural Studies

70 credits

Core Requirements 36-38 credits

- AmSt 301
- Three courses from AmSt 202, 203, 204, 205 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, 362, 366 or 462
- Two courses from Eng 234, 235, 327, 341, 408, 420 or 422
- Art Hist 331 or 360 (plus prerequisites); or Music 202

Individualized Program of Study 32-34 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, 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 credits

- Three courses from AmSt 202, 203, 204 or 205
- AmSt 301
- One course from Eng 234, 235, 327 or 341
- One course from Hist 261, 362, 366 or 462

Related Courses 4 credits

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 18-20 credits

- AmSt 202, 301, 499
- Anth 361 or 462
- Eng 235
- 5-7 credits under advisement, selected from areas such as Eng 420; Hist 275; Fair 357 or 455

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 30 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.

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.

499 SPECIAL PROBLEMS (4)

Prereq: AmSt 301 and senior status. A research or field project 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 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 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 and museums.

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. degree in biology/anthropology within a four-year time span should have completed the following courses by the start of their junior year. Major omissions from this list will make it difficult or impossible to complete this degree within two additional years.

- Chem 121, 122, 123, 124
- Biol 201, 202, 203
- Anth 201

ANTHROPOLOGY FACULTY

ROBERT C. MARSHALL (1985) Chair. Associate Professor. BA, Youngstown State University; PhD, University of Pittsburgh.

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 HAMMOND (1984) Associate Professor. BA, MA, Brown University; PhD, University of Illinois.

LINDA AMY KIMBALL (1976) Associate Professor. BSEd, MA, PhD, Ohio State University.

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 in order 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.

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 may be substituted for an anthropological linguistics course)
- Anth 301
- Anth 335, or another basic statistics course under departmental advisement

Topical Skills

- Anth 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 in anthropology under departmental advisement. Student selection of a complementary minor under advisement is strongly recommended.

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
- 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; Geog 330, 351, 354, 356, 358, 359, 432

Combined Major — Anthropology/Biology

86 credits including 20 in supporting courses

- Chem 121, 122, 123, 124 and 251 (or 351, 352, 353)
- Biol 201, 202, 203, 348, 349, 370 (or 321)
- Anth 335, Biol 340 or Math 341
- Anth 201, 210, 215
- 10 credits in anthropology under advisement
- Recommended elective courses: Biol 323, 324, 325, 326, 345, 403, 408, 449, 465, 469, 470, 471, 472, 473, 474, 475, 490, 495 and 384 or 485; Anth 420, 423, 424, any "Peoples" courses relevant to the student's interests

Program advisers: H. Brown, biology, and J. Stevenson, anthropology. Students should also consider the human biology concentration in the Biology Department with a minor in 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 — At least one course from each of the following groups:
 - Cultural area courses: Anth 361, 362, 364, 365, 460, 462, 463, 464, 465
 - Topical cultural anthropology courses: Anth 247, 330, 348, 351, 353, 424, 429, 453, 475, 480, 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 30 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.

103 THE NON-WESTERN WORLD: ASIA, AFRICA AND THE AMERICAS (4)

An introduction to the ethnography and ethnology of the non-Western world. Anthropological methods and approaches are explored from the perspective of cross-cultural comparison and the processes of social change. Not appropriate for those who have taken or plan to take 201.

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 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.

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.

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: 5 credits of anthropology. 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.

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: 10 credits in anthropology including Anth 210 or equivalent. 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: 10 credits in anthropology or one year's experience in law enforcement and 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 102 or 215 and a 300-level course in anthropology, biology or geology. Detailed exploration of the fossil record leading to modern humans.

424 MEDICAL ANTHROPOLOGY (5)

Prereq: Anth 201. 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 201. 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: 10 credits in anthropology 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.

- 443 INTERMEDIATE ANTHROPOLOGICAL LINGUISTICS (5)**
Prereq: Anth 348. Detailed examination of further topics in anthropological linguistics, including language universals, language acquisition, world language and script patterns, and ethno-semantic.
- 453 WOMEN IN "THIRD WORLD" SOCIETIES (4)**
Prereq: 5 credits of anthropology. Women's familial, economic, religious and political roles in selected "third world" or "developing" societies. Different theoretical perspectives for explaining women's roles.
- 460 CULTURE AND SOCIETY OF JAPAN (4)**
Prereq: Anth 201. 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 INDIANS OF THE NORTHWEST COAST (3)**
Prereq: Anth 201 and 361. Tribal distributions, social organization and ecological adjustment with emphasis on the Indians of Western Washington; problems of adjustment to the modern world.
- 463 PEOPLES OF SOUTH AND SOUTHEAST ASIA (3)**
Prereq: Anth 201. 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: Anth 201. 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 instructor. Internship at the Whatcom Museum of History and Art under the direction of a designated faculty member with a museum staff person. Students select an area of museum specialization and may work with ethnographic, archaeological or historic materials. Repeatable to 10 credits.
- 471 FIELD WORK METHODS IN CULTURAL ANTHROPOLOGY (7)**
Prereq: 15 credits in anthropology. The study of ethnographic field work methods through exercises in class and a major field work project in the community. Discussion of topics, including the anthropologist as field worker and the ethics of field work.
- 475 INTERNATIONAL MIGRATION (4)**
Prereq: Anth 201. 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: Anth 201. 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 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 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 30 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.
- 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.
- 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.
- 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 study of life — includes a broad spectrum of exciting subjects. Microbiology, ecology, environmental science, systematic biology, genetics, marine biology, biometry, cell and molecular biology, botany, entomology, zoology, science education, animal and plant physiology and anatomy are some of the specialties to be found in Western's department. Many of our students prepare for professional careers in biology, the health sciences or for teaching in the public schools and community colleges. And a growing number of students select a degree program in biology just because they find it a fascinating area of study even though they may not plan to pursue a career in biology. Biology is a valuable second major which enhances employment opportunities. The department offers courses, majors and minors encompassing these and other possibilities.

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. Take all requirements for an AA degree *and* be sure to include:

- mathematics through two quarters of calculus, *and*
- a year sequence in general chemistry, *and*
- a year sequence in biology for majors: cellular, animal, and plant biology

B. Take all of the following sequences; 90 credits; without an AA:

- two quarters of calculus, *and*
- a year sequence in general chemistry, *and* a year sequence in organic chemistry, *and/or* a year sequence in 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 chemistry*. 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 by the start of 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.

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

Professional career opportunities in biology are very diverse, and many of them require education beyond the baccalaureate degree. Medicine, oceanography, environmental law, fisheries, forest biology, veterinary medicine, sanitary engineering, and specialties in medical and dental technology involve additional studies after graduation from Western. Students interested in one of these professional careers complete one of the majors leading to the Bachelor of Science degree.

The B.S. degree program is recommended for those who wish to continue post-graduate studies in the biological sciences or to teach in secondary schools and community colleges. The curriculum is based on a strong core of seven biology courses and supporting courses in the physical sciences and mathematics.

Each option in the depth requirements section is designed to provide students with flexibility to become proficient in a specific part of the discipline. Student interested in biochemistry, genetic engineering, biotechnology, cell biology, biochemistry, medical or dental school should select either the interdisciplinary cellular and molecular biology/biochemistry major or the cellular emphasis in the B.S. degree. Western is the only four-year university on the West Coast that has natural habitats ranging from salt water to alpine within a one-hour drive of campus. Within this region are three national parks, three national forests, hundreds of miles of marine shoreline, countless lakes and numerous other natural features. Students interested in graduate study or careers in field-oriented research should select the appropriate ecology or marine biology emphasis. Other emphases in the B.S. degree provide experience in broader areas, such as botany, zoology and human biology. Students who want to experience the broad spectrum that characterizes the field of biology will find maximum flexibility in the general biology emphasis.

The B.A. Degree

Students interested in biology or one of its component specialties, but not directly interested in post-graduate

study, professional careers in biology or teaching, may wish to combine biology with an area such as history or political science. Combinations of this sort are particularly valuable to those interested in environmental science. Happily, there are many students who simply want to make the science of life the focus of a liberal education. These students are encouraged to consider the B.A. degree in which the number of required courses has been kept low to permit students to select areas of study and courses suited to their individual needs and interests.

A combined B.A. major is available in biology/anthropology for students whose interests span these two disciplines. Other programs one might design under the B.A. degree include combinations of biology with another discipline such as art, economics, history, philosophy, physical education, psychology, political science and speech.

DECLARING A MAJOR

The Biology Department maintains a program of advisement; students interested in any major or pre-professional program in biology should consult the Biology Department as early in their university careers as possible. Early advisement will ensure appropriateness and proper sequence of courses. All biology majors must declare the major, and have it so signed in the *Degree Planning Guide* by their faculty adviser, no later than one year before the *Degree Planning Guide* is approved for senior evaluation by the department chair. 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. These forms are available in October, January and May in the Biology Office.

TEACHING CAREERS IN BIOLOGY

For those who wish to become certified to teach biology, a Bachelor of Science is now the appropriate degree.

Many of Western's students are interested in careers in teaching. To be effective in teaching biology, one must also have a solid foundation in the other sciences. Thus, those interested in teaching in the secondary schools are urged to complete a B.S. (biology emphasis) including Science Education 491 and 492 as well as the professional education sequence (see Education). The state of Washington requires certification in two endorsement areas. By completing Geology 211 and 212 students will receive an additional endorsement in general science called "science" on the Washington endorsement list. The professional education courses may be included as electives in the baccalaureate program or may be taken during a post-baccalaureate year, part of which may be applied to the fifth-year requirement for standard certification. Students entering this program are urged to seek departmental advisement as soon as possible.

Those who wish endorsements in biology and chemistry

should consider the B.A. in Education program in biology/chemistry.

Students planning to teach at the college level are advised to complete a B.S. (biology) and graduate work leading to a master's or doctoral degree.

Students who wish to teach at the elementary or intermediate levels are advised to take the general science major. See the Science Education Program section of this catalog.

BIOLOGY FACILITIES

The Biology Department has recently moved into a new 82,000 square-foot building just south of the new Chemistry Building. The building features classrooms, teaching and research labs, and related equipment. The new state-of-the-art facilities house the department's programs in ecology, marine biology, and in molecular and cellular biology. Highlights include state-of-the-art in vitro lab, sea water lab, multiple environmental rooms, and a skybridge connecting the cell and molecular labs with biochemistry. The department frequently uses the facilities of the Sundquist Marine Laboratory at Shannon Point near Anacortes. This laboratory is an important focus of the department's strong program in marine biology. The Science Education Center and the Computer Center also serve in support of special program areas.

Learning by doing is a primary teaching mode in Western's Biology Department. Members of the department very often find themselves involved in open-ended laboratory or field projects, and the cell-tissue culture lab has attracted a number of students interested in modern techniques important in research and industry. The beautiful nearby Cascades and Olympics and rich diversity of the marine habitats at our doorstep invite frequent class and individual projects focusing on the organismal and ecological aspects of biology, and the essential intricacy of our environment.

BIOLOGY FACULTY

- RICHARD W. FONDA (1968) Chair. 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.
- HUBERTUS E. KOHN (1966) Professor. PhD, University of Innsbruck, Austria.
- GERALD F. KRAFT (1961) Professor. BA, San Jose State College; MS, Washington State University; PhD, Oregon State University.
- DAVID S. LEAF (1991) Assistant Professor. BS, University of Washington; PhD, Indiana University.
- DAVID R. MORGAN (1993) Assistant Professor. BS, MS, Mississippi State University; PhD, University of Texas.
- HEDY MOSCOVICI (1994) Assistant Professor. BS, MS, Hebrew University, Jerusalem, Israel; PhD, Florida State University.
- 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) Associate Professor. BA, University of North Carolina, Greensboro; MSPH, University of North Carolina, Chapel Hill; PhD, University of Georgia.

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.
 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 C. 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.

BACHELOR OF ARTS

Major — Biology

Supporting courses plus 55 credits in biology

Basic biology emphasis

- Supporting courses: Chem 121, 122, 123, 251
- Required core courses: Biol 201, 202, 203; Biol 321, or 370, 325, 384, 485
- Upper-division biology courses approved by faculty adviser

Program Adviser: See department chair

Combined Major — Biology/Anthropology

86 credits including 20 in supporting courses

- Chem 121, 122, 123, and 251 (or 351, 352, 353)
- Biol 201, 202, 203, 348, 349, 370 (or 321), 490
- Anth 335, or Biol 340
- Anth 201, 210, 215
- 10 credits in anthropology under advisement
- Recommended elective courses: Biol 323, 324, 325, 326, 345, 403, 408, 449, 465, 469, 470, 471, 472, 473, 474, 475, 490, 495 and 384 or 485; Anth 420, 423, 424, any "Peoples" courses relevant to the student's interests

Program Advisers: H. Brown, Biology, and J. Stevenson, Anthropology. Students should also consider the human biology concentration in the Biology Department with a minor in anthropology.

BACHELOR OF ARTS IN EDUCATION

Combined Major — Biology/Chemistry

105-106 credits

- 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, 490
- Biol 384 or 485
- Sci Ed 491 and 492
- Math 124, 125 (for Option a)
- Physics 114, 115, 116 (or 121, 122, 123, 133)

Program Adviser: H. Moscovici

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 35-46 credits

- Chem 121, 122, 123
- Chem 251 (or 351, 352; 353 recommended)
- Physics 114, 115; 116 recommended (or 121, 122, 123, 133)
- Math 124

Basic Requirements: Biology 15 credits

- Biol 201, 202, 203

Breadth Requirements: 15 credits

- Biol 321, 325, 340; Biol 319 or 323 (secondary teaching requires Biol 319)

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.

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
 - Required core: Biol 326, 452, 479
 - Electives: Biol 322, 404, 415, 454, 470

Faculty Advisers: Fonda, Kohn, Morgan

- Cellular Emphasis
 - Required core: Biol 319 or Biol 323 (or 471 and 472); Biol 324 and 345 and two of the following: Biol 322, 346, 494
 - Electives: Biol 322, 346, 408, 470, 473, 475, 479, 493, 494, 495

Faculty Advisers: Kohn, Leaf, Peele, Pultz, Trent, Williams

Ecology

- Required core: Biol 326, 403 or 479
- Electives: Biol 402 or Envr 430a,b; Biol 403, 404, 405, 407, 410, 415, 424, 454, 465, 479; Envr 429, 435

Faculty Advisers: Anderson, Fonda, Peele, Schneider

General Biology

- Selected upper-division courses

Faculty Advisers: Assigned Faculty

Secondary Teaching

- Required core: Biol 322, 324, 326, 384 (or 485), 499; Geol 211, 212; Sci Ed 491, 492
- Electives: Upper-division courses under advisement

Faculty Advisers: Parakh, Moscovici

Human Biology

- Required core: Biol 348, 349; Anth 215
- Electives: Biol 384, 408, 469; Biol 490 or Anth 423

Faculty Advisers: Anderson, Brown, Kraft

Marine Biology

- Required core: Biol 326, 406, 407, 456, 460 or 461; Geol 211
- Electives: Biol 403, 405, 462; Chem 333 (or Envr 361); Envr 421a&b, 431a&b

Faculty Advisers: Muller-Parker, Peele, Ross, Schneider

Zoology

- Biol 322, 326, 403, 407, 410, 424, 460, 461, 462, 463, 465, 467

Faculty Advisers: Anderson, Brown, Kraft, Ross, Schneider

Completion Requirements: 8 credits or more

- Students select one or more of the following options. Prerequisites for undertaking completion requirements include senior standing and written permission. To ensure course availability and to facilitate scheduling, students must contact the Biology Department and apply for admission to their selected completion course(s) by March 15. Grading convention: A-F or S/U.

- Biol 485 or Biol 490
- One of the following: Biol 496, 498, 499, 485 or 490

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

Cellular and molecular biology emphasis

For biochemistry emphasis, see the Chemistry Department section of this catalog.

- Biol 201, 202, 203, 319, 321, 340, 345, 470; two of the following: Biol 322, 346, 494
- 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: Kohn, Leaf, Peele, Trent, Williams

Combined Major — Biology/Mathematics

110 credits

- Biol 201, 202, 203, 321, 323, 325
- Biol 473 or 490
- Math 124, 125, 204, 224, 331, 341, 342, 432; Comp Sci 120 or 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 30 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.

140 FLOWERING PLANTS, CONIFERS AND FERNS (3)

Prereq: Biol 101. Recognition, life history, ecological relationships and distribution, and evolutionary trends of representative organisms.

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.

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 251 or 351. 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 251 or 351 and 352. Cell organelle structure and function, membrane phenomena, energy utilization and production, cellular biosyntheses, control of cellular activities.

324 MOLECULAR AND CELL BIOLOGY LAB (3)

Prereq: Biol 319. An introduction to techniques of molecular and cell biology, including recombinant DNA and microscopy.

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 of 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. Structure of the human body. Energy processes relative to muscles.

349 HUMAN PHYSIOLOGY (5)

Prereq: Biol 348; Chem 115 or higher. A comprehensive introduction to the study of integrated functions of cells, organs and organ systems in humans.

370 HUMAN GENETICS (4)

Prereq: Biol 201 and 202. The basic principles of mendelian, molecular and population genetics as applied to humans. Includes special topics such as genetic screening and gene therapy.

334 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. 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 and 325. Ecology of plant communities with special emphasis on analysis, description, succession and distribution. Weekend field trips included.

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.

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.

408 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.

410 ANIMAL BEHAVIOR (3)

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.

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.

424 ENTOMOLOGY (5)

Prereq: Biol 202. Insects: their anatomy, physiology, development, classification, ecology and economic importance.

430 SCIENTIFIC WRITING FOR BIOLOGISTS (3)

Prereq: Biol 340. The techniques of writing a journal article; use of literature and data; the elements of style; pre-writing and revision.

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.

454 PLANT EVOLUTION (4)

Prereq: 25 credits in biology, permission of instructor, Biol 452 or 490 recommended. Application of modern experimental methods to the study of plant evolution.

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.

461 MARINE INVERTEBRATE ZOOLOGY (5)

Prereq: Biol 202. Laboratory and field study of local marine invertebrates.

462 ICHTHYOLOGY (5)

Prereq: Biol 202. Form and function of fishes; life histories; behavioral adaptations; ecological relationships; distribution; evolution and classification; socioeconomic value.

463 ORNITHOLOGY (5)

Prereq: course in zoology. 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.

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.

479 PLANT PHYSIOLOGY (5)

Prereq: Biol 203; Chem 251 or 351 and Chem 352. 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.

485 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.

490 PRINCIPLES OF ORGANIC EVOLUTION (4)

Prereq: Biol 321. Principles, patterns, processes and mechanisms of evolution in the organic world.

493 SEMINAR IN DEVELOPMENTAL BIOLOGY (1)

Pre- or coreq: Biol 495. Seminar course that investigates the current experimental analysis of animal and plant development. Emphasizes discussions and presentations of research papers.

494 DEVELOPMENTAL BIOLOGY LABORATORY (2)

Pre- or coreq: Biol 495. Laboratory investigations of the genetic, cellular and molecular control of development, focusing on invertebrate model systems.

495 DEVELOPMENTAL BIOLOGY (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.

496 PROFESSIONAL WORK EXPERIENCE IN BIOLOGY (1-5)

Prereq: fourth-year status in biology and permission of department. Full- or part-time work with a cooperating agency or firm. Oral and written report required. Repeatable to 8 credits. S/U grading.

498 TEACHING PRACTICUM (1-2)

Prereq: senior standing and permission of instructor. Classroom experience in biology teaching. Students will assist faculty in the laboratory and lecture settings. Repeatable to 8 credits. S/U grading.

499 BIOLOGY RESEARCH (1-5)

Prereq: senior standing and permission of instructor; completion of department's request form by March of the preceding academic year. 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 30 of this catalog.

Admission to Graduate School or special permission required. See the Graduate School section of this catalog.

NOTE: Biol 503, 508, 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 dynamics; 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.

507 BIOLOGICAL OCEANOGRAPHY (4)

Prereq: graduate status and Biol 406 or equivalent. Productivity of marine and coastal pelagic ecosystems. Energetics, food webs and biogeochemical cycles. Laboratory and field exercises emphasize processes in local marine waters.

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 452 and 490 recommended). Application of modern experimental methods to the study of plant evolution.

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 coursework 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 our relations with Canada is desired by firms, agencies and individuals who do business in Canada or with Canadians, and is a great asset when combined with another major. Examples include the combination with business administration, marketing, purchasing, transportation, geography and other specialties for employment in firms doing business in Canada or with Canadians. Political scientists, sociologists, biologists and others in the employ of 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 truly knowledgeable about Canada and things Canadian. Canadian-American studies has a strong interdisciplinary orientation.

Opportunities for study in British Columbia and Québec are available, and internships in Canada are possible.

For program advisement, contact D.K. Alper, director, phone (360) 650-3728, fax (360) 650-3995, Canada House 201.

BACHELOR OF ARTS

Named Professorships

Dr. Valerie Alia Distinguished Visiting Professor of Canadian Culture

Dr. Steven Globerman Ross Distinguished Professor of Canada/U.S. Business and Economic Relations (located in the College of Business and Economics)

Canadian-American Studies Major

50 credits

- Core Courses: Can-Am Studies 200, 401, 402; Eng 415a; French 101, 102, 103 (or equivalent), 201 or 280; Geog 328; Hist 277; Pol Sci 406
- Select additional credits from the following to complete the major: Anth 361, 411, 462; Can-Am Studies 400; Econ 364, 365; Envr 465, 469; French 305, 401, 405, 450; Geog 327; Hist 390 (topics vary by quarter), 477, 478, 499; Journ 460; Pol Sci 301, 418g

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; Econ 364, 365; Eng 415a; Envr 465, 469; French 101, 102, 103 (or equivalent), 201, 280, 305, 401, 405, 450; Geog 327; Hist 390 (topics vary by quarter), 477, 478, 499; Journ 460; Pol Sci 301, 418g

COURSES IN CANADIAN-AMERICAN STUDIES

Courses numbered X37; X97; 300, 400, 417, 445 are described on page 30 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, JWE pass. 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. Professor. AB, Boston University; MS, Michigan State University; PhD, University of Illinois.

MARK E. BUSSELL (1990) Associate 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.

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 WILSCIN (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

24 credits

- Chem 121, 122, 123
- A minimum of 10 credits from Chem 333, 351 (or 251), 352, 353, 354, 371, 461, 462, 463

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

88-89 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 120 or 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, 461, 462, 466, 471, 472, 473, 474, 475
- Math 124, 125, 224
- Physics 121, 122, 123, 131, 132, 133

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

Second Year

Chem 351, 352, 353, 354; Biol 201, 202 (or 203), 345, 346; Physics 121, 122, 123, 131, 132, 133

Third Year

* Students not prepared for calculus should begin with Math 114 or 115.

Chem 333, 471, 472, 473, 474, 475; Biol 319, 321
Fourth Year

Chem 461, 462, 466

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 30 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.

305 GLASS WORKING (1)

Prereq: permission of instructor. One hour of demonstration and three hours of lab per week. Basic glass working and construction of simple glass apparatus. May be repeated once for credit. S/U grading.

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 122; 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 and 354 or concurrent. 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 or concurrent: Chem 461 and Chem 333; junior status in chemistry and an overall 3.0 g.p.a. in chemistry courses; permission of instructor required. Individual projects under supervision. Presentation and discussion of projects encouraged; written report required. Repeatable for credit. S/U grading.

405 INTENSIVE WRITING IN BIOCHEMISTRY (1)

Prereq: Chem 471 (or concurrent), passing grade on Junior Writing Exam and written permission. 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.

425h Enzyme Chemistry. Prereq: Chem 463 or 466, 471.

425i Immunology. Prereq: Chem 473 or Biol 473.

425m Organometallic Chemistry. Prereq: Chem 441.

425p Advanced Molecular Biology. Prereq: Chem 473 or Biol 473.

425q Atmospheric Chemistry. Prereq: Chem 333 and 463 (or 466).

425r Surface Chemistry. Prereq: Chem 463 or permission of instructor.

425s Protein Structure. 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, 465 PHYSICAL/INORGANIC CHEMISTRY**LABORATORY (3 ea)**

Prereq: Chem 333 and 461; Chem 441 and 462 are co-requisites for Chem 464; Chem 463 is a co-requisite for Chem 465. An integrated approach to inorganic synthesis and physical measurement. Includes formal report writing.

466 BIOPHYSICAL CHEMISTRY (3)

Prereq: Chem 462. Physical chemistry applied to biochemistry. Topics such as biochemical kinetics, ligand binding, sedimentation, electric fields, biochemical spectroscopy and X-ray diffraction.

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: 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 30 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.

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.

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.

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.

577 ADVANCED MOLECULAR BIOLOGY (3)

Prereq: Chem 473 or Biol 473. Current topics in molecular biology with emphasis on eukaryotic organisms: chromosome structure and topology, replication, transcription, translation and regulation.

578 PROTEIN STRUCTURE (3)

Prereq: Chem 471. Structure and function of proteins, protein-protein and protein-DNA interaction, designing drugs for proteins, improving protein function.

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 (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 once.

COMMUNICATION

Communities thrive through the effective exchange of ideas and information. In order to promote ethical, lively exchanges, the Department of Communication has these educational objectives: (1) to build a firm liberal arts foundation, (2) to teach communication competencies that nurture civil discourse and encourage cooperative solutions in our diverse society, and (3) to enhance communication skills the students will use in business, education, government and professional careers.

Departmental courses in interpersonal/organizational, public and 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 writing and research provides students with skills needed for entry-level positions in organizational training and development, public relations, marketing, media and other information-oriented occupations. Some graduates use the degree as a basis for further academic work leading to advanced degrees in such professions as law, ministry or social sciences.

The department sponsors several undergraduate activities. These include a nationally active program in debate and forensics; Communications Club; peer advising; radio and television 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

LARRY S. RICHARDSON (1970) Chair. Associate Professor. BA, Western Washington College of Education; MEd, Central Washington State College; MA, PhD, Washington State University.

ROBERT BODE (1992) Associate Professor. BS, University of South

Dakota; MA, University of South Dakota; PhD, University of Oregon.
ANNA EBLEN (1986) Associate Professor. BA, Duke University; MA, University of West Florida, PhD, University of Oregon.

ALDEN C. SMITH (1966) Associate Professor. BS, Florida Southern College; MS, Syracuse University; PhD, University of Illinois.

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. Cumulative grade point average (GPA) will be one of the major criteria for admission. The average GPA for portfolios approved fall quarter, 1995, was 3.01.

- 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 and supporting minors 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, under advisement. (Obtain recommended course list from departmental office.)
 - At least one course from two of the following:
 - (1) Comm 224, 327, 420, 416—under advisement;
 - (2) Comm 230, 235, 331, 435, 416—under advisement;
 - (3) Comm 240, 241, 340, 416—under advisement.
 - 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, under advisement, 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

BACHELOR OF ARTS IN EDUCATION

Declaration of Major

- Maintain a GPA of 2.75 for all college work

Major — Communication — Elementary Education

45 credits

This major meets the requirements for a supporting endorsement in speech for Washington state certification.

- Comm 101 or 312, ThA 265
- Comm 224, 327
- SPA 351 or 354
- ThA 101, 350, or 351
- Comm 454, 498
- Electives chosen from the following: Comm 220, 235, 236, 240, 318, 427, 436, 450, 451; ThA 212, 216, 350, 351, 452; Lib Sci 309; SPA 351 or 354

This major must be accompanied by the professional preparation program in elementary education.

Major — Communication — Secondary Education

70 credits

This sequence meets minimum requirements for Washington state certification, primary endorsement in speech, when taken in combination with a professional education program.

- Comm 101 or 312, 331
- Comm 224
- Comm 235, 236 (3 credits)
- Comm 327, 427
- Comm 220, 240, 318, 498
- Comm 455
- ThA 101, 160, 265
- Electives in communication
- Choose one of the following emphases:
 - *Theatre*: ThA 212, 215, 216
 - *Forensics*: Comm 436, 456, and one course, under advisement, relevant to this emphasis

This major must be accompanied by the professional preparation program in secondary education.

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

93-94 credits

This sequence results in primary endorsements for Washington state teaching certification in both speech and English (communication 44-45 credits and English 49 credits).

This major must be accompanied by the professional preparation program in elementary education.

Communication

44-45 credits

- Comm 101 or 312, 331
- Comm 224
- Comm 235, 236 (3 credits)
- Comm 327, 427
- Comm 220, 240
- Comm 455, 498
- 5 or more credits selected from the following:
 - Comm 230, 236, 241, 318, 420, 435, 436, 450, 451, 456, 456s
 - ThA 265

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 30 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.

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.

240 INTRODUCTION TO MASS COMMUNICATION (4)

Introduction to the structure and history of the mass media, as well as to the political, social and cultural effects of mass communication. Credit not allowed for both Comm 240 and Journ 190.

241 INTRODUCTION TO BROADCASTING (3)

History and development of radio and television. Theory and technique of basic broadcast procedures; practice in developing fundamental broadcast communication skills.

242 BROADCAST WRITING (3)

Prereq: Comm 241 and Journ 104. The preparation of news, advertising and public affairs copy for radio and television.

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. Normally offered alternate years.

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 dyad 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 12 credits.

340 TELEVISION PRODUCTION (3)

Prereq: Comm 240; written permission of instructor. Theory and technique of basic television production. Laboratory practice utilizing media services television facilities.

343 BROADCAST COMMUNICATION (2)

Prereq: Comm 240, 242. Laboratory practice in applying communication skills to broadcast media; gathering, preparation and delivery of radio news. Repeatable to 4 credits.

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 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.

COMMUNICATION

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 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 TELEVISION NEWS PRODUCTION (2)

Prereq: written permission of instructor; Comm 240 or Jour 190 and Comm 242 recommended. Participation on staff of University television news programs. Practicum in the gathering, preparation and presentation of televised news. Repeatable to 4 credits.

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.

456 DIRECTING THE FORENSICS PROGRAM (4)

Prereq: Comm 235 or 236 (taken for 4 credits). Conducting tournaments; critiquing debates and individual events; budgeting. Normally offered alternate years.

456s HIGH SCHOOL DEBATE COACH WORKSHOP (2)

Prereq: one year of teaching experience or graduate student status. An intensive lecture, seminar and workshop program in pedagogy related to teaching of argumentation, debate and forensics. 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 coursework 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.

COMPUTER SCIENCE

The curricular task group of the Association for Computing Machinery (ACM) defines computer science as the systematic study of algorithmic processes that describe and transform information, covering the dimensions of theory, analysis, design, efficiency, implementation and applications. The field is further defined by nine content areas, each having components of theory, abstraction and design. These nine areas are (1) algorithms and data structures, (2) programming languages, (3) architecture, (4) numerical and symbolic computation, (5) operating systems, (6) software methodology and engineering, (7) databases and information retrieval, (8) artificial intelligence and robotics, and (9) human-computer communication. All of these areas are represented in the computer science program, some as the specific emphasis of certain courses, others as a more general philosophy distributed across the entire curriculum.

In addition to advanced courses in the areas noted above, the Computer Science Department offers introductory classes that can be of great benefit to students in other fields of study. A computer literacy course (CS 101) is designed to introduce students to machines and to familiarize them with standard office automation software, including word processing, spreadsheets and telecommunications packages. Two courses in computer-mediated communications (CS 102, 202) deal with computer networks. They cover use of the Internet and management of Web resources. A special course in computer programming for non-majors (CS 110) teaches a procedural language (currently Pascal) in a less rigorous fashion than the corresponding course for majors (CS 120). CS 110 is intended for students who want to understand the basic ideas of computer programming, but who are not planning to continue as computer science majors.

The computer science program is supported by a variety of hardware platforms. The department maintains a laboratory of SUN SPARC-5 stations that is used for the majority of the computer science courses. A separate facility is organized around Motorola 68000 VME-bus systems, and it supports the introductory architecture courses. A third laboratory of 80486-based machines is dedicated to computer network offerings. Finally, a small laboratory of DEC workstations is available for graduate work. There are two campus-wide systems: (1) a VAX 4000 running VMS and (2) a network of DEC 5000 machines running UNIX. There also are several University laboratories containing networked PCs.

The Bachelor of Science degree in computer science at Western is accredited by the Computing Sciences Accreditation Board.

MAJOR PROGRAMS

The Department of Computer Science offers two undergraduate majors, one culminating in the Bachelor of Science degree in computer science and the other in the Bachelor of Arts degree in computer science education. In addition, joint majors are offered with the departments of Mathematics and Accounting. Minors are also available in

both computer science and computer science education. Graduate study, culminating in a Master of Science degree, is also offered by the department.

The goals of the computer science major are to provide a broad conceptual base, as well as considerable experience with the computer environments and applications to be encountered upon graduation. The intent is to give the student a suitable foundation from which to pursue a graduate education or to enter the industrial sector. In either case, the student should be prepared to continue learning in order to keep abreast of the rapid advances in computing technology.

DECLARATION OF MAJOR

A student declares the computer science major by completing the forms available in the departmental office, Bond Hall 302, and by obtaining the signature of the department chair. To complete a major the student is expected to satisfy the requirements as stated in the catalog in effect at the time of the declaration.

After declaring the major, a student is assigned to an adviser. Students who have not yet been accepted as majors are encouraged to seek advice in the departmental office, Bond Hall 302. In general, eight quarters are needed to complete the degree requirements, although a strong student could shorten the span by carrying a heavier load. A general outline of the course sequence through the eight quarters is as follows.

Student schedule by quarter							
1	2	3	4	5	6	7	8
CS 120	CS 221	CS 222	CS 223	CS 324	CS 4xx	CS 4xx	CS 4xx
M 124	M 125	M 226	M 204	M/CS 375	CS 4xx	CS 4xx	CS 4xx
		CS 310	CS 320	CS 420	CS 4xx	CS 4xx	CS 4xx

This schedule accommodates the mathematics and computer sciences prerequisites, and it leaves some flexibility in the 400-level courses. Two further requirements, CS 315 (C/C++ language) and a supporting sequence in the sciences, are not shown on the schedule. Students arriving from a community college will likely transfer the equivalent of CS 120 (introductory programming) and some portion of the calculus sequence (Math 124, 125, 226). Such students should be able to complete the computer science major in two years. Students who cannot transfer a course equivalent to CS 120 will nevertheless be given credit for CS 120 upon presentation of a score of 3 or better on the Advanced Placement Exam, Computer Science, A or AB. 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.

MID-PROGRAM CHECKPOINT

A student seeking to complete a B.S. degree in computer science 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.

- Math 124, 125
- CS 120, 221
- The supporting science sequence (choice of biology, chemistry, geology, physics, or engineering technology)

INFORMATION

Anyone interested in the study of computer science is invited to write, phone, visit or correspond by e-mail with the Department of Computer Science, Western Washington University, Bellingham, Washington 98225-9062. Phone (360) 650-3805. E-mail: valeriek@admsec.wvu.edu

COMPUTER SCIENCE FACULTY

- JAMES L. JOHNSON (1981) Chair. Professor. BS, University of Louisville; MS, PhD, University of Minnesota.
- 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.
- FRED M. IVES (1971) Associate Professor. BA, MS, PhD, Washington State University.
- DEBRA S. JUSAK (1988) Associate Professor. BA, State University of New York at Potsdam; MS, University of Connecticut; PhD, University of California, Irvine.
- GEOFFREY B. MATTHEWS (1985) Professor. BA, University of California; MA, PhD, Indiana University.
- LARRY D. MENNINGA (1970) Associate Professor. BA, University of Iowa; MA, MS, PhD, University of Washington.
- 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.

Adjunct Faculty

GEORGE MOBUS (1994) Assistant Professor. BA, University of Washington; MBA, San Diego State University; PhD, University of North Texas.

BACHELOR OF SCIENCE

Major — Computer Science

94 credits plus 6-8 credits of science beyond the CUR science requirement

- CS 120, 221, 222, 223, 310, 315, 320, 324, 401, 405, 410, 420, 425, 430, 460.
- Math 124, 125, 204, 226, 341
- Math-CS 375
- 12 credits chosen from CS 400, 402, 415, 416, 417, 439, 440, 441, 450, 465, 480, Math-CS 335, 435, 475, 476, of which a maximum of 4 credits may be from CS 400 or 496 projects.
- A supporting sequence chosen from Biol 201, 202, 203; Chem 121, 122, 123; Geol 211, 212, and one of

310, 314, 318, 352; Physics 121/131, 122/132, 123; ETech 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 (ETech 273, 274 count as a higher level than listed ETech sequence); or (2) a course from a different discipline than the supporting sequence chosen above, but restricted to the list above.

Minor — Computer Science

31-34 credits

- CS 120, 221, 222, 223, 324
- Math 124 or 157
- Two upper-division computer science courses

BACHELOR OF ARTS IN EDUCATION

The Bachelor of Arts in Education major can be completed with a concentration which prepares the graduate for teaching computer science on the secondary level. Those who intend to pursue this concentration must complete courses in structured programming, assembly language, data structures, algorithm analysis, computer educational software and computers in society/education. Successful completion of these courses provides technical expertise, while EdAF 444 addresses the methods of teaching computer science at the secondary level.

Recommendation for teaching endorsement requires the completion of the major with a minimum grade point average of 2.50 in 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 and consult with an adviser in instructional technology. It is strongly recommended that this program be taken in conjunction with another endorsable one. It is essential that the interested student consult the Department of Educational Curriculum and Instruction portion of this catalog for further information.

Major — Computer Science Education

71-73 credits

- CS 120, 221, 222, 223, 310, 315, 320, 324, 405, 425
- Math 124, 125, 204, 341
- EdAF 444, 452, 453
- Two courses chosen from: CS 401, 410, 420, 430, 440, 441, 450, 460, 465, 480

Minor — Computer Science Education

30 credits

- CS 120, 221, 222, 223, 324
- EdAF 444, 452, 453

Combined Majors

The Computer Science Department cooperates with other departments in offering combined majors for students wishing to achieve considerable depth in both areas.

Accounting/Computer Science: See the Accounting Department section of this catalog.

Mathematics/Computer Science: See the Mathematics Department section of this catalog.

GRADUATE STUDY

For information regarding a concentration in computer science leading to the Master of Science degree, see the Graduate School section of this catalog.

COURSES IN COMPUTER SCIENCE

Courses numbered X37; X97; 300, 400; 417, 445 are described on page 30 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: CS 101 or equivalent. Computer network connections. Access protocols. Network resources available. Search strategies. Communication conventions, ethics and etiquette. Laboratory exercises involving remote access to machines, persons and data repositories.

110 ELEMENTARY PROGRAMMING (4)

Prereq: Math 102 or equivalent. Basic concepts of computer programming, using PASCAL. Not open to students who have credit in CS 210 or CS 120. Students who intend to take upper-division computer science courses should take CS 120. Laboratory.

120 COMPUTER PROGRAMMING (5)

Prereq: Math 115 and general computer literacy (CS 101 or equivalent). Computer programming in a high-level, block-structured language, such as Pascal.

202 INTERNET RESOURCE CREATION AND MANAGEMENT (4)

Prereq: CS 102 or equivalent. Principles and technologies needed to be a content provider on the Internet; security and legal issues; current tools and standards, which will vary from quarter to quarter, including HTML, VRML and Common Gateway Interface.

206 EXPLORATORY DATA ANALYSIS (4)

Prereq: Math 102 and general computer literacy (CS 101 or equivalent). Treatment of computer tools needed to probe for regularities in large data sets, as well as the study of introductory computer skills necessary to access the tools. Appropriate for both science and non-science students.

207 SCIENTIFIC COMPUTING (4)

Prereq: Math 124, 125, 204 and general computer literacy (CS 101 or equivalent). Use of software packages — e.g., Mathematica, Maple or MathCad — to explore scientific data sets. Graphical interfaces, symbolic computing, pattern analysis (searching for and displaying expected regularities in the data), visualization (display of cross-sections, profiles, surfaces). Elementary programming concepts.

215 PROGRAMMING LANGUAGE LABORATORY (1-3)

Prereq: CS 120 or equivalent. Students who already know how to program may take this course to learn additional programming languages. May be repeated for credit in different languages. Credit is determined on the basis of the programming language studied.

221 COMPUTER SCIENCE I (5)

Prereq: CS 120 or equivalent, Math 124 or 157. Components of computing and data storage devices. Data representation models. Algorithms and the design of programs. Proving properties of programs. Recurrence relations, induction, recursion. Programming required in implementation of concepts.

222 COMPUTER SCIENCE II (5)

Prereq: CS 221. Trees, lists, stacks, queues, sets and graphs with attendant applications. The theory of relations. Programming required in implementation of concepts.

223 COMPUTER SCIENCE III (4)

Prereq: CS 222. Patterns, automata, regular expressions and grammars

with attendant applications. Propositional and predicate logic. Logic gates and computer circuitry. Programming required in implementation of concepts.

310 COMPUTER ARCHITECTURE I (4)

Prereq: CS 221. Introduction to computer architecture; data representation; instruction set architecture of a typical computer; assembly language programming.

315 C/C++ PROGRAMMING (3)

Prereq: CS 222 and 310. Thorough coverage of the C language; introduction to C++.

320 COMPUTER ARCHITECTURE II (4)

Prereq: CS 315. Input/output; interrupts; device controllers; programming projects to implement device drivers and system primitives.

324 PROGRAMMING PROJECT (3)

Prereq: CS 223. Programming project integrating the experiences of CS 221-223. Software methodology. Student reports. Example projects include (some portion of) a text editor, a database system, a string processor, a circuit simulation, a game tree or a graphical interface.

340 INTRODUCTION TO OBJECT-ORIENTED SOFTWARE DEVELOPMENT (3)

Prereq: CS 222 or compatible programming experience (as judged by the instructor). Introduction to the concepts of object-oriented programming, event-driven programming and the implementation of graphical user interfaces. Fundamentals of analysis and design from an object-oriented perspective. Analysis and design exercises.

401 FORMAL LANGUAGES AND AUTOMATA (3)

Prereq: CS 223. Formal languages, grammars, automata.

402 ARTIFICIAL INTELLIGENCE (3)

Prereq: CS 324. 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 223, Math 341. Derivation of time and space complexity of algorithms. Typical algorithms investigated include sorts, graph traversals, string matching. Algorithms paradigms: divide and conquer, greedy algorithms, backtracking, branch and bound. Discussion of NP-completeness. Correctness proofs of algorithms.

410 PROGRAMMING LANGUAGES (3)

Prereq: CS 223, 315. Introduction to the structure of programming languages; syntax and semantics; properties of algorithmic languages; special purpose languages.

415 INFORMATION SYSTEMS I (3)

Prereq: CS 222 or permission of instructor. Examination of computerized information systems, for example, accounting systems, geographical databases, airline reservation systems. Techniques for analysis, design and implementation of such systems. Interface design. Multimedia data. Implementation exercises on networked PCs using an integrated mix of higher-level development tools.

416 INFORMATION SYSTEMS II (3)

Prereq: CS 415. Continuation of CS 415.

420 COMPUTER ARCHITECTURE III (4)

Prereq: CS 223, 320. 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 223. Database models and their access languages. Design issues: ER diagrams, functional dependency analysis, normalization. Database programming.

439 COMPUTER MODELING AND SIMULATION (3)

Prereq: CS 221, college-level statistics. 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 223, 315, 340. Examination of general concerns and techniques of software engineering. Programming in C++. Mastery of the Windows programming interface. Object-oriented analysis and design techniques.

441 SOFTWARE ENGINEERING II (C++/Windows) (3)

Prereq: CS 440. Continuation of CS 440. Team development project.

450 COMPILER THEORY AND DESIGN (4)

Prereq: CS 324, 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 223, 315. Network architecture and design, physical networks, network protocols, network management, systems level and user-level programming.

480 COMPUTER GRAPHICS (4)

Prereq: CS 315, 324; 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.

496 SENIOR PROJECT (2)

Prereq: senior status. Software development project requirement specifications, design, implementation, testing and documentation. Repeatable to a maximum of 4 credits.

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

Courses numbered 500; 517; 545; 597 are described on page 30 of this catalog.

Admission to Graduate School or special permission required. See the Graduate School section of this 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.

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, multiprocessors, new architectures.

560 VERY LARGE SCALE INTEGRATION (4)

Prereq: CS 420 or equivalent. Design of VLSI circuits. Physical technologies. Modeling tools. Silicon compilers. Chip simulation.

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 COMMUNICATIONS NETWORKS (4)

Prereq: permission of instructor. Topics from digital communications technologies, media access control, local area networks, network architectures, networking protocols, interconnections and routing, performance, security, and industry standards.

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 adviser and committee. S/U grading.

691 MASTER'S PROJECT (1-8)

Prereq: appointment of project adviser 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. Foreign Languages and Literatures. Chinese language and culture; traditional and modern literature.

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.

KRISTEN PARRIS, Political Science. East Asian politics.

SCOTT PEARCE, Liberal Studies. Medieval Chinese history.

CATHERINE PEASE, Center for International Business. Modern Chinese language and literature.

WAYNE RICHTER, Wilson Library. Mongolian language.

HENRY C. SCHWARZ, History and East Asian Studies, Emeritus. Mongolian and modern Chinese history, minorities of Northern China.

EDWARD J. VAJDA, Foreign languages and literatures. Central Asian and Siberian languages and history.

JIANGLONG WANG, Communications. Intercultural communications.

NING YU, English. Chinese and Chinese-American literatures.

MICHIKO YUSA, Foreign Languages and Literatures. History of religion, Japanese language and culture.

BACHELOR OF ARTS

Major — East Asian Studies*

60 credits

- Two years of Chinese, Japanese, Korean or Mongolian
- East Asian Studies 201; 202 and 302
- Either East Asian Studies 367 or 368 or 369 or Hist 372
- Additional credits from courses approved by the Center for East Asian Studies as listed below
- 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 369 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 30 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.

202 THE CULTURES OF EAST ASIA: RELIGIO-PHILOSOPHIC AND LITERARY ASPECTS (5)

The religions, secular intellectual and literary aspects of the cultures of China, Japan, Korea and Mongolia, and the influence of these aspects of culture on political life from earliest times to the present.

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.

311 TRADITIONAL KOREA (4)

Prereq: Hist 280 or East Asian 201. A general survey of Korean history before 1876.

312 CONTEMPORARY KOREA: KOREA AFTER WESTERN CONTACT (4)

Prereq: Hist 280 or East Asian 201. A general history of the Korean people since 1876.

313 EARLY MONGOLIA (4)

Prereq: East Asian 210. The history, society and culture from the early

* This major pending final approval from Higher Education Coordinating Board.

steppe confederations to the Mongol world empire.

314 POST-EMPIRE MONGOLIA (4)

Prereq: East Asian 210. History, society and culture since the end of the Mongol world empire.

367 CHINESE LITERATURE IN TRANSLATION (5)

Prereq: East Asian 201 and 202 or equivalent 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 and 202 or equivalent or permission of instructor. Selected readings in Japanese literary masterpieces from early modern times to the present.

369 KOREAN LITERATURE IN TRANSLATION (5)

Prereq: East Asian 202 or equivalent. Selected readings in Korean literary masterpieces from earliest to modern times.

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 373: History of 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

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 274: Humanities of Japan

Lbrl 277: Humanities of China

Lbrl 270: Major Asian and African Traditions: The Traditional Order

Lbrl 271: 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 and 369

Chinese 280: Traditional Chinese Characters

Chinese 360: Business Chinese

Chinese 380: Chinese Culture through Film and Literature

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, Japanese and Korean. Elementary and intermediate Mongolian (15 credits) are taught summers at Inner Mongolia University. The Department of Foreign Languages offers a summer intensive course in elementary Chinese (15 credits).

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 programs in:

- Electronics Engineering Technology
- Industrial Design
- Industrial Technology
- Manufacturing Engineering Technology
- Plastics Engineering Technology
- Technology Education

The Department of Engineering Technology offers six academically excellent programs to prepare graduates for challenging professional careers.

All of the programs present a balanced mix of theory and practice. Almost every departmental course has an associated laboratory where students work with modern equipment of the type and quality normally found in the workplace.

Engineering technology graduates, faculty and programs have excellent and well-earned regional and national reputations. The vehicles and engines produced by the department's Vehicle Research Institute have gained international recognition for the University.

The amount and level of mathematics and science courses required in the engineering technology programs (electronics, manufacturing and plastics) is substantial, and a strong high school background is recommended for majors. The programs in industrial design, industrial technology and technology education are demanding and rigorous but require less math and science.

ENGINEERING TECHNOLOGY FACULTY

STEVEN H. DILLMAN (1993) Assistant Professor. BS (chemical engineering), Rice University; PhD (chemical engineering), University of Washington.

THOMAS GRADY (1986) Associate Professor. BA, BS, MSEE, University of Colorado.

CLYDE M. HACKLER (1974) Associate Professor. BS, Eastern Kentucky University; MEd, University of Illinois; EdD, University of Maryland.

F. DAVID HARRIS (1990) Professor. BSFE, Newark College of Engineering; MAT (Physical Sciences), Rhode Island College; MSEE, Rensselaer Polytechnic Institute; Registered Professional Engineer.

ROSALIE ROSSO KING (1983) Professor. BS, University of Washington; MEd, Massachusetts State College at Framingham; PhD, University of Washington.

KATHLEEN L. KITTO (1988) Professor. BS, MSME, Montana College of Mineral Science and Technology.

TODD MORTON (1988) Associate Professor. BSEE, MSEE, University of Washington.

STEVE MOSKOWITZ (1984) Associate Professor. BEE, MEE, Rensselaer Polytechnic Institute.

HARINDER SINGH OBEROI (1994) Assistant Professor. BSME, University of Bombay; MSME, Virginia Polytechnic Institute and State University.

ARUNAS P. OSLAPAS (1991) Associate Professor. BFA, Montana State University; MFA, University of Illinois.

JO ANN RATTQ (1995) Assistant Professor. BA (chemistry), College of the Holy Cross; MS (plastics engineering), University of Lowell; DE (plastics engineering), University of Massachusetts, Lowell.

ROBERT A. RAUDEBAUGH (1988) Associate 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.

RICHARD F. VOGEL (1971) Associate Professor. BA, MAT, Washington State University; 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 some courses that also fulfill CUR 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, 124, 125
- Physics 121/131, 122/132, 123/133 or 114, 115, 116
- Comm 101, CS 120, Eng 101 and 302
- 8 credits technical electives, 5 credits other GURS

Manufacturing Engineering Technology

- ETec 110, 111, 201, 220, 221, 222, 223, 224, 225
- Math 115, 124, 125
- Physics 121/131, 122/132, 123/133 or 114, 115, 116
- Chem 115, CS 120, Comm 101, Eng 101
- 20-24 credits other GURS

Plastics Engineering Technology

- ETec 110, 111, 201, 220, 223, 224, 225
- Math 115, 124, 125
- Physics 114, 115
- Chem 121 and 251, CS 120, Comm 101, Eng 101
- 25-30 credits other GURS

Industrial Design

- ETec 110, 111, 214, 215, 216, 223
- Math 115, Mgmt 271
- Physics 114, 115
- Art 101, 120, 130, plus additional art courses (with advisement)
- Art History 220, 240, 270
- Other GURS (with advisement)

Industrial Technology — Industrial Graphics

- ETec 110, 111, 214, 215, 220, 223
- Math 114, 115
- CS 101, 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
- CS 101, Chem 115
- Physics 114, 115
- Acctg 240, Mgmt 271, Econ 206
- Minimum of 32 credits GURs

Industrial Technology — Vehicle Design

- ETec 110, 111, 220, 223, 280, 281
- Math 114, 115
- CS 101, 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
- 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.

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.

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 should also make application to the Office of Admissions but must indicate their intention to attend in North Seattle. University enrollment quotas do not apply to the off-campus program.

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

151 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: 53 credits

- Mathematics — 24 credits: Math 114, 115, 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 — 5 credits: CS 120

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 restricted. A sophomore portfolio review determines acceptance.

Major — Industrial Design

141 credits

Industrial Design Core: 52 credits

- ETec 110, 111, 214, 215, 216, 220, 223, 231, 311, 323, 333, 411

Professional Practice Series: 30 credits

- ETec 314a, 314b, 314c, 414a, 414b, 414c

ETec Electives: 4 credits

Supporting Courses: 55 credits

- Art 201, 202, 220, 230, 270, 290
- Art History 220, 240, 270
- Math 115
- Physics 114, 115
- Chem 115
- Mgmt 271
- FMDS 330

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

110 credits

Core Courses: 75 credits

Required of all IT majors:

- ETec 110, 111, 220, 223, 333, 351; CS 101; Math 114, 115; Chem 115; Physics 114, 115; Econ 206; Acctg 240; Mgmt 271, 311

Specialization: 35 credits

Complete one of the following specializations with guidance from a departmental adviser:

- Industrial Graphics: ETec 214, 215, 309, 310, 311, 312, 313, 323, 4 credits of electives
- Industrial Supervision: ETec 322, 327, 328, 423, FMDS 330, Mgmt 322, 460, 463, 465, 2 credits of electives
- Vehicle Design: ETec 280, 281, 311*, 334, 380, 381*, 382, 400(1), 480, 484, 486, 489*
- 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 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

146 credits

Manufacturing Core: 86 credits

- ETec 110, 111, 201, 220, 221, 222, 223, 224, 225, 322, 326, 327, 328, 333, 351, 352, 354, 420, 421, 423, 424, technical electives (8 credits)

Supporting Courses: 60 credits

- Mathematics, 18 credits: Math 115, 124, 125, 240
- Computer Science, 5 credits: CS 120
- Business, 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

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

141 credits

Technical Core: 82 credits

- ETec 110, 111, 201, 220, 223, 224, 225, 322, 326, 333, 334, 335, 336, 337, 351, 421, 423, 424, 433, 434, 435, 436, technical electives (4 credits)

Supporting Courses: 59 credits

- Mathematics, 18 credits: Math 115, 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, 5 credits: CS 120
- Management, 4 credits: Mgmt 311

NOTE: Physics 116 is recommended but not required if science GUR is otherwise completed.

* *Optional.*

PLASTICS ENGINEERING TECHNOLOGY

The plastics engineering technology program prepares men and women 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

141 credits

Plastics Core: 86 credits

- ETec 110, 111, 201, 220, 223, 224, 225, 322, 333, 334, 335, 336, 337, 351, 423, 424, 433, 434, 435, 436, technical electives (13 credits)

Supporting Courses: 55 credits

- Mathematics, 18 credits: Math 115, 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, 5 credits: CS 120

NOTE: Chemistry 122 and 123 are recommended but not required if science GUR is otherwise completed.

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.

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)

NOTE: To expand teaching eligibility, technology education majors should seek additional certification

* Most engineering technology courses with a laboratory have a materials fee.

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 30 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)

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 TECHNOLOGY (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, 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 STATICS (3)

Prereq: ETec 201 or CS 101 or CS 120 or equivalent, Physics 114, Math 115. Elementary statics; analysis of forces and movements in trusses, frames and other rigid bodies.

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 written 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 trouble-shooting.

273 DIGITAL ELECTRONICS (4)

Prereq: ETec 271, EET major or written permission. Introductory digital electronics with emphasis on basic digital concepts, Boolean algebra, digital integrated circuit devices and the major functional units from "building block" approach. Laboratory with applications, constructing, testing and troubleshooting of digital circuits.

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.

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.

312 ADVANCED DRAFTING AND CAD MANAGEMENT (3)

Prereq: ETec 110, ETec 111, or equivalent. Applications of machine drafting and computer-aided design management. Methods of improving productivity with PC CAD. Visitation to observe current CAD practices in industry.

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.

320 ADVANCED MACHINE METAL PROCESSES (4)

Prereq: ETec 223, ETec 222 recommended. Advanced theory and skill development in machine metalworking. Includes product and process design, special tooling and machine tool operation.

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.

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 120 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 120 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; 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, 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 worse-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 include explorations in other media beyond markers such as gouache, air marker, inks and a variety of papers. Assignments range from full-size renderings to series of ideation sketches.

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 ROBOTICS AND AUTOMATION (4)

Prereq: ETEc 322, 326; or, for EET majors, departmental permission. Procedures for selecting the applications for industrial robots, for designing the workplace for industrial robots, and for programming and modifying existing industrial robots for these applications and workplaces.

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 120 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.

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, 331. 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 hardware and software and modern digital devices applied to real-time embedded systems. Includes C cross development tools, real-time kernels, hardware synchronization and implementation using modern programmable logic devices and a hardware descriptive language such as Verilog. The use of revision control software for team-based software development also will be covered.

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.

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 30 of this catalog.

Admission to Graduate School or special permission required. See the Graduate School section of this catalog.

590 PRINCIPLES OF TECHNOLOGY I (5)

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.

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.

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 and American literature 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

JOHN PURDY (1991) Associate Professor and Interim Chair. BA, Western Oregon State College; MA, University of Idaho; PhD, Arizona State 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.

MEREDITH B. CARY (1964) Professor. BA, Central Missouri State College; MALS, University of Michigan; MA, Michigan State University; PhD, University of Washington.

OMAR S. CASTAÑEDA (1990) Associate Professor. BA, MFA, Indiana University.

DAWN DIETRICH (1992) Assistant Professor. BA, Eastern Michigan University; MA, PhD, University of Michigan.

RICHARD K. EMMERSON (1990) Professor. BA, Columbia Union College; MA, Andrews University; PhD, Stanford University.

MARC GEISLER (1992) Assistant Professor. BA, Bates College; MA, PhD, University of California, Irvine.

BRUCE GOEBEL (1996) Assistant Professor. BA, Eastern Washington University; MA, California State University, Fresno; PhD, The University of Iowa.

ROBIN HEMLEY (1994) Associate 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.

WILLIAM C. KEEP (1966) Associate Professor. BA, PhD, University of Washington.

LAURA LAFFRADO (1993) Associate Professor. AB, Vassar College; MFA, University of Montana; MA, PhD, State University of New York, Buffalo.

ANNE LOBECK (1990) Associate Professor. BA, Whitman College; MA, PhD, University of Washington.

KATHLEEN LUNDEEN (1991) Associate Professor. BA, MA, PhD, University of California, Santa Barbara.

WILLIAM LYNE (1995) Assistant Professor. BA, University of California, Los Angeles; MA, PhD, University of Virginia.

MARY JANELL METZGER (1995) Assistant Professor. BA, University of Washington; MA, PhD, University of Iowa.

SUZANNE PAOLA (1994) Assistant Professor. MFA, University of Virginia.

DOUGLAS B. PARK (1979) Professor. AB, Hamilton College; PhD, Cornell University.

DONNA QUALLEY (1994) Assistant Professor. BA, University of Kentucky; MST, PhD, University of New Hampshire.

KNUTE SKINNER (1962) Professor. AB, Colorado State College; MA, Middlebury College; PhD, State University of Iowa.

ALLISON D. SMITH (1993) Assistant Professor. BA, MA, California State University, Long Beach; PhD, University of Illinois.

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 VANDER STAAY (1996) Assistant Professor. BA, MA, University of Washington; PhD, University of Iowa.

NING YU (1993) Assistant 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)
- Four credits from the following: Eng 381, 383, 384
- Eight credits from one of the following four groups:
 - Eng 451, 457
 - Eng 453, 456
 - Eng 401, 402, 454
 - ThA 485, 486, 487, 488; 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
- 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 423 (Shakespeare)
- 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, 330, 338, 341, 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

45 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
- 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, 330, 338, 341, 422, 424, 425 or other appropriate course
- One of the following: Eng 336, 339, 406
- Electives in English up to the 45 credits are required for the major (Eng 446 recommended). A maximum of 8 credits of 200-level GUR (literature and/or Eng 202) courses may be included.

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 423 (Shakespeare)
- 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

94 credits

(Theatre 45 credits and English 49 credits)

Completion of this major will lead to primary endorsements in English and drama when taken in combination with a professional education program.

English

49 credits

- Eng 370, 436, 443, 444
- Eng 423 (Shakespeare)
- 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 45 credits

(See the Theatre Arts Department section of this catalog.)

Teaching Endorsement

Recommendation for an endorsement in teaching secondary English normally requires completion of the Bachelor of Arts in Education, secondary major, or of the interdisciplinary major concentrations. A grade point average of 3.0 or better in English is required.

Recommendation for a supporting endorsement in teaching secondary English requires completion of either of the following minors. A grade point average of 3.0 or better in English is required.

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

DEPARTMENTAL HONORS

In addition to the general requirements for all honors students, an English major who wishes to graduate "with honors" must complete Eng 339, 401 and 405 and an upper-division course in philosophy or in literature read in a foreign language.

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 30 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.

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.

281, 282, 283 WESTERN WORLD LITERATURE (4 ea)

Readings from classical, medieval to neoclassical, and romantic to modern literature. Not open to students with credit in Lib St 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.

307 BRITISH LITERATURE: RENAISSANCE (4)

Prereq: Eng 202. Reading and discussion of a range of works emphasizing either the 16th or the 17th century.

308 BRITISH LITERATURE: 18TH CENTURY (4)

Prereq: Eng 202.

309 BRITISH LITERATURE: ROMANTIC (4)

Prereq: Eng 202.

310 BRITISH LITERATURE: VICTORIAN (4)

Prereq: Eng 202.

311 BRITISH LITERATURE: 20th CENTURY (4)

Prereq: Eng 202.

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 range of works in American literature before 1776.

317 AMERICAN LITERATURE: 1776-1860 (4)

Prereq: Eng 202.

318 AMERICAN LITERATURE: 1860-1940 (4)

Prereq: Eng 202.

319 AMERICAN LITERATURE: 1940 TO PRESENT (4)

Prereq: Eng 202.

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.

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 LITERATURE AND FILM (4)

Prereq: Eng 202. Examines the relationship between literature and film in various literary forms, genres, periods and authorial approaches. Repeatable with various topics.

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: completion of GUR communications requirement and status as English major or minor (or permission of instructor). 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, 235. 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 LITERATURE IN TRANSLATION (4)

Prereq: Eng 202 and possible additional prerequisite relevant to topic. Studies of literature in translation from classical to modern times. 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. Survey of resources and methods of teaching the language arts.

441 WORLD LITERATURE FOR THE ELEMENTARY AND MIDDLE SCHOOL TEACHER (4)

Prereq: Eng 202. Myth, legend, folk literature, epic, fairy tales and modern novels for children.

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 370. 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.

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 202 or equivalent. 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.

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.

499a,b,c HONORS TUTORIAL (2-5 ea)**GRADUATE COURSES**

Courses numbered 500; 517; 545; 597 are described on page 30 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.

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)

FOREIGN LANGUAGES AND LITERATURES

The Department of Foreign Languages and Literatures 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.

FOREIGN LANGUAGES AND LITERATURES FACULTY

DARREL W. AMUNDSEN (1969) Chair, 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.

HENRICH BROCKHAUS (1965) Associate Professor of German. BA, MA, University of British Columbia; PhD, University of Washington.

PIETRA S. FIERO (1995) Assistant Professor of German. MA, PhD, University of Nebraska, Lincoln.

SHAW N. GYNAN (1986) Associate 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.

ARTHUR S. KIMMEL (1969) Director, International Programs and Exchanges. Associate Professor of French. AB, MA, University of Miami; PhD, University of California, Berkeley.

DANIEL RANGEL-CUERRERO (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.

KATHLEEN M. TOIALONOVIC (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) Associate 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.

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 280 and 425 are not applicable to major.

Required Courses

- Two French 301s
- French 314
- Two of French 331, 332, 340, 341
- Two French 401s (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

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

- Two French 301s; or 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

The teaching endorsement is part of the certification program for the State of Washington. Endorsement is given in conjunction with the certificate course work of the College of Education. See Woodring College of Education section of this catalog for requirements.

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; Seville and Alicante, Spain; Cologne, Germany; Avignon and Rennes, France; 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, Austria 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 30 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 30 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; in.erlanguage; 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: 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; emphasis on acquisition of oral and written vocabulary; intensive reading and discussion in Chinese of graded materials in modern Chinese.

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.

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.

Classical Studies

(The following courses require no knowledge of Latin or Greek as prerequisites. Certain courses not offered every year.)

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 250 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.

280 FRENCH FOR A READING KNOWLEDGE (4)

Prereq: minimum of one year of college French or equivalent strongly recommended. Does not apply to major or minor. S/U grading.

301 GRAMMAR REVIEW AND WRITTEN EXPOSITION (4)

Prereq: French 202 or equivalent. Practice in written expression, vocabulary building, study of grammar and language structure. Repeatable to a maximum of 12 credits; 8 credits required for major/minor.

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 DE 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 STRUCTURES ET STYLISTIQUE (3)

Prereq: 8 credits of French 301. Extensive practice in writing and in analyzing grammatical, stylistic and textual forms. Repeatable to a maximum of 9 credits; 6 credits required for majors.

405 COMMUNICATION ET DISCOURS (3)

Prereq: French 305; 8 credits of French 301. 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.

450 SEMINAR IN FRENCH STUDIES (3-5)

Prereq: two upper-division courses, including French 301. 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 30 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 THIRD-YEAR CONVERSATION (3)

Prereq: German 301. Conversation practice involving situations of daily life; topics of contemporary Germany. Vocabulary building.

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 FOURTH-YEAR CONVERSATION (3)

Prereq: German 302. Advanced conversational practice on topics reflecting events and institutions; students give expository talks and discuss articles taken from periodicals; vocabulary building.

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 30 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 grammar designed primarily to provide an elementary reading knowledge; selected readings from Plato's simpler dialogues.

201, 202, 203 INTERMEDIATE GREEK (3 ea)

Prereq: Greek 103 or equivalent; to be taken in sequence. Review of

fundamentals; 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. Open to juniors and seniors by permission only.

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.

201, 202 INTERMEDIATE SPANISH (5 ea)

Prereq: Spanish 103 or 104 or equivalent; to be taken in sequence. Review of fundamentals: understanding, speaking, reading and writing.

205 SECOND-YEAR CONVERSATION (3)

Prereq: Spanish 103, 104, or equivalent. Emphasis on developing speaking skills in communicative situations. Vocabulary building.

301, 302 GRAMMAR REVIEW AND COMPOSITION (4 ea)

Prereq: Spanish 202 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 202 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 (3)

Prereq: Spanish 340. Study of genres and trends during various periods of Hispanic literature.

352 SURVEY OF THE LITERATURE OF LATIN AMERICA (3)

Prereq: Spanish 340. Study of genres and trends during various periods in Latin American literature.

401 ADVANCED GRAMMAR (3)

Prereq: Spanish 302 or equivalent. Analysis of special problems in Spanish syntax.

402 ADVANCED COMPOSITION (3)

Prereq: Spanish 302 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)

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)

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 30 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.

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 11 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: coastal geology; 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 on-going 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

CHRISTOPHER A. SUCZEK (1977) Chair. Associate Professor. AB, University of California, Berkeley; PhD, Stanford University.
 RANDALL S. BABCOCK (1967) Professor. AB, Dartmouth College; MS, PhD, University of Washington.
 MYRL E. BECK, JR. (1969) Professor. BA, MS, Stanford University; PhD, University of California, Riverside.
 EDWIN H. BROWN (1966) Professor. AB, Dartmouth College; MSC, University of Otago; PhD, University of California, Berkeley.
 DON J. EASTERBROOK (1959) Professor. 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.
 THOR A. HANSEN (1985) Professor. BS, George Washington University; PhD, Yale University.
 ELIZABETH R. SCHERMER (1990) Associate Professor. BS, Stanford University; PhD, Massachusetts Institute of Technology.
 JAMES L. TALBOT (1976) Professor of Geology. 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

BROOKS D. ANDERSON II (1993) BS, MS, Bowling Green State University; PhD, Heed University.
 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.

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 115 or 121; Geog 203; Geog 331 or Geol 252; Physics 114; Astron 103
- Electives under departmental advisement from Geol 214, 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

61-63 credits

- Geol 211, 212, 214, 306, 310, 340, 407a
- Geog 331 or Geol 252; Physics 114; Astron 315; Chem 121; Sci Ed 491, 492
- At least one elective from Geol 314, 315, 316, 318, 352, 400, 407b, 410a, 410b, 414, 415, 418, 430, 440; Geog 203, 431, 432; Astron 316

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

89 credits

This major leads to recommendation for teaching endorsements in earth science (4-12) and science (4-12).

- Geol 211, 212, 306, 310, 407a
- Geog 331 or Geol 252
- Chem 121, 122, 123
- Physics 114, 115, 116 (or 121, 122, 123, 131, 132, 133) and Astron 315
- Biol 201, 202, 203
- Sci Ed 491, 492
- 3 additional credits under advisement

This major must be accompanied by the professional preparation program in secondary education.

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 Comp Sci 207
- 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
- One of Math 204, 224, or an approved course in statistics

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, 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
- At least one from Geol 452, 453, 454
- At least one from Geol 314, 432, 472
- 15 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 and Math 124. (**NOTE:** Grades of D-, D, or D+ are not acceptable for major and supporting courses.) Students must apply to the department for admission to the major.

DEPARTMENTAL HONORS

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 30 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.

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.

212 HISTORICAL GEOLOGY (4)

Prereq: Geol 211 (or Geol 101 and Geol 300 [lab]). 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.

213 DINOSAURS AND THEIR ENVIRONMENT (3)

Prereq: Geol 101. Dinosaurs and their world; what they looked like, how they lived, why they died and what the world was like during their reign.

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.

302 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 102 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.

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 PRINCIPLES OF PALEONTOLOGY (4)

Prereq: Geol 212. Life on the earth as revealed by its inhabitants, past and present.

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; a passing grade in the Junior Writing Exam. 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.

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.

436 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.

440 GLACIAL GEOLOGY (4)

Prereq: Geol 310. Processes and phenomena of modern and ancient glaciers; effects of Pleistocene glaciations.

442 INTRODUCTION TO REMOTE SENSING (3)

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 is placed on the use of multispectral scanners and radar.

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 COMPUTER APPLICATIONS IN GEOLOGY (3)

Prereq: 10 credits in geology or permission of instructor. PC hardware and software applications used in geology. Scanning of charts, maps and cross-sections into graphic software for enhancement and creation of bibliographies using optical character recognition software. Graphic software programs for developing geologic illustrations. Data calculation and plotting using spreadsheets. Combining text and graphics for reports using PageMaker. S/U grading.

450 STRUCTURAL ANALYSIS OF DEFORMED ROCKS (4)

Prereq: Geol 318, 407a, 410. Analysis of geologic structures at all scales. Structural regimes and plate tectonics.

452 APPLIED GEOPHYSICS (5)

Prereq: Geol 352 or equivalent. Geophysical exploration techniques applied to geological problems. Theory and field application of gravity, magnetism, 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 PRINCIPLE OF OROGENY (5)

Prereq: Geol 318, 352 and 407a. Application of geological and geophysical tools to understanding of earth's mountain belts.

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, and MathCad or proficiency in a comparable area. Study of the hydrologic cycle, with emphasis on geologic and engineering aspects.

473 GROUNDWATER HYDROLOGY (4)

Prereq: Math 124; Geol 472 recommended. Principles of hydrogeology, with emphasis on groundwater resources.

474 ADVANCED STUDIES IN HYDROLOGY (3)

Prereq: Geol 472 or 473 or permission of instructor. Advanced topics in hydrology; topics vary but will include one or more of the following: water yield and vegetation, snow hydrology, runoff generation, groundwater flow in the unsaturated zone, applied hydrogeology investigations, groundwater contamination.

475 INTRODUCTION TO GROUNDWATER MODELING (4)

Prereq: Math 124; Geol 472 or 473 recommended; computer literacy recommended. The application of Poisson and Laplace equations to steady-state groundwater flow regimes. Equations are defined using finite differences and finite element analysis.

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 30 of this catalog.

Admission to Graduate School or special permission required. See the Graduate School section of this catalog.

507 COASTAL GEOLOGY (4)

Prereq: Geol 310 or 340. Nearshore oceanography, coastal processes, coastal engineering and research methods in the field.

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 406, 407b or equivalent. Advanced classification of igneous rocks and minerals. Petrogenesis of volcanic and plutonic suites and their relation to the plate tectonic model.

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, 407b 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 418; 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 (3)

Prereq: graduate status. An introduction to remote sensing techniques for monitoring the earth's surface. Special emphasis is placed on the use of multispectral scanners and radar.

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.

550 STRUCTURAL ANALYSIS OF DEFORMED ROCKS (4)

Prereq: Geol 318, 407a, 410. Analysis of geologic structures at all scales. Structural regimes and plate tectonics.

552 APPLIED GEOPHYSICS (5)

Prereq: Geol 352 or equivalent. Geophysical exploration techniques applied to geological problems. Theory and field application of gravity, magnetics, refraction and earthquake seismology, electrical resistivity and others. Class projects include depth-to-bedrock, buried subsurface features, groundwater estimates and earthquake potential and ground response.

553 PLATE TECTONICS (4)

Prereq: Geol 352. Kinematics and dynamics of plate motions, with applications to geotectonics.

554 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 geologic and geophysical tools to gain understanding of earth's mountain belts.

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: Geol 211, Math 125, and MathCad or proficiency in a comparable area. Study of components of the hydrologic cycle, including properties of water, evaporation, evapotranspiration, water budgets, infiltration, runoff processes, flood prediction, channel hydraulics and sediment transport.

573 GROUNDWATER HYDROLOGY (4)

Prereq: Math 124; Geol 572 recommended. Occurrence, movement and characteristics of groundwater; basic principles of flow in porous media; hydraulics of wells and earth dams; groundwater exploration, development, quality and management. Emphasis on practical applications of geology and basic principles of groundwater hydraulics to water resource problems.

574 ADVANCED STUDIES IN HYDROLOGY (3)

Prereq: Geol 572 or 573, or permission of instructor. Advanced topics in hydrology; topics vary but will include one or more of the following: water yield and vegetation, snow hydrology, runoff generation, groundwater flow in the unsaturated zone, applied hydrogeology investigations, groundwater contamination.

575 GROUNDWATER MODELING (4)

Prereq: Math 124, 125 (or 128), and 204 or 240; Geol 572 or 573; computer literacy recommended. The application of Poisson and Laplace equations to steady-state groundwater flow regimes. Equations are defined using finite differences and finite element analysis.

578 INTRODUCTION TO FIELD WORK IN ENVIRONMENTAL GEOLOGY (2)

Prereq: admission to one-year M.S. option. Research and report-writing skills in preparation for completing a summer field project.

579 SUMMER FIELD PROJECT (10)

Prereq: Geol 578. 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 E. MARIZ (1970) Chair. Professor. BA, MA, PhD, University of Missouri.

SUSAN E. COSTANZO (1993) Assistant Professor. BA, MA, PhD, Northwestern 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) Assistant 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) Assistant Professor. BA, State University of New York, Plattsburgh; MA, University of California, Irvine; PhD, University of California, Irvine.

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; MEdS, 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.

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, or 280 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, 441, 442); Germany (Hist 431, 432); Latin America (Hist 273, 274, 474); Russia (Hist 333 and 334)
- Electives under advisement

Area Studies Minor

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
- 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

* Half must be in upper-division courses.

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
- Hist 273 and 274
- Remainder in courses relating to Latin America from at least one other academic department

For further information and advisement, consult the departments of History, Anthropology or Foreign Languages (Spanish).

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 30 of this catalog.

103, 104 INTRODUCTION TO AMERICAN CIVILIZATION (5 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 (5 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 credit 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 methodological problems. Intended for students with credit in Hist 104, 113, or AP credit in American or European history. Repeatable to 8 credits.

261 BLACK HISTORY IN THE AMERICAS (5)

The cultures and achievements of blacks in the Americas.

267 CHRISTIANITY IN HISTORY (5)

A survey of Christian institutions and doctrines from their inception to the present, including a study of the intellectual, social and economic forces which have influenced their development.

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 (5)

Canadian history from the period of French colonization 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.

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.

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.

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 WOMEN AND AMERICAN HISTORY (4)

Prereq: Hist 103 or 104. Contributions of women in the evolution of the colonies and the United States. Particular emphasis is accorded structures and consequences of identifying large groups as peripheral to the major concerns and actions of the whole community. Was Hist 366 in previous catalog.

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.

373 HISTORY OF JAPAN (5)

Prereq: Hist 280 or EAS 201 or EAS 202. Japanese history from the earliest times to the present, with the main emphasis on the early modern and modern periods from a political and economic history perspective.

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 (3)

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.

419 SOCIAL AND ECONOMIC HISTORY OF MEDIEVAL EUROPE (4)

Prereq: Hist 112 or Hist 315 or 316 or Lbrl 122. Examination of social and economic transformations of medieval Europe, with particular attention given to relations between social, economic and technological developments in the second half of the period (1000-1450).

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.

426 MODERN EUROPE: 1789-1850 (5)

Prereq: junior status. Political, economic, social and diplomatic developments between the French Revolution and mid-19th century.

427 MODERN EUROPE: 1850-1914 (5)

Prereq: junior status. From the age of "Realpolitik" to First World War.

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.

429 EUROPE SINCE 1945 (5)

Prereq: junior status. Major political, economic and social developments; origin and operation of the cold war and attempts of Europe to adjust to the changing status of the continent.

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 TO 1776 (4)

Prereq: junior status. The settlement of the English colonies in America and their political, economic, religious and social development to the mid-18th century; colonial reaction to imperial policies in the context of internal partisan politics from 1763 to the Declaration of Independence.

454 THE CIVIL WAR AND RECONSTRUCTION (5)

Prereq: junior status. Development of rival nationalisms; problems of war in North and South; efforts toward reunion; new problems in 1877.

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.

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.

- 461 DIPLOMATIC HISTORY OF THE UNITED STATES (5)**
Prereq: junior status. The United States in world affairs from colonial times to the present.
- 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.
- 467 AMERICAN SOCIAL AND CULTURAL HISTORY (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.
- 477 CANADA SINCE 1945 (4)**
Prereq: junior status. Canadian internal and external developments since 1945.
- 478 THE REGIONS OF CANADA (5)**
Prereq: junior status. A study of the unique characteristics and historical development of the regions of Canada, Atlantic Canada, Central Canada, the West, the North.
- 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.
- 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.
- 489 HISTORY OF WOMEN IN THE MIDDLE EAST (4)**
Prereq: one European or Middle-Eastern history class or women's studies class or equivalent. An examination of the traditional roles of women in the Islamic, Jewish and Christian societies of the Middle East. The latter half of the class focuses on the responses of women and men to the impact of the West, economic and political modernization, and the emergence of religious fundamentalism.
- 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.

Graduate Courses

Courses numbered 500; 517; 545; 597 are described on page 30 of this catalog.

Admission to Graduate School or special permission required. See the Graduate School section of this catalog.

NOTE: *Timetable of Classes* will designate a reading seminar with "r" and a writing seminar with "w."

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 paper 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 English 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.

558 20th-CENTURY AMERICAN HISTORY (4)

561 AMERICAN DIPLOMATIC HISTORY (4)

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: permission of the department.

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.

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 104 and Journ 190.

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 2.50 grade point average.
- Pass Journ 104 with a B- or better (transfer students must meet the same requirement for any course accepted as an equivalent of Journ 104 and also complete one additional non-staff journalism course with a B- or better).
- Complete with a B- or better one journalism staff course.
- Submit a letter of application.

Students meeting qualifications but not admitted because

of space limitations will be listed as pre-majors and admitted as space allows. Majors must maintain a 2.50 grade point average 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 104, 190
- Eng 101
- 100- and 200-level GURs

JOURNALISM FACULTY

FLOYD MC KAY (1990) Chair, Associate Professor. BA, Linfield College; MA, University of Maryland; PhD, University of Washington.

CAROLYN DALE (1977) Associate Professor. BA, MC, University of Washington.

LYLE E. HARRIS (1976) Professor. BA, MA, University of Montana; PhD, University of Missouri.

TIM PILGRIM (1992) Associate Professor. BA, Western Montana College; MA, University of Montana; MA, PhD, University of Washington.

PETE S. STEFFENS (1972) Professor. BA, Harvard; BA, MA, Balliol College, Oxford.

BACHELOR OF ARTS

Major — Journalism

News-Editorial Sequence

64 credits

- Journ 104
- Journ 190, 204, 304, 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 114, 214, 314, 414
 - (b) Journ 121, 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

69-70 credits

- Journ 104
- Comm 101 or 235 and 428
- FMDS 330
- Journ 190, 204, 304, 350, 404, 405, 480

- One course from list (a), one from list (b), and one additional from (a) or (b), or Comm 241:
- (a) Journ 114, 214, 314, 414
- (b) Journ 121, 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 104
- Journ 190, 204, 304, 340, 350
- Three staff courses, or equivalent professional experience:
 - Two from: Journ 114, 214, 314, 414
 - One from: Journ 121, 221, 321, 421

COURSES IN JOURNALISM

Courses numbered X37, X97, 300, 400, 417, 445 are described on page 30 of this catalog.

- 104 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.
- 114 NEWSPAPER STAFF (2)**
Prereq: freshman status; Journ 104. Participation on the staff of the University newspaper; critiques in news reporting, writing, editing and make-up; editorial writing. Repeatable to 8 credits.
- 121 PERIODICAL STAFF (2)**
Prereq: freshman status; Journ 104; one newspaper staff course. Workshop in periodical design, layout and production, training in the creative combination of type, headings, photographs and other illustrative material; text and caption writing; creative layout techniques; publication production; participation on the University periodical. Repeatable to 6 credits.
- 160 CURRENT EVENTS AND THE MEDIA (3)**
Discussion and interpretation of news in context of interaction with media; for potential journalists and others interested in current events.
- 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. Credit not allowed for both Journ 190 and Comm 240.
- 204 EDITING (5)**
Prereq: Journ 104. News copy desk operations; editing; headline writing; dummied; page make-up and news graphics; and computerized editing.

- 214 NEWSPAPER STAFF (2)**
Prereq: sophomore status; Journ 104. 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 104; one newspaper staff course. Workshop in periodical design, layout and production; training in the creative combination of type, headline, photographs and other illustrative material; text and caption writing; creative layout techniques; publication production; participation on the University periodical. Repeatable to 6 credits.
- 304 REPORTING (5)**
Prereq: Journ 104. 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.
- 305 PHOTOJOURNALISM (3)**
Prereq: Art 260 or equivalent experience; Journ 104. 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. (Students must have their own access to darkroom facilities.)
- 310 ADVERTISING IN THE MASS MEDIA (3)**
Role of mass media advertising in the economy and advertising methods; research, planning and preparation of the message, selection of media, budgets and schedules; social performance of advertisers.
- 314 NEWSPAPER STAFF (2)**
Prereq: junior status; Journ 104. 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 104; one newspaper staff course. Workshop in periodical design, layout and production, training in the creative combination of type, headline, photographs and other illustrative material, text and caption writing; creative layout techniques; publication production; participation on the University periodical. Repeatable to 6 credits.
- 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 104. 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 304. In-depth article writing; development of ideas, gathering of materials and writing; special attention to individual interests; exploration of freelance writing markets.
- 405 PRINCIPLES OF PUBLIC RELATIONS (3)**
Prereq: Journ 104 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, news releases, publications, relations with the press.

ARTS & SCIENCES

406 JOURNALISM FOR PUBLICATION ADVISERS (3)

Prereq: Journ 104. Teaching public school journalism; news elements, values and writing for newspapers.

414 NEWSPAPER STAFF (2)

Prereq: senior status; Journ 104. Participation on the staff of the University newspaper; critiques in news reporting, writing, editing and make-up; editorial writing. Repeatable to 8 credits.

421 PERIODICAL STAFF (2)

Prereq: senior status; Journ 104; one newspaper staff course. Workshop course in periodical design, layout and production; training in the creative combination of type, headline, photographs and other illustrative material; text and caption writing; creative layout techniques; publication production; participation on the university periodical. Repeatable to 6 credits.

430 FIELD INTERNSHIPS (6)

Prereq: Journ 204, 304, 350, and newspaper staff courses; 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 304, 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 304. Introduction to theory and research in mass communications; review of pertinent literature; limited field studies.

480 CURRENT PROBLEMS (3)

Prereq: Journ 350. 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 ethic.

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. The Junior Writing Exam and English 304 are 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. Professor. BA, Pomona College; MDiv, Yale Divinity School; MPhil, PhD, Yale University.
 DAVID L. CURLEY (1996) Assistant Professor. BA, MA, PhD, University of Chicago.
 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) Assistant Professor. BA, Rutgers University; PhD, Princeton University.
 ROBERT F. STOOPS, Jr. (1983) Associate 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, 201
 - 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, 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 winter quarter only.) Lbrl 302 and Eng 304 should be completed before enrolling in Lbrl 417a-d. (NOTE: Eng 202 is prerequisite to Eng 304.) A passing score on the

Junior Writing Examination and permission of the instructor are 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 winter 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.) A passing score on the Junior Writing Examination and permission of the instructor are 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

* Contact the department before enrolling.

** Lbrl 273 may be counted in one group only.

- One course from Lbrl 302, 332, 335, 378 and other appropriate courses under advisement

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 267, 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 .637; X97; 300, 400; 417, 445 are described on page 30 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 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 winter 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 INDIVIDUALS AND SOCIETY IN CONTEMPORARY ASIAN AND AFRICAN 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 Asia and Africa.

373 IDEOLOGY AND EXPERIENCE IN CONTEMPORARY ASIA AND AFRICA: CONSERVATIVES, REFORMERS, REVOLUTIONARIES (4)

Prereq: junior status. Case studies of 20th-century Third World political leaders (e.g., Gandhi, Mao Tse-tung, Nyerere); their writings, actions, and influence upon contemporary non-Western development.

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 enrolment 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.

LINGUISTICS FACULTY

KENN APEL, Speech Pathology and Audiology. Language acquisition, language analysis, language disorders.

SHAW N. GYNAN, Foreign Languages and Literatures. Sociolinguistics, second language acquisition, syntax and phonology.

JAMES W. HEARNE, Computer Science. General linguistics, computational linguistics, narratology.

LINDA KIMBALL, Anthropology. Southeast Asia linguistics.

ANNE LOBECK, English. Syntactic theory, historical linguistics, sociolinguistics.

ALLISON SMITH, English. Applied linguistics, discourse analysis, literacy issues.

JOHN H. UNDERWOOD, Foreign Languages and Literatures. Applied linguistics, syntax, language pedagogy.

EDWARD J. VAJDA, Foreign Languages and Literatures. Morphology and semantics, language typology, general historical linguistics.

RUDOLF WEISS, Foreign Languages and Literatures. General and applied phonetics, applied linguistics, general linguistics.

LINA ZEINE, Speech Pathology and Audiology. Phonetics, phonological acquisition.

Linguistics Area Advisers:

English — Anne Lobek

Anthropology — Linda Kimball

Speech Pathology and Audiology — Kenn Apel

Computer Sciences — James W. Heame

Foreign 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), 436, 438, 439
- Additional work under advisement

Anthropology option

- Anth 201, 247, 348 (to replace Ling 201), 448
- Additional work under advisement

Speech Pathology/Audiology option

- Selected courses (from SPA 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 30 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 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 481.

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 or 156 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 120 (computer programming) or CS 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.

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.

Graduation with Merit

To graduate with merit in mathematics, a student must complete one of the following majors:

- B.S. Mathematics
- B.S. Applied Mathematics
- B.S. Mathematics-Computer Science
- B.A. Mathematics
- B.A./Ed. Mathematics — Secondary

The student's program must include at least 32 quarter hours of mathematics or math-computer science courses taken at Western, including Math 312 and at least 23 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, including completion of one of the following majors:

- B.S. Mathematics
- B.S. Applied Mathematics
- B.S. Mathematics-Computer Science

Furthermore, the student must successfully complete:

- At least one of the sequences Math 401-402 or Math 423-424
- At least one of the sequences Math 331-432, Math 441-442, Math-CS 335-435, Math-CS 375-475
- A comprehensive examination covering Math 124, 125, 224, 225, 226, 204, 304, 331
- An approved senior project

The comprehensive examination should normally be taken in the junior year. This examination may be retaken if necessary, but must be passed no later than September 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. A student may petition to have the senior project accepted as meeting the University writing proficiency requirements.

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. 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.
- LINDA M. CAVE (1994) Assistant 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.
- JAMES E. DUEMMEL (1966) Associate Professor. BA, MA, PhD, Ohio State University.
- 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.
- NEIL R. GRAY (1964) Associate Professor. BA, San Francisco State College; MA, PhD, University of Washington.
- 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.
- 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.
- 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 18-22 credits in other courses

- Math 124, 125, 204, 224, 226, 331
- Math 341 or 441
- CS 120 or CS 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 12 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 221, 222, 223, 324
 - Econ 206, 207, 306, 470 or 475

BACHELOR OF ARTS IN EDUCATION

Major — Mathematics — Elementary

50 credits

- Math 124, 125, 204, 209, 381, 302, 341, 360, 382, 419
- CS 120 or CS 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

71 credits

- Math 124, 125, 204, 209, 224, 226, 302, 331, 341, 360, 419, 483
- CS 120 or CS 207

* Pending HEC Board approval.

MATHEMATICS

- 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

42 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
- CS 120 or CS 207
- 4 credits in mathematics (200+ level) as advised

This major must be accompanied by the professional preparation program in secondary education.

Combined Major — Chemistry/Mathematics — Secondary

88-89 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 120 or 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

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 18-22 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 423-424; 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 120 or CS 207
- One of the following sequences:
 - Physics 121, 122, 123, 131, 132, 133
 - Chem 121, 122, 123
 - CS 221, 222, 223, 324
 - 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 18-22 credits in other courses

- Math 124, 125, 204, 224, 226, 304, 312, 331
- Math 209 or Math 302
- CS 120 or CS 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
- 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
 - CS 221, 222, 223, 324
 - Econ 206, 207, 306, 470 or 475

Minor — Mathematics

36 credits

- Math 124, 125, 224
- Math 204
- CS 120 or CS 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

92 credits

- Math 124, 125, 204, 224, 225, 226, 302, 312, 331, 430 or 432; 341 or 441; 304 or 401
- Three courses from Math-CS 335, 375, 435, 475; CS 120, 221, 222, 223, 324
- 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.

COURSES IN MATHEMATICS

Courses numbered X37; X97; 300, 400; 417, 445 are described on page 30 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: suitable score on the Intermediate mathematics placement test or suitable score on the Precalculus mathematics placement test or 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.

124 CALCULUS AND ANALYTIC GEOMETRY (5)

Prereq: suitable score on the advanced mathematics placement test or at least C- in Math 115. 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 or Math 115. 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 R^n ; linear independence, bases, subspaces and dimension in 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.

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.

423 ADVANCED CALCULUS OF ONE VARIABLE (4)

Prereq: Math 312. Rigorous treatment of the calculus of one variable and convergence of sequences and series of functions.

424 ADVANCED CALCULUS OF SEVERAL VARIABLES (4)

Prereq: Math 225, 423. Differentiation and integration of functions on Euclidean space.

430 FOURIER SERIES AND PARTIAL DIFFERENTIAL EQUATIONS (4)

Prereq: Math 226, 304 and 331. An introduction to the Fourier method for solving boundary value problems arising in physics and engineering. Fourier series, the wave equations, the heat equation, the Fourier transform and related topics.

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.

Graduate Courses

Courses numbered 500; 517; 545; 597 are described on page 30 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 recommended. 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.

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 OPERATIONS RESEARCH (4)
Prereq: Math 224, Math-CS 335. 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, choice of project degree option. Repeatable to 2 credits. S/U grading.

COURSES IN MATHEMATICS-COMPUTER SCIENCE

Courses numbered X37, X97; 300, 400; 417, 445 are described on page 30 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 PROGRAMMING (4)
Prereq: Math 204 and CS 120 or 207. Linear programming, duality theory, sensitivity analysis, applications.

375 NUMERICAL COMPUTATION (4)
Prereq: Math 204, CS 120 or 207. Computer arithmetic, solution of nonlinear equations and optimization in a single variable; matrix factorization; matrix iterative techniques.

435 OPERATIONS RESEARCH I (4)
Prereq: Math 224 and Math-CS 335. Non-linear 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.

475 NUMERICAL ANALYSIS (4)
Prereq: Math 224, Math-CS 375. Polynomial interpolation including splines, orthogonal systems of function and least squares approximation; numerical differentiation and integration; solution of systems of nonlinear equations and unconstrained optimization.

477 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.

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. Professor. BS, Loyola University; PhD, Stanford University.

THOMAS E. DOWNING (1968) Associate Professor. AB, Wayne State University; PhD, Stanford University.

FRANCES HOWARD-SNYDER (1993) Assistant Professor. BA, MA, University of Capetown; PhD, Syracuse University.

HUD HUDSON (1992) Associate Professor. BA, Boise State University; MA, PhD, University of Rochester.

RICHARD L. PURTILL (1962) Professor. BA, MA, PhD, University of Chicago.

In addition to regular faculty, the Department of Philosophy often includes one or two temporary faculty. The department also seeks to have a distinguished visiting philosopher for at least one quarter each year.

BACHELOR OF ARTS

Major — Philosophy

59 credits

- Phil 102, 112, 201, 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
- 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, 201, 310, 320, 420, 350, 360, 364

Minor — Philosophy

25 credits

- Phil 102, 112, 201
- 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 30 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.

201 INTRODUCTION TO PHILOSOPHY: KNOWLEDGE AND REALITY (3)

Emphasis is given to the nature and possibility of knowledge, to related concepts such as truth, belief and evidence, and to selected metaphysical problems.

202 INTERMEDIATE LOGIC (4)

Prereq: Phil 102. The development of a formal system of logic with multiple quantifiers, identity and definite descriptions; and an examination of either nonclassical systems of logic or the fundamental results defining the scope and limits of formal systems of logic.

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, 201. 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, 201. 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.

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 201. 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 201. 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 201. 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 10 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 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 and must also be admitted to the K-12 physical education program. Students should apply for entry into the K-12 physical education 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 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: The *athletic training* specialization of the exercise and sport science option requires careful planning if students are to complete the degree in a four-year period. It should be noted that this specialization requires an extensive internship of 1,500 hours. It is suggested that students who are interested in this specialization consult with Dr. Dennis Caine (PEHR faculty) during their sophomore year in order to establish a reasonable plan of study for completion of this degree.

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 health education and health promotion. The concentrations include:

- School Health Education
- Community Health Education
 - Community-based
 - Worksite-based

HEALTH EDUCATION MID-PROGRAM CHECKPOINT

Students seeking to complete a B.S. degree in community health or a B.A. in Education in school health 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. 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 either degree. The following courses should be completed prior to the start of the senior year. Major omissions from this list make it difficult or impossible to complete either degree within two additional years.

- Biol 348, 349
- Chem 115
- P.E. 303 and Chem 251 (B.S. degree)

NOTE: The *school health* major (teacher education) requires a 4½-year commitment which includes a

one-semester teaching internship. Students must meet the minimum entry requirements of the Woodring College of Education.

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
- Industrial 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. Prerequisites in disciplines such as biology, psychology, sociology, business and environmental studies should be taken prior to being admitted to the program. 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, 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) Associate Professor. BS, Pennsylvania State University; MS, Pennsylvania State University; PhD, University of Oregon.
- DENNIS CAINE (1992) Associate Professor. BPE, BEd, University of Manitoba; MEd, University of British Columbia; Graduate Certificate in Gerontology, PhD, University of Oregon.
- ROY A. CLUMPNER (1975) Professor. BS, University of Wisconsin, Lacrosse; MA, California State University, San Jose; PhD, University of Alberta.
- 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.
- LEA ANN TYSON (1991) Associate Professor. BS, Southwest Missouri State University; MS, University of Arizona; PhD, University of Texas.
- RALPH A. VERNACCHIA (1973) Professor. BA, Montclair State College; MS, Ohio University; PhD, University of Utah.

Affiliated Teaching Faculty

- LINDA L. BERGEN (1987) Head Athletic Trainer. BA, ATC, California State University, Long Beach.
- 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.

CARMEN DOLFO (1989) Head Coach, Women's Basketball. BA/Ed, Western Washington University.

PAT FABIANO (1991) Health Education; BS, University of Pittsburgh; MS, University of Wisconsin; MA, Southern Illinois University.

LYNDA GOODRICH (1973) Athletic Director. BA/Ed, MA, Western Washington State College.

KELVEN HALSELL (1987) Head Coach, Track and Cross-Country. BS, MEd, Wayland Baptist University.

MARY HAWK (1992) Health Education; BS, University of Alberta; MEd, Western Washington University.

JILL HECKATHORN (1980) Lecturer, Recreation; Recreation Supervisor, Bellingham Parks and Recreation. BS, MA, Michigan State University.

WARREN B. HOWE, M.D. (1992) Physician-WWU, Lecturer. BA, University of Rochester; MD, Washington University School of Medicine.

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.

WILLIAM ROSS (1995) Lecturer. BPE, University of British Columbia; MA, PhD, University of Oregon.

DENISE SEABERT (1995) Health Education. BA in Ed, Western Washington University.

LYNNE SHERWOOD-PARKER (1986) Health Education. BS, BA, Central Washington University; MEd, Western Washington University.

ROBERT SMITH (1987) Associate Athletic Director; Head Coach, Football. BA, University of Washington.

LOWELL "BUD" TURNER (1974) BA, MEd, Seattle University.

MARC WHITLOCK (1993) Lecturer. BA, Hope College; MEd, Western Washington 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 following pre-major requirements:

Requirements for all specializations:

- Completion of First Aid/CPR certification prior to entering the major
- Satisfactory completion of JWE

Fitness and Exercise Science

- Biol 348 (B- or better)
- Select four courses from: Biol 349; Chem 115/Physics 114; CS 101; Math 240; Chem 121, 122; Chem 251/Physics 115; PE 203

Pre-Physical Therapy

- Chem 121, 122, Biol 348 (B or better), Biol 349 (B or better), PE 203

Athletic Training

- Biol 349 (B or better), Psych 201, PE 203
 - Acceptance into the WWU Athletic Training Internship program

Sport Psychology

- Biol 348, Psych 201, 315 (B- or better), PE 203, 309 (B- or better)

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, 490
- Psychological, Sociological and Historical Foundations: 10 credits
 - PE 309 or 310; 407
 - Select 3 credits from PE 308, 309, 310, 409
- Field Experience: 6 credits
 - PE 491 or PE 471

or

- Internship: 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 from the following: Biol 349; Chem 115, 121, 122, 123, 251, 371; CS 101, 110; Envr 454; HED 345, 435; Math 240; PE 304, 403, 440; Physics 114, 115, 116

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, 340, 345, 349, 370; Chem 121, 122, 123, 251; Physics 114, 115, 116; Psych 201, 314, 316; Math 240; CS 101, 110; PE 304

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 306, 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 306, 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

126-128 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. 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 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 PE K-12 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 physical education 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 physical education K-12 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 302b, EdAF 310, EdCI 370
- Spring:* PE 330p (Elementary Practicum), PE 496 and 303b, EdCI 422, Psych 351

Second Year

- Fall:* PE 420 (Block III: Secondary PE), PE 420p (Middle School Practicum), PE 301b, 307b, 310
- Winter:* PE 430 (Block IV: Secondary PE), PE 430p (High School Practicum), PE 309, EdCI 472, Psych 352/353
- Spring:* PE 407, 490, 492, EdAF 344, 411

Students take HEd 456 any fall or spring quarter.

Third Year

- Fall/Winter:* Student internship (student teaching)
or

- Winter/Spring:* Student internship (student teaching)

NOTE: Students are encouraged to seek a second teaching endorsement area. In the event a student is not accepted into the PE K-12 program, the student can take classes in this second endorsement area while continuing to seek admission into the program. To student teach, students must possess standard First Aid/CPR certification.

K-12 Physical Education Supporting Teaching Endorsement

37 credits

This course of study is a supporting endorsement in physical education grades K-12. This endorsement can be taken only if the student has a primary endorsement — an academic major which is certifiable by the State Superintendent of Public Instruction.

- Introductory courses: 8 credits
 - Biol 348, PE 203
- Exercise and Sport Science: 10 credit
 - PE 302, 303
- Psychological, Sociological and Historical foundations: 3 credits
 - PE 309 or 310
- Instructional Methodology: 16 credits
 - PE 496 plus 13 credits to be prescribed by an assigned adviser on an individual basis depending on individual needs, teaching experience and teaching focus (i.e., elementary or secondary)
- First Aid/CPR certification

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)

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.

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 and 151). Several supporting courses required in one or both of the health majors fulfill GUR requirements (e.g., Chem 115, 251; Psych 201 or Soc 201). Junior and senior years are devoted to the health education core, human development core, and to the community health concentration or to teacher education requirements in the Woodring College of Education. Electives that emphasize oral and written communication skills are recommended. Prospective majors are encouraged to fulfill the biological science requirements by the end of their junior year.

BACHELOR OF ARTS IN EDUCATION

Major — School Health Education

65 credits

The school health educator is a practitioner who is professionally prepared in the field of school health education, meets state teaching requirements, and demonstrates competence in the development, delivery and evaluation of planned curricula and learning activities for students and adults in the school setting that enhance health knowledge, attitudes and problem-solving skills. The school health education major prepares students to coordinate and implement comprehensive school health education programs. Further information and major declaration forms are available from the Coordinator of Health Education, Carver 104, Physical Education, Health and Recreation Department. In addition, students must contact the Woodring College of Education Admissions Office regarding procedures specifically related to teacher education entrance requirements. In order to obtain the B.A. in Education with a school health education major, students must fulfill the Woodring College of Education requirements. Prerequisites for declaring the school health education major are completion of HEd 150 and 151 and 2.75 GPA and completion of a program application form.

General Courses

13 credits

- Chem 115*
- Nutrition — PE 440
- Psych 201* or Soc 201*

Health Education

30 credits

- HEd 150, 151

* Meets General University Requirements

- HEd 345
- HEd 407, 447, 450, 460, 470

Human Development

22 credits

- Biol 348, 349
- Behavioral/Social Sciences — 12 credits under advisement

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 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, 345, 470
- Nutrition — PE 440
- Physiology — PE 303, Biol 349

BACHELOR OF SCIENCE

Major — Community Health

110 credits

A community health educator is a practitioner who is professionally prepared in the field of community health education and demonstrates competence in the planning, implementation and evaluation of a broad range of health-promoting or health-enhancing programs for community groups. This major prepares students to apply a variety of methods 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 and 151, 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

18 credits

- Chem 115*, 251*
- Nutrition — PE 440
- Psych 201* or Soc 201*

Health Education

47 credits

- HEd 150, 151
- HEd 345
- HEd 407, 435, 447, 450, 460
- HEd 451

Human Development

28 credits

- Upper-division psychology or sociology course
- Biol 348 and 349; 345 or 449
- PE 303
- Journ 405

Concentration

17 credits

Students select supporting courses that relate to the settings in which they wish to practice.

Recommended courses for community-based:

- Comm 240
- Anth 353, 424
- Psych 315, 316, 353, 360
- Soc 260, 333, 380
- HEd 250, 470
- Envr 454
- Geol 214

Recommended courses for worksite-based:

- PE 208, 302, 403, 440
- Rec 377, Psych 320
- Tech 328

Exit Requirement

- Standard First Aid/CPR certification

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 special populations.

The recreation program is nationally accredited. Students should inquire directly 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 who are eligible to enter Phase II of the program should plan to apply by the deadline *one year prior to when they intend to begin the program*. 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.

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 2S-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 administration, sociology, special education, communications, retail management, psychology, journalism, natural resource management, environmental planning, physical education, cultural arts, commercial recreation, biology, health promotion.

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 30 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, a \$10 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 Theatre Arts Department for additional dance offerings.)

- 120 BEGINNING SOCIAL DANCE
- 122 BEGINNING FOLK AND SQUARE DANCE
- 123 BEGINNING SCOTTISH COUNTRY DANCING

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

150-178 INDIVIDUAL SPORTS (1 ea unless otherwise noted)

- 150 BEGINNING ARCHERY
- 151 BEGINNING GYMNASTICS
- 154 BEGINNING GOLF
- 157 BEGINNING SKIING
- Fee: \$150.
- 158 INTERMEDIATE SKIING
- Fee: \$150.
- 159 ADVANCED SKIING
- Fee: \$150.
- 162 BEGINNING HORSEMANSHIP
- Fee: \$160.
- 167 BEGINNING BICYCLING
- 168 BEGINNING MARTIAL ARTS
- 169 BEGINNING HANDBALL
- 170 SAILING

Prereq: swim test. Fee: \$35.

171 INTERMEDIATE SAILING/BEGINNING RACING

Prereq: swim test and basic sailing skills required. Fee: \$35.

172 ADVANCED SAILING/RACING

Prereq: PE 165 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: PE 170. Boat handling under power and sail, plus basic seamanship. Fee: \$100.

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.

180-193 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 (3)

Must be taken first two quarters in the program. Career orientation, professional organizations, research, physical fitness and skill competency testing; relationship between physical education and athletics.

208 PRINCIPLES OF CONDITIONING AND STRENGTH TRAINING (3)

Theoretical and practical background regarding strength training and aerobic/anaerobic activities.

243 CONTEMPORARY RECREATIONAL ACTIVITIES (2)

Prereq: Competency in skills and knowledge of the sport.

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 PHYSICAL EDUCATION FOR ELEMENTARY SCHOOL (3)

Prereq: admission to the Woodring College of Education and Psych 316 or 352. Physical activities in fundamental skill development, movement concepts, rhythms and gymnastics for elementary age. Includes methods of teaching and developmental characteristics of children.

307 MOTOR LEARNING (3)

Prereq: PE 203. Principles of motor skills acquisition as it relates to teaching methodology and coaching techniques.

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.

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 skills.

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, gymnastics, 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, strength and body composition; develop case studies and develop appropriate exercise program and re-evaluation. Includes experimental laboratory sessions and practical laboratory skills analysis.

407 HISTORY, PHILOSOPHY AND ETHICS OF PHYSICAL EDUCATION (4)

Prereq: PE major or minor; senior status. Philosophical and historical considerations of physical education with emphasis on social, cultural and aesthetic aspects of sports and dance. Writing intensive 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, gymnastics 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: 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, Envr 352, or permission of instructor. Current topics on exercise and nutrition; weight control, obesity, dietary supplementation and performance, fluid regulation, atherosclerosis and diabetes.

471 INTERNSHIP (15)

Prereq: permission of instructor and certification in First Aid/CPR. 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)

A study of the physical and motoric changes which characterize persons throughout their lifespan, their interrelationship with physical activity, with application to the planning and implementation of physical activity programs.

490 MEASUREMENT AND EVALUATION IN PHYSICAL EDUCATION (3)

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 and written 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 and written 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 and written 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 and written 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.

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 30 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 LEARNING: ADVANCED (3)

Prereq: PE 307 or equivalent. Factors affecting the acquisition of skill; individual and group differences, retention, transfer of training, motivation in learning motor skills.

509 ADMINISTRATION OF PHYSICAL EDUCATION, SPORTS, PHYSICAL ACTIVITY CENTERS (3)

Prereq: EdAF 541a, 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: exercise physiology. 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: completion of course work 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 30 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 (4)

Physiological and behavioral effects of legal and illegal drugs; societal substance use and abuse; alternatives to drug use; sociological, psychological and biological aspects of human sexuality.

250 HEALTH OF THE COLLEGE STUDENT (4)

Prereq: HEd 150, 151, 152, or permission of instructor. Analysis of major health risks; personal health status assessment; strategies for reducing risk behaviors and promoting healthy lifestyles among college students.

345 HEALTH PROMOTION/DISEASE PREVENTION (4)

Prereq: junior status; HEd 150, 151 recommended. Relationship of lifestyle choices and personal beliefs to well-being; investigation of illnesses, intentional injury and violent behaviors compromising personal and public health.

407 PRINCIPLES AND PRACTICES OF HEALTH EDUCATION (3)

Prereq: HEd 345. Historical perspectives of health education; professional issues and ethics; principles and practices of health education. Writing intensive course.

435 HEALTH PROMOTION AND EMPLOYEE WELLNESS PROGRAMS (5)

Prereq: HEd 345, PE 303. Theoretical base and direct application of worksite health promotion programs; assessment tools; impact of health risk factors; cost-benefit ratio and employee production; individual/organizational behavior change process; field experience required. Offered alternate years.

447 COMMUNITY HEALTH (3)

Prereq: HEd 345 or permission of instructor. Concept of community health; role of government, voluntary and private agencies; investigation of health issues targeting Healthy People 2000; volunteering required.

450 METHODS AND MATERIALS IN HEALTH EDUCATION (4)

Prereq: HEd 345 or permission of instructor. 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, 450, 460. 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.

456 ABUSE PREVENTION FOR SECONDARY EDUCATION TEACHERS (?)

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.

460 PROGRAM PLANNING AND EVALUATION IN HEALTH EDUCATION (5)

Prereq: HEd 447, 450. Application of processes of program development in designing health education programs.

470 SCHOOL HEALTH PROGRAMS (3)

Prereq: HEd 345 or permission of instructor. Organization of comprehensive school health education programs; analysis of critical health issues and risk-taking behaviors of young people. Offered alternate years.

COURSES IN RECREATION

Courses numbered X37; X97; 300, 400; 417, 445 are described on page 30 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 (3)

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.

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 RESEARCH AND INFORMATION SYSTEMS (4)

Prereq: Phase III. Survey research methods: mail, telephone and face-to-face interviews; data analysis and report writing. Library research sources and 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 or appropriate experience and written permission. 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 co-workers in the technical work of the department. Such employment provides valuable experience as well as financial support. It also promotes close association between faculty and students.

PHYSICS

Physics is the fundamental science. It is the study of matter and energy and 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 a Ph.D. degree in physics is required. 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 quadruple 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 120
- 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 120

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. The student then delivers the card to the Registrar's office.

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. rquigley@physics.wvu.edu is the Internet e-mail address. 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

ROBERT J. QUIGLEY (1970) Chair. Professor. BS, MS, California Institute of Technology; MA, PhD, University of California, Riverside.

RICHARD A. ATNEOSEN (1968) Associate Professor. BS, MS, University of Minnesota; PhD, Indiana University.

W. LOUIS BARRETT (1968) Associate 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. BS, State University of New York; MS, PhD, Stanford University.

AJIT S. RUPAAL (1964) Professor. BSc, MSc, Panjab University; PhD, University of British Columbia.

LESLIE E. SPANEL (1968) Associate Professor. BS, University of Missouri, Rolla; PhD, Iowa State University, Ames.

JAMES E. STEWART (1987) Associate 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.

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 120
- Physics 325, 331, 336, 339, 341, 349, 363, 368, 369
- Physics 423, 431, 455, 456, 472, 475

In addition, three 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 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 30 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: 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: Physics 121 and 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; concurrent 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.

202 SOUND SYSTEMS (3) W

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.

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.

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 (2) 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) W

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.

403 HOLOGRAPHY (3) S

Prereq: Physics 339 and 349. Basic concepts of holography in thin and thick recording media; theory of elementary holograms and Gabor zone plates; major hologram types; interferometric holography. Laboratory.

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 (1) F

Prereq: Physics 224, 323 and 349. Selected experiments in quantum physics and atomic physics.

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 30 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 225. 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

- KENNETH R. HOCVER (1988) Chair. Professor, BSc, Beloit College; MSc, PhD, University of Wisconsin, Madison.
- 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.
- EUGENE J. HOGAN (1969) Associate Professor. BA, Gonzaga University; MA, Georgetown University; PhD, University of Oregon.
- 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.
- CERARD 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 to 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, 304, 305, 307, 308, 370, 376, 390, 402, 406, 411, 417, 418a, 418b, 418c, 418d, 418g, 430, 431, 471

Methodology and Political Analysis: Pol Sci 260, 365, 366, 427, 450

Political Theory: Pol Sci 360, 365, 424, 460, 461, 462, 463, 464, 465, 466, 467, 469, 480

Politics, Government and Law: Pol Sci 311, 313, 343, 345, 346, 353, 411, 414, 415, 423, 426, 427, 429, 441, 442, 443, 446, 449, 450, 471, 475, 480, 490, 491

Public Policy and Administration: Pol Sci 320, 345, 346, 347, 350, 353, 414, 415, 420, 422, 423, 424, 425, 426, 427, 429, 444a,b, 468, 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
- 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 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/Education

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
- 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, 201, 310, 320, 420, 350, 360, 364

BACHELOR OF ARTS IN EDUCATION

Major — Political Science

Program Adviser: Dr. David Ziegler

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 30 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.

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 (3)

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 CANADA (4)

Prereq: Pol Sci 250 or 291. Canadian social and political systems; governmental structures and functions; social, political, economic problems and foreign relations.

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.

418b CONTEMPORARY LATIN AMERICAN ISSUES (3)

Prereq: Pol Sci 304.

418c CONTEMPORARY ISSUES IN AFRICAN POLITICS (3)

Prereq: Pol Sci 308 or 390 or equivalent.

418g CONTEMPORARY CANADIAN POLITICS (3)**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.

422 STAFFING THE PUBLIC BUREAUCRACY (4)

Prereq: Pol Sci 320. Public personnel systems; general principles and specialized aspects such as recruitment, training and employee morale. Not offered every year.

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.

424 THEORY OF PUBLIC ORGANIZATIONS (4)

Prereq: Pol Sci 320. Organization theory as related to public organizations and the political system.

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.

442 INTEREST GROUP POLITICS (4)

Prereq: Pol Sci 250, 260, 366; or permission of instructor. Role of interest groups in American politics; origins, structures and activities of interest groups. Examination of theories of interest groups and politics in light of empirical research.

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.

444a,b ADMINISTRATIVE INTERNSHIPS (5 ea)

Prereq: two courses in public administration area and permission of department. Part-time internships in administrative agencies of the federal, state and local governments. Priority given to seniors. Where the number of applicants exceeds the available intern positions, competitive selections will be made. Requests for internships should be filed with the department one quarter in advance of registration for this course. No more than 10 credits of internship may be counted toward the major without the permission of the chair.

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.

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.

467 POLITICS, TRANSFORMATION AND ENVIRONMENT (4)

Prereq: Pol Sci 101 or 250. Incompatibility between the growth-oriented goals of contemporary political cultures and environmentally derived "steady state" imperatives. The politics of transformation and value-change. Also offered as Envr 467.

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 politics 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 30 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.

510 SEMINAR IN PUBLIC LAW (5)

The tradition and emerging trends.

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 24 men and women, all of whom hold doctoral degrees, the department is able to offer a program of study which provides a solid foundation in the general concepts and methods of psychology, as well as courses and programs for students in many of the more specialized areas of this large and exciting field.

The Department of Psychology has limited the number of credits required for a major in psychology so that students may develop minors or a second major in another department. The core program in general psychology is designed to ensure that all majors will develop a sound basic background in psychology which will provide effective preparation for advanced study as well as contribute significantly to a liberal education. 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. Professor. BA, MS, PhD, Washington State University.
 STEPHEN L. CARMEAN (1964) Professor. BA, MA, PhD, University of Illinois.
 CATHERINE CRAIN-THORESON (1991) Assistant Professor. BA, San

- Diego State University; MA, University of California, San Diego; PhD, University of Washington.
 LOWELL T. CROW (1968) Professor. BS, MA, University of South Carolina; PhD, University of Illinois.
 GEORGE T. CVETKOVICH (1969) Professor. BA, Youngstown State University; MA, Akron State University; PhD, Kansas State University.
 DALE L. DINNELL (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) Assistant 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.
 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.
 B. L. KINTZ (1965) Professor. BA, MA, PhD, University of Iowa.
 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.
 LAURENCE P. MILLER (1968) Professor. BA, University of California, Los Angeles; MA, San Fernando Valley State College; PhD, Ohio State University.
 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.
 LAURA L. SHAW (1995) Assistant Professor. BS, University of Alabama at Birmingham; MA, PhD, University of Kansas.
 DAVID SUE (1985) Professor. BS, University of Oregon; MS, PhD, Washington State University.
 RICHARD W. THOMPSON (1987) Professor. BA, MA, PhD, Michigan 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.
 VERNON O. TYLER, JR. (1965) Associate Professor. BS, University of Washington; MA, University of Iowa; PhD, University of Nebraska.

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, 342, 343, 347, 353

DECLARATION OF MAJOR

Students wishing to declare a major in psychology must:

(a) have completed at least 75 credits; (b) completed at least 25 credits in psychology including Psych 306;* 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 306) 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 45-credit core and 15 elective credits in psychology.

Core Required Courses

- Psych 201, 306, 307
- Two courses from Psych 309-316
- Two courses from Psych 321-326
- One course from Psych 401-403
- One course from Psych 404-406
- One course from Psych 411-412
- 15 elective credits in psychology

Minor — Psychology

24 credits

- Psych 201
- One course from Psych 309-316
- One course from Psych 321-326
- 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 306, 311, 313, 315, 316, 321, 322, 324, 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

49-52 credits

Adviser: F. Grote

- Psych 201

* 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.

- Psych 306 and 307
- Either Psych 316 or Psych 352
- Either Psych 321 or Psych 351
- One course from Psych 309-315
- One course from Psych 322-326
- 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 321-326
- Electives under advisement (Psych 306, 307 are recommended)

DEPARTMENTAL HONORS

Adviser: S. Carmean

In addition to the general requirements for all University honors program students, a psychology major who wishes to graduate with honors will develop a program of studies with the department honors adviser, complete Psych 425 and prepare a thesis which will be defended before a faculty committee.

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 30 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 SEX ROLES (4)

Basic concepts, foundations for sex roles; similarities and differences between the sexes; historical customs, personality theories, cultural, sub-cultural and cross-cultural perspectives.

306 EXPERIMENTAL PSYCHOLOGY AND STATISTICS I (5)

Prereq: Psych 201. Introduction to experimental methodology in psychology and statistical treatment of results. Lectures and laboratory.

PSYCH 307 is open only to students who have been admitted to psychology as a major.

307 EXPERIMENTAL PSYCHOLOGY AND STATISTICS II (5)

Prereq: Psych 306 and admission to the major. Design and conduct of

psychological research investigations and statistical treatment of results; individual research project; lectures and laboratory.

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, 306 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.

312 PSYCHOLOGY OF INDIVIDUAL DIFFERENCES (5)

Prereq: Psych 201, 306 or permission. Research strategies, correlational procedures and inferential processes. The nature-nurture question. Elements of genetics, heredity and behavior genetics. Dimensions of differences in intelligence by race, social class, age and sex. The effect of cultural influences on intelligence.

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 AND MEMORY (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. Phylogenetic 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 LABORATORY IN PHYSIOLOGICAL PSYCHOLOGY (3)

Prereq: concurrent with Psych 326; Psych 306 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.

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 pre-school 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.

360 HEALTH PSYCHOLOGY (2)

Prereq: Psych 201. Surveys psychological processes affecting physical health and illness, and explores the role of psychologists within the health-care system. Included are psychophysiological relationships, effects of stress on health, preventive health behaviors, coronary-prone behavior patterns (Type A), psychological processes in medical treatment and psychological treatments of physical disorders. Summer only.

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 307 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 307 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 307 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 307 and 321 or 322. 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 307 and one from 323, 324 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 307 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 307 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: declared major in psychology. 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: declared major in psychology. A seminar examining the philosophical assumptions of science in general and psychology in particular.

420 ADVANCED INDUSTRIAL/ORGANIZATIONAL PSYCHOLOGY (5)

Prereq: Psych 306, 320 and written permission of instructor. Psychological theories, methodology and findings related to the problem of business and industry, lectures and laboratory.

425 HONORS SEMINAR (3)

Prereq: permission of instructor. Intensive examination of selected problems in psychology.

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 306, 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.

432 INTERVIEWING THEORY AND PRACTICE (4)

Prereq: written permission of instructor. Skills and underlying psychological principles which facilitate communication — particularly the helping interview. Lecture, demonstration, role playing and videotape feedback, with special emphasis on listening skills and assessing one's impact on others.

449 FIELD EXPERIENCES IN PSYCHOLOGY (5)

Prereq: 20 credits in psychology (students in the mental health concentration must have Psych 431 and 432, and written permission of instructor). Mental health, child development, behavior problems of adolescence and other relevant topics. Field work combined with

readings and seminars. May be taken two times for credit only by students in the psychology mental health services concentration. All other students are limited to one quarter of credit.

456 ADVANCED TOPICS IN DEVELOPMENTAL PSYCHOLOGY (3)

Prereq: Psych 306 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 30 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 PERCEIVING, KNOWING AND ACTING (4)

Prereq: admission to the M.S. or M.Ed. in psychology program. Considerations of the active organism in relation to a complex environment. Encompasses the concept of organization on several levels, such as physiological structure/function, perceptual ordering and changes in behavior. Draws on both reductionistic and holistic methods, theory and data. Diverse topics are used to develop these themes.

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 SYSTEMS OF PSYCHOLOGY (4)

Prereq: admission to the M.S. or M.Ed. in psychology program. Basic understanding of the processes of science including theory construction, scientific explanation, operationalism, etc. Provides an historical perspective for modern psychology by examining various systems which have preceded current views (for example, gestalt psychology, behaviorism, psychoanalysis).

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.

508 CONTEMPORARY PSYCHOLOGY (2)

Prereq: admission to the M.S. or M.Ed. in psychology. A review of psychology as a profession, current research activities, thesis development, and related legal and ethical considerations. S/U grading.

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 (2)

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.

512 RESEARCH DESIGN AND ANALYSIS (4)

Prereq: Psych 511. Covers topics in the bivariate distribution; introduces the basic linear regression model. 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 analyses using SPSS or other statistical packages are used to provide practical experience with analysis problems and the interpretation of interactions.

513 COMPUTER APPLICATIONS AND DATA ANALYSIS (3)

Prereq: Psych 512. Multiple regression analysis and factor analysis are compared and studied in detail. Practice data are analyzed using SPSS. Covers the various strengths and weaknesses involved in the multivariate analyses. Students develop a broad and solid understanding of why these designs are used and how the results are of value to researchers and practitioners alike. Covers advanced analysis of variance and covariance designs.

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.

518 INSTRUMENTATION FOR PSYCHOLOGICAL RESEARCH (2)

Prereq: admission to the M.S. or M.Ed. in psychology program. Typical technological solutions to problems encountered in original research; lecture and laboratory.

519 CONSTRUCTION OF PSYCHOLOGICAL MEASURING DEVICES (2)

Prereq: Psych 311 or equivalent. Course content varies with the interest of the students, but includes material on scaling, domain specification, item writing, test format and reproduction of instruments. Students, as a group, conceive, construct and pre-test some measuring device of their own choosing.

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 SEMINAR IN EDUCATIONAL PSYCHOLOGY (3)

Prereq: permission of instructor.

532 SEMINAR IN CROSS-CULTURAL COUNSELING (3)

Prereq: admission to M.S. mental health counseling curriculum or the M.Ed. school counseling program; permission of instructor required for students in the general curriculum. Review of fundamental issues in

counseling theory and techniques as they relate to providing mental health services to clients of different cultural and ethnic backgrounds. Some skill development through simulation, role playing and other laboratory procedures in counseling the culturally different.

538 INTERDISCIPLINARY SEMINAR IN BEHAVIORAL TOXICOLOGY (2)

Prereq: graduate status, Envr 458 or 556 or Psych 501, or permission of instructor. Assessment of the impacts of toxic environmental chemicals on various behavioral processes.

550 RESEARCH ISSUES AND METHODS IN COUNSELING (3)

Prereq: admission to M.S. mental health counseling curriculum or M.Ed. school counseling program and Psych 512. Covers content and research methods relevant to psychological processes in psychotherapy. Students produce a research proposal.

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.

552 STRATEGIES OF BEHAVIOR CHANGE (3)

Prereq: admission to M.S. program. Study of selected current approaches to behavior change with particular attention to application with children.

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.

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 departments.

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, 251, and 122 or 371
- 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 30 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; EdCI 320. Classroom/laboratory study of theory, curriculum, science content and processes with activities appropriate for the elementary classroom. Peer and/or microteaching is often part of the course. 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 EdCI 495. S/U grading.

GRADUATE COURSES

Courses numbered 500; 517; 545; 597 are described on page 30 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.

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.

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.

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 no maximum.

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 no maximum.

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 no maximum.

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 (1-6)

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 students majoring in elementary and secondary education. Social studies education courses and curriculum are directed by the Social Studies Program Committee. General questions relating to social studies classes and certification programs should be directed to the program head of social studies education. 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 who plan to be certified K-8th grade. 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: Program Head of Social Studies Education
- Certification requirements of the Educational Curriculum and Instruction 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 30 of this catalog.

425 SOCIAL STUDIES FOR THE ELEMENTARY SCHOOL (4)

Prereq: EdCI 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: EdCI 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.

490 SOCIAL STUDIES PRACTICUM (2-5)

Prereq: Soc St 425 or 426 and permission of instructor. Microteaching of students in learning laboratories or arranged social studies assignments in classrooms. S/U grading.

* 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

JAMES INVERARITY (1985) Chair. Associate Professor. BA, University of Michigan; PhD, Stanford University.

KAREN BRADLEY (1992) Assistant 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.

ANNE H. GAUTHIER (1996) Assistant Professor. BSc, MSc, Université de Montréal; DPhil, Oxford University.

ELDON R. MAHONEY (1970) Professor. BA, Chico State College; PhD, University of Oregon.

JOHN C. RICHARDSON (1974) Professor. BA, University of the Pacific; PhD, University of California, Davis.

JUKKA K. SAVOLAINEN (1996) Assistant Professor. BA, MA, University of Finland; PhD, State University of New York at Albany.

CARL H. SIMPSON (1978) Professor. BA, PhD, Stanford University.

G. EDWARD STEPHAN (1970) Professor. BA, San Francisco State College; PhD, University of Oregon.

VEGA SUBRAMANIAM (1994) Lecturer. BA, MA, Penn State University.

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 201, 221, 251, 255, 260, 268
- Soc 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 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. Before being accepted into the major, all pre-majors also must obtain a grade of C or better in the statistics/methods sequence (Soc 207 and 210). The major must be declared within one quarter of completing Soc 210.

BACHELOR OF ARTS

Major — Sociology

60 credits

Sociology students are encouraged to formulate a plan of study at the point of declaring their major. The department maintains an Office of Undergraduate Advising for this purpose. Students should obtain a copy of the undergraduate *Student Guide to Sociology* available in the department office.

All sociology majors must complete the core program, five courses constituting 25 credit hours. Electives must bring the total of sociology courses to 60 credits. It is strongly recommended that the core be completed early in the major. Most senior seminars require that the entire core be completed as prerequisites.

The Sociology Core

- Any one course from Soc 201, 221, 251, 255, 260, 268
- Soc 207, 210 and 302
- Any writing proficiency course approved by the department (list available from the sociology office)

Course Restrictions

- No more than two of the following courses may be applied to the 60 credits required for the major: Soc 201, 221, 251, 255, 260, 268
- No more than 10 total credits from the following courses may be applied to the 60 credits required for the major: Soc 400, 480, 492
- Soc 471 may not be applied to the 60 credits required for the major

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 201, 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

25 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 251 or 255
- Soc 210, 352
- Electives under departmental advisement

BACHELOR OF ARTS IN EDUCATION*Major — Elementary and Secondary*

50 credits

- Any Soc 201, 221, 251, 255, 260, 268 (no more than two of these courses can apply to major)
- Soc 207, 210, 302, 361, 461
- At least two courses from Soc 321, 338, 362, 364
- Under advisement: electives from sociology or other disciplines
- Elementary program students also must complete professional program courses as outlined in the Department of Educational Curriculum and Instruction section. This results in both a K-8 elementary and a 4-12 sociology endorsement.
- Secondary program students must also complete the specific program requirements for social studies education. See the Social Studies Education Program section of this catalog. Completion of this program leads to teaching endorsements in sociology and social studies at the secondary level

BACHELOR OF SCIENCE*Major — Sociology*

75 credits

- Math 124, 125
- CS 120
- Any one course from Soc 201, 221, 251, 255, 260, 268
- Soc 207, 210, 302, 303, 321, 415, 421, 492
- Additional credits under advisement in mathematics, computer science, sociology or cognate areas

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 30 of this catalog.

201 EVOLUTION OF SOCIETY (5)

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.

205 PROSEMINAR IN SOCIOLOGY (2)

Orientation to sociology as an academic discipline and as a field with associated occupational futures; self-assessment and peer assessment of skills relevant to success in the field; research linking various undergraduate experiences to occupational success. Intended as interactive introduction to, and planning for, the WWU major.

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 WORLD 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 HISTORY OF SOCIAL THOUGHT (5)

Prereq: any Soc 201, 221, 251, 255, 260, 268. The emergence of sociology as response to the Industrial Revolution and as an attempt to develop a scientific understanding of social organization, behavior and change; the development of social thought; Comte, Spencer, Marx, Durkheim and Weber.

303 CONTEMPORARY SOCIOLOGICAL THEORY (5)

Prereq: any Soc 201, 221, 251, 255, 260, 268 and Soc 302. Major contemporary perspectives in sociology.

318 SURVEY RESEARCH METHODS (3)

Prereq: any Soc 201, 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 201, 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 INTRODUCTION TO 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 201, 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 201, 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 201, 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 201, 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 201, 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 201, 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 201, 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).

361 SOCIOLOGY OF EDUCATION (5)

Prereq: any Soc 201, 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 201, 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 201, 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 201, 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 201, 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 201, 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 201, 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.

380 SOCIOLOGY OF YOUTH (5)

Prereq: any Soc 201, 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.

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 201, 221, 251, 255, 260, 268; Soc 207, 210 or equivalent; or permission of instructor. Experimentation and tests of significance applied to research problems.

421 DEMOGRAPHIC ANALYSIS (4)

Prereq: any Soc 201, 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.

433 ADVANCED AGING (4)

Prereq: sociology core, Soc 333, or permission of instructor. Analysis of the social, medical and legal issues surrounding growing old in American society. Emphasis given to issues of intergenerational equity, old-age discrimination, the role that family plays in social support of the elderly, and the effects of income maintenance programs on the well-being of older women and minority subpopulations.

440 ADVANCED TOPICS IN MACROSOCIOLOGY (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.

454 FAMILY VIOLENCE SEMINAR (4)

Prereq: sociology core; Soc 352 or permission of instructor. Detailed review of current theory and research in spouse abuse, elder abuse, and child abuse and neglect. Discussion of social, cultural, psychological and legal factors. In addition, theoretical explanations of family violence. Involves extensive student participation and discussion.

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 (3-10)

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 30 of this catalog.

Admission to Graduate School or special permission required. See the Graduate School section of this catalog.

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 ADVANCED TOPICS IN MACROSOCIOLOGY (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.

551 RESEARCH APPLICATIONS (4)

Prereq: permission of instructor. Examination of current theory and research of a selected substantive field of sociology. Emphasis on review of relevant literature on the selected topic, theory construction and hypothesis formation.

552 RESEARCH MEASUREMENT (4)

Prereq: permission of instructor; extension of Soc 551. Examination of existing data sets, other secondary sources of data, and standardized instruments as they relate to the selected substantive field. Review and/or assessment of validity and reliability of measurement techniques.

554 FAMILY VIOLENCE SEMINAR (4)

Prereq: permission of instructor. Detailed review of current theory and research in spouse abuse, elder abuse, and child abuse and neglect; discussion of social, cultural, psychological and legal factors; exploration of theoretical explanations of family violence. Involves extensive student participation and discussion.

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.

561 THEORY CONSTRUCTION (4)

Prereq: permission of instructor. Examination of the connections between theory and research. How theories are constructed and testable research hypotheses derived.

562 ADVANCED RESEARCH DESIGN (2)

Prereq: permission of instructor. Examination of various research methods used in sociology, including advanced qualitative methods such as computer content analysis, and quantitative approaches such as survey design. Conceptualization and operationalization of concepts used in social science research also examined.

563 ADVANCED STATISTICS (2)

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. Students engage in data analysis projects bringing together previous work in theory construction, research design and statistical techniques.

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 (1-6)

Prereq: formal advancement to candidacy for the M.A. in sociology. Repeatable to a maximum of 6 credits. S/U grading.

SPEECH PATHOLOGY AND AUDIOLOGY

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 Speech Pathology and Audiology 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.

ACCREDITATION

The Department of Speech Pathology and Audiology is accredited by the American Speech-Language-Hearing Association's Educational Standards Board (ESB) in both speech-language pathology and audiology.

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 (Certificate of Clinical Competence: Speech-Language Pathology, CCC-SLP; Audiology, CCC-A), which is often necessary for employment in hospitals. 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 Speech Pathology and Audiology 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 (206) 650-3885.

SPEECH PATHOLOGY AND AUDIOLOGY FACULTY

MICHAEL T. SEILO (1970) Chair. Professor. BS, Northern Michigan University; MA, University of Arizona; PhD, Ohio University. (Audiology/aural rehabilitation/speech acoustics/perception).

KENN APEL (1989) Associate Professor. BA, MA, San Diego State University; PhD, Memphis State University. Undergraduate adviser; National Student Speech-Language-Hearing Association chapter adviser (speech-language pathology).

RIEKO M. DARLING (1995) Assistant Professor. BS, MS, PhD, The Florida State University. Transfer adviser (audiology). Director, Aural Rehabilitation Clinic.

BARBARA MATHERS-SCHMIDT (1991) Associate Professor. BA, Lewis and Clark College; MS, Portland State University; PhD, University of Washington. Undergraduate adviser (speech-language pathology).

CAROL C. McRANDLE (1975) Professor. BS, University of Minnesota, Duluth; MS, PhD, Purdue University. Director, Audiology Clinic.

(Audiology/hearing science.) 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).

Clinic Staff

ANNA CHAMBERLIN (1995) Aural Rehabilitation Supervisor. BA, MA, Western Washington University (aural rehabilitation, hearing aids).

PAMELA H. EHLERS (1995) Audiology Supervisor. BA, University of Alberta; MA, Western Washington University (audiology, hearing aids).

CANDACE K. GANZ (1982) Director, Speech-Language Clinic. BA, MA, University of Kansas. 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.

Speech-Language Pathology Clinic adviser (speech/language pathology).

GEORGETTA LILLEY (1988) Speech-Language Pathology Clinic Supervisor. BS, MEd, California University of Pennsylvania (speech-language pathology).

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 Speech Pathology/Audiology. At that time an adviser will be assigned. Students will complete an undergraduate major application to determine where they are in the eligibility process.

The Speech Pathology and Audiology Department 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 SPA 464 and SPA 468. 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 three criteria*: documented overall college GPA of 3.0 and an earned B- (GPA 2.7) or better in SPA 351, 352, 354 and 356. Non-graduate track students do not take SPA 458a but will need to substitute an equivalent number of credit hours in order to meet the requirements of the undergraduate degree in SPA. Both major tracks require a passing score on the Junior Writing Examination prior to completion of the major.

BACHELOR OF ARTS

Major — Speech-Language Pathology and Audiology

57 credits

- SPA 351, 352, 353, 354, 356, 361, 371, 372, 373
- SPA 450, 451, 454, 457, 458a,* 458b*, 462, 463
- Electives under departmental advisement
- Required minor

Minor — Speech-Language Pathology and Audiology

25 credits

(A minimum of 25 credits. More than 25 credits recommended.)

- SPA 351, 354, 356, 361, 371
- Electives from SPA 352**, 353, 372, 373**, 451, 463

GRADUATE STUDY

For a concentration leading to the Master of Arts degree, see the Graduate School section of this catalog.

* Required for graduate track only.

** Requires prerequisites not obtained through required courses

COURSES IN SPEECH-LANGUAGE PATHOLOGY AND AUDIOLOGY

Courses numbered X37; X97; 300, 400; 417, 445 are described on page 30 of this catalog.

201 ORIENTATION TO SPEECH-LANGUAGE-HEARING DISORDERS (2)

Orientation lectures and video viewing on selected subjects in speech-language therapy and audiology. Students observe aural rehabilitation, audiological testing, and most areas of speech and language pathology treatment.

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)

Survey of speech, language and hearing disorders; an introduction to speech and language therapy as a discipline.

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, SPA 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: SPA 354. Etiologies of language learning disabilities in children from birth to five years; diagnosis and treatment procedures.

371 HEARING SCIENCE (3)

Introduction to the nature of sound and its measurement. The structure and function of the auditory mechanism.

372 HEARING DISORDERS (3)

Prereq: SPA 371. The nature and cause of hearing impairment. The evaluation of hearing and the treatment of hearing disorders.

373 INTRODUCTION TO PHONOLOGY (3)

Prereq: SPA 351, 352, 356. Phonological development, symptomatology, etiology and therapy for articulation disorders.

450 NEUROANATOMY FOR SPEECH PATHOLOGY AND AUDIOLOGY (4)

Prereq: SPA 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: SPA 354, 361. Diagnosis and treatment procedures for school-age language-learning impaired children.

454 DISORDERS OF FLUENCY (3)

Prereq: SPA 351. Characteristics of stuttering behavior; current theories of etiology; principles and practices of therapy; cluttering as a related disorder.

457 CLINICAL PROCESSES (5)

Prereq: SPA 354, 361, 373, 451; both sections of JWE must be passed. 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: SPA 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: SPA 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 SPA 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: SPA 371 or permission of instructor. 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: SPA 371. Listening training, speech reading and coping skills for the aurally handicapped.

464a,b,c CLINICAL PRACTICE IN AURAL REHABILITATION (2 ea)

Prereq: SPA 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: SPA 465. Continued theory and practice of (pidgin) sign language.

468a,b,c CLINICAL PRACTICUM IN AUDIOLOGY (2 ea)

Prereq: SPA 371, 462, and a minimum of 25 hours of documented speech-language pathology/audiology/aural rehabilitation observations. 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 department. Off-campus field experience in an approved setting designed to develop clinical competencies in the management of communication disorders. S/U grading.

Graduate Courses

Courses numbered 500; 517; 545; 597 are described on page 30 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: SPA 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 (3)

Prereq: SPA 373. Current topics and issues on normal and disordered phonology, with special emphasis on clinical implications.

550 VOICE DISORDERS AND THERAPY (3)

Prereq: SPA 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, loudness. Experience in diagnosis and evaluation of voice disorders. Developing techniques and methods for treatment and therapy. Lab required.

551 SURVEY OF SPEECH PATHOLOGY AND AUDIOLOGY (1)

A survey of recent concepts, issues, techniques and methods in speech-language pathology and audiology. S/U grading.

552 DIAGNOSTIC PROCESSES IN SPEECH-LANGUAGE PATHOLOGY (1)

Prereq: SPA 457, 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: SPA 457, 558 and permission of instructor; should be taken concurrently with SPA 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: SPA 457, 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: PRE-SCHOOL LANGUAGE DEVELOPMENT AND DISORDERS (3)

Prereq: SPA 354, 361, 451 or permission of instructor. Current topics and issues on normal and disordered language in pre-school children, as well as factors related to language development. Special emphasis on clinical implications of recent research findings.

554 STUTTERING (3)

Prereq: SPA 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: SPA 354, 361, 451. 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: SPA 450 or equivalent. Descriptions, classifications and theoretical issues related to multimodality language-impaired adults following neurogenic brain dysfunction. Some discussion of diagnostic methods.

557 ADVANCED SPEECH PATHOLOGY (3)

Diagnosis and treatment of laryngectomies, and traumatic brain injury. Discussion of issues relating to communication and aging.

558 ADVANCED CLINICAL PRACTICE IN SPEECH-LANGUAGE THERAPY (1-3)

Prereq: permission of instructor. Supervised clinical practicum. Must be completed with a grade of B- or better. Repeatable to 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: SPA 371, 462 or permission of instructor. Study of basic auditory correlates and audiometric procedures.

562 ADVANCED AUDIOLOGY II (3)

Prereq: SPA 462, 561. Theory and application of advanced diagnostic audiometric procedures.

563 SEMINAR: AURAL REHABILITATION (3)

Prereq: SPA 463 or permission of instructor. Issues related to the hearing-impaired population.

564a,b,c ADVANCED CLINICAL PRACTICE IN AURAL REHABILITATION (2 ea)

Prereq: SPA 458a,b, 463, 558a,b,c 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.

565 PSYCHOACOUSTICS (3)

Prereq: SPA 561 or permission of instructor. Application of standard psychophysical techniques and theory of signal detection to audiological research.

566 AUDITORY NEUROPHYSIOLOGY (3)

Prereq: SPA 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: SPA 562. Discussion of federal and state noise regulations. Cause and treatment of noise-induced hearing loss; the role of audiology in prevention and control of noise.

568a,b,c,d,e ADVANCED CLINICAL PRACTICUM IN AUDIOLOGY (2 ea)

Prereq: SPA 371, 462 or permission of instructor; to be taken in sequence. Clinical practicum designed to advance skills in audiology. Must be completed with a grade of B or better.

570 MEDICAL AUDIOLOGY (3)

Prereq: SPA 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: SPA 462 or permission of instructor. History, development and description of hearing aids. Research into the electro-acoustic characteristics of hearing aids. Evaluation procedures and fitting techniques of hearing instruments. Auditory training techniques. Lab required.

572 HEARING AIDS II (3)

Prereq: SPA 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: SPA 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 SPEECH PERCEPTION (3)

Prereq: SPA 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)

Contemporary theories and techniques of counseling individuals with communication disorders and their families.

577 PEDIATRIC AUDIOLOGY (3)

Prereq: SPA 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: SPA 561, 568a or permission of instructor. Current topics and issues in specialized areas of averaged electro-encephalic audiometry; research trends and problems. Lab required.

579 AGING AND THE EAR (3)

Prereq: SPA 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, terminology and dysphagia assessment and treatment.

585 NEUROMOTOR SPEECH DISORDERS (3)

Prereq: SPA 450, 556 or equivalent. Etiologies of neuromotor speech disorders; assessment and treatment procedures.

586 DIAGNOSIS AND TREATMENT OF ADULT LANGUAGE NEUROGENIC DISORDERS (3)

Prereq: graduate status, SPA 450 and 556 or equivalent. Differential diagnosis assessment tools and theories of diagnostic methods. Treatment approaches for adult neurogenic disorders.

587 SEMINAR: DYSPHAGIA (2)

Prereq: SPA 352, 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 termination. Analysis of program funding; administrative structures within schools, hospitals and clinics. A project report is required. Report may be used to help satisfy the non-thesis requirement.

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 (1-5)**691 NON-THESIS OPTION (1-3)**

Prereq: SPA 502. Writing based on research or clinical projects. This report to be used to help satisfy the non-thesis requirement.

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.

Approved general degree programs, comprising courses from several departments, also are offered through the Student-Faculty Designed Major. These programs do not require further committee or Curriculum Council review. Details of these majors are available from the Academic Advising Center or the chair of the Department of Liberal Studies.

TEACHING ENGLISH AS A SECOND LANGUAGE

The program in Teaching English as a Second Language (TESL) is open to students planning to teach English as a Second Language (ESL) either in the U.S. or abroad, in public schools or in private institutions, with or without Washington state certification. The program provides training in areas central to the profession, including the structure of the English language, second language acquisition, methods and materials, cross-cultural communication, and a practicum providing actual classroom experience.

For further information, application forms and advisement, contact Dr. John Underwood, Department of Foreign Languages and Literatures, the director of the program in Teaching English as a Second Language.

BACHELOR OF ARTS

Minor — TESL

The minor requires a minimum of 26 credits, of which 23 will be in required courses. Students must complete the program with a minimum GPA of 3.0 in required courses. Native speakers of English must have completed the equivalent of one year of college study in a single foreign language.

Required Courses

- Eng 370, 436
- Foreign Languages 410
- TESL 420a, 420b, 430

The remaining 3-4 credits are to be earned in a course dealing with comparative cultures (e.g., AmSt 203 or Anth 365) and/or communication (e.g., Comm 325), selected in consultation with the TESL adviser.

Teaching Endorsement

The teaching endorsement is part of the certification program for the State of Washington and is available to students who either currently hold a Washington state teaching credential or are enrolled in the credential program at Western and wish to obtain a second area of endorsement. (The first or primary endorsement requires the completion of a full major in a suitable content area.) To pursue a teaching credential with a TESL endorsement, the student must be recommended by a faculty member in the TESL program. Endorsement candidates must complete all the requirements for the minor in TESL.

Certificate in TESL

Students who complete the minor in TESL but do not possess state teaching certification will be granted a Western Washington University TESL certificate acknowledging successful completion of the program.

COURSES IN TESL

420a,b METHODS AND MATERIALS IN TESL (4 ea)

Prereq: English 370 is a prerequisite for TESL 420a; TESL 420a is a prerequisite for 420b. 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: TESL 420. Supervised teaching of ESL in a local public school, adult education program or university program. Includes a two-hour weekly seminar to discuss observations, materials and teaching strategies. S/U grading.

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 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

ROSANNE D. KANHAI, Women Studies Director, English. Feminist literary theory, post-colonial literatures, imaginative texts by women of color.

KATHRYN ANDERSON, Fairhaven. American women's history and politics, gender and communication, women's oral history.

KAREN BRADLEY, Sociology. Organizations, stratification, political sociology, cross-national research.

KRIS BULCROFT, Sociology. Aging, family, intimate relationships.

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.

BARBARA COLLAMER, Psychology. Gender roles.

SUSAN COSTANZO, History. Women in Russia and the Soviet Union.

LAURA CRARY-ORTEGA, Art History. Modern Latin American art and feminist art theory.

CAROLYN DALE, Journalism. Women and media.

KATHERINE DALEN, English. African American women, women in literature, feminist 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.

JOYCE HAMMOND, Anthropology. Cross-cultural women studies, gender in visual media and popular culture, gender and body, women's folk arts.

DANA JACK, Fairhaven. Women and psychology.

KATHLEEN KENNEDY, History. American women's history, women and American politics.

ARLEEN LEWIS, Psychology. Women, gender role, and mental health.

ANNE LOBECK, English. Language and gender.

MAUREEN O'REILLY, Theatre Arts. Women playwrights.

SUZANNE PAOLA, English. Creative writing, women's experimental narrative.

DEBRA J. SALAZAR, Political Science. Women and environmental politics.

VEGA SUBRAMANIAM, Sociology. Women Studies.

MAUREEN SWEENEY, English. Gay and lesbian literature.

MIDORI TAKAGI, Fairhaven. Race, class and gender, comparative studies of women of color.

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.

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.

COURSES IN WOMEN STUDIES

Courses numbered X37, X97, 300, 400, 417, 445 are described on page 30 of this catalog.

211 INTRODUCTION TO WOMEN STUDIES (4)

Introduction to the issues, questions, conceptual frame-works 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'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

WOMEN STUDIES

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

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 American Assembly of Collegiate Schools of Business at both the graduate and undergraduate levels.

Department Chairs

Dr. Stephen V. Senge	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
Lynn W. Trzynka	Small Business Development Program
Dr. David E. Merrifield	Center for Economic and Business Research
Dr. David M. Nelson	Center for Economic Education
Dr. Catherine E. Pease	Center for International Business

Named Professorships

Dr. James W. Dean	Kaiser Professor of International Business
Dr. Steven Globberman	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 and economics-political science. 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

* Consult Graduate School for further details.

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.

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.
- All students must consult their adviser regarding writing and communications requirements.

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, visual communications, home economics, 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 develops opportunities for faculty and students to conduct overseas research or study. The Center works with faculty on incorporating international components into the curriculum and organizes a public lecture series on international business topics.

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 Accounting Department 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 Accounting Department 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.

* 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 Accounting department for details.

- 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.

DECLARATION OF MAJOR

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

ACCOUNTING FACULTY

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

MARGUERITE R. HUTTON (1989) Associate Professor. BBA, MPA, University of Texas at Arlington; PhD, University of Houston; CPA, State of Texas.

JULIE A. LOCKHART (1982) Associate Professor. BS, MS, University of Illinois; CPA, State of Illinois; CMA.

DOROTHY J. PARKER (1996) Visiting Assistant Professor. BS, Mississippi College; MPA, University of Southern Mississippi; PhD, University of Arkansas.

MARY ANN REYNOLDS (1996) Assistant Professor. BS, Brigham Young University; PhD, University of Utah; CPA, State of Washington.

MICHAEL R. RUBLE (1991) Assistant Professor. BA, Central Washington; MBA, Pacific Lutheran; PhD, Arizona State; CPA, States of Washington and Idaho.

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, States of Colorado and Washington.

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

Major

104 credits

- Acctg 240, 245, 321, 331, 341, 342, 343, 370, 375, 441, 461

- 12 upper-division accounting credits under advisement
- FMDS 205, 330, 341, 495
- Mgmt 271, 311, 360, 482
- Econ 206, 207, 309
- Math 157

Combined Major — Accounting/Computer Science

108 credits

- Acctg 240, 245, 341, 342, 461
- 6 upper-division accounting credits under departmental approval
- Comp Sci 120, 215, 221, 222, 223, 324, 415, 416, 430
- FMDS 205, 330, 341, 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
- Additional credits in accounting under advisement

COURSES IN ACCOUNTING

Courses numbered X37; X97; 300, 400, 417, 445 are described on page 30 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, FMDS 201 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 MEASUREMENT, ANALYSIS AND REPORTING (4)

Prereq: Acctg 245, FMDS 201 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.

370 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.

371 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.

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.

475 INCOME TAXATION II (3)

Prereq: Acctg 375. Taxation of corporations and partnerships.

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.

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, philosophy, 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.

ECONOMICS FACULTY

Typically all economics faculty on on-going 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, Professor, BA, Whitworth College; MA, Ph.D., 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.

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.

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

64 credits

- Econ 206, 207, 208, 303, 306, 307, 406 or 407
- FMDS 205
- At least one of Econ 470, Econ 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 8 of the 20 credits of economics must be at the 400 level

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 120 or 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

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, 330, 341, 495
- Mgmt 271, 311, 360, 482

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
- 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

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

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
- 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, 201, 310, 320, 420, 350, 360, 364

BACHELOR OF ARTS IN EDUCATION

Major — Elementary or Secondary Education

50 credits

Adviser: Dr. David M. Nelson

- Econ 206, 207, 208, 303, 306, 307
- FMDS 205
- Electives in economics under departmental advisement to complete the required 50 credits of the major

Students in elementary education also must complete the elementary professional sequence.

Students in secondary education also must 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 economics and in social studies for grades 4-12.

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 30 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. Graphing calculator required.

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 recommended. 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 in both profit and not-for-profit organizations. 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.

364 CANADIAN ECONOMIC HISTORY (2)

Prereq: Econ 206 and 207. Canadian economic development from the 17th century to the mid-20th century. Examines the importance of resources, agriculture and transportation in the economic growth of Canada.

365 TOPICS IN CANADIAN ECONOMIC POLICY (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 local on 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.

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.

430 LABOR ECONOMICS (4)

Prereq: Econ 306 or 309. 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.

442 INDUSTRIAL ORGANIZATION AND PUBLIC POLICY (4)

Prereq: Econ 306 or 309. The relation of market structure to performance. Particular attention paid to monopoly, oligopoly, workable competition and public policy, including anti-trust policy and the costs and benefits of regulation.

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.

490 INTERNSHIP IN ECONOMICS (4-10)

Prereq: eligibility outlined in departmental internship policy statement. Repeatable to a maximum of 10 credits. S/U grading.

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 30 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.

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.

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.

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 201 prior to their registration in FMDS 305, 308 and 341. Students who desire more than a basic introduction may take FMDS 202.

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 declaration of major procedure.

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.

WENDY J. BRYCE (1986) Associate Professor. BA, 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) Assistant Professor. BS, MPA, DBA, Louisiana Tech University.

KEN HUNG (1990) Assistant Professor. BS, National Taiwan University; MBA, Virginia Polytechnic & State University; PhD, University of Maryland.

L. FLOYD LEWIS (1983) Professor. BA, California State University, Sacramento; MS, San Jose State University; PhD, University of Louisville.

ROBERT C. MEIER (1978) Emeritus Professor. BS, Indiana University; MA, PhD, University of Minnesota.

JOHN S. MOORE (1970) Associate Professor. BS, University of North Dakota; MS, JD, University of Colorado; CPA, State of Colorado; PhD, University of Washington.

THOMAS J. OLNEY (1986) Associate Professor. AB, Cornell University; MBA, PhD Columbia University.

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.

ROBERT S. SPICH (1988) Associate Professor. BA, Lafayette College; MBA, PhD, University of Washington.

TERRELL G. WILLIAMS (1990) Professor. BS, MS, University of Wyoming; PhD, University of Arizona.

* 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.

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,* 308, 330, 341, 495**
 - 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

- FMDS 440, 441, 444
- Two courses from FMDS 443, 446, 447, 448, 449
- Two courses from Acctg 331, 341, 375, Econ 306, 307, 310, 311, FMDS 345, 346, 456

International Business

- FMDS 370, 470
- One course from Econ 385, 462, 463
- One course from FMDS 436, 473, Mgmt 366, 481, Acctg 451
- Three courses under advisement

Management Information Systems

- Mgmt 312, FMDS 309, 411, 412, 419
- Two courses from: FMDS 410, 413 (may be repeated), 414, 490 (four hours maximum), Acctg 421, CS 415 or other computer science courses under advisement

Marketing

- Mgmt 312, FMDS 439
- Three courses from FMDS 430, 431, 432, 433, 434, 435, 436, 417 (topics)
- Two courses under advisement

Minor — Business Administration

40 credits

- Acctg 240, 245
- Mgmt 271, 311
- FMDS 205, 330, 341
- Econ 206, 207
- Math 157

COURSES IN FINANCE, MARKETING AND DECISION SCIENCES

Courses numbered x37: X97, 300, 400; 417, 445 are described on page 30 of this catalog.

201 INTRODUCTION TO BUSINESS COMPUTER SYSTEMS I (2)
Prereq: Acctg 240 or equivalent. Introduction to the use of commercial software packages for business applications of spreadsheet analysis, word processing and data communications. S/U grading.

202 INTRODUCTION TO BUSINESS COMPUTER SYSTEMS II (2)
Prereq: FMDS 201 or equivalent. Introduction to the use of commercial software packages for business applications of database management; integration of material across word processing, spreadsheet and database systems. S/U grading.

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.

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.

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.

308 PRINCIPLES OF MANAGEMENT INFORMATION SYSTEMS (4)
Prereq: FMDS 201 or equivalent recommended. 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, MIS planning and MIS development.

309 BUSINESS SYSTEMS ANALYSIS AND DESIGN (4)
Prereq: FMDS 202; FMDS 308 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.

330 PRINCIPLES OF MARKETING (4)
Prereq: Mgmt 271, Econ 206. Institutions, functions, problems and policies in the distribution of industrial and consumer goods; pricing, costs; and governmental regulations.

341 PRINCIPLES OF FINANCE (4)
Prereq: Acctg 245, FMDS 205, spreadsheet competence. 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, FMDS 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.

370 INTRODUCTION TO INTERNATIONAL BUSINESS (3)
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.

410 EXPERT SYSTEMS IN BUSINESS (4)
Prereq: FMDS 308 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.

411 BUSINESS DATABASE DEVELOPMENT (4)
Prereq: FMDS 309 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.

412 MANAGEMENT SUPPORT SYSTEMS (4)
Prereq: FMDS 309. 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.

413 TOPICS IN MANAGEMENT INFORMATION SYSTEMS (2-4)
Prereq: FMDS 308 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.

414 APPLIED DECISION SCIENCE (4)
Prereq: FMDS 308. Application of quantitative techniques to the solution of decision problems in organizations. Emphasis on the use of computer tools such as spread-sheet programs and linear programming.

419 CORPORATE INFORMATION SYSTEMS MANAGEMENT (4)
Prereq: FMDS 309. 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.

430 MARKETING RESEARCH (4)
Prereq: FMDS 330, 305 or equivalent, computer literacy; Soc 320 recommended. Marketing problems posed by executive decision; techniques applicable to product selection, advertising and motivation research; research methodology; research design and decision models in marketing; individual research projects.

431 PROMOTION MANAGEMENT (4)
Prereq: FMDS 330, computer literacy. Management of the promotional function within the marketing program: advertising, sales promotion, public relations, direct marketing. Promotional objectives and strategies; organization of advertising function; media selection and evaluation; advertising research; new developments such as use of computer and mathematical models.

432 SALES MANAGEMENT (4)
Prereq: FMDS 330. Nature of personal selling with emphasis on industrial sales effort and management of sales personnel.

433 TOPICS IN MARKETING (4)
Prereq: FMDS 330. 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.

434 RETAIL MANAGEMENT (4)
Prereq: FMDS 330. Administration and strategic planning in large and small retail firms. Management of retail functions, including stock planning; inventory control, markup and pricing; retail accounting; merchandising; retail promotion; human resources management in retail firms; store location, design and layout; retail legal and ethical issues; and retail information systems.

435 CONSUMER BEHAVIOR (4)

Prereq: FMDS 330, 305 or equivalent, computer literacy; FMDS 430 recommended. Relevance of customer behavior in household and organizational markets for marketing management planning and analysis; the consumer decision-making process and its implications for marketing mix variables.

436 INTERNATIONAL BUSINESS OPERATIONS (4)

Prereq: FMDS 330, 370. Strategic and operational issues that firms face when they do business abroad. Themes include the competitiveness challenge, country-market analysis and entry strategies, negotiation and diplomacy, cooperative ventures, design and control of international operations, and various functional area issues.

439 MARKETING MANAGEMENT (4)

Prereq: FMDS 305, 330 and at least two 400-level marketing courses or equivalent and FMDS 430 recommended. Objectives, strategies and organization of marketing departments in large- and medium-sized firms. Emphasis upon operating, control and evaluation.

440 INVESTMENTS (4)

Prereq: FMDS 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, 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: FMDS 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: FMDS 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, 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: FMDS 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, 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: FMDS 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: FMDS 345. Investment strategy, selection, financing, appraisal of income properties such as rentals, apartments condos, office buildings, shopping centers and other secure purpose real estate.

470 INTERNATIONAL BUSINESS OPERATIONS (4)

Prereq: FMDS 330, 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.

495 BUSINESS POLICY (4)

Prereq: Mgmt 311, 360, FMDS 308 (or Acctg 321), 330, 341. 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.

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. It requires that we work effectively and efficiently with and through others. It 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 single instrument whose effectiveness 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 may 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. 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.

LOIS E. PETERSEN (1974) Associate Professor. BA, Wartburg College; MEd, Oregon State University; EdD, University of North Dakota.

E. LEROY PLUMLEE (1976) Professor. BBA, Texas Tech University, MS, Northern Illinois University; PhD, Texas Tech University.

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, 308, 330, 341
 - Mgmt 492 or FMDS 495
 - Mgmt 311, 312, 322, 360, 482
- 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

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

Production/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, 330, 341
- Mgmt 271, 311
- Math 157

BACHELOR OF SCIENCE

Major — Manufacturing Management

141 credits

The Department of Management's unique manufacturing management program focuses on more than the traditional production/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
 - Econ 206, 207
 - FMDS 205
 - Mgmt 271
 - Math 157
 - Chem 115
 - Physics 114
- Core Courses (103 credits)
 - Econ 309
 - FMDS 305, 308, 330, 341
 - Mgmt 301, 311, 312, 322, 360, 460, 463, 468, 469, 482
 - Mgmt 492 or FMDS 495
 - ETec 110, 111, 220
 - Plus six courses (24 credits) under advisement and

Mgmt 490 (two internships, one credit each)

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 30 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: FMDS 308. 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, FMDS 330. The interaction of buyer and seller in the industrial environment. Problems met in purchasing by industrial organizations.

366 INTERNATIONAL 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 policy and practice used in personnel and industrial relations administration.

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, form: of compensation and reward, compensation levels.

430 CASES IN BUSINESS COMMUNICATION (4)

Prereq: FMDS 202 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 OPERATIONS MANAGEMENT FIELD STUDY (4)

Prereq: Mgmt 360 and permission of instructor. Field-based study of operations management theory and concepts applied to current manufacturing and service operations problems. Course involves facility tours and projects on actual manufacturing or service problems.

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, FMDS 308, 330, 341. 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. 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 focuses on quantitative, theoretical and analytical skills. It strives to provide a proper 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, the candidates will find a challenging program designed to meet their specific background and needs.

PROGRAM OF STUDY

Both a full-time and a part-time program of study are offered. The program is comprised of 15 to 22 four-credit courses. Students with a non-business/quantitative background are normally required to take all 22 courses. Students with an undergraduate record in business or economics may make application to waive certain foundation courses. The foundation consists of courses in accounting, management, statistics, marketing, operations management, finance, economics and computer information systems. The balance of the program is comprised of advanced courses in some of the above areas and elective courses. All students are able to select at least six electives.

Classes are offered in the evening, and students attend four quarters a year. A new class is admitted for June of each year. Some students may be able to have the first summer quarter classes waived and start the program in the fall. Part-time students take two courses per quarter and require 11 consecutive quarters to complete the degree. Full-time students proceed at a pace of four courses per quarter and will normally complete their requirements in six consecutive quarters.

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 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.
- Foundation Courses (36 credits): MBA 501, 502, 503, 504, 505, 506, 507, 508, 509.
- Core Courses (28 credits): MBA 511, 551, 581, 591 and area requirements in finance, management and

marketing.

- Elective Courses (24 credits): Six elective courses under advisement, selected from course work reserved exclusively for graduate students. No more than eight of these elective credits may be taken in a single field. (Additional electives will be required if more than seven of the foundation courses are waived.)

A required comprehensive examination 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 will be excluded from the program.

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.

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 for credit.

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.

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.

MASTER OF BUSINESS ADMINISTRATION

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.

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

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. It is the responsibility of faculty to cultivate these attitudes in their own studies and in their classes. It is the responsibility of students to participate fully in the learning process and to shape their own goals and expectations.

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 educations. The College offers training in writing and research, critical thought and creative expression, independent judgment and scholarship, self evaluation and assessment.

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.

Any 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

Fairhaven is an experimenting college where innovative teaching methods and varied classroom structures are welcomed. Experiential and diverse learning styles are respected and addressed. The interdisciplinary curriculum emphasizes relationships between disciplines. Important emerging studies are discussed along with and in relation to traditional knowledge. Along with a respect for the traditions of education, vital aspects of Fairhaven are the love of learning and passion for social and cultural renewal.

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. In any given quarter, students may select classes offered across the University and/or design study projects in consultation with faculty.

At Fairhaven, 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 form an important part of a college education. Faculty and staff help students locate and arrange a wide variety of experiential learning opportunities.

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 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 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 maximum 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 program combines college and university classes, independent studies, field work and other practical experiences relevant to the student's purposes. Students are assisted in completing the concentration by faculty

and other advisers, and by a course, the *Concentration Seminar*. At the conclusion of the program, a *senior project* and a *concentration summary* help each graduate to evaluate his or her work and to look toward the future.

The following titles represent some concentrations recently completed by Fairhaven College students: Latin American Studies; Video and Photographic Documentaries; Native Cultures and Nutrition; Spiritual Ecology; Aging and Family Systems; Wetlands: Assessment and Policy; Women's Voice in Theatre and Literature; Studies in Power: Women, Law and Policy; Somatic Psychology; Humanistic Philosophy of Learning, Teaching and Education; Ideas and History: Re-Thinking the Past; Interactive Multi-Media Systems; Creative Expression: Writing, Art and Religion.

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, including business and industry; communications, journalism and research; creative writing; community service, counseling and health; education; fine & performing arts; government — local, state, national; medicine, law, ministry; public and international relations.

Graduates have independently ventured into the private sector, started their own businesses, created new jobs in established organizations and distinguished themselves in research and publication.

Many graduates have pursued advanced studies. The following are some of the schools which have accepted Fairhaven graduates: Boston University, Columbia University, University of Washington, Harvard University, The Julliard School, University of California-Berkeley, University of Puget Sound Law School, Stanford University, Princeton, San Francisco Art Institute, Canterbury University (England), Leuven-Kortrijk University (Belgium), University of Paris (France), Waseda University (Japan) and many more in the U.S. and abroad.

In preparation for graduation, students are invited to review their academic files with faculty and staff. Transcripts, class evaluations, concentration documents, letters of reference — these and other materials may be organized for use in employment search or application to graduate schools.

THE CORE PROGRAM: THREE CURRICULAR STAGES

The core program, unique to Fairhaven College, includes a series of courses designed to widen students' exposure to areas of study and to connections among disciplines. 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 the methods of knowing and understanding, the unique objects of knowledge, the modes of creativity and the practical applications to be found in each area of study.

Fairhaven College offers the opportunity for self-motivated

students who have demonstrated exceptional learning skills to design an individualized alternative to parts of the core program (Hum, Soc, Sci I & II), 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
- 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.

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)

SPECIAL PROGRAMS

Law and Diversity Program. In the fall of 1991 Fairhaven inaugurated a pilot 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 on-going 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. The program meets the requirements of a Fairhaven concentration and leads to a Bachelor of Arts degree.

Thematic and Intensive Studies. The College may offer 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. Additional themes include "The Televised Mind," a 15-credit intensive seminar, and the quincentennial of Columbus' "discovery" of America, a coordinated series of seminars, lectures and events. 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.
 LORRAINE K. BANNAI (1991) Visiting Associate Professor. BA, University of California, Santa Barbara; JD, University of San Francisco.
 GARY BORNZIN (1981) Assistant Professor. BS, California Institute of Technology; MS, PhD, University of Colorado.
 MICHAEL J. BURNETT (1969) Associate Professor. BA, University of Illinois; MA, PhD, Claremont Graduate School.
 LESLIE CONTON (1980) Associate Professor. BA, Oberlin College; MA, PhD, University of Oregon.
 CONSTANCE P. FAULKNER (1966) Professor. BS, PhD, University of Utah.
 WILLIAM H. HEID (1968) Associate Professor. BA, Denison University; MS, PhD, University of Washington.
 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.
 DAVID T. MASON (1966) Professor. AB, Reed College; MA, PhD, University of California, Davis.
 JOHN C. McCLENDON (1971) Associate Professor. BA, MA, San Francisco State College.
 DONALD B. McLEOD (1963) Professor. BA, Whitman College; MA, University of Montana.
 MARIAN RODRIGUEZ (1993) Associate Professor. BS, California State University; MEd, University of California, Los Angeles; JD, University of California, Berkeley.
 TANIS S'ELTIN (1992) Assistant Professor. BA, University of Alaska, Fairbanks; MFA, University of Arizona.
 MIDORI TAKAGI (1994) Assistant Professor. BA, Oberlin College; MA, American University; MPhil, PhD, Columbia University.

Adjunct Faculty

GEORGE DYSON (1993) Research Associate and Writer in Residence.
 LAWRENCE J. ESTRADA (1989) Vice Provost for Diversity and Director, American Cultural Studies. BA, University of California, Santa Barbara; MEd, Whittier College; PhD, University of California, Los Angeles.
 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. Mount Holyoke College; 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 American literature, anthropology, art and art history, Asian studies, biology, constitutional and environmental law, creative writing, theory and practice of teaching, ecology, economics, European and Russian literature, history and philosophy of science, human development, limnology, mathematics, Middle East studies, oceania, philosophy, physics, psychology and psychology of women, contemporary religion, religion and the arts, play and scriptwriting, social theory, U.S. and Native American history, theater and drama, 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 1995-97 Curriculum. The courses and studies listed in this catalog will be offered during the 1995-97 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. In the last biennium such courses included: *Spirituality and Peace and Justice-Making; National Parks and Indians; Women of the Americas; The Family Past and Present; Anthropology of Evil; Images of "the Other"; Culture and Mental Health; Conflict Resolution and Mediation Techniques; World Health: Past, Present and Future; Economic Issues in Native America; History of Asian Women in America; and Video Production Workshop.*

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, aspects of educational theory, curricular structures and individualized learning. Partially satisfies the all-University writing proficiency requirement.
- 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 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 (5)

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**210/310/360/410 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.

214 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.

215 SEXUAL MINORITIES (4)

Historical, sociological, political, psychological and cultural aspects of people who prefer modes of sexual expression other than exclusive heterosexuality.

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.

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 PACIFIC RIM STUDIES (4)

Prereq: history, political science, economics or East Asian Studies course. History of the development of the Pacific Rim countries with emphasis on the understanding of economic and political developments. Repeatable with various topics to 12 credits.

314 TELEVISION AND MEDIA: A CRITIQUE (4)

A critical examination of the mass media with particular emphasis on television and the television industry. Television's impact and influence on American culture, society and politics.

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 SEXUAL MINORITY SUBCULTURES: CONTEXTS AND FUNCTIONS (4)

Prereq: Fair 215 or Eng 327a. Examines from a sociobiological viewpoint the cultural products, context and impacts of non-heterosexuals working within a larger community. Repeatable with different topics three times.

318 MANAGERS AND ELITES: TOPICS IN LEADERSHIP (4)

Prereq: Fair 204 or equivalent introduction to social sciences and U.S. history. Historical study of leadership selection and the exercise of power in U.S. culture with attention to role of family, religion, class, race and gender. Topics may include leadership within corporations, public institutions and social movements with varying emphasis on the importance of professionals, the role of higher education and public policy formation. Repeatable with different topics.

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 HISTORY OF SEXUALITY (3)

Prereq: Fair 204 or equivalent. A seminar based on Foucault's approach to the history of sexuality which seeks to understand the relationship of biological, cultural and creative dimensions in human sexual expression and identity. Common readings in theory, narrative history

and fiction with independent topics of current interest as well as historical importance.

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.

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.

220/320/420 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 (3)

Directed toward the student who wishes to improve expository writing skills. Theory, practice and criticism of student work.

222 IMAGINATIVE WRITING (3)

Workshop to develop and discuss student manuscripts. Repeatable to 9 credits.

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.

225 EXPLORING THE DICTIONARY (4)

Building vocabulary and understanding of etymology and usage through extensive analysis of words, their roots and meanings.

Repeatable once.

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.

321 COMMUNICATION AND GENDER (4)

Prereq: communication course. Survey and analysis of gender differences in communication behavior with a discussion of implications for personal and social change.

322 IMAGINED WORLDS (4)

Prereq: background in literature permission of instructor. Studies in the fairy tale, fantasy or science fiction. Discussion of literary technique, recurrent themes, prototypes in myth and legend. Since authors or genres will vary from year to year, course is repeatable.

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. 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 (2 ea)

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.

421 WINTER, WRITING AND DOSTOEVSKY (4)

Prereq: humanities courses or permission of instructor. A critical study of Dostoevsky, his life, times, works and influence as a novelist, psychologist, religious philosopher and social theoretician. Readings include the major novels and representative shorter works.

422 TOLSTOY! (4)

Prereq: humanities courses or permission of instructor. A critical study of Leo Tolstoy's literary evolution, moral quest and social reforms, with special reference to problems of the present time. Readings include *Anna Karenina* and representative shorter fiction; also his *Confession* and selections from his writings on religion, politics and alternative education.

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 (3)

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.

426 IN THE SPELL OF CHEKOV (4)

Prereq: upper-division standing or permission of instructor. A study of Chekov's life and work, chiefly through a close reading of selected short stories and major plays.

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 (2 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.

232 COMPUTERS (4)

Studies in the hardware, software, and social, economic, political, cultural and educational implications of the computer revolution. May include introduction and instruction in programming and word processing. Repeatable with various topics.

234 THE LANGUAGE OF MATHEMATICS (4)

Introduction to various aspects of mathematical reasoning and computation, to how mathematics makes its meanings, the uses and limitations of mathematics. Repeatable with various topics.

235 INTRODUCTION TO QUANTITATIVE THINKING (4)

This course seeks to promote competence and confidence in the following specific areas: ratios, proportionality, percentages, making estimates, scientific notation, unit conversion, simple formulas, pattern recognition, experimental design, techniques and assumptions in measurement and data gathering, data interpretation, graphing techniques, statistical techniques and fallacies, techniques of scanning technical papers, critical reading, analyzing an argument, recognizing unstated assumptions and leaps and abuses of logic, plus basic computer literacy and word processing.

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 REGIONAL ECOLOGIES (3)

Lectures emphasizing the ecology of a large global region: e.g., tropics, arctic/antarctic, deserts or temperate zone. Science background not assumed.

335 ALTERNATIVE FUTURES (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.

433 FRONTIERS (4)

Prereq: Fair 206 or other science courses. Questions, trends, theories and important figures at the leading edge of physics, biology, chemistry or mathematics. Repeatable with various topics.

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. Repeatable to 8 credits.

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.

342 PERSONAL EMPOWERMENT (3)

Through lecture, discussion and experiential learning, we move from expression of our knowledge and feelings about the present planetary crisis to the articulation, definition and experience of individual and group power.

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.

345 THEORIES OF MORAL DEVELOPMENT (4)

Prereq: previous course in psychology, either introduction to psychology or developmental psychology. Examines major psychological theories of moral development. Includes readings by J. Piaget, L. Kohlberg, C. Gilligan, R. Coles and contemporary feminist theorists. What is moral development? How do individuals internalize cultural values, develop moral perspectives and change those perspectives?

347 PSYCHOLOGY OF WOMEN (4)

Prereq: previous courses in psychology or women studies. Major theories of psychology of women.

348 MEN AND IDENTITY (4)

Prereq: Fair 204 or equivalent courses in human development, or gender studies. Study of contemporary male development, gender roles and related social issues. Use of academic and imaginative literature with sharing of creative work and essays on individual topics. Seminar topics include sexuality, relationships, health, family, work and sports. Study of artists, media and criticism dealing with contemporary gender roles and relationships. Sharing of creative work, with collaborative projects in theatre, dance, music and mixed media.

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.

443 THE PHILOSOPHICAL CONTEXT OF MODERN THOUGHT (4)

Prereq: courses in philosophy, upper-division status or permission of instructor. Readings, lectures and discussions on the history of modern philosophy with emphasis on epistemology. The intention is to show how contemporary attitudes are both dependent on and a reaction to major tendencies in the history of philosophy. Repeatable with different topics.

444 HIGHER EDUCATION, POWER AND PERSONAL IDENTITY (4)

Prereq: U.S. history and introductory sociology or equivalents. The study of higher education in U.S. society, using both historical and sociological approaches. Attention to professional identity, leadership and adaptation to cultural norms as outcomes of college life at different periods of U.S. history, including issues of access, selective success and post-graduate career opportunities related to class, gender and cultural background. Readings in current research and theory.

445 AGGRESSION IN WOMEN (4)

Prereq: previous courses in psychology and women studies. An examination of the issue of aggression in women 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.

250/350/450 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.

257 MUSICAL/DRAMATIC PRODUCTION (1-5)

Prereq: permission of instructor. Rehearse, stage and perform a musical/dramatic theatre production. Repeatable with various topics.

258 OPERA STUDY (2)

Enhanced appreciation of productions of operas in Seattle and Vancouver through lecture, discussion, critical listening and historical/cultural studies related to the operas. Repeatable to 12 credits.

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.

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.

353 NEW WORLD THEATRE (4)

Prereq: previous work in humanities, literature or drama. In a rapidly changing world, nations, and whole cultures with them, are emerging, transmuting and dying. This course seeks understanding of this volcanic process through an examination of dramas that deal with revolutionary changes in human circumstances and sensibilities.

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.

355 EXPLORING THE SELF PORTRAIT IN THREE DIMENSIONS (3)

Exploration of the self-portrait with conventional two-dimensional studies, drawings and photos transformed into three dimensions with various media and incorporating personal symbols. Examination of major artists in three-dimensional portraits.

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.

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.

453 POST-MODERN PERSPECTIVES IN CONTEMPORARY ART (4)

Prereq: studio art or art history classes. Exploration of the current debate on post-modern art by viewing art of the past 10 years and reading the critics who are attempting a definition of post-modernism. Study of significant contemporary artists. Repeatable three times with different topics.

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 THE MYTH OF PRIMITIVISM IN 20TH-CENTURY ART (4)

Prereq: humanities, studio art and introductory art history. Examination of the major cultural implications of the complex and open-ended subject of "the primitive" in art. In order to understand the concepts that surround primitivism, the class compares and contrasts Western and Native American imagery, ideas and philosophies.

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. 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 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 arts are additionally represented throughout the campus by site-specific sculpture of international importance which comprise the Outdoor Sculpture Collection.

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.

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

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 department.

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. A minor is optional.

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

Elsi Vassdal Ellis	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.

ART

The Department of Art offers a number of degree programs with major and minor concentrations in art history, art education, graphic design, illustration, photography, painting, drawing, printmaking, sculpture, ceramics and fibers. These concentrations are basic and central to the various purposes of art. They are potentially discrete disciplines in themselves and are typically studied as such, but they also are media and process alternatives that may be brought together in various ways.

CONCEPT OF INSTRUCTION

The broad instructional concept is to integrate the components of art history, criticism, 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.

Through a contract system students may, in conjunction with faculty of the Department of Art, develop majors to meet their particular backgrounds, needs and interests. Students should seek advisement from faculty members in the department regularly.

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

ELSI VASSDAL ELLIS (1977) Chair. Professor. BS, MEd, Western Washington State College; PhD, University of Washington.

EDMOND BEREAL (1993) Assistant Professor. Alternative Education. Professional artist.

LAURA CRARY-ORTEGA (1993) Assistant Professor. BFA, Ohio University; MA, University of Pittsburgh.

ROBERT D. EMBREY (1971) Professor. BA, MA, MFA, University of Oregon.

ARISTOTLE GEORGIADIS (1993) Assistant 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.

ROBERT A. JENSEN (1966) Associate Professor. BFA, University of Washington; MFA, Washington State University.

THOMAS A. JOHNSTON (1967) Professor. AA, San Diego City College; AB, San Diego State College; MFA, University of California, Santa Barbara.

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.

LINDA E. SMEINS (1981) Professor. BFA, University of Denver; MA, California State University, Long Beach; PhD, University of British Columbia.

KENTON D. SMITH (1993) Assistant Professor. BFA, MA, Fort Hayes State University; MFA, Kent State University.

ROBERT A. URSO (1969) Professor. BA, MA, University of Notre Dame, Indiana.

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.

JOHN OLBRANTZ, Curator, Whatcom Museum of History and Art.

BACHELOR OF ARTS

Art majors are encouraged to develop a plan of study for the academic year. Thoughtful planning results in greater continuity and appropriate sequencing of educational experience. All art majors should note the prerequisites for intermediate and advanced courses and develop appropriate sequencing of their academic plan of study. Students are required to complete the stated course prerequisites before attempting to enroll in 300-level and 400-level elective courses.

It is necessary to pass the Junior Writing Exam before being admitted to any of the designated writing proficiency art history courses.

Studio Major

70 credits

- Foundation Core
 - Studio sequence: Art 101 or equivalent; Art 120, 130, 190
- Art History sequence: Art History 220, 230, 240
- Two art history courses at the 300 or 400 levels

Satisfactory completion of the studio major will be determined by contractual agreement between the student and faculty committee. Individual advisement concerning this contract may begin whenever the student requests it. Concentrations may be developed in drawing, printmaking, painting, photography, sculpture, ceramics, fibers, graphic design, illustration, design production, or in a combination of these areas as determined by the student's contractual agreement. Courses outside the Department of Art may be applied where appropriate. Revisions and amendments will be considered and may be made by the student and the faculty committee upon request.

Any student who expresses the intention of declaring a studio major in art will be initially identified as a pre-major on the declaration of major cards. This status will provide priority access to 100- and 200-level courses within the department during all phases of registration. (No application for pre-major or major status will be processed during Phase I, II and III of registration. Declaration of Major cards may be filled out during these phases but will not be processed until after classes begin in the new quarter.) Upon completion of the foundation core requirements (Art 101, 120, 130, and 190), two of the three art history requirements (Art History 220, 230, 240) and a minimum of one 200-level studio course, a contract will be developed with an area adviser. Once the contract has been signed by an adviser and co-adviser and is placed on file in the department office, the applicant will complete new Declaration of Major cards to be advanced to major status.

Portfolio Review

Portfolios may be required for all art majors before access to upper-division classes. Transfer students who have taken art classes at a previous school should be prepared to show samples of their work to the appropriate area adviser before registration. Failure to consult with the department may result in diminished access to courses and placement in courses unsuited to student skills. Certain studio concentrations have limited enrollments. Entrance to 400-level courses in graphic design, illustration, design production and painting will be determined by a portfolio review at the end of winter quarter each year. Consult with faculty in the appropriate areas for guidelines and procedures.

Studio Minor

30 credits

- Foundation core studio sequence: Art 101 or equivalent, Art 120, 130, 190
- Art History 240
- Electives under advisement

Major — Art History

65-70 credits

- Art History 220, 230, 240, 270
- Art History 275, 375, 475
- Art 101, 120, 130, 190
- 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 additional art history courses at the 400 level
- Reading knowledge of French, German or another second language appropriate to the student's career plans

NOTE: To declare an art history major, complete the Declaration of Major cards in the Department of Art office. For the completion of the declaration it will be necessary to choose an adviser. Because the art history division recognizes that student area specialization interests may change during the course of study, students may change advisers when it is appropriate. Degree contracts are negotiated on an individual basis between the student and the adviser. The contract is typically formed after the student has completed the survey of art history courses. The degree requires a minimum of 65-70 credits.

Minor — Art History

28-30 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. Those who want to do so in art will take the 50-credit program in addition to those courses specified in the School of Education elementary section of this catalog. Those who want to teach art only at any grade level take the 70-credit program as well as the requirements presented in the School of Education K-12 section.

For possible changes in program requirements, consult the current *Timetable of Classes* and the College of Education Advisement Office.

The content of the major will be determined by contractual agreement between the student and a faculty committee. Upon completion of not less than 12 credits of art and not more than 18 credits of art, a student must write a contract with the faculty committee for completion of the major. Transfer students with more than 18 credits of art should do this prior to completion of their second quarter at the University.

Major — K-12 Specialist

70 credits

- Art 101, 120, 130, 190, 220, 230, 240, 270, 290, 370
- Studio specialization (13 credits)
- Art History 220, 230, 240, 401
- Art 280, 381, 382

Major — Elementary Education

50 credits

- Art 101, 120, 130, 190, 220, 240, 290

- Studio specialization (6 credits)
- Art 280, 381, 382
- Art History 220, 230, 240 and 401

This results in an elementary endorsement and a K-12 art endorsement.

Supporting Teaching Endorsement

30 credits

- Art 101, 120, 130, 190, 240
- Art 280, 381, 382
- Art History 240
- Electives under advisement

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 more 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 basic program:

- A 60-credit primary concentration (including the B.A. major requirements) in one specific studio area. The areas are: drawing, painting, printmaking, sculpture, graphic design/illustration, ceramics, fibers and metals. Certain areas may be combined to create an area of concentration on consultation with faculty
- A 24-credit secondary concentration in a studio area other than that covered in primary concentration. Certain areas may be combined, including approved outside electives, to create an area of concentration on consultation with faculty
- A 30-35 credit art history minor (including art history requirements for the art major)
- Passage to BFA candidacy after completion of 50 credits of art
- Passage to BFA status upon completion of contract before granting of the degree

Each student BFA program is arranged through the Department of Art's contract system. That contract should be established between the student and the primary and secondary area advisers. After the completion of 50 credits, each student should have made arrangements through the major professor to submit work to the area faculty in consideration for admission to BFA candidacy. Each student's works are considered by his/her committee separately and judged in relationship to established esthetic criteria in a manner designated by the department. At the completion of all credit requirements, each student must submit work for BFA degree consideration. This will be a public exhibition or presentation in an appropriate professional milieu. Transfer students with more than 18 credits of previous art work should seek advisement before entering the BFA program. All incoming students contemplating the BFA degree are urged to seek departmental advisement during the first quarter at Western.

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 30 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.

101 DRAWING (3)

Fundamental principles and techniques of drawing in a variety of media.

120 DESIGN AND COLOR (3)

Introductory-level problems involving the elements and principles of two-dimensional design: understanding of color relationships.

130 THREE-DIMENSIONAL DESIGN (3)

Introductory-level problems involving three-dimensional form.

190 VISUAL DIALOGUE (3)

This course is a required component of the foundation. Art pre-majors are advised to take Art 190 concurrent with Art 101, 120 or 130. Introduction to the processes, materials, vocabulary and expressive means used in art. Concepts of content, significance and cultural interrelationships of art. Was AH 190 in previous catalog.

201 DRAWING CONCEPTS AND SYSTEMS (4)

Prereq: Art 101 or equivalent. 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.

210 INTRODUCTION TO PRINT (4)

Prereq: Art 101, 120, 130 and/or concurrent enrollment in Art 190. A lecture/lab course covering history, methods and practice of print concepts. Introduction to monotype, relief and intaglio process.

220 PAINTING (4)

Prereq: Art 101, 120, 130 and/or concurrent enrollment in Art 190. Introduction to contemporary painting.

230 BEGINNING SCULPTURE (4)

Prereq: Art 101, 120, 130 and/or concurrent enrollment in Art 190. Beginning problems in three-dimensional form and expression employing a variety of media. Introduction to contemporary concepts in sculpture.

240 CERAMICS (4)

Prereq: Art 101, 120, 130 and/or concurrent enrollment in Art 190. 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: Art 101. Drawing what you see, for designers and illustrators. How to use line, shape and tone. Basics of light and perspective. Lecture studio format. Was Art 207 in previous catalog.

260 FIBERS/FABRICS I (4)

Prereq: Art 101, 120 and 130 and/or concurrent enrollment in Art 190. Lecture/lab course providing an introduction to the media of fibers and fabrics. Structuring of fiber forms and application of paint/dye/thread to fabric surfaces.

270 GRAPHIC DESIGN I (4)

Prereq: Art 101, 120. Introductory lecture studio class in layout and design with an emphasis on typography.

272 DESIGN PRODUCTION FUNDAMENTALS (3)

Prereq: Art 101 or equivalent. Overview of the processes related to the reproduction of visual images via conventional printing methods.

280 INTRODUCTION TO ART EDUCATION (2)

Prereq: 9 credits in art. Examination of the profession of art education, teaching skills, teaching as influencing student behavior in art, curriculum content and materials.

290 PHOTOGRAPHY (4)

Prereq: Art 120. Fundamentals of film developing, enlarging, print finishing. Basic elements of black and white composition and visualization.

301 DRAWING WORKSHOP (5)

Prereq: Art 201. A studio course committed to the pursuit of drawing as a major creative mode of expression. Emphasis placed on students becoming self-directed as to assignments. Weekly group criticisms; field trips to museums and galleries. Repeatable to a maximum of 15 credits.

302 LIFE DRAWING (5)

Prereq: Completion of the core foundation and 8 credits of 200-level studio courses. 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: Art 101, 120, 130, 190, 201 or 250, 210. A lecture/lab course covering history, methods, criticism and practice of the planographic processes with emphasis on stone lithography. Repeatable to a maximum of 15 credits.

312 PRINT — INTAGLIO (5)

Prereq: Art 101, 120, 130, 190, 201 or 250, 210. A lecture/lab course covering history, methods, criticism and practice of the intaglio print processes: drypoint, engraving, mezzotint, soft-ground etching and aquatint. Repeatable to a maximum of 15 credits.

313 PRINT — COLOR (5)

Prereq: completion of the foundation core; Art 201 or 250, 210; Art 311 or 312. A lecture/lab course covering history, methods, practice and criticism of the color print processes: surface relief, lithography or intaglio processes. Repeatable to a maximum of 15 credits.

315 BOOK ARTS (5)

Prereq: Art 101, 120 and 130 and/or concurrent enrollment in Art 190 and at least one 200-level studio. Lecture/lab course in the history, methods and practice of book structures and their application in design and production of limited edition and one-of-a-kind formats employing letterpress, offset and printmaking techniques. Repeatable to a maximum of 15 credits.

321 PAINTING WORKSHOP (5)

Prereq: Art 220, Art History 240 or concurrent enrollment. Intermediate problems in painting. Development of individual direction in form and expression. Repeatable to a maximum of 15 credits.

331 INTERMEDIATE SCULPTURE (5)

Prereq: Art 230 and Art History 240. Direct exploration of contemporary issues and various media in sculpture. Repeatable to a maximum of 15 credits.

341 CERAMICS II (5)

Prereq: 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: Art 240, 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. Repeatable to a maximum of 8 credits. Was Art 378 in previous catalog.

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. Repeatable to a maximum of 8 credits. Lecture studio format. Was Art 376 in previous catalog.

361 SURFACE DESIGN (5)

Prereq: Art 120, 260. Lecture/lab course emphasizing surface design on fabric as a creative mode of expression. Use of pigments and dyes with silkscreening and direct application techniques. Consideration of repeat patterning, individual images, color and space. Repeatable to a maximum of 15 credits.

362 PAPERMAKING/MIXED MEDIA (5)

Prereq: Art 101, 120, 130, and 260 or permission of instructor. 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.

367 FIBER STRUCTURE (5)

Prereq: Art 120 and 260. Lecture/lab courses emphasizing the creation of fiber structures as a major medium of expression. Consideration of form, color and space in the structuring of loom and non-loom work. Repeatable to a maximum of 15 credits.

370 INTRODUCTION TO COMPUTER GRAPHICS (4)

Prereq: Art 270. 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. A lecture studio class introducing the design of logos, posters, brochures.

372 DESIGN PRODUCTION PROCESSES (4)

Prereq: Art 272, 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 SCREENPRINTING (3)

Prereq: Art 101, 120. Fine arts and commercial applications; emphasis on photographic stencil making.

379 TYPOGRAPHY (4)

Prereq: Art 374. Letter forms as design and illustrative elements. Advanced problems in typography. Lecture studio format. Was Art 470 in previous catalog.

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 OF ART EDUCATION (3)

Prereq: Art 280. The philosophy, psychology and procedures for art in the elementary and secondary schools.

382 TEACHING STRATEGIES AND RESOURCES (3)

Prereq: Art 381. Examination of the field from student teaching to the job market. Development of plans for lessons, programs and learning resource materials. Study of techniques for art production and critical inquiry.

390 PHOTOGRAPHY II (5)

Prereq: Art 290 or permission of instructor. 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: Art 390. Fundamentals of color theory; techniques of producing color transparencies and prints.

401 ADVANCED DRAWING WORKSHOP (5)

Prereq: Art 301. Class is for the pursuit of individual creativity in drawing media. Repeatable to a maximum of 15 credits.

402 LIFE DRAWING — ADVANCED (5)

Prereq: Completion of the foundation core; Art 201 or 250, 302 and 8 credits of upper-division art history. 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 PRINT — ADVANCED STUDIO (5)

Prereq: Completion of the foundation core; Art 201 or 250, 210, 311, 312, 313 and 8 credits of upper-division art history. 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.

415 ADVANCED BOOK ARTS (5)

Prereq: Art 315. Lecture/lab. Contemporary issues in book arts with emphasis on individual problems in unique and editioned bookworks. Repeatable to a maximum of 15 credits.

421 ADVANCED PAINTING WORKSHOP (5)

Prereq: six 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: six credits of Art 331. 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. Advanced problems in illustration. Concepts and techniques of text, advertising, display and cover illustration. Lecture studio format. Was Art 379 in previous catalog.

454 COMPUTER ILLUSTRATION (5)

Prereq: Art 350, 370. Concepts and techniques of computer illustration, text, editorial, advertising, display and information graphic problems. Lecture studio format. Was Art 473 in previous catalog.

455 SENIOR PROJECTS IN ILLUSTRATION (5)

Prereq: Art 450. Directed work in illustration aimed at preparing pieces for an illustration portfolio. Was Art 475 in previous catalog.

461 ADVANCED SURFACE DESIGN (5)

Prereq: Art 361. Continuation of individual problems in fabric-related areas employing a variety of materials. Repeatable to a maximum of 15 credits.

467 ADVANCED FIBER STRUCTURE (5)

Prereq: Art 367. Continuation of individual problems in woven/constructed fiber-related areas employing a variety of materials. Repeatable to a maximum of 15 credits.

470 ADVANCED GRAPHIC DESIGN (5)

Prereq: Art 350, 379. Advanced projects in logo design and graphic identity systems. Lecture studio format. Was 471 in previous catalog.

471 THREE-DIMENSIONAL GRAPHIC DESIGN (5)

Prereq: Art 470 and permission of instructor. 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. The study of design reproduction by lithography, screen relief and electrostatic processes. Was Art 373 in previous catalog.

473 ADVANCED DESIGN PRODUCTION (5)

Prereq: Art 472. Advanced projects relating to current trends in graphic arts production. Was Art 472 in previous catalog.

474 ADVANCED COMPUTER GRAPHICS (5)

Prereq: Art 370. Current topics in computer graphics. Advanced techniques and software. Lecture lab format.

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.

478 FIELD INTERNSHIPS (3-6)

Prereq: senior status, art major, permission of instructor. Supervised field work in appropriate professional situations. S/U grading.

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 BFA WORKSHOP (5)

Prereq: admittance to BFA Program and permission of instructor. Individual problems specific to the student's major discipline. Repeatable to a maximum of 20 credits.

Graduate Courses

Courses numbered 500; 517; 545; 597 are described on page 30 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 30 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 19th 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.

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.

312 GRAPHIC DESIGN HISTORY (4)

Prereq: Art History 240. History of graphic design and illustration from ancient culture through the present with emphasis on 20th-century concepts and trends.

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: Art History 275; non-majors: 9 credits in art history. 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: Art History 375; non-majors: 9 credits in art history. 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 30 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.

MUSIC

At Western we believe music is doing — performing, composing, searching for new insights and sharing the joy of music with others. An education in music is the result of interaction among students and between students and faculty actively pursuing musical endeavors.

We believe in the personalization of music education and the need for ongoing advisement for all music majors. The University takes pride in the quality of its instruction and the fact that Western offers a balanced program in choral, instrumental, private instruction and academic music aimed toward professional competency in music education, teaching, performance, conducting, composition, music history/literature and jazz studies.

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, Associate Professor. BM, University of Michigan; MM, University of Wisconsin; DMA, Eastman School of Music.
- ROGER D. BRIGGS (1989) Associate Professor. BM, Memphis State; MM, PhD, Eastman School of Music.
- DAVID FEINGOLD (1980) Assistant Professor. BA, Sarah Lawrence College; MA, Western Washington University.
- 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.
- KAREN IGLITZIN (1986) Associate Professor. BM, Indiana University; MM, Yale University.
- 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.
- ALBERT C. SHAW (1978) Professor. BME, Wheaton College; MME, Drake University; DME, Indiana University.
- MARY TEREY-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

- LAURIE BRIDGE, Class Piano
- CHERYL BRIGGS, Music Education
- NICHOLAS BUSSARD, Oboe
- GREGORY COX, Trombone
- FELICIA DOBBS, Voice
- DAVID FEINGOLD, Classical Guitar
- WALTER GRAY, Cello
- VINCE GREEN, Trumpet
- VIRGINIA HUNTER, Voice
- DAVIDA KAGEN, voice
- JULIA NOLAN, Saxophone
- FRANCINE PETERSON, Bassoon
- LARRY PHILPOTT, Horn
- DANIELLE RANGEL, Flute
- MARVIN REGIER, Voice
- PATRICK ROULET, Percussion
- CHARLENE SUTTON, Music Education
- PAUL TAUB, Flute
- MONTY CARTER, Professional Accompanist
- LUCILLE OSTER, Professional Accompanist
- DAVID STEEGE, Keyboard Technician

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.

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.

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 — Simandl, "New Methods for the Double Bass," Book 1. 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; Bach "Gavotte in D Major"; Grieg "Solvejg's Song" [select any two]. Major and minor scales and arpeggios through four sharps and four flats (two octaves when possible).

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 or three studies from "Twenty-five Exercises for Saxophone" by Klose. Solos selected from "Cantilena" by Benson, "Chant Corse" by Tomasi, or "Concerto" by Larsen. Major and minor scales and arpeggios through four sharps and four flats (two octaves when possible).

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 Wechselblatt. 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 have prior training in at least one of the following five categories, and some experience and ability on the remainder: timpani; snare drum; mallet instruments; bass drum; cymbals, and miscellaneous percussion and drum set. *For Timpani:* tuning, stick technique, pedaling, intonation, tone production, roll and attack. *For Snare Drum:* all rudiments, rhythm studies, stick technique (both matched and traditional grip), control and bounce. *For Mallet Instruments:* tone production, mallet technique, scales and arpeggi in all major and minor keys, and experience on xylophone, marimba, vibraphone, chimes, etc. *For Bass Drum, Cymbals, and Miscellaneous Percussion:* experience and technique on all. *For Drum Set:* basic rhythms in all styles and traditional and Latin American patterns.

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.

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.

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, 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, 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
- 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

* 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.)

- 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 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, 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 30 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.

* Additional course credits in applied music instruction beyond the required minimum of 6 may be obtained under the advisement of the appropriate area coordinator.

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 I (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 pre-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.

324 COUNTERPOINT (2)

Prereq: Music 225, 226. Counterpoint in species and free style. Composition and analysis of pieces in two and three parts. Repeatable for credit.

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.

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 MENC methodolgy. 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 BIRCH BAY BAND MUSIC WORKSHOP (2)

Offered summers only. Repeatable for credit.

456 BIRCH BAY ORCHESTRA MUSIC WORKSHOP (2)

Offered summers only. A reading workshop in materials and literature for school music orchestra teachers. 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 pre-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 30 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.

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 BIRCH BAY BAND MUSIC WORKSHOP (2)

A reading workshop in materials and literature for school music band teachers. Participants are expected to prepare scores and conduct the ensemble. Course not applicable to M.Mus. degree. Offered summers only. Repeatable for credit.

556 ADVANCED BIRCH BAY ORCHESTRA MUSIC WORKSHOP (2)

A reading workshop in materials and literature for school orchestra music teachers. Participants are expected to prepare scores and conduct the ensemble. Course not applicable to M.Mus. degree. Offered summers only. Repeatable for credit.

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:

- Bachelor of Arts in theatre arts
- Bachelor of Arts in Education with a double emphasis in theatre and English.

A teaching endorsement in drama is offered to education majors. While each of these degrees provide a sound undergraduate education that is academic and practical in nature, students need to be aware that a supporting endorsement in theatre is often more marketable than an initial endorsement. Programs also provide preparation for those who wish to seek advanced degrees or the variety of careers offered by the theatre. The skills acquired are readily transferable to careers in teaching, law, business and other areas where interpersonal or group communication skills are required.

THEATRE

The Bachelor of Arts program is a balance of the academic (formal classes with strong theatre history and dramatic literature components) and practical approaches (studio and production experience in all phases of theatre). A vigorous program of faculty-directed productions relates directly to class work. Supplemented by graduate and undergraduate directing projects, the production program offers numerous and varied opportunities for students to learn the exciting collaborative art of theatre.

Each student is grounded in fundamentals and chooses one or more areas of specialization:

- Acting
- Directing
- Educational Drama
- Dramatic Writing
- Dramatic Literature
- Technical Theatre
- Dance

Plays chosen for production range from the great classic dramas to the avant-garde and from original student scripts to Broadway musicals.

Theatre students at Western learn by participating in a variety of special classrooms. Support facilities include a 1,100-seat proscenium house with computerized lighting control; a 200-seat modified thrust house; and a 100-seat experimental black box; studio spaces for dance, costumes, make-up, sets and props; as well as acting and musical theatre.

For information and advisement contact the department chair, Thomas E. Ward, Performing Arts Center 395, by mail at MS 9108 or by phone (360) 650-3876.

THEATRE ARTS FACULTY

THOMAS E. WARD (1977) Chair. Professor. BA, Western Maryland College; MFA, New York University, School of Arts.
 DENNIS E. CATRELL (1966) Professor. BA, University of Michigan; MA, Northern Illinois University.
 NOLAN A. DENNETT (1989) Lecturer. BA, Brigham Young University; MA, Western Washington University.
 ROGER GERMAIN (1970) Associate Professor. BA, Western Washington

State College.

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) Associate 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.
 DOUGLAS R. VANDER YACHT (1970) Associate Professor. BA, Western Washington State College; MA, Purdue University; PhD, Ohio State University.

Adjunct Faculty

CAROLINE G. CAINE (1995) Assistant to the Dean, College of Fine and Performing Arts. BA, Lamar University; MA, Florida State University; PhD, Texas Woman's University.

BACHELOR OF ARTS

Major — Theatre

82 credits

- Core requirements (62 credits): ThA 101, 135 or 138, 160, 212, 213, 216, 222, 255, 256, 322, 349, 355, 356, 370, 380, 381, 384 or 385, two topics selected from 428 plus 3 credits of dramatic literature
- Concentration (15 to 20 credits) selected from one of the following areas:
 - Acting: ThA 260, 261 or 266, 360, 361, 460 plus 4 credits under advisement. Dance and voice lessons recommended
 - Educational Drama: ThA 350, 351, 450, 452, plus 6 credits under advisement
 - Dance: ThA 231, 235, 336, 342, 434, 435
 - Directing: ThA 260, 311, 314, 371, 470
 - Dramatic Writing: ThA 385, 485, 486, 487
 - Dramatic Literature: ThA 325, 327, 328, 365, 465, plus 6 credits under advisement
 - Technical Theatre: ThA 311, 312, 313, 314, 315, 411, 412
- Electives under advisement

Minor — Theatre

30 credits

- ThA 101, 160, 212, 222, 370
- One course selected from ThA 201, 231, 260, 349, 384
- One course selected from ThA 314, 322, 350, 371, 385
- Electives under advisement

Minor — Dance

30-36 credits

- Required courses: ThA 235 (two quarters), 238 (two quarters), 257, 336, 342, 432, 435; Biol 348
- One course selected from ThA 231, 434, 435 (a second quarter), 442, or electives under advisement

The dance minor 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.

ADDITIONAL EDUCATIONAL CHOICES

Supporting Endorsement

Major — English/Theatre

97 credits (English 49 credits and Theatre 48 credits)

This major meets the requirements for Washington state teaching endorsements in both English and drama.

Theatre

48 credits

- Core requirements: ThA 101, 160, 212, 213, 222, 260, 261, 322, 370, 371, 380 or 381, 384, 453
- Recommended additional courses: ThA 360, 470, 428

English

49 credits

See the *English Department* section of this catalog.

The supporting endorsement in drama, coupled with an initial endorsement in another area, meets the Washington State Teacher Certification by the completion of the following courses:

Drama — Supporting Endorsement

29 credits

- ThA 101, 160, 212, 222, 255, 260, 350 (elementary) or 453 (secondary), 370, 371

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
Dance	31-45
Educational Drama	45-59
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 30 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.

135 BEGINNING MODERN DANCE (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-majors. Repeatable to a maximum of 6 credits. S/U grading.

138 BEGINNING BALLET 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-majors. S/U grading. Repeatable to 6 credits.

139 BEGINNING JAZZ DANCE (2)

Exploration of a variety of jazz dance styles through development of a beginning jazz movement vocabulary. S/U grading. Repeatable to 6 credits.

160 INTRODUCTION TO ACTING (2)

Prereq: written permission of instructor. ThA 101 recommended. Fundamentals of acting; emphasis on basic techniques and tools used by the actor, including improvisation, resume writing, auditioning, 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.

212 INTRODUCTION TO STAGECRAFT (5)

Basic theory of planning, drafting, construction and rigging of scenery. Practical lab experiences in scenery construction; painting, 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, handling and rigging lighting and special effects; assignments on one major production with one scheduled lab assignment per week.

215 STAGE MAKE-UP (2)

Theory and practice of applying make-up for the stage. S/U grading.

216 STAGE COSTUMING (4)

Prereq: ThA 101 recommended. Costume design and execution; 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.

231 DANCE AND WORLD CULTURES (3)

An historical and cultural overview of dance from the primitive to the contemporary. Class members are encouraged to discover and examine their own movement heritage.

235 INTERMEDIATE MODERN DANCE (2)

Prereq: 6 credits of ThA 135 or equivalent. Further development of movement principles established in ThA 135. Open to non-majors. Repeatable to 6 credits.

238 INTERMEDIATE BALLET (2)

Prereq: 6 credits of ThA 138 or equivalent. Further development of principles of ballet. Increased difficulty and terminology; preparation for advanced levels. Open to non-majors. Repeatable to 6 credits.

255, 256 THEATRE/DANCE PRODUCTION (2 ea)

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, make-up, etc. S/U grading.

257 THEATRE/DANCE 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: written 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: 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.

311 STAGE DESIGN TECHNIQUES (3)

Prereq: ThA 212 or concurrent. Theory and practical experience in communicating technical and artistic information through drafting, and color-rendering.

312 SCENE PAINTING (3)

Prereq: ThA 212 and 311. A survey of traditional scene painting with emphasis on color, technique, materials, tools and formulas.

313 ADVANCED STAGE LIGHTING (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: minimum of 3 credits of acting and ThA 212. An in-depth study of the stage manager's role and responsibilities prior to, during and after production. Assignment to one major production.

315 HISTORIC COSTUME FOR THE STAGE (3)

Prereq: ThA 101 recommended. Evolution of costume from Ancient Greece through World War I with reference to contemporary reproduction.

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 from 1850-1950.

327 MODERN AMERICAN DRAMA (3)

Prereq: ThA 222. Selected American plays and playwrights from 1920 to 1950.

328 CONTEMPORARY DRAMA (3)

Prereq: ThA 222. Selected plays and significant trends in contemporary English, European and American drama.

336 MUSICAL RESOURCES FOR DANCE (3)

Prereq: ThA 235 or permission of the instructor. Examines the use of music in teaching movement and music in relationship to the choreographic process. A companion course to ThA 342 and ThA 434.

342 CHOREOGRAPHY & IMPROVISATION (3)

Prereq: 4 credits of ThA 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.

349 CHILD DRAMA (3)

Children's theatre, creative dramatics, puppetry; history, value, philosophy and literature of child drama; its uses in theatre, speech therapy, education and recreation.

350 CLASSROOM DRAMA (3)

ThA 349 recommended. Principles and methods for using improvised drama as a subject and/or as a method for teaching social studies and language arts. Laboratory work with children.

351 PUPPETRY (3)

Design, construction and manipulation of puppets; their use in productions for the child audience, in speech therapy, in elementary education, and as a craft for children.

355/356 THEATRE/DANCE PRODUCTION (2)

Prereq: ThA 255 and 256. Directly supervised practice in theatre crafts prior to performance. Students work as a team member in scenic, costume or lighting studios or special project(s). 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.

365 ADVANCED ORAL INTERPRETATION (3)

Prereq: ThA 265 or permission. Continuation and refinement of theory and techniques of oral interpretation from beginning oral interpretation (ThA 265) and introduction of reader's theatre theory and practice.

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.

370 INTRODUCTION TO PLAY DIRECTION (2)

Theory and practice of stage direction. Students are required to perform in at least two student-directed scenes.

371 PLAY DIRECTION I (3)

Prereq: A minimum of 6 credits of acting course work. ThA 370 or equivalent strongly recommended. Theory and practice of stage direction including selection of play casting and blocking, and production of a scene for public performance.

380 THEATRE HISTORY I (4)

Development of the theatre arts from Classic Greece 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.

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 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. Repeatable to a maximum of 6 credits.

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.

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.

432 HISTORY OF THE DANCE SINCE 1450 (3)

Prereq: ThA 231 or 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.

434 DANCE ARTS IN EDUCATION (3)

Prereq: permission of instructor or demonstrated competency at the intermediate level of dance technique. 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 ADVANCED MODERN DANCE (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 ADVANCE CHOREOGRAPHY (3)

Prereq: ThA 342 or permission of instructor. Advanced studies in movement invention, theme and development, form and design. Repeatable to a maximum of 6 credits.

450 CREATIVE DRAMATICS LEADERSHIP (3)

Prereq: ThA 350. Advanced techniques; supervised teaching.

452 CHILDREN'S THEATRE (3)

Prereq: ThA 250 recommended. Philosophy, nature and values of theatre for children. Each student selects and prepares a script for performance for and/or by children.

453 SECONDARY DRAMA: METHODS AND CURRICULUM (3)

Prereq: one acting and one directing course under advisement. Exploration, discussion and devising of methods and curriculum for use in secondary drama classrooms. Creation of lesson plans and projects aimed specifically for drama students on a variety of subject.

460 ACTING STUDIO III: STYLE (4)

Prereq: written permission of instructor. Continuation 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.

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.

465 READER'S THEATRE (3)

Prereq: ThA 365 or permission. Continuation and refinement of theory and techniques of reader's theatre introduced in ThA 365. Public performance required.

470 PLAY DIRECTION II (3)

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 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 467 to a maximum of 12 credits.

495 INTERNSHIP (1-12)

Prereq: junior status or above and permission of the chairman. Qualified third- and fourth-year students may apply to apprentice with theatre and/or dance companies, performing arts agencies or producing organizations. S/U grading. Repeatable to a maximum of 24 credits.

Graduate Courses

Courses numbered 500; 517; 545; 597 are described on page 30 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: ThA 511. 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 DRAMA IN EDUCATION (4)

Prereq: ThA 450 and 452, or equivalent. Critical review of theories and research in children's theatre and creative drama; the use of drama techniques in teaching grades K-12. Individual artistic or research projects.

551 THEATRE IN EDUCATION (4)

Prereq: ThA 550. Strategies for the implementation of the 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 471. 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 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). Leona M. Sundquist Marine Laboratory, within easy driving distance at Shannon Point on Fidalgo Island, provides facilities for marine studies. Huxley's resources also include a map library which houses in excess of 220,000 maps and 1,000

atlases, is regarded as a major map collection in the United States, and serves the University and surrounding community.

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 management, 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, 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 science 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 geography and planning, environmental policy studies, environmental education and journalism and a B.A. program in environmental studies that allows students to link their interest in the environment with social science and humanities disciplines. Its programs direct students to specific career paths, such as planning, environmental education or environmental journalism, or provide an excellent background for advanced study in law, public administration and resource management, among other fields.

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

Both Bachelor of Science and Bachelor of Arts degrees are 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.

RESEARCH 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 Environmental Research and Educational Center, has recently been developed to augment laboratory and field facilities for studies in aquatic, terrestrial and microbial systems.

While centered at Huxley College, the work of the Institute is University-wide in scope, involving faculty in several academic units at Western. The Institute provides opportunities for graduate and undergraduate students to participate in ongoing research projects and undertake thesis research through Huxley's programs in environmental science.

Institute for Watershed Studies

Director: Robin A. Matthews

With offices and laboratories in the Environmental Studies building, the Institute for Watershed Studies conducts and promotes research on watersheds, streams, and lake systems. The Institute provides opportunities for undergraduate and graduate students to participate in laboratory and field-oriented research studies. Analytical service and instrumentation are available to students and faculty for research and instructional purposes. Recent research activities of the Institute have centered on the chemistry of North Cascade lakes, watershed management and lake and stream water quality monitoring.

FACULTY

Center for Environmental Science

BRIAN BINGHAM (1995) Assistant Professor. BS (zoology), MS (zoology), Brigham Young University; PhD (biology), Florida State University.

LEO BODENSTEINER (1995) Assistant Professor. BA (biology), Moorhead State University; MA (zoology), PhD (zoology), Southern Illinois University at Carbondale.

JOHN T. (JACK) HARDY (1989) Professor and Director, Center for Environmental Sciences. BA (analytical biology), University of California, Santa Barbara; MS (biological oceanography), Oregon State University; PhD (marine botany and aquatic ecology), 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.

BRADLEY F. SMITH (1994) Professor and Dean of the 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) Assistant Professor. BS (biology), Juanita College; MA (biology), The College of William and Mary; PhD (environmental science), University of Virginia.

MING-HO YU (1969) Professor. BS (agricultural chemistry), National Taiwan University; MS, PhD (plant nutrition and biochemistry), Utah State University.

Center for Geography and Environmental Social Sciences

JAMES R. ALBERS (1971) Professor. BS (physics), Washington State University; MS (physics), George Washington University; PhD (physics), University of Washington.

ANDREW J. BACH (1995) Visiting Assistant Professor. BS, MA (geography), University of California, Davis; PhD (geography), Arizona State University.

GIGI BERARDI (1995) Assistant 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.

BARBARA S. DONOVAN (1994) Visiting Assistant Professor. BA (political science/French), University of South Alabama; MPH, University of South Alabama; JD, University of Washington.

ERNST L. GAYDEN (1971) Associate Professor. BPh, University of Chicago; MS, Illinois Institute of Technology.

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.

ROBERT L. MONAHAN (1955) Professor Emeritus. BA (geography), University of Washington; MA (geography), University of Michigan; PhD (geography), McGill University.

DEBNATH MOOKHERJEE (1961) Professor. BSc, MSc (geography), University of Calcutta; PhD (geography), University of Florida.

O. EUGENE MYERS (1995) Visiting 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.

BRADLEY F. SMITH (1994) Professor and Dean of the 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

FEL X A. (TONY) BASABE, Western Washington University, Bellingham, Washington. PhD (air pollution/forest effects), University of Washington.

RICHARD S. BENNETT, USEPA, Environmental Research Laboratory, Corvallis, Oregon. PhD (animal ecology), Iowa State University.

DOUGLAS A. BULTHUIS, Padilla Bay National Estuarine Research Reserve, Mount Vernon, Washington. PhD (botany), LaTrobe University, Australia.

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.

PATRICIA IRVING, Battelle, Pacific Northwest Laboratories, Richland, WA. PhD (ecology), University of Wisconsin.

NADEZHDA K. KHRISTOFOROVA, Professor and Chair of Ecology, Far East State University. Vladivostok, Russia. PhD (electrical chemistry and ecology of animals), Far East State University.

LISA BRYCE LEWIS, Global Rivers Environmental Education Network (GREEN), Bellingham, WA. MS (forest resources), University of Washington.

WALTER PEARSON, Battelle Marine Science Laboratory, Pacific Northwest Division, Sequim, Washington. PhD (oceanography), Oregon State University.

MICHAEL G. STONER, Environmental Manager, Port of Bellingham, Bellingham, WA. MS (forest soils), University of Washington.

PHILIP WATANABE, University of Washington School of Environmental Health, Seattle, WA. PhD (toxicology), Utah State University.

PETER WILLING, Water Resources Consultant, Charles Howard & Associates, Ltd., Bellingham, Washington. PhD (water resources policy), Cornell University.

JANET ZUKIN, Research Associate, Western Washington University; BA (geology), University of California at Santa Barbara; MSc (oceanography), University of Southampton; MSc (geophysics), PhD (geophysics), Institut de Physique du Globe, Paris.

Affiliated Faculty

RANDALL S. BABCOCK, Professor, Department of Geology

DANIEL L. BOXBERGER, Associate Professor, Department of Anthropology

MARK BUSSELL, Associate Professor, Department of Chemistry

SARAH CAMPBELL, Associate Professor, Department of Anthropology

GEORGE T. CVETKOVICH, Professor, Department of Psychology

MELVIN DAVIDSON, Professor, Department of Physics

MAURICE H. FOISY, Associate Professor, Department of Political Science

DANIEL A. HAGEN, Associate Professor, Department of Economics

STEVEN E. HENSON, Associate Professor, Department of Economics

RAND F. JACK, Professor, Fairhaven College

DAVID T. MASON, Professor, Fairhaven College

GEOFFREY B. MATTHEWS, Professor, Department of Computer Science

EMILY R. PEELE, Associate Professor, Department of Biology

DEBRA J. SALAZAR, Associate Professor, Department of Political Science

DAVID E. SCHNEIDER, Professor, Department of Biology

MAURICE L. SCHWARTZ, Professor Emeritus of Geology

PETER A. SMITH, Assistant Professor and Science/Technology Librarian, Wilson Library

MART STEWART, Assistant Professor, Department of History

STEPHEN SULKIN, Professor and Director, Shannon Point Marine Center

RONALD J. TAYLOR, Professor Emeritus of Biology

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 is selective and based upon preparation and prior academic performance. Students must apply to, and be accepted by, Western Washington University before making formal application to Huxley College. Application forms for WWU and Huxley College are available through either the WWU Admissions Office or Huxley College. Applicants must have earned at least 75 quarter hours of college credit and have completed all preparatory courses in (A) and also either (B) or (C) below (or equivalents) prior to admission to the College and registration in 300-level Huxley core courses:

(A) All majors

- Physical geology (Geol 211) or physical geography (Geog 203)
- Economics, preferably microeconomics (Econ 206)
- Philosophy, preferably ethics or moral (Phil 102, 107 or 112)
- Expository writing course above the 101 level (Eng 201)
- Sociology or anthropology
- Political science

(B) All majors (other than environmental science)

- Precalculus (Math 115)
- One quarter of general chemistry (Chem 115 or 121)
- Two quarters of general introductory biology (Biol 101, 102)

(C) Environmental science majors

- One quarter of calculus, second quarter recommended (Math 124 and 125 or 128)
- One year general chemistry (Chem 121, 122, 123)
- One year general biology (Biol 201, 202, 203)

Courses listed in (A) and (B) are considered to be minimum 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.

It is also highly recommended that students entering Huxley College be computer literate, possessing skills in word processing, spreadsheets, etc.

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 Admissions 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, 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
- Geography
- Student/Faculty Design

Bachelor of Arts in Journalism

- Environmental Studies/Journalism

Bachelor of Arts in Economics

- Environmental Studies/Economics

Bachelor of Arts in Education

- Environmental Studies
- Geography — Elementary
- Geography — Secondary

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 the General University Requirements 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 B.A. in Education.
- At least one full year (45 quarter credits) as a member 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 *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, lobby, 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)

1-5 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)

* All three courses complete the requirement; six credits may be counted toward electives.

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 *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

28-40 credits

Include one course from each area numbered 1 through 5 and two lectures plus associated laboratories from area number 6 below:

1. Ecology: Envr 325 or Biol 325
2. Organic Chemistry: Chem 251 or Chem 351, 352, 354*
3. Statistics: Envr 340 or Biol 340
4. Planning, Assessment and Management: Envr 418, 436 or 490
5. Large-Scale Systems: Envr 321, 435 or 492; Geog 330, 331, 433
6. Laboratory/Field Courses (including lecture and lab): Envr 326, 361a,b; 407; 421a,b; 429; 430a,b; 431a,b; 455/457; 456/458

Upper-division electives chosen under faculty advisement — 24-36 credits

For students wishing an area of emphasis, advisement plans are available for aquatic ecology, environmental toxicology, environmental chemistry, marine ecology, and terrestrial ecology.

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 *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

89-97 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 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.

Program

The undergraduate program of study for the bachelor's degree requires a major concentration of 89 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 370, 351, 305, 470
- Econ 380 or 383
- Pol Sci 320 or 353

Environmental Policy Track — 17-18 credits

- Envr 418
- Pol Sci 420 or 468 or 427

- Econ 383 or 483
- Soc 207 or Pol Sci 366
- Electives — 25 credits
- A minor under advisement (students choosing the minor option may need more than 25 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

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 photo-journalism coupled with conservation history, physical science, biology and chemistry. See *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 104 or 406 (3 credits)
- Journ 190, 204, 304, 350, 430, 470 and 480 (30 credits)
- Journalism staff courses from the following list (A): Journ 114, 214, 314, 414 (6 credits)
- One additional staff courses from the following list (B), or list (A): Journ 121, 221, 321, 421, 422, 423 (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 102; Chem 115 or 121; Math 115.

- 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 340 or 312
- Econ/Envr 493 or 4 credits of Envr 499
- 13 upper-division credits of electives in economics or environmental studies under faculty advisement

Major — Geography

Adviser: Thomas Terich

88 credits

All majors are required to complete a set of core courses, supporting courses and a field of concentration that meets their specific needs and interests. The undergraduate adviser will recommend courses related to students' career objectives. Students are urged to consult advisers at the earliest opportunity to plan their program. See *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 — 28-30 credits

- Envr 301
- Geog 201, 203, 301, 305, 351, 352
- One of the following courses: Geog 320, 321, 322, 323, 324, 326, 328
- One of the following courses: Geog 330 or Geol 310; Geog 331, 362, 431, 432

Concentration in either A or B below:

A. Environmental and Resource Management concentration requirements

This option emphasizes the study of interactions between the natural environment and human activities. Students investigate issues relating to utilization of resources and develop skills in the scientific management of natural resources.

- Geog 330 or Geol 310; Geog 331, 362, 431, 461
- One of the following courses: Geog 358, 432, 433
- Two of the following courses: Geog 359; Envr 328, 338, 421a, 436, 438, 490; Geol 442/542, 443/543
- Two of the following courses: Geol 314, 413, 440; Envr 321, 407, 430a, 435, 462, 492

B. Human and International Studies concentration requirements

This option prepares students for public and private sector occupations with a spatial and global emphasis; especially concentrating on the Pacific Rim. Students develop investigative skills to analyze issues relating to culture, spatial economics, urbanization, development, and the environment.

- Geog 310, 312, 314
- One of the following courses: Geog 412 or 414
- Three of the following courses: Geog 320, 321, 322, 323, 324, 326, 328
- One of the following courses: Geog 421 or 423
- Two of the following courses: Envr 412, 416, 465; Geog 358, 359; Geol 442/542, 443/543
- One elective selected under faculty advisement

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 102, Chem 115, Math 115. See *Admissions and Declaration of Major* section for preparatory courses which must be completed prior to admittance to junior-level Huxley common core courses.

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 *Department of Educational Curriculum and Instruction* section of this catalog.

Major — Geography (Secondary)

Adviser: Thomas Terich

55 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 — 31 credits

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 Program* 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 — 21 credits

This major must be accompanied by the professional preparation program in elementary education.

Minor — Geography

24 credits

- Geog 201, 203, 351, 320
- Approved electives to total 24 credits

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, 305 (11 credits)
- Electives under advisement (14 credits)

Minor — Geographic Information Systems

Adviser: Patrick Buckley

35 credits

- Geog 201 or 203, 305, 351, 352, 358, 359, 452; CS 110 or 120 or an approved programming course
- Electives selected under faculty advisement from the following: CS 206, 221, 439, 471, 480, a second programming language; Art 370, 372; Geol 442/542, 443/543

MASTER OF SCIENCE — ENVIRONMENTAL SCIENCE

The Center for Environmental Science offers a graduate program that draws upon graduate course work in Huxley College and the College of Arts and Sciences' science departments leading to the Master of Science in environmental science degree. In the M.S. in Environmental Science, three major areas of program emphasis are recognized: environmental toxicology and chemistry, aquatic ecology, and regional, global and terrestrial ecosystems. A fourth area of emphasis, environmental chemistry, is a cooperative program with the Department of Chemistry.

Western Washington University is a member of the Western Interstate Commission for Higher Education (WICHE). This membership entitles out-of-state graduate students from participating western states to a partial remission of out-of-state tuition when enrolling in the environmental toxicology and chemistry option of Huxley's M.S. program in environmental 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 30 of this catalog.

110 ENVIRONMENTAL STUDIES: A SCIENTIFIC APPROACH (3)

Prereq: one GUR natural science course at the college level. 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. General systems theory; principles of natural systems; ecosystems structure, function and management.

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, and and water occurring on local, regional and global scales.

303 HUMAN ECOLOGY (4)

Prereq: Huxley major prerequisites or written permission of instructor. A Huxley core course. Study of the interactions between human and natural systems, including intended and unintended effects on natural systems, the use of energy, information and materials in human systems, and the growing complexity and magnitude of environmental problems and their management. The Pacific Northwest is used to illustrate these processes.

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.

32B 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.

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: Envr 301 or 325 or Biol 325 or written permission of instructor. The design of biological experiments and appropriate statistical analysis of experimental data. Calculator required.

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.

365 ENERGY AND ENERGY RESOURCES (4)

Prereq: general physics course or general chemistry course; Envr 302; or permission of instructor. Basic concepts of work and energy, heat and heat transfer, First and Second Laws of Thermodynamics and entropy. Energy resources and energy conversion, including thermal and nuclear power plants. Renewable energy resources: solar, wind, fusion, etc.

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.

377 ALTERNATIVE FUTURES (3)

Prereq: Envr 303 or two 200-level courses in the social sciences. Introduction to the growing field of future studies, utilizing the framework of human ecology to evaluate various projections and scenarios in future studies literature; exploration of the different ways of attempting to foresee the future, scientifically and imaginatively; the role of the individual in bringing about some desirable future. Offered alternate years.

401 ENVIRONMENTAL ETHICS (3)

Prereq: Huxley core courses. An examination of philosophical dimensions of man-environment relations with emphasis upon ethical problems. Considers several contrasting views of man and examines the influence of these philosophical positions upon environmental

behavior. Attempts to identify an environmental ethic which might be operable in modern society.

407 TERRESTRIAL ECOLOGY (5)

Prereq: Envr 325 or Biol 325. 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.

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.

411 ALTERNATIVE ENERGY SOURCES AND SYSTEMS (3)

Prereq: senior status. Recommended preparation: general physics, general chemistry, Envr 365, Physics 207, 399. Energy as a means to social ends; identification of characteristics of alternative (non-conventional) energy sources and technologies and their applications for industrial, transportation, agricultural and domestic uses; alternative energy, appropriate technology and the decentralist alternative. Offered alternate years.

412 SUSTAINABLE COMMUNITY DESIGN: URBAN (4)

Prereq: Envr 303 or Tech 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, 377, 411 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.

416 HUMAN POPULATION AND THE ENVIRONMENT (3)

Prereq: Envr 301 and 303. A study of the concepts of unlimited and limited population growth, carrying capacity and the upper limits of world population. Historical and future trends of human populations. Effects of human populations on the environment now and in the future, including food production, shelter, energy and mineral resources, technical and industrial impacts, population control, and geographical areas with particular population pressure.

418 SOCIAL IMPACT ASSESSMENT (4)

Prereq: Soc 210, Soc 207 recommended. An interdisciplinary approach to the effects of technology, industry, commerce, and public and private policy on the lives of human beings. Social science techniques are used to assess and evaluate problems, issues and strategies. Case studies are used to illustrate central issues. Emphasis is on environmental legislation, policy and public involvement.

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.

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)

Co- or prereq: Envr 361a,b. 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.

431a POPULATION BIOLOGY (3)

Prereq: Biol 321; Envr 325 or Biol 325; Math 115. Introduction to theory and application of population genetics and population biology.

431b POPULATION BIOLOGY LABORATORY (2)

Prereq: Envr 431a concurrently. Companion laboratory for 431a.

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.

435 LANDSCAPE ECOLOGY (4)

Prereq: Envr 325 or Biol 325. The study of landscape patterns across temporal and spatial scales; emphasis on their organization, functional interactions and dynamics. Application of landscape principles to land management problems.

436 ENVIRONMENTAL IMPACT ASSESSMENT (5)

Prereq: senior status, completion of analysis course work within majors or permission of instructor. Objective evaluation and formal description of a real natural system or geographic region. Class preparation of a unified document summarizing physical, biological and social aspects of a study area. Review of pertinent laws and EIS documents.

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 evolutionary, biological, social and ethical questions concerning conservation and protection of endangered and threatened species. Applications of genetics, ecology and behavior to conservation and preservation strategies. Conflicts arising from multiple-use management of natural resources.

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 (3)

Prereq: Envr 455. 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.

463 PACIFIC NORTHWEST ENERGY POLICY (3)

Prereq: Envr 365 or permission of instructor. A review of the historical development of private and public electric power in the Pacific Northwest. A description of the Northwest Power Planning Council's planning process and latest plan, including databases, computer modeling, public review, the role of conservation, the development of new electrical energy supplies and fish and wildlife 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 COMPARATIVE AND INTERNATIONAL ENVIRONMENTAL POLICIES (4)

Prereq: Envr 303 or 464 or permission of instructor. A systematic comparison and analysis of the formation, strengths and weaknesses of international environmental treaties and agreements, and the national policies and laws of several developed and less-developed nations.

467 POLITICS, TRANSFORMATION AND ENVIRONMENT (4)

Prereq: Envr 202 or permission of instructor. Incompatibility between the growth-oriented goals of contemporary political cultures and environmentally derived "steady-state" imperatives. The politics of transformation and value change. Also offered as Pol Sci 467.

468 ENVIRONMENTAL LAW (4)

Prereq: admission to Huxley or permission of instructor. Introduction to the basics of environmental law, using a resource to recovery approach. Includes history of environmental law, U.S. statutes and case law, an overview of international law, with emphasis on North America. Requires substantial reading and exposes students to legal analysis.

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.

470 THE HISTORY OF THE CONCEPT OF NATURE:**PRE-HISTORY-300 A.D. (3)**

Prereq: Envr 301 or 303, or permission of instructor. Historical ideas about nature and their relationships to contemporary concepts of nature. These ideas include dominion over nature and nature as spirit, as a theocracy, as matter, as thought and as empirical perception.

471 THE HISTORY OF THE CONCEPT OF NATURE: 1200-1800 A.D. (3)

Prereq: Envr 302 or 303, or permission of instructor. Envr 470 recommended. Various concepts of nature during the period 1200-1800 including discussion of the Copernican Revolution, changing from the earth-centered universe and the subsequent impact on society; the use of natural magic in explaining natural events; the artistic representation of nature and how it changed over this period; the Enlightenment and debate over nature as ennobler or debaser of human beings.

472 HISTORY OF THE CONCEPT OF NATURE: 1800-PRESENT (3)

Prereq: Envr 302 or 303, or permission of instructor. Envr 471 recommended. Various concepts of nature including discussion of the debate over the geologic record and evolution; the artistic representation of nature; recent changes in the scientific description of nature. Exploration of long-standing problems concerning our knowledge of nature, e.g., the mind/body problem, nature vs. nurture, holism vs. reductionism, stewardship vs. dominion.

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 (5)

Prereq: Envr 371 and 372; or permission of instructor; concurrent enrollment in Envr 476 and 483. 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 (5)

Prereq: Envr 371 and 372; or permission of instructor; concurrent enrollment in Envr 474 and 483. 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)

Environmental problems of Northwest Washington and related topics. A survey course that may include impact assessment, local and regional planning, pollution problems, and problems of the environmental classroom. Available only off campus under the aegis of Continuing Education. Not available to Huxley majors. Repeatable for credit with no maximum.

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 110 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 and 476. 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.

490 ENVIRONMENTAL RISK MANAGEMENT (4)

Prereq: Econ 206 or permission of instructor. Introduces students to risk analysis methods and processes that shape risk management decisions in the public and private sectors. Focuses on environmental problems and health hazards, although parallels to other risk contexts are discussed.

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. Evaluates 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.

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: senior status 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: senior status or permission of instructor. Student-faculty interaction. Repeatable for credit with no maximum. S/U grading.

499n-r SEMINAR (1)

Prereq: senior status or permission of instructor. Student-faculty interaction on topics of general interest. Repeatable for credit with no maximum.

499s-z SEMINAR (2)

Prereq: senior status 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 pages XX 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.

505 ADVANCED HUMAN ECOLOGY (3)

Prereq: graduate status; previous undergraduate course work in sociology, anthropology, psychology and/or geography. The study of human-environmental interactions based on an understanding of the unique psycho-physiology of the human species, and the evolution of human social institutions, technology and scientific understanding of the natural environment, followed by an assessment of the need for institutional changes to cope with the increasing scope of environmental problems.

507 ADVANCED TERRESTRIAL ECOLOGY (5)

Prereq: Envr 325 or Biol 325. The advanced study of species interactions with one another and with abiotic components in terrestrial ecosystems.

510 QUANTITATIVE RISK ASSESSMENT (4)

Prereq: Envr 450 or 456 (or equivalents); biostatistics or other statistics course. Principles and methods of quantitative risk assessment, application of risk assessment to environmental problems, analysis of environmental data.

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.

531 STATISTICAL ECOLOGY (4)

Prereq: at least one 300-level biostatistics class and at least 10 credits of ecology. Covers graphical, descriptive and basic inferential statistics; non-parametric procedures; regression, correlation, and analysis of variance; and multivariate classification and ordination. Emphasis on

using a variety of statistical tools to analyze ecological data sets. Uses advanced statistical software (e.g. SPSS-X); computer literacy is helpful but not required.

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.

535 ADVANCED LANDSCAPE ECOLOGY (4)

Prereq: Envr 325 or Biol 325. The advanced study of landscape patterns across temporal and spatial scales with emphasis on their organization, functional interactions and dynamics. Application of landscape principles to land management problems.

536 ENVIRONMENTAL IMPACT ASSESSMENT PRACTICUM (4)

Prereq: graduate status. Preparation of an objective assessment description of a real natural area including the search for public documentation, evaluation of coverage and specific new analyses. Coordinating role in task group data assembly and editorial review of draft project summaries. Experience directly related to professional responsibilities in the environmental field. Review of assessment utilization in the EIS format and of significant legislation.

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 (4)

Prereq: Envr 325 or Biol 325. Advanced examination of evolutionary, biological, social and ethical questions concerning conservation and protection of endangered and threatened species. Applications of genetics, ecology and behavior to conservation and preservation strategies.

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 (3)

Prereq: Envr 455 or 555. 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 ADVANCED ENVIRONMENTAL EDUCATION (4)

Prereq: graduate status or permission of instructor. In-depth review of the field of environmental education, examining its fundamental principles and processes. Review of literature revealing the major questions and issues facing environmental educators in both formal and informal settings. Presentation of challenges involved in educating literacy.

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.

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 SCIENCE SEMINAR (1-2)

Prereq: graduate status in environmental science. Selected topics across the spectrum of specialization within environmental science (e.g., toxicology, watershed studies, applied ecology, 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 education) program. May take various forms: development of an educational program, preparation of curriculum, production of educational materials. May be done off campus between periods of residence work.

COURSES IN GEOGRAPHY

Courses numbered X37; X97; 300, 400; 417, 445 are described on page 30 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 AREAL DATA (4)

Prereq: Math 240 or Soc 207; Geog 201, 203. Statistical and cartographic techniques 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 URBAN GEOGRAPHY (4)

Prereq: Geog 201. Geographic relations of the modern city with emphasis upon the development, functions and problems of American cities.

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 MAP DESIGN AND PRODUCTION (2)

Prereq: Geog 201 or 203; concurrent enrollment in Geog 351; Geog 305 or concurrent enrollment in Geog 305. Map design and

construction; basic concepts for cartography and geographic information systems.

358 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 applications through lab assignments.

359 GIS DATABASES (4)

Prereq: Geog 358. 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.

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.

452 ADVANCED GIS (4)

Prereq: Geog 359. 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 510; 517; 545; 597 are described on page 30 of this catalog.

Admission to Graduate School or special permission required. See the Graduate School section of this catalog.

501 HISTORY AND PHILOSOPHY OF GEOGRAPHY (4)

Prereq: graduate status. Evolution of geographic concepts, philosophy and methodology.

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 LAND USE AND DEVELOPMENT (5)

Prereq: Geog 501 and 510. Investigation and research in the area of land use and development, including an evaluation of the theories, methods and techniques employed in that sub-field. Attention also given to procedures for assessment of land resources within various social, economic and cultural contexts.

522 RESOURCE ASSESSMENT AND MANAGEMENT (5)

Prereq: Geog 501 and 510. Investigation and research in the area of resource assessment and environmental management, including an examination of the analytical frameworks employed in that sub-field to evaluate constraints and options in the sustainable use of biophysical systems.

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 (1-9)

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

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 human resources development. 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 Department of Educational Curriculum and Instruction is one of two major components of the Woodring College of Education and is responsible for developing and implementing teacher education programs which lead to Washington State Certification. The Department of Educational Curriculum and Instruction offers both undergraduate and graduate course work in elementary, secondary, K-12 and special education.

The Department of Educational Administration and Foundations is comprised of programs in Adult and Higher Education, Foundations of Education, Human Services, Instructional Technology and School Administration.

Professional education programs are developed and reviewed with the assistance of professional education advisory boards with representatives from cooperating school districts and professional associations.

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, admissions 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 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

Teacher Certification Requirements

See the Department of Educational Curriculum and Instruction section of this catalog.

OVERVIEW OF THE WOODRING COLLEGE OF EDUCATION

Administrative Services

- Certification
 - Initial Teaching Certification
 - Continuing Certification
 - Principal Certification
- Center for Regional Services
 - Field Services for Education
- Center for Interactive Multimedia for Education and Training
- Center for Educational Pluralism

Educational Administration and Foundations

Program Chairs

Les Blackwell, Instructional Technology
 Robert Kim, Educational Foundations
 Marvin Klein, School Administration
 Susan Mancuso, Adult and Higher Education
 Philip Vander Velde, Human Services

Programs Offered

- Adult and Higher Education
 - Adult Education
 - Student Personnel Administration in Higher Education
- Educational Foundations
- Human Services
- Instructional Technology
 - Instructional Technology in Schools
 - Instructional Design and Multimedia Development
 - Learning Resources
- School Administration
- Professional Certificate Programs
 - Certificate of Advanced Study (CAS)
 - Community and Technical College Faculty Preparation Programs
 - Interactive Multimedia Development

Educational Curriculum and Instruction

Program Chairs

Charles Atkinson, Special Education
 Lee Dallas, Secondary Education
 Carolyn Dyson, Office of Field Experiences
 Theodore Mork, Elementary Education

Programs Offered

- Secondary Education Professional Program
- Elementary Education Professional Program
- K-12 Education Professional Program
- Special Education Professional Program
 - Early Childhood Special Education (P-3)
 - Special Education (K-12) with Elementary Education
 - Special Education (K-12) with Secondary Education
 - Special Education (K-12)

Administrative Services

- Teacher Education Admissions
- Office of Field Experiences

Graduate Programs in Education

The two departments of the Woodring College of Education offer various master's degrees. There are graduate programs within the Department of Educational Curriculum and Instruction which include initial teacher certification and those which are designed for practicing

teachers. Within the Department of Educational Administration and Foundations, graduate programs are offered in school administration, adult education administration and student personnel administration. For a complete description of the programs, see the Graduate School section of this catalog.

EDUCATIONAL ADMINISTRATION AND FOUNDATIONS

EDUCATIONAL ADMINISTRATION AND FOUNDATIONS FACULTY

- LESLIE BLACKWELL (1968) Professor. BA, Washington State University; MEd, EdD, University of Washington.
- EILEEN COUGHLIN (1994) Adjunct Professor. BS, MA, Central Michigan State University; EdD, Northern Arizona University.
- LAWRENCE ESTRADA (1989) Adjunct Professor. BA, University of California at Santa Barbara; MA in Ed, Whittier College; PhD, University of California at Los Angeles.
- JAMES FLINT (1988) Lecturer. BA, MA, PhD, University of Washington.
- CAROL HAWTHORNE (1993) Lecturer. BA, MEd, Western Washington University.
- ANTHONY JONGEJAN (1983) Associate Professor. BA, MS, Western Washington University; MS, PhD, University of Oregon.
- LORRAINE KASPRISIN (1979) Professor. BSEd, MA, The College of the City of New York; MPhil, PhD, Teachers College, Columbia University.
- ROBERT H. KIM (1971) Professor. BA, Hangeuk University for Foreign Studies; BA, MA, EdD, George Peabody College.
- MARVIN L. KLEIN (1978) Professor. BS, MS, Southern Illinois University; PhD, University of Wisconsin, Madison.
- ROBERT LAWSON (1985) Lecturer. BA, MEd, Western Washington University.
- MARY MORGAN LIVINGSTON (1977) Lecturer. BA, MA, University of Oregon.
- VIOLET M. MALONE (1991) Professor. BEd, Northeastern Illinois State University; MEd, Chicago State University; Advanced Master's, University of Chicago; PhD, Florida State University.
- SUSAN K. MANCUSO (1995) Lecturer. BA, University of California, Los Angeles; MA, Western Washington University; EdD, University of Washington.
- LAWRENCE W. MARRS (1984) Professor and Dean, Woodring College of Education. BS, MS, University of Utah; PhD, University of Texas.
- SHARALYN POPEN (1989) Assistant Professor. BSE, State University College, Cortland; MSE, Kent State University; PhD, State University of New York, Albany.
- JANE ANN PULLEN (1986) Lecturer. BA, University of California; MA, Goddard College.
- FRANKLIN C. ROBERTS (1990) Associate Professor. BA, Salem State College (Mass.); MEd, PhD, Pennsylvania State University.
- SY SCHWARTZ (1967) Associate Professor. BS, MS, EdD, Wayne State University.
- JOSEPH E. TRIMBLE (1978) Professor. BA, Waynesburg College; MA, University of New Hampshire; PhD, University of Oklahoma.
- JOHN F. UTENDALE (1972) Professor. BPE, University of Alberta; MEd, Eastern Washington State College; EdD, Washington State University.
- PHILIP B. VANDER VELDE (1967) Associate Professor. BA, Calvin College; MA, PhD, Michigan State University.
- JANE VERNER (1994) Lecturer. BS, New York University; MBA, University of Toronto.
- LINDA ZURFLUH (1984) Professor. BA, MA, Pacific Lutheran University; EdD, University of Washington.

OVERVIEW

The Department of Educational Administration and Foundations consists of five program areas as described below. The programs help prepare individuals for administrative-leadership roles in K-12 educational systems, higher education student personnel work, adult educational programming and in human service agencies. The programs also extend and complement the educational experiences offered to teacher education program certification students. Degrees granted are:

- Bachelor of Arts in Human Services

- Master of Education in Adult Education — Concentrations in:
 - Specialization I, Management/Leadership
 - Specialization II, Instructional Design and Multimedia Development
 - Specialization III, Human Services Administration
 - Specialization IV, Vocational Rehabilitation Counseling
 - Community College Faculty Preparation Program (certificate program)
- Master of Education in Student Personnel Administration in Higher Education
- Master of Education in School Administration (Elementary, Secondary, Instructional Technology):
 - Principal's (Initial or Continuing) Certificates
 - Certificate of Advanced Study (CAS)
- Professional Certificate Programs:
 - Certificate of Advanced Study (CAS)
 - Community College Faculty Preparation Program
 - Interactive Multimedia Development

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 EdAF 444 or HS 483 with a grade of C or higher demonstrates this competency
- Entrance into EdAF 444 requires the completion of a portfolio of basic instructional technology skills. EdAF 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 are available from the Instructional Technology office (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.

ADULT AND HIGHER EDUCATION

Program Chair: Dr. Susan Mancuso, Miller Hall 329, (360) 650-6552, smancuso@wce.wvu.edu

This area consists of two programs: Adult Education and Student Personnel Administration in Higher Education.

They represent a recognition of several broad areas of adult education and life-long learning that go beyond traditional elementary and secondary education, and which take place in the numerous other human service institutions in the community. The program is organized to prepare both entry-level and advanced practitioners who would administer, counsel or teach in these institutions. A listing of types of institutions is lengthy, but would include colleges and universities, social and health service agencies, volunteer service agencies such as the Red Cross, Planned Parenthood, half-way houses and rehabilitation organizations that sponsor various types of community development programs.

For additional information, refer to the Adult Education or

Student Personnel Administration in Higher Education program descriptions in the Graduate School section of this catalog. The program area office is located in Miller Hall 311.

EDUCATIONAL FOUNDATIONS

Program Chair: Dr. Robert Kim, Miller Hall 310A, (360) 650-3867, kimhchan@wce.wvu.edu

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 310.

HUMAN SERVICES

Program Chair: Dr. Philip Vander Velde, Miller Hall 324D, (360) 650-3348, pvander@wce.wvu.edu

This program is offered at five sites: Bellingham, Bremerton, Everett, Oak Harbor and Seattle. Not all courses are taught at all sites. The programs are all 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. Emphasis areas in counseling and management may be determined with advisement.

The human services major is an upper-division program within the Woodring College of Education and leads to a B.A. degree. Admission to Bellingham, Bremerton, Everett, Oak Harbor or Seattle sites requires a transferrable associate degree or 90 credits that include the General University Requirements (sciences, mathematics, communications, social sciences, humanities, non-Western and minority cultural studies).

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 program at all locations is now self-sustaining (not funded by legislated appropriation and dependent upon student tuition revenue), the tuition rate may be different than for state-supported courses. Admissions and registration information is available in Miller Hall 324 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. Procedures for demonstrating or developing competence are available from the program offices.

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 seminars for six quarters (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.

- Applied Research Methods (4 credits): HS 482a, which provides students with the knowledge and skills required to examine human service agencies and services.
- Seminar in Cultural Awareness (3 credits): HS 477, which responds to the humanistic values attendant to working and living in pluralistic and global societies.
- Group Facilitation and Interventions (3 credits): HS 477, which provides students with skills necessary to understand and facilitate group interactions.
- Caseload Management and Interviewing (3 credits): HS 448, reviews case management and provides basic interviewing skills.
- Prerequisite for admission: successful completion of a basic computer course from an academic institution, or the equivalent.
- Twenty-nine credits are required with advisement.
- Independent study: Students are limited to 6 credits of independent study, workshops and social issues institute classes.
- For scholarship standards refer to the University Academic Policies section of this catalog.

INSTRUCTIONAL TECHNOLOGY

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

The Instructional Technology Program 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)

The program advisement office is located in Miller Hall 204.

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. 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)
 - EdAF 444, 452, 453, 457
- Elective courses (12 credits)
 - EdAF 449, 450, 454, 455, 460
 - CS 120 or 221
 - 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 Instructional Technology Program office in Miller Hall 204, (360) 650-3090.

SCHOOL ADMINISTRATION

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

The School 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 two consecutive years of certificated teaching experience in one district on at least a half-time basis; the service must cover the entire school year. Candidates are directed to the Graduate School section of this catalog for more information; the program area office is located in Miller Hall 204.

COURSES IN EDUCATIONAL ADMINISTRATION AND FOUNDATIONS

Courses numbered X37; X97; 300, 400; 417, 445 are described on page 30 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.

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.

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.

240 PARAPROFESSIONALS IN EDUCATION (1-4)

Prereq: employment or anticipated employment as a paraprofessional. Course work emphasizes the nature of the helping relationship; an overview of philosophical and theoretical issues which confront paraprofessionals; the development of specific job requirement skills. Repeatable with no maximum.

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.

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.

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: EdAF 340 and permission of instructor. Supervised practicum for students to work in university student services programs. Repeatable with varied experiences to six credits. 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 EdAF 444. S/U grading.

350 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.

391 HUMAN RELATIONS (1-4)

A study and practicum in interpersonal relationships as they affect teacher-student interaction. Repeatable with no maximum.

410 TEACHING THE CULTURALLY DIFFERENT CHILD (4)

Prereq: EdAF 310 or equivalent. Analysis of legal, political and cultural forces influencing education of culturally different children, of their family, community and values, and of school curricula provisions for cultural identity.

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.

441 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.

444 CLASSROOM USE OF INSTRUCTIONAL TECHNOLOGY (3)

Prereq: 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.

449 MULTIMEDIA TOOLS AND APPLICATIONS (3)

Prereq: EdAF 444 or permission of instructor. An overview of the tools required for the creation of interactive multimedia. The tools are organized into three categories: authoring systems, hypermedia authoring environments, and media production (such as graphics production, video and sound).

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: EdAF 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: EdAF 444 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: EdAF 444 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: EdAF 444 or permission of instructor. Examines the use of tools such as word processing, data bases, spreadsheets, graphics, desktop publishing and presentation software.

455 INTERACTIVE MULTIMEDIA SYSTEMS (3)

Prereq: EdAF 444 or permission of instructor. An introductory study of interactive multimedia systems. Includes videodiscs, computer interfacing, CD ROM and multimedia authoring software.

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.

457a-d PRACTICUM IN INSTRUCTIONAL TECHNOLOGY (1-4)

Prereq: EdAF 444 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.

458 MANAGING CONFLICT AND STRESS (1-4)

Prereq: upper-division status or permission of instructor. 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 to a maximum of 4 credits.

459 TELECOMMUNICATIONS IN EDUCATION (3)

Prereq: EdAF 444 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, listserves, gopher, the World Wide Web and new emerging telecommunications technologies.

460 DESKTOP PUBLISHING AND TECHNICAL WRITING (3)

Prereq: EdAF 444 or permission of instructor. Basic issues of desktop publishing for technical documents, including layout, design, scanning and graphics.

462 DIGITAL VIDEO AND AUDIO PRODUCTION (3)

Prereq: EdAF 444 or permission of instructor. Principles of audio and video production and methods for digitizing for multimedia development.

463 GRAPHICS FOR MULTIMEDIA DEVELOPMENT (4)

Prereq: EdAF 444 or permission of instructor. Principles and techniques for computer graphics for multimedia development.

466 AUTHORIZING FOR MULTIMEDIA DEVELOPMENT (4)

Prereq: EdAF 462 and 463 or permission of instructor. Techniques and procedures for authoring when developing multimedia. Scripting required in implementation of concepts.

467 AUTHORIZING SYSTEMS (2)

Prereq: EdAF 462 and 463 or permission of instructor. Introduction to features of authoring languages and systems, including templates, multimedia, record keeping, variables and data structures.

473 EDUCATIONAL STATISTICS (5)

Prereq: Math 240 or equivalent, or permission of instructor. Statistics applicable to description of school data and research in education, primarily selected analysis of variance and correlation procedures; computer applications.

Graduate Courses

Courses numbered 500; 517; 545; 597 are described on page 30 of this catalog.

Admission to Graduate School or special permission required. See the Graduate School section of this catalog.

501 EDUCATIONAL RESEARCH (4)

Prereq: graduate status. 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.

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: EdAF 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: EdAF 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: EdAF 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 higher education in any of the following areas: adult education, educational administration, foundations, human services, instructional technology, student personnel administration, community education, interprogram topics. Repeatable with no maximum.

521 INSTRUCTIONAL DESIGN FOR MULTIMEDIA DEVELOPMENT (4)

Introduction to the process of instructional design, project management and human interface design. Topics include task analysis, competency specification, instructional strategies, media selection, user interface, prototyping, formative evaluation and project management.

522 INSTRUCTIONAL DESIGN: STRATEGIES (3)

Prereq: EdAF 521 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.

524 DESIGNING COMPUTER-BASED INSTRUCTION (3)

Prereq: EdAF 449 or permission of instructor. Introduction to 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, student control, storyboarding techniques and evaluation strategies.

525 ADVANCED DESIGN OF MULTIMEDIA INSTRUCTION (3-6)

Prereq: EdAF 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.

527a-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.

534 ASSESSING EDUCATIONAL QUALITY (3)

Prereq: EdAF 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.

535 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.

541a THEORY IN EDUCATIONAL ADMINISTRATION (4)

Prereq: graduate status or permission of instructor. Major administrative theories.

541b PUBLIC SCHOOL ORGANIZATION AND ADMINISTRATION (4)

Problems and potentials of the principalship.

541c SCHOOL LAW (4)

Legal principles underlying statutes and court decisions related to the schools.

541e COLLECTIVE BARGAINING IN THE PUBLIC SCHOOLS (4)
 Technical structure and protocol of collective bargaining as well as issues and practices.

542a-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).

543a SUPERVISION IN THE PUBLIC SCHOOLS (4)
 Supervision as educational leadership in continuous evaluation and improvement of school practice.

543b SEMINAR IN SCHOOL PERSONNEL ADMINISTRATION (4)
 Prereq: permission of instructor. Professional relationships among certified employees and other school personnel; development and implementation of policies.

543c 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.

544a SYSTEMS APPROACH AND EDUCATIONAL MANAGEMENT (4)
 The systems approach as related to educational project planning and management.

544b 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.

544c 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.

544d 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.

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 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.

549 SEMINAR IN EFFECTIVE SCHOOL PRACTICES (4)
 Review and analysis of research findings related to effective school practices.

550 ORGANIZATION AND MANAGEMENT OF INSTRUCTIONAL TECHNOLOGY PROGRAMS (4)
 Prereq: EdAF 544b 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.

555 STUDENT PERSONNEL ADMINISTRATION (4)
 Prereq: admission to Student Personnel Administration Program or permission of instructor. The services commonly included in student personnel programs of colleges and universities; emphasis on purpose, scope, function and effect of student services; their conceptual

framework and relationship to faculty, other administrative offices and students.

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 organization behavior.

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 communications and crisis intervention; emphasis on skill acquisition through micro-training techniques.

562 DIGITAL VIDEO AND AUDIO PRODUCTION (3)
 Prereq: EdAF 444 or permission of instructor. Principles of audio and video production and methods of digitizing for multimedia development.

563 GRAPHICS FOR MULTIMEDIA DEVELOPMENT (4)
 Prereq: EdAF 444 or permission of instructor. Principles and techniques for computer graphics for multimedia development.

566 AUTHORING FOR MULTIMEDIA DEVELOPMENT (4)
 Prereq: EdAF 562 and 563 or permission of instructor. Techniques and procedures for authoring when developing multimedia. Scripting required in implementation of concepts.

567 AUTHORING SYSTEMS FOR COMPUTER-BASED TRAINING (2)
 Prereq: EdAF 562 and 563 or permission of instructor. Introduction to features of authoring languages and systems, including templates, multimedia, record keeping, variables and data structures.

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 CONTEMPORARY ADULT EDUCATION (4)
 Prereq: graduate status or permission of instructor. Introductory seminar that provides an understanding of adult education's characteristics as a social movement and its role in society. Adult education as a discipline and knowledge of the scope, structure and current influencing factors on practice are developed.

576 SEMINAR IN ADMINISTRATION (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. Examines the nature of social power in organizations, how power is created and how it flows, how it is increased through coalitions, coalition bargaining issues and patterns, conditions influencing coalition formation, conflict bargaining, theories of bargaining tactics, and uses and misuses of coercion.

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 HUMAN RESOURCES DEVELOPMENT (2-5)

Prereq: permission of instructor. Supervised study focusing on selected topics in the following areas: adult education, student affairs, 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.

583 THEORY AND PRACTICE OF REHABILITATION COUNSELING (4)

Prereq: EdAF 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.

584 GROUP COUNSELING TECHNIQUES IN REHABILITATION (3)

Prereq: EdAF 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: EdAF 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: EdAF 582 or permission of instructor. A comprehensive exploration of the process of assisting individuals with disabilities to find and maintain suitable theories, placement strategies and techniques, job analysis and modification, functional limitations and transferrable skills, and computer-assisted career information systems.

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.

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. 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: 3 or 6 credits of practicum 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.

594j,k,m 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.

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.

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) adult education; (b) educational administration; (c) reading; (d) foundations; (e) learning resources/library science; (f) secondary education; (g) special education; (h) personnel administration; (i) elementary education; (k) early childhood education; (n) community education; (p) interprogram topics. Repeatable with no maximum.

642a-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.

643 ADMINISTERING THE IMPROVEMENT OF CURRICULA (3)

Prereq: MA or MEd and EdCl 521 or 522 or equivalent. Systematic analyses of curricular offerings, development of guidelines for curriculum design and development of curricular screening devices.

644a-c SEMINARS IN EDUCATIONAL MANAGEMENT: ADVANCED SYSTEMS THEORY (5 ea)

644a ADVANCED EDUCATIONAL SYSTEMS ANALYSIS

Prereq: master's degree and permission of instructor. Identification of high-priority needs within a school system and application of systems theory.

644b EDUCATIONAL CHANGE: THEORY AND PRACTICE

Prereq: master's degree and EdAF 644a. Analysis of appropriate strategies and tactics for effecting planned change in public schools and/or districts.

644c MANAGEMENT BY OBJECTIVES: ACCOUNTABILITY

Prereq: master's degree and EdAF 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).

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.

676 INSTRUCTIONAL SYSTEMS THEORY AND COMMUNITY COLLEGE INSTRUCTION (4-6)

Prereq: master's degree and/or 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.

690 THESIS (1-9)

Prereq: approval of the student's graduate committee. Research study under the direction of a faculty committee. Repeatable to a maximum of 9 credits. S/U grading.

691 RESEARCH SEMINAR (1-6)

Prereq: approval of the student's graduate committee or program adviser. Graduate research under the direction of program adviser/committee. Repeatable to a maximum of 6 credits. S/U grading.

692a,b,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.

COURSES IN HUMAN SERVICES

Courses numbered X37; X97; 300, 400; 417, 445 are described on page 30 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.

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.

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 PRINCIPLES OF AGENCY MANAGEMENT (3)

Management principles including historical perspectives and contemporary management concepts as applied to non-profit 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. S/U grading.

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.

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.

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.

446 INDIVIDUAL INTERVIEWING AND COUNSELING (4)

Prereq: HS 303 or another interpersonal skills class or permission of instructor. Theory and practice of basic skills used in one-on-one helping relationships; includes lab for skills acquisition and development.

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.

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 HUMAN SERVICES AND EDUCATION (3)

Addresses the emerging trend of increased collaboration between human services and public schools. Examines the cultures of human services and education with emphasis on the foundations, values and history of both institutions.

461 COLLABORATIVE SKILLS IN HUMAN SERVICES AND EDUCATION (3)

Prereq: HS 460. Examination, analysis and synthesis of research and strategies necessary in the creation and management of community-based school projects formed by partnerships between human services, education, public health and/or the private sector.

462 COMMUNITY RESOURCE AND REFERRAL IN HUMAN SERVICES AND EDUCATION (2)

Study of the process of resources referral, including listening skills and the intake process. Research of education, community agencies and resources, client rights, confidentiality, legal issues and networking strategies.

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. S/U grading.

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)

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 (4)

Procedures for strategic planning and creating and implementing programs, including needs assessments and budgeting.

486 HUMAN RESOURCES DEVELOPMENT (3)

Development of knowledge and skills in consultation, advocacy, organizing 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. S/U grading.

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.

LIBRARY SCIENCE

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

"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.

K-12 Supporting Endorsement — Learning Resources

25 credits

- Required (16 credits)
 - EdAF 450
 - EdAF 444
 - Lib Sci 405 or Lib Sci 407
 - EdAF 453
 - Lib Sci 403
- 9 credits of electives selected from:
 - Lib Sci 309, 401, 402, 410
 - EdAF 452, 454, 457
 - EdAF 455, 451

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 30 of this catalog.

125 LIBRARY ORIENTATION (1)

Introduction to books and libraries and to the Wilson Library in particular; effective use of standard reference tools.

304 INTRODUCTION TO CHILDREN'S LITERATURE (2)

An overview of the field of literature for pre-school through middle school students.

305 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 30 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.

EDUCATIONAL CURRICULUM AND INSTRUCTION

EDUCATIONAL CURRICULUM AND INSTRUCTION FACULTY

- CHARLES M. ATKINSON (1976) Associate Professor. BA/Ed, MEd, Central Washington State College; EdD, Utah State University.
- DARCY BRADLEY (1994) Assistant Professor. BFA, California College of Arts and Crafts; MEd, Colorado State University; PhD, The Ohio State University.
- LEE A. DALLAS (1968) Associate Professor. AB, Gettysburg College; MEd, EdD, Temple University.
- MARCIA DAVIDSON (1994) Visiting Assistant Professor. BA, Webster College; MS, Central Florida University; PhD, University of Washington.
- HOWARD M. EVANS (1972) Associate Professor. BS, Eastern Oregon College; MA, EdD, University of Illinois.
- FLORA FENNIMORE (1969) Professor. BS, Mt. Angel College; MA, EdD, Washington State University.
- SHEILA FOX (1977) Associate Professor and Assistant Dean. BA, Western Washington State College; MEd, 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.
- KENNETH W. HOWELL (1988) Professor. BA, MA, Arizona State University; PhD, University of Oregon.
- ROBERT KEIPER (1990) Associate Professor. BA, Kearney State College; MA, EdD, University of Northern Colorado.
- BRIDGET KELLEY (1995) Visiting Assistant Professor. B.S., University of Pittsburgh; MEd, Arizona State University; PhD, University of Washington.
- SUZANNE L. KROGH (1990) Professor. BA, Florida State University; MEd, University of Maryland; PhD, University of Oregon.
- LAWRENCE W. MARRS (1984) Professor and Dean, College of Education. BS, MS, University of Utah; PhD, University of Texas.
- THEODORE A. MORK (1971) Professor. BA, MEd, Western Washington State College; PhD, Syracuse University.
- KARNA L. NELSON (1987) Lecturer. BA, MA, Arizona State University.
- ROBERT H. PINNEY (1971) Associate Professor. BA, University of Washington; EdD, Stanford University.
- KAY PRICE (1984) Lecturer. BA, MA, Western Washington University.
- MELISSA J. RICKEY (1994) Assistant Professor. BA, MEd, EdD, University of Washington.
- KRISTINE L. SLENTZ (1989) Associate Professor. BA, State University of New York; MA, PhD, University of Oregon.
- JOHN C. TOWNER (1972) Professor. BS, MSE, Wisconsin State University; PhD, University of Minnesota.
- RAY WOLPOW (1994) Assistant Professor. BA, Wagner College; MA, Columbia University; PhD, Pennsylvania State University.

OVERVIEW

Students who wish to become teachers or to expand their knowledge of teaching can choose from programs in elementary, secondary, and special education. Programs are designed to balance work in theoretical foundations, teaching methodology, academic content and practical classroom applications. The emphasis assigned to each of these areas is determined by each program's focus and by each student's individual needs.

Undergraduate programs in Elementary and Secondary Education require an academic major in addition to course work within the College of Education. Special Education is an academic major that also includes course work within the College of Education. At the time of catalog printing,

Early Childhood certification and middle school programs were under development and may be available before the next catalog revision. Finally, a reading endorsement may be added to the student's certificate program by adding state-required coursework.

Western Washington University graduates with teaching certification 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 more information on critical areas of need. It will then be possible to make a knowledgeable choice of major and to begin work in it early in the student's University experience.

Students or applicants should check with the program office as curricula and other important factors may change from what is published in this catalog. At the time of printing of this catalog, Washington Administrative Code requirements are in the process of revision. Some requirements for admission or certification may be different by fall quarter, 1996. Please consult your program area for current requirements.

BACHELOR OF ARTS IN EDUCATION WITH CERTIFICATION

The teacher 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.

MASTER'S DEGREE AND INITIAL CERTIFICATION PROGRAMS

Programs leading to a master's degree and initial certification are available to students with bachelor's degrees and no education background. See the Graduate School section of this catalog for further information on degree options that include certification.

NOTE: There is also a concentrated, four- to six-quarter post-baccalaureate teacher preparation program for those who have a bachelor's degree but do not wish to pursue a master's degree at this time.

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.

NOTE: The Woodring College of Education only accepts post-baccalaureate and master's students who have, or are working toward, an endorsable major. See below for the state-approved list.

NOTE: Approved endorsements are subject to State of Washington legislative and administrative action and are not determined by Western Washington University. Students should check with the Admissions Office of the College of Education for any changes to this listing.

Secondary certificate candidates are required to complete a major approved by the state certification office for endorsement. The following majors all provide endorsement: Anthropology*, Art (see K-12 section), Biology**, Biology/Chemistry**, Chemistry**, Chemistry/Mathematics**, Chemistry/Physics**, Communication, Communication/English, Computer Science, Drama (see Theatre Arts section of catalog), Earth Science**, Economics*, English, English/Theatre (this double major leads to endorsements in English and drama), English/Communication (this double major leads to endorsements in English and speech), Foreign Language (see K-12 section), General Science**, Geography*, School Health Education, History*, Mathematics, Music Education (see K-12 section), Physical Education (see K-12 section), Physics**, Physics/Mathematics**, Political Science*, Social Studies* (student designed), Sociology*, Student/Faculty-Designed majors (may be acceptable if developed according to established policies and procedures), Technology Education.

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 current list includes: Anthropology, Art, Child Development (interdisciplinary), 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, Special Education, Student/Faculty-Designed Major.

Some of these majors for elementary candidates do fulfill the requirements for a WWU recommendation for an additional supporting endorsement. See the departmental description and your adviser for additional information.

K-12 certificate candidates must complete a major in one of the following four areas: Art, Foreign Language, Music, Physical Education.

Special Education certificate candidates may complete either the Special Education K-12 or the Preschool-3rd Grade Special Education program. The K-12 sequence qualifies students to teach special education only. The P-3 program results in a certificate with at least two endorsements.

Programs that combine special education with either a secondary or an elementary certificate result in at least two endorsements and are considered to be more versatile than the K-12 special education only sequence. Please see a special education adviser about these programs.

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, Reading, and Special Education.

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 319, phone (360) 650-3388, for more information on the requirements for these supporting endorsements.

ADMISSION TO TEACHER EDUCATION

Pre-Admission Work

The Woodring College of Education offers a number of courses such as EdCI 131 and EdAF 109 or 311 that can give students who are considering teaching as a career early exposure to the profession. Of the above, EdAF 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.

* **Social Studies Education.** All majors in the social studies fields, with the exception of the interdisciplinary social studies major, require the additional 44- to 46-credit Social Studies minor. Consult the Social Studies Education course descriptions in this catalog. Majors, except the social studies major itself, lead to a dual endorsement (the approved major and social studies).

** **Science Education.** Majors in science programs that do not offer a Bachelor of Arts or Education require completion of a Bachelor of Arts or Bachelor of Science plus additional courses in science methods. Consult the Science Education section listed in the index.

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 College of Education.

Transfer students must attend Western one quarter before they will be admitted into Woodring College of Education. Post-baccalaureate students must apply simultaneously to Western and to Woodring College. 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.

Application Requirements

NOTE: Enrollment restrictions apply in all teacher education programs. While meeting admissions criteria makes the applicant eligible for admission, it does not guarantee admission. The actual number of students admitted each year is determined by the faculty resources available.

Criteria for eligibility for admission are:

Credits

Completion of at least 45 credits (elementary and special education)

Completion of at least 75 credits (secondary/K-12)

Grade Point Average Minimum

A 2.75 cumulative grade point average (GPA) at the time of application in courses taken from any accredited institution of higher education. This GPA may be determined on the basis of the student's most recent 45 credits.

Entrance Tests

Minimum total scores* on the Washington Pre-College Test (WPCT), the Scholastic Aptitude Test (SAT) or the American College Test (ACT) are required by state law for admission to teacher education programs:

Test	Total Score	Verbal Comp. (Eng.)	Quant. Comp. (Quant.)
WPCT	103**	50	40
SAT	910	440	340
ACT	23	11	9

* The above numbers represent scores and are not percentiles. A student who does not have these scores may arrange to take the TETP through the Testing Center at WWU.

** The state requirement for the WPCT is the mean score for all people taking the test the previous year. It may change slightly for each subsequent school year, so students are advised to check with the College of Education Admissions Office.

In-School Observation

Five full days of classroom observation in an accredited school are required for admission to the Elementary and Special Education Programs and recommended by K-12 and Secondary Education Programs. Students should request a Five-Day Observation Packet from the Admissions Office in Miller Hall 206E prior to doing their observation.

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 approved public speaking course with a grade of B- or higher. Comm 101, 235 (secondary only), 312, 331, 454 (elementary only), at Western or equivalent courses fulfill this requirement. Challenge of the competency is possible but must be accomplished before application for admission to the College of Education.

Student Conduct

The Student Conduct Requirements and Agreement form must be completed and submitted with the application for admission to the College of Education.

NOTE: Secondary/K-12 Applicants: Names of applicants who meet the above criteria for admission to the Secondary/K-12 Education Program will be placed in a pool of qualified candidates. Each qualified candidate's name will be forwarded to his/her academic major department. Individual academic departments apply their own respective standards/criteria to determine which candidates will be recommended for admission to Secondary/K-12 Education. Applicants should contact their major adviser for further information.

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.

With notification of admission to the College, the admission coordinator will send instructions regarding fingerprinting, application for certification and sexual harassment prevention education (including a schedule of one-hour training sessions).

ADDITIONAL REQUIRED COMPETENCIES

Competency in the Use of Instructional Technology in Education is required of all teacher education candidates prior to the final internship.

- Completion of EdAF 444 with a grade of C or higher demonstrates this competency. There will be assigned sections of EdAF 444 for Elementary, Secondary and Special Education students.
- Entrance into EdAF 444 requires the completion of a portfolio of basic instructional technology skills. EdAF 344 can be used to help complete this portfolio. Procedures for completing this portfolio are available in Miller Hall 204.

Contact the Instructional Technology program in Miller Hall 204 for further information.

English competency is expected of all teacher 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 teacher 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 attached to the Five Day Observation form and distributed in practica (elementary and special education) or distributed in an orientation and methods course (secondary). **Successful completion of these requirements is necessary before beginning the final internship.**

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 schedule an appointment to meet with an adviser before beginning the education sequence. Secondary/K-12 students attend a required orientation prior to registering for their first quarter courses. Appointments may be arranged by contacting the following offices:

Elementary Education, Miller Hall 251, (360) 650-3336

Secondary Education, Miller Hall 306, (360) 650-3327

Special Education, Miller Hall 318, (360) 650-3330

K-12 Programs, Miller Hall 306, (360) 650-3327

Students who are interested in education, but who have not applied for admission to the College of Education, may talk with an adviser by contacting the program area office of their interest.

Program Standards

Students who have been admitted into the College of Education must maintain a 2.75 cumulative GPA in all courses taken at Western. This requirement takes effect the quarter in which the student is admitted into the College of Education and applies even if no education courses are being taken. If a student's cumulative GPA falls below 2.75, the student will be dropped from the teacher education program.

Grade point requirements for the academic major or minor may differ between departments.

In certain situations, a case conference may be called by the program head 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.

SECONDARY PROGRAM

Miller Hall 306, (360) 650-3327

Program Chair: Lee Dallas, Ed.D.

The Secondary Education professional program leads to initial certification at the 4-12 level when combined with an approved major. Students will be certified to teach only in their endorsed areas. For a list of approved major areas for the Secondary certificate, see the Certificates and Endorsements section above. Students who wish to pursue both certification and a concurrent Master of Education degree should consult the Graduate School section of this catalog and the secondary graduate program adviser.

Requirements for completion of the professional program in Secondary Education are outlined below.

Secondary Education Professional Program

65 credits

The courses listed below are not in the sequential order students will follow.

Professional Studies Core

23 credits

- Psychological Foundations
 - Psych 351
 - Psych 353
- Social/Philosophical Foundations
 - EdAF 310
 - EdAF 411
- Instructional Foundations
 - EdCI 363
 - HEd 456

• EdAF 444

Secondary Studies

18 credits

- EdCI 370
- EdCI 471, 471a
- EdCI 472, 472a
- EdCI 481

Secondary Program Internship

24 credits

- EdCI 495

Note: At the time of this printing, a specialized track focusing on middle school preparation was in the development stages. Contact the Secondary Education Office for information.

K-12 PROGRAM

Miller Hall 306, (360) 650-3327

Program Adviser: Robert Kieper, Ed.D.

This program leads to a K-12 certificate and must be accompanied by an approved major in art, foreign languages, music or physical education. (See appropriate catalog section for description.)

K-12 Professional Program

65-66 credits

Professional Studies Core

23-24 credits

- Psychological Foundations
 - Psych 351
 - Psych 352 or 353
- Social/Philosophical Foundations
 - EdAF 310
 - EdAF 411
- Instructional Foundations
 - EdCI 363
 - EdAF 444
 - HEd 455 or 456

K-12 Studies

18 credits

- EdCI 370
- EdCI 471, 471a*
- EdCI 472, 472a**
- EdCI 481 or 485 or 488

K-12 Internship

24 credits

- EdCI 494 or 495

Student Internship Placement/Required Portfolio

Recommendation by the Secondary Faculty is required for Student Internship Placement. Beginning with the first course(s) taken in the secondary professional education sequence, students will be responsible for compiling a portfolio illustrating the quality of their work in each class

* Exempt for physical education and foreign languages.

**Exempt for physical education.

to support their application and acceptance as student interns. *This portfolio will be collected during the last week of the class in EdCI 472.* Prior to final acceptance into the internship, the Secondary faculty will review the list of interns for that semester and review the file of any student they feel may not be totally prepared to student teach.

Criteria which may be considered in ascertaining the preparedness of a student include competence in written communication, verbal communication, presentation/peer teaching, and academic requirements of the program.

Following examination of the portfolio, should the faculty question the readiness of the student for the internship, a conference with the faculty will be arranged at which time the 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 materials/evidence. Following the conference the faculty will make one of the following recommendations: (1) approval to student teach; (2) develop a plan for remediation; or (3) advise student out of education.

The specific contents of the portfolio are outlined in a handout students receive upon admittance to Secondary Education.

ELEMENTARY PROGRAM

Miller Hall 251, (206) 650-3336

Program Chair: T.A. Mork, Ph.D.

The Elementary program leads to initial certification at the K-8 level when combined with an approved major.

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
 - EdAF 310
 - EdAF 411
- Instructional Foundations
 - EdCI 363
 - EdCI 320
 - EdCI 429
 - EdAF 444

Elementary Program — Methods and Curriculum Content

36 credits

- Art 380
- Music 361
- Math 381, 382

- PE 306
- Sci Ed 390
- Sci Ed 391
- Soc St 425
- Eng 440 or EdCI 424
- EdCI 485
- HEd 455

Elementary Internship

24 credits minimum

- EdCI 394a, 394b
- EdCI 494

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

Course Requirements

- Soc St 425
- Sci Ed 390
- Sci Ed 391
- EdCI 485
- PE 306
- Music 361
- Art 380
- Eng 440 or EdCI 424
- Math 381, 382
- EdCI 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

- EdCI 390 or 592d
- EdCI 430 or 530
- EdCI 431 or 531
- EdCI 432 or 433
- EdCI 438

Early Childhood Electives

- By advisement to total a 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
 - EdCI 385 or 489
- Reading Diagnosis and Prescription
 - EdCI 486 or 594e,f
 - EdCI 463a or 462a
- Children and Adolescent Literature
 - Lib Sci 405 or 407 or Eng 441 or 444 or EdCI 583
- Instructional Methods in Reading
 - EdCI 485 or 587 or 481 or 485, 485a or 583
- Instructional Methods in Content Reading
 - EdCI 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.

SPECIAL EDUCATION PROGRAM

Miller Hall 318, (360) 650-3330

Program Chair: Charles Atkinson, Ed.D.

Special Education may be combined as an endorsement with a Secondary certificate (4-12) or an Elementary certificate (K-8) or taken as a certification sequence in either Special Education (K-12) or Preschool through Third Grade (P-3).

See an adviser in the Special Education Office for details about each program.

Special Education candidates who already possess a bachelor's degree should consult the Graduate School section of this catalog (M.Ed. Exceptional Children program) and then see a Special Education adviser.

Major — Special Education

49-52 credits

This program may be completed as an academic major with an Elementary certificate or as part of the K-12 Special Education certificate.

- EdCI 360, 460, 462a, 462b, 463a, 463b, 463c, 465a, 465b, 466a, 466b, 468, 469a, 469b
- Seven credits of electives by advisement

K-12 Special Education Only

When taken with the Special Education major, this program leads to a certificate to teach Special Education K-12 only. Graduates are not qualified 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

49-52 credits

Professional Studies Core

19 credits

- Psychological Foundations
 - Psych 351, 316
- Social Foundations
 - EdAF 310

Instructional Foundations

- EdCI 471
- EdAF 444

General Methods

12 credits

- Math 382 (Note: Math 381 is a prerequisite to Math 382 and may be taken prior to admission to the College of Education)

- EdCI 472
 EdCI 424 or English 440

Special Education Internship

16 credits

- EdCI 498b or 498c

Special Education with Elementary Certificate

79-80 credits

Students wishing to complete the Elementary certificate with a Special Education major and endorsement also must be accompanied by a 30-credit concentration in a liberal arts area and must complete the following professional course work:

Special Education Major

49-52 credits

Professional Studies Core

15-16 credits

- Psychological Foundations
 • Psych 351
 • Psych 316 or 352
 Social Foundations
 • EdAF 310
 Instructional Foundations
 • EdCI 320

Elementary Program

35 credits

- HEd 455
 Sci Ed 390, 391
 Math 381, 382 (Note: Math 381 may be taken prior to admission to the College of Education)
 Soc St 425
 Eng 440 or EdCI 424
 Music 361, Art 380, PE 306
 EdAF 444

Internship

- 16 credits of EdCI 494
 16 credits of EdCI 498b

Special Education with Secondary Certificate

76 credits

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 candidates.

Major — Special Education

49-52 credits

Professional Studies Core

16 credits

Psychological Foundations

- Psych 316, 351

Social Foundations

- EdAF 310

Instructional Foundations

- EdAF 444

Secondary Program

16 credits

- EdCI 485
 EdCI 481 or 484
 EdCI 472, 471

Combined Internship

24 credits

- EdCI 495/498c

Major — Early Childhood Special Education

85 credits

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

27 credits

- Psychological Foundations
 • Psych 351, 316
 Social Foundations
 • EdAF 310
 Instructional Foundations
 • EdCI 320, 485
 • Math 382 (Note: Math 381 is a prerequisite to Math 382 and may be taken prior to admission to the College of Education)
 • EdAF 444

Early Childhood Studies

28-30 credits

- EdCI 390, 430, 431, 432, 433, 467a
 Soc 260 or HS 335
 PE 485b or 496
 SPA 351 or 354

Special Education Studies

30 credits

- EdCI 360, 460, 462b, 465a, 465b, 466a, 466b, 467b, 468, 469a

Electives

- Electives under advisement from psychology, sociology, anthropology, speech pathology/audiology, and educational curriculum and instruction

Teacher Certification

Internship

16 credits

- EdCI 498a

INTERNSHIP

An important experience for teaching certification candidates is the internship. Depending on program area, internships last either one quarter, two quarters, or one semester. Students in semester internships will register for credits in two consecutive quarters.

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 and with special education students, the sexual harassment prevention education requirement, certification paperwork and a 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 of their programs 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 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 M-F 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 program area and the Office of Field Experiences.

Placement locations are listed on the map available in the program area 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 319.

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 319.

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 three 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 under advisement.

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 319.

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. If a course is taken on the Pass/Fail system, the candidate's instructor must provide a statement that the Pass represented a C or better.

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 319, phone (360) 650-3388.

INTERDISCIPLINARY PROGRAMS

For information on advisement, inquire at Miller Hall 206.

BACHELOR OF ARTS IN EDUCATION

Major — Child Development

45 credits

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 3) or psychology (fourth through twelfth grades) by completing the appropriate additional course work. The early childhood endorsement requires EdCI 390, 430, 431, 432 or 433, and 438. Students who wish to add a psychology endorsement should take Psych 355 and enough electives in psychology to total 24 credits.

Core

34-41 credits

- Learning
 - Psych 351 or 321
- Development
 - Psych 352 or 316
- Motor Development
 - PE 485b
- Language Development
 - SPA 354 or EdCI 489 or Eng 442
- Exceptional Children in the Classroom
 - EdCI 363 or EdCI 467a
- Child in the Family
 - Psych 355 or EdCI 438
- Child and Family in Society and Culture
 - EdCI 435
 - Soc 360 or 369 or 380 or Anth 351 or 481 or 484
- Statistics
 - Psych 306 or Soc 210
- Advanced Topics in Developmental Psychology
 - Psych 456a or 456b or 456d

Elective Topics

- Sex Roles
 - Psych 219 or Anth 353 or Soc 368
- Life Span Development
 - EdCI 430 or 431 or Psych 353 or 357 or Soc 333 or 380 or EdCI 467b
- Advanced Topics
 - Psych 456a or 456b or 456c or 456d

Major — Interdisciplinary Arts

54-57 credits

The interdisciplinary arts major is an academic major offered through the Woodring College of Education and in cooperation with the departments of Art, English, Music and Theatre Arts. Students first receive advisement from the Department of Educational Curriculum and Instruction; later they are advised in the department in which they choose an area of concentration.

Students take all five units in the General Core. In addition, they complete one of the concentrations: art, literature/writing or theatre. (Those who choose art or theatre may apply for a supporting endorsement to be added to their certificate in elementary education.)

General Core

General: 8 credits

- Psych 342 and one of the following: Lbrl 232, 242, 243; CI St 350.

Art: 6 credits

- Art 101 and 120

Literature/Writing: 8 credits

- Eng 251 and one of the following: Lbrl 405; Eng 441

Music: 6 credits

- Music 101 or 102
- Music 105 or 205

Theatre: 6 credits

- ThA 250 and ThA 350 or 351

Concentrations

Art: 23 credits

- Art 220, 240, 280, 381, 382
- AH 240 and 301

Literature/Writing: 23 credits

- Lbrl 309 or ThA 265 or ThA 365
- Eng 370
- Lbrl 410 or Eng 351 or Eng 353 or EdCI 439
- One of the following: Eng 340, 364, 371, 404, 405, 406; Phil 303
- One 300/400 course in American literature
- One 300/400 course in British literature

Theatre: 23 credits

- ThA 101, 160, 170, 212, 222, 255, 260, 371

COURSES IN EDUCATIONAL CURRICULUM AND INSTRUCTION

Courses numbered X37; X97; 300, 400; 417-445 are described on page 30 of this catalog.

KEY TO COURSE NUMBERS: The first digit follows the University policy of numbering for the year in which the course is normally taken. The second digit signifies the following course groups:

- 0 Introductory
- 2 Curriculum and Instruction
- 3 Child and Youth Education
- 6 Special Education
- 7 Secondary Education
- 8 Reading
- 9 Supervising Teaching or Practicums

(See the Psychology Department section in this catalog for courses in educational psychology.)

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 and concurrent enrollment in EdCI 360 or 363. 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.

360 INTRODUCTION TO EXCEPTIONAL CHILDREN (3)

An introduction to the special instructional needs of disabled and gifted children.

361 MODERATE AND SEVERE DISABILITIES (3)

A survey of special education and related services for individuals exhibiting moderate and severe disabilities. Includes providing assistive technologies, alternative communication techniques and transition services. Observing and participating in school placement may be required.

363 EXCEPTIONAL CHILDREN IN THE CLASSROOM (3)

Prereq: admission to the Woodring College of Education and EdCI 320 (may be concurrent) or EdCI 471 (may be concurrent). Introduction to the characteristics and needs of exceptional learners; pertinent federal and state laws; curricular and behavior management adaptations in the regular classroom; assessment of learning problems; instructional techniques; behavior management strategies.

370 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.

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; EdCI 320 complete or concurrent; concurrent enrollment in EdCI 363 and 429 (or 469) recommended. 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: EdCI 424 (or Eng 440) and EdCI 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.

422 THE ELEMENTARY CURRICULUM (3)

Historical and analytical study of the curriculum of the elementary school.

423c,d 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.

424 LANGUAGE ARTS IN THE ELEMENTARY CURRICULUM (4)

Prereq: EdCI 320. Functions and programs of language arts in the curriculum including reading, writing, speaking, listening.

425a,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.

426c,d SOCIAL STUDIES IN THE SECONDARY CURRICULUM (3)

Prereq: teaching experience or permission of department. Functions, programs and materials in the social studies. Letters indicate grade level of emphasis in various sections of the course: (c) Junior High-Middle School. (d) Senior High.

429 ELEMENTARY CLASSROOM MANAGEMENT AND DISCIPLINE (3)

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: EdCI 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: EdCI 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 (1-3)

Development of skills for working with children from abusive or neglectful home environments. Content deals with helping educators help children increase their self esteem and cope with their environments.

438 SCHOOL-HOME-COMMUNITY RELATIONSHIPS (1-3)

Problems of communication and interaction among teachers, parents, and paraprofessionals, administrators, and community; conferencing, planning meetings, community survey. PR publications, use of mass media.

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.

442 WORKING WITH STUDENT TEACHERS (3)

Prereq: teaching experience. Techniques for the orientation of student teachers, major problems which confront student teachers, and evaluation of their achievement.

458 MANAGING CONFLICT AND STRESS IN TEACHING (1-3)

Prereq: teaching experience. Examines the relationships among conflict, stress and health. Emphasizes coping and managing techniques. Also includes self-assessment methods necessary to diagnose stressors in the work setting, etc.

460 BEHAVIOR MANAGEMENT (3)

Prereq: EdCI 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: EdCI 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 IN INCLUSIVE CLASSROOMS (4)

Prereq: EdCI 320, 360. 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: EdCI 360 or permission. Curriculum selection and adaptation of methods and materials for exceptional children and youth. Includes direct instruction, pre-vocational and vocational programming and transition services, survey and adaptation of instructional materials and task analysis.

463a LEARNING DISABILITIES (3)

Prereq: EdCI 360. Theoretical background assessment and instructional procedures for the learning-disabled student.

463b EDUCATION OF BEHAVIOR-DISORDERED CHILDREN (3)

Prereq: EdCI 360. Assessment, methods and curriculum for behavior disordered children. Emphasis on social skills training.

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.

465a MENTORSHIP IN SPECIAL EDUCATION (2)

Prereq: concurrent with EdCI 466a. Practicum experience in a school setting. Designed to provide students with a placement in a school where the requirements of 466a can be met and to provide students with experience in a special education setting. S/U grading.

465b PUBLIC SCHOOL PRACTICUM (4)

Prereq: concurrent with EdCI 469a. Practicum experience in a school setting. Designed to provide students with a placement in a school where the requirements of 469a can be met and to provide extensive experience in a special or general education setting just prior to the internship.

466a ASSESSMENT AND EVALUATION I (3)

Prereq: EdCI 360 or permission of instructor; concurrent enrollment with EdCI 465a. Assessment of pupil performance, selection of teaching strategies and evaluation using fluency as one of the parameters.

466b DEVELOPING IEPs (1)

Prereq: EdCI 466a or concurrent. Developing individualized education programs for individuals with disabilities based on best practices and compliance with the law.

467a TYPICAL AND ATYPICAL EARLY DEVELOPMENT (3)

Prereq: EdCI 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: EdCI 360 or 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: EdCI 360, 462a or concurrent. Techniques for communicating with and counseling disabled and gifted children and their parents, and working with interdisciplinary teams.

469a ASSESSMENT AND EVALUATION II (3)

Prereq: EdCI 466a; concurrent enrollment with EdCI 465b. Use of individualized teaching strategies and evaluation using curriculum-based assessment and precision teaching.

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.

471 INSTRUCTION IN SECONDARY SCHOOLS — METHODS 1 (4)

Prereq: EdCI 370, Psych 351, 353, EDAF 310; concurrent with EdCI 471a. Secondary curricula, lesson planning, instructional strategies and assessment techniques.

471a PRACTICUM (2)

Prereq: concurrent with EdCI 471 or EdCI 571. Assisting with classrooms at the middle school level; observing at the elementary school level. S/U grading.

472 SECONDARY SCHOOL MANAGEMENT, INSTRUCTION AND EVALUATION — Methods 2 (4)

Prereq: EdCI 471; concurrent with EdCI 472a. Management, motivation and discipline, development of individual management plans; issues related to school law; teachers' rights and responsibilities; peer teaching.

472a SECONDARY SCHOOL PRACTICUM (2)

Prereq: concurrent with EdCI 472 or EdCI 573. Students serve as teaching assistants in assigned public schools 4-5 hours each week; some small group and large group instruction. S/U grading.

475 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.

480 CONFERENCE IN READING (1-3)

Prereq: teaching experience. Repeatable with different themes.

481 DEVELOPMENTAL READING, WRITING AND LEARNING IN SECONDARY SCHOOLS (2)

Prereq: EdCI 370, 471. 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.

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: EdCI 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 EdCI 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.

SUPERVISED LABORATORY TEACHING — Courses EdCI 490-496 and 498a,b,c offer varied opportunities for laboratory study in the classroom and for student teaching. Practice in the classroom is an integral part of professional preparation.

490 TEACHING LABORATORY (4)

Prereq: EdCI 471 or 571 or permission of program adviser. Diagnosis

of students, lesson preparation, video-taped peer teaching, analysis of teaching, lesson re-design.

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.

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.

498a,b,c INTERNSHIP — EXCEPTIONAL CHILDREN (2-18 ea)

Prereq: recommendation for supervised teaching. Supervised teaching experience to develop and demonstrate teaching competence for exceptional children. Repeatable to 24 credits. S/U grading. Letters indicate grade level of emphasis in various sections of the course: (a) Early Childhood; (b) Elementary; (c) Secondary.

Graduate Courses

Courses numbered 500, 517, 545, 597 are described on page 30 of this catalog.

Admission to Graduate School or special permission 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 and controversial issues in any of the following areas: (a) Elementary Education; (b) Early Childhood Education; (c) Reading; (d) Secondary Education; (e) Special 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.

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 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: EdCI 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 EdAF 501. Examination and analysis of research underlying current issues and problems in elementary education.

539 MASTER'S SEMINAR (4)

Prereq: completion of requirements for teaching certification and an elementary K-8 teaching endorsement, advancement to candidacy, EdAF 501, 512, 513, EdCI 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.

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 or permission. 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 handicapped learners. Discusses assessment and evaluation of cognitive strategies and academic skill development. Designed for students who do not have a teaching certificate or endorsement in special education.

563 CURRICULUM AND METHODS IN SPECIAL EDUCATION (3)

Prereq: admission to graduate program or permission. Models of curricular organization selection and adaptation of content to facilitate mainstreaming and instructional aids, including computers and adaptive equipment. Writing IEPs with computer assistance.

564 SOCIAL SKILLS (4)

Prereq: admission to graduate program or permission. Applied behavior analysis and cognitive strategies for special education and high risk children. Assessment and evaluation of social skill development.

565 COLLABORATION IN SPECIAL EDUCATION (4)

Prereq: admission to graduate program or permission of the instructor. The collaborating teacher's role in providing special education services to children in integrated settings. Emphasizes instructional and communication skills needed to achieve that role.

567 ADVANCED ISSUES IN SPECIAL EDUCATION (3)

Prereq: completion of 20 hours in the M.Ed. in Exceptionality program or permission of the instructor. Intensive study of legal and ethical issues in special education.

568 CURRICULUM-BASED ASSESSMENT AND EVALUATION IN SPECIAL EDUCATION (4)

Prereq: admission to graduate school or permission of instructor. Information on the evaluation of instruction. Includes summative evaluation, development and analysis of behavior samples, data-based program modification, observation procedures and evaluation of program effectiveness.

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 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.

570 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. Designed for candidates for M.Ed. degrees in secondary school curriculum. Recommended for candidates in School Administration.

571 TEACHING ADOLESCENTS (4)

Prereq: permission of program adviser, concurrent with EdCI 471a. Advanced study of adolescents, especially in educational settings. Use of case studies. Emphasis upon recent research.

572 CURRICULUM IN THE SECONDARY SCHOOLS (4)

Prereq: permission of program adviser. Planning and development of curriculum. Advanced study of curricular design, materials and adoption. Emphasis on current studies and trends. Independent research.

573 INSTRUCTIONAL DESIGN IN SECONDARY SCHOOLS (4)

Prereq: EdCI 572 or concurrent; concurrent with EdCI 472a. The design of effective classroom instruction with an emphasis on planning, presenting and evaluating units of instruction focusing on alternative, innovative strategies and structures.

574 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.

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 DEMONSTRATION TEACHING AND SUPERVISION (3)

Prereq: EdCI 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.

596c ADVANCED PRACTICUM: SECONDARY EDUCATION (2-12)

Prereq: graduate status and 20 quarter hours of approved course work. Supervised experience for the improvement of teaching in the secondary school. 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.

598 RESIDENCY IN SPECIAL EDUCATION (4-16)

Full-time residency placement in a special education environment in the public schools.

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; (d) Secondary Education; (e) Special Education.

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: 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.

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Associate Professor Emeritus of Chemistry. BS, University of Washington; MS, Purdue University; PhD, University of Washington.

JOSEPH D. BETTIS

Professor Emeritus of Fairhaven. BA, Southern Methodist University; BE, Drew University; MA, PhD, Princeton University.

ROBERTA A. BOUVERAT

Associate Professor Emeritus of Educational Curriculum and Instruction. BA, MEd, Western Washington State College; PhD, The Ohio State University.

ELIZABETH BOWMAN

Associate Professor Emeritus of English. AM, PhD, University of

Chicago.

LAURENCE W. BREWSTER

Professor Emeritus of Speech. BA, Yankton College; MA, PhD, University of Iowa.

A. CARTER BROAD

Professor Emeritus of Biology. BA, MA, The University of North Carolina, Chapel Hill; PhD, Duke University.

DONALD W. BROWN

Associate Professor Emeritus of Education. BS, MA, University of Nebraska; EdD, Colorado State College.

WILLARD A. BROWN

Professor Emeritus of Physics and Astronomy. BS, University of Washington; MAT, Washington State University; EdD, University of Florida.

WILLIAM H. BRYANT

Professor Emeritus of Foreign Languages and Literatures. BA, University of Hawaii; PhD, University of Missouri, Columbia. (1970-1996)

ROSCOE L. BUCKLAND

Professor Emeritus of Liberal Studies. BA, MA, University of Idaho; PhD, State University of Iowa.

WILLIAM C. BUDD

Professor Emeritus of Psychology. BA, Hamline University; BS, MA, PhD, University of Minnesota.

WILLIAM A. BULTMANN

Professor Emeritus of History. AB, PhD, University of California, Los Angeles.

KATHERINE M. CASANOVA

Associate Professor Emeritus of Education. BS, MA, Teachers College, Columbia University.

ROBERT A. CHRISTMAN

Professor Emeritus of Geology. BS, MS, University of Michigan; PhD, Princeton University.

NITA CLOTHIER

Assistant Professor Emeritus of Liberal Studies. BA, MEd, Western Washington State College.

ROBERT P. COLLIER

Professor Emeritus of Economics. BA, Reed College; PhD, Stanford University.

RICHARD J. L. COVINGTON

Associate Professor Emeritus of Educational Curriculum and Instruction. BA, Doane College; MEd, Whittier College; EdD, University of California, Los Angeles.

HOWARD J. CRITCHFIELD

Professor Emeritus of Geography and Regional Planning. BA, MA, PhD, University of Washington.

HELEN F. DARROW

Professor Emeritus of Educational Curriculum and Instruction. BS, Wilson Teachers College; MA, Northwestern University; MA, University of California, Los Angeles; EdD, Teachers College, Columbia University.

STANLEY M. DAUGER

Professor Emeritus of Philosophy. AB, MA, PhD, Columbia University.

JAMES W. DAVIS

Professor Emeritus of Political Science. BA, Valley City State College; MA, PhD, University of Minnesota.

CAROL J. DIERS

Professor Emeritus of Psychology. BA, BAEd, Western Washington University; MA, University of British Columbia; PhD, University of Washington.

WILLIAM J. DITTRICH

Associate Professor Emeritus of Physics and Astronomy. BS, MS, University of Washington.

MARJORIE J. DONKER

Professor Emeritus of English. BA, Western Washington State College; MA, PhD, University of Washington.

LOWELL P. EDDY

Associate Professor Emeritus of Chemistry. BS, MS, Oregon State University; PhD, Purdue University.

DONALD K. EKLUND

Associate Professor Emeritus of History. BA, University of New Mexico; MA, Colorado State University; PhD, University of Colorado.

ROSS C. ELLIS

Professor Emeritus of Geology. BA, Occidental College; PhD, University of Washington.

JOHN E. ERICKSON

Associate Professor Emeritus of Biology. BA, Omaha University; MA, Indiana University; PhD, University of Oregon.

RICHARD F. FERINGER

Professor Emeritus of Educational Administration and Foundations. BS, University of Minnesota; EdD, University of California at Los Angeles.

DONALD A. FERRIS

Professor Emeritus of Education. BA, MA, University of Washington.

A. HUGH FLEETWOOD

Associate Professor Emeritus of Philosophy. BA, MA, PhD, University of Michigan.

CHARLES J. FLORA

Professor Emeritus of Biology. BS, Purdue University; MEd, EdD, University of Florida.

PAUL M. FORD

Professor Emeritus of Educational Administration and Foundations. AB, Dartmouth College; MEd, EdD, Harvard University.

IONE FOSS

Associate Professor Emeritus of Art. BS, MAA, Montana State College; MFA, University of Oregon.

RICHARD J. FOWLER

Professor Emeritus of Technology. BA, MS, Washington State University; EdD, Texas A and M University.

RICHARD L. FRANCIS

Professor Emeritus of English. AB, Kenyon College; MA, Duke University; PhD, Yale University.

BARTON FRANK

Professor Emeritus of Music. BM, MM, Tulsa University.

MARIA GUADALUPE GARCIA-BARRAGAN

Professor Emeritus of Foreign Languages and Literatures. BA, Colegio Aquiles Serdan; BEd, Instituto America; MA, Escuela Normal Superior Nueva Galicia; PhD, Universite de Paris, III, Sorbonne.

HARVEY M. GELDER

Professor Emeritus of Fairhaven. BA, Colorado State College; MA, University of Missouri.

JEROME GLASS

Associate Professor Emeritus of Music. BS, New York University; MMus, University of Southern California.

PAUL C. GLENN

Associate Professor Emeritus of Fairhaven. BA, University of Washington; MFA, Stanford University.

WILLIAM A. GREGORY

Professor Emeritus of Theatre/Dance. BS, Central Michigan University; MA, Michigan State University; PhD, University of Minnesota.

BURTON L. GROVER

Associate Professor Emeritus of Educational Administration and Foundations. BS, MA, PhD, University of Minnesota.

HOWARD L. HARRIS

Professor Emeritus of Anthropology. BA, University of Iowa; MA, University of Missouri; M.Div., Hartford Theological Seminary.

HERBERT R. HEARSPY

Associate Professor and Librarian Emeritus. BA, EdM, Tufts College; BS in LS, MS in LS, University of Illinois.

PAUL E. HERBOLD

Associate Professor Emeritus of Speech. BAEd, Western Washington State College; MA, University of Washington; PhD, University of Minnesota.

MILDRED HERRICK

Associate Professor and Librarian Emeritus. BA, Michigan State Normal College; BA in LS, MA in LS, University of Michigan.

JAMES L. HILDEBRAND

Associate Professor Emeritus of Mathematics/Computer Science. BA, MA, North Texas State University.

CLAUDE E. HILL

Professor Emeritus of Technology. BA, MEd, University of Washington.

FORD D. HILL

Associate Professor Emeritus of Music. AB, Wisconsin State University; MMus, Indiana University. (1975-1996)

HARLEY E. HILLER

Professor Emeritus of History. BA, Westmar College; MA, PhD, University of Minnesota.

JESSE HIRAOKA

Professor Emeritus of Foreign Languages. BA, Roosevelt University; MA, University of Chicago; PhD, Northwestern University.

JAMES J. HITCHMAN

Professor Emeritus of History. BA, Willamette University; MA, PhD, University of California, Berkeley.

PETER J. HOVENIER

Professor Emeritus of Education. BA, University of Southern California, Santa Barbara; MA, Brigham Young University; MA, PhD, Stanford University. (1970-1996)

HARRY D. JACKSON

Associate Professor Emeritus of History. BEd, Wisconsin State University at Whitewater; MA, PhD, University of Iowa.

ELLWOOD JOHNSON

Professor Emeritus of English. AB, MA, PhD, University of Washington.

ELVET G. JONES

Professor Emeritus of Psychology. BA, MA, University of British Columbia; PhD, University of Minnesota.

HENRY W. JONES

Assistant Professor Emeritus of Education. BS, North Dakota State University; MS, University of Wisconsin; EdD, University of California, Los Angeles.

HALLDOR C. KARASON

Associate Professor Emeritus of Education and Philosophy. BAEd, Western Washington State College; MA, PhD, University of Washington.

ROBERT H. KELLER

Professor Emeritus of Fairhaven. AB, University of Puget Sound; BD, MA, PhD, University of Chicago.

SAMUEL P. KELLY

Professor Emeritus of Educational Administration and Foundations. BA, BAEd, MEd, Western Washington University; PhD, University of Chicago.

J. RUTH KELSEY

Associate Professor Emeritus of Art. BA, Washington State University; MA, University of California, Berkeley.

FRED W. KNAPMAN

Professor Emeritus of Chemistry. BAEd, Western Washington State College; MS, University of Washington; EdD, Teachers College, Columbia University.

GEORGE S. LAMB

Professor Emeritus of Educational Curriculum and Instruction. BA, Macalester College; MA, University of Washington; PhD, University of Minnesota.

CHARLES F. LAPPENBUSCH

Professor Emeritus of Physical Education. BS, MA, University of Washington.

UNIVERSITY PERSONNEL

EDITH B. LARRABEE

Assistant Professor Emeritus of Home Economics. BA, East Texas State University; MA, Colorado State University.

GOLDEN L. LARSEN

Associate Professor Emeritus of English. BS, MS, Utah State University; PhD, University of Washington.

LAWRENCE L. LEE

Professor Emeritus of English. BA, MA, PhD, University of Utah.

MERRILL E. LEWIS

Professor Emeritus of English. BA, MA, University of Oregon; PhD, University of Utah.

RICHARD H. LINDSAY

Professor Emeritus of Physics and Astronomy. BS, University of Portland; MS, Stanford University; PhD, Washington State University.

ROBERT A. McCracken

Professor Emeritus of Educational Curriculum and Instruction. BA, MA, PhD, Syracuse University.

HOWARD F. McGAW

Professor Emeritus of Library Science. BA, Vanderbilt University; MA, BS in Library Science, George Peabody College for Teachers; EdD, Teachers College, Columbia University.

RUBY D. McINNES

Associate Professor Emeritus of Education. BA, University of Washington; MA, Columbia University.

WILLIAM R. MACKAY

Associate Professor Emeritus of Psychology. BA, Brown University; MA, PhD, University of California, Berkeley.

STEPHEN C. MARGARITIS

Professor Emeritus of Education. BA, University of Athens; MA, PhD, University of Southern California.

DAVID MARSH

Professor Emeritus of Art. BA, Central Washington College; MS, University of Oregon.

JAMES S. MARTIN

Professor Emeritus of Biology. BS, MS, PhD, University of Washington.

EVELYN P. MASON

Professor Emeritus of Psychology. BA, Mills College; MA, PhD, Washington University.

MIRIAM S. MATHES

Associate Professor Emeritus of Library Science. BA, New York College for Teachers; MA, Teachers College, Columbia University; BLS, MLS, School of Library Science, Columbia University.

ERWIN S. MAYER

Professor Emeritus of Economics. AB, Hunter College; PhD, University of Washington.

D. PETER MAZUR

Professor Emeritus of Sociology. BA, Stetson University; MA, University of Colorado; PhD, University of Washington.

ROBERT D. MEADE

Professor Emeritus of Psychology. BA, Indiana University; MA, PhD, University of Pennsylvania.

ROBERT C. MEIER

Professor Emeritus of Finance, Marketing and Decision Sciences. BA, Indiana University; MA, PhD, University of Minnesota.

VLADIMIR MILICIC

Professor Emeritus of Foreign Languages and Literatures. Certificate of Baccalaureate, Gymnasium for Boys, Belgrade; MA, University of Chicago.

MICHAEL K. MISCHAIKOW

Professor Emeritus of Economics. BA, School of Commerce and Finance; MBA, Hochschule fuer Welthandel; MA, PhD, Indiana University.

HOWARD E. MITCHELL

Professor Emeritus of Economics. BA, Whitworth College; MA, PhD, University of Washington.

KURT W. MOERSCHNER

Associate Professor Emeritus of Foreign Languages and Literatures. BComm, BA, Sir George Williams University; MA (Psychology), MA (German), PhD, University of Colorado.

ROBERT L. MONAHAN

Professor Emeritus of Geography and Environmental Social Sciences. BA, University of Washington; MA, University of Michigan; PhD, McGill University.

DONALD E. MOON

Associate Professor Emeritus of Technology. BS in Ed, California State College, California, Pa.; MA, Teachers College, Columbia University; EdD, Oregon State University.

GEORGE M. MULDROW

Professor Emeritus of English. BA, MA, University of Missouri; PhD, Stanford University.

KEITH A. MURRAY

Distinguished Service Professor Emeritus of History. BA, Whitworth College; MA, PhD, University of Washington.

EDWARD F. NEUZIL

Professor Emeritus of Chemistry. BS, North Dakota State College; MS, Purdue University; PhD, University of Washington.

ALDEN NICKELSON

Professor Emeritus of Educational Curriculum and Instruction. BS, MA, PhD, University of Washington.

FRANK A. NUGENT

Professor Emeritus of Psychology. BS, New Jersey State Teachers College; MA, Columbia University; PhD, University of California, Berkeley.

JAMES H. O'BRIEN

Professor Emeritus of English. BA, Seattle University; MA, PhD, University of Washington.

J. EVELYN ODOM

Associate Professor Emeritus of English. AB, Winthrop College; MA, Teachers College, Columbia University.

MARVIN L. OLMSTEAD

Associate Professor Emeritus of Communication. BS, Black Hills State College; MA, Washington State University; PhD, University of Washington.

FRED A. OLSEN

Professor Emeritus of Technology. BS, University of Washington; MS, Stout State University; PhD, Ohio State University.

PAUL J. OLSCAMP

Distinguished Service Professor Emeritus of the University, Philosophy. BA, MA, University of Western Ontario; PhD, University of Rochester.

EUGENE OWENS

Professor Emeritus of Management. BA, University of Arizona; MS, Purdue University; PhD, University of California, Los Angeles.

HAROLD O. PALMER

Professor Emeritus of Business Education. BA, College of Emporia, Kansas; EdM, University of Oregon; EdD, Oregon State University.

CHARLES E. PARAM

Professor Emeritus of Foreign Languages. BA, Oklahoma State University; MA, PhD, University of Arizona.

ROBERT A. PETERS

Professor Emeritus of English. BA, Ohio State University; MA, Western Reserve University; PhD, University of Pennsylvania.

HAZEL JEAN PLYMPTON

Associate Professor Emeritus of Art. PhB, University of Chicago; MA, Teachers College, Columbia University; Reed College; Portland School of Art.

SAM R. PORTER

Professor Emeritus of Technology. BA, Iowa State Teachers College; MA, Teachers College, Columbia University; EdD, University of Missouri.

AUGUST C. RADKE

Professor Emeritus of History. BA, MA, PhD, University of

Washington.

DOROTHY E.A. RAMSLAND

Professor Emeritus of Home Economics. BS, University of Wisconsin; MS, PhD, Michigan State University.

CHARLES RANDALL, JR.

Associate Professor Emeritus of Physical Education. BA, Eastern Washington State College; MA, Washington State University.

FRANKLIN C. RANEY

Associate Professor Emeritus of Geography and Regional Planning. BS, University of Chicago; MS, Washington State University; PhD, University of California, Davis.

JAMES B. RHOADS

Professor Emeritus of History. BA, MA, University of California, Berkeley; PhD, The American University.

CHARLES M. RICE

Associate Professor Emeritus of Industrial Arts. BFA, MA, Washington State University; University of Washington; University of Oregon; Carnegie A.I.A. Art Sessions; EdD, Oregon State University.

WALTER L. ROBINSON

Professor Emeritus of Foreign Languages and Literatures. BA, MA, PhD, University of Texas.

PAUL L. ROLEY

Associate Professor Emeritus of History. BA, Illinois College; MA, Northwestern University; PhD, University of Illinois.

J. ALAN ROSS

Professor Emeritus of Education and Psychology. BAEd, Western Washington State College; MA, PhD, Yale University.

MARJORIE RYAN

Professor Emeritus of English. AB, MA, University of Michigan; PhD, University of Minnesota.

LEONARD SAVITCH

Associate Professor Emeritus of Education. BS, Pennsylvania State; MA, Teachers College, Columbia University; PhD, University of Washington.

ROBERT L. SCANDRETT

Professor Emeritus of Music. BA, Seattle Pacific College; MA, PhD, University of Washington.

DAVID B. SCHAUB

Professor Emeritus of Music. BA, MusB, Lawrence College; MA, Harvard University; PhD, University of California, Berkeley.

THOMAS SCHLOTTERBACK

Professor Emeritus of Art. BFA, MFA, University of Kansas; PhD, the State University of Iowa.

CARL U. SCHULER

Associate Professor Emeritus of History. BS, MA, PhD, University of Wisconsin.

HENRY G. SCHWARZ

Professor Emeritus of History/East Asian Studies. BA, MA, PhD, University of Wisconsin.

MAURICE L. SCHWARTZ

Professor Emeritus of Geology and Education. BA, MS, PhD, Columbia University.

DONALD J. SCHWEMMIN

Associate Professor Emeritus of Biology. BS, MS, PhD, University of Michigan.

JAMES W. SCOTT

Professor Emeritus of Geography and Regional Planning. BA, MA, University of Cambridge; PhD, Indiana University.

CLYDE M. SENGER

Professor Emeritus of Biology. BA, Reed College; MS, Purdue University; PhD, Utah State University.

BEARNICE S. SKEEN

Professor Emeritus of Education. BS, MS, University of Oregon; EdD, Washington State University.

ALDEN C. SMITH

Associate Professor Emeritus of Speech Pathology/Audiology. BS, Florida Southern; MS, Syracuse University; PhD, University of Illinois. (1966-1996)

ARTHUR L. SOLOMON

Professor Emeritus of Speech and Broadcast. BA, Antioch College; MA, University of North Carolina; PhD, Stanford University.

MARVIN A. SOUTHCOTT

Associate Professor Emeritus of Technology. BA, University of Washington; MFA, Maryland Institute College of Art.

DONALD L. SPRAGUE

Associate Professor Emeritus of Physics and Astronomy. BS, MS, PhD, University of Washington.

RICHARD O. STARBIRD

Professor Emeritus of Education. BA, Heidelberg College; MA, Columbia University; EdD, Teachers College, Columbia University.

KATHLEEN J. STEPHENS-KERNAN

Associate Professor Emeritus of Library Sciences. BA, Western Washington State College; MLS, University of Washington.

RONALD J. TAYLOR

Professor Emeritus of Biology. BS, Idaho State University; MS, University of Wyoming; PhD, Washington State University.

DAVID E. TEMPLETON

Associate Professor Emeritus of Art. BFA, MA, University of Illinois; PhD, University of Minnesota. (1969-1996)

ROBERT W. TESHARA

Associate Professor Emeritus of Geography and Regional Planning. BA, BAEd, Western Washington State College; PhD, University of Washington.

HUBERT N. THORESON

Associate Professor Emeritus of Management. BS, Valley City State College; MEd, EdD, University of North Dakota.

MARIAN J. TONJES

Professor Emeritus of Educational Curriculum and Instruction. BA, MA, University of New Mexico; EdD, University of Miami.

COLIN E. TWEDDELL

Professor Emeritus of Anthropology and Linguistics. BA, MA, PhD, University of Washington.

STEWART VAN WINGERDEN

Associate Professor Emeritus of Education. BAEd, Western Washington State College; MA, Colorado State College; EdD, Washington State University.

MANFRED C. VERNON

Professor Emeritus of Political Science. LLB, University of Cologne; JD, University of Berlin; PhD, Stanford University.

GENE VIKE

Professor Emeritus of Art. BEd, BA, Western Washington State College; MS, Pratt Institute.

ADA L. WALTER

Assistant Professor Emeritus of Business Education and Economics. BS, Winthrop College; MBA, University of Denver.

MARY W. WATROUS

Professor Emeritus of Education. AB, University of Nebraska; MA, Gonzaga University; EdD, University of Washington.

LOREN L. WEBB

Professor Emeritus of Speech Pathology and Audiology. BS, University of California, Berkeley; MA, University of Redlands; PhD, University of Washington.

EVELYN M. WELLMAN

Associate Professor Emeritus of Music. BA, MA, Western Washington State College.

JAMES W. WILKINS, JR.

Associate Professor Emeritus of Psychology. AB, MA, Kent State University; PhD, Michigan State University.

GEORGE E. WITTER

Associate Professor Emeritus of Computer Science. BA, MA, Miami University.

UNIVERSITY PERSONNEL

EVELYN C. WRIGHT

Associate Professor Emeritus of English. BS, Illinois State University; MA, PhD, Northwestern University.

JOHN J. WUEST

Professor Emeritus of Political Science. BS, MS, University of Southern California; PhD, University of California, Los Angeles.

DISTINGUISHED SERVICE PROFESSOR OF WESTERN WASHINGTON UNIVERSITY

KEITH A. MURRAY

Distinguished Service Professor Emeritus of History. BA, Whitworth College; MA, PhD, University of Washington.

PAUL J. OLSAMP

Distinguished Service Professor Emeritus of the University. BA, MA, University of Western Ontario; PhD, University of Rochester.

PRESIDENT EMERITUS

CHARLES J. FLORA

President Emeritus. BS, Purdue University; MEd, EdD, University of Florida.

KENNETH P. MORTIMER

President Emeritus. AB, MBA, University of Pennsylvania; PhD, University of California at Berkeley.

FACULTY

Albers, James R. / Geography and Environmental Social Sciences
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Ames, Evelyn E. / Physical Education, Health and Recreation
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Amundsen, Darrel W. / Foreign Languages and Literatures
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Atkinson, Charles M. / Educational Curriculum and Instruction
Atneosen, Richard A. / Physics and Astronomy
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Balas, Robert S. / Foreign Languages and Literatures
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Bouchard, Louise Marie / Foreign Languages and Literatures
Boxberger, Daniel L. / Anthropology
Bradley, Darcy / Educational Curriculum and Instruction
Bradley, Karen / Sociology
Briggs, Roger D. / Music
Brilla, Lorraine / Physical Education, Health and Recreation
Brockhaus, Henrich / Foreign Languages and Literatures
Brown, Edwin H. / Geology
Brown, Herbert A. / Biology
Bryce, Wendy J. / Finance, Marketing and Decision Sciences
Buckley, Patrick H. / Geography and Environmental Social Sciences
Bulcroft, Krls / Sociology
Burnett, Michael J. / Fairhaven
Burton, Brian K. / Management
Bussell, Mark E. / Chemistry
Caine, Dennis J. / Physical Education, Health and Recreation
Campbell, Sarah K. / Anthropology
Carmean, Stephen L. / Psychology

Cary, Meredith B. / English
Castañeda, Omar S. / English
Catrell, Dennis E. / Theatre Arts
Cave, Linda M. / Mathematics
Chalice, Donald R. / Mathematics
Clumpner, Roy A. / Physical Education, Health and Recreation
Cotton, Leslie / Fairhaven
Costanzo, Susan / History
Coughlin, Eileen / Educational Administration and Foundations
Crain-Thoreson, Catherine D. / Psychology
Crary-Ortega, Laura / Art
Craswell, Keith / Mathematics
Crow, Lowell T. / Psychology
Curgus, Branko / Mathematics
Curley, David L. / Liberal Studies
Cvetkovich, George T. / Psychology

Dale, Carolyn / Journalism
Dallas, Lee A. / Educational Curriculum and Instruction
Darling, Rieko M. / Speech Pathology and Audiology
Davidson, Marcia / Educational Curriculum and Instruction
Davidson, Melvin G. / Physics and Astronomy
De Lorme, Roland L. / History
Dennett, Nolan A. / Theatre Arts
Diehl, Peter D. / History
Dietrich, Dawn Y. / English
Dillman, Steven H. / Technology
Dinnel, Dale L. / Psychology
Donovan, Barbara S. / Geography and Environmental Social Sciences
Donovan, Todd A. / Political Science
Downing, Thomas E. / Philosophy
Duemmel, James E. / Mathematics
Easterbrook, Don J. / Geology
Eaton, Marie D. / Fairhaven
Eblen, Anna / Communication
Eerkes, Gary L. / Computer Science
Elich, Peter J. / Psychology
Embrey, Robert D. / Art
Emmerson, Richard K. / English
Engbretson, David C. / Geology
Estrada, Lawrence / Educational Administration and Foundations
Eurich, Susan Amanda / History
Evans, Howard M. / Educational Curriculum and Instruction
Faulkner, Constance P. / Fairhaven
Feinberg, Richard / Physics and Astronomy
Feingold, David / Music
Fennimore, Flora / Educational Administration and Foundations; Educational Curriculum and Instruction
Fewings, David R. / Finance, Marketing and Decision Sciences
Field, John J. / Geology
Fiero, Petra / Foreign Languages and Literatures
Flint, James / Educational Administration and Foundations
Folsy, Maurice H. / Political Science
Fonda, Richard W. / Biology
Forgays, Deborah K. / Psychology
Fox, Sheila / Educational Curriculum and Instruction
Friday, Christopher C. / History
Froderberg, Albert J. / Mathematics

Gallay, Alan / History
Garcla, Joseph E. / Management
Gardner, Richard J. / Mathematics
Gauthier, Anne H. / Sociology
Gayden, Ernst L. / Geography and Environmental Sciences
Geisler, Marc S. / English
Georgiades, Aristotle / Art
Gerhold, George A. / Chemistry
Germain, Roger / Theatre Arts
Ghali, Moheb A. / Economics
Gilliam, Jeffrey P. / Music
Gleeson, Madge / Art
Goebel, Bruce / English

- Grady, Thomas / Engineering Technology
 Gray, Neil R. / Mathematics
 Green, Gaye Leigh / Art
 Grote, Frederick W., Jr. / Psychology
 Guelker-Cone, Leslie / Music
 Gynan, Shaw N. / Foreign Languages and Literatures
 Haag, Enid / Library
 Hackler, Clyde M. / Engineering Technology
 Hagen, Daniel A. / Economics
 Hall, Pamela L. / Finance, Marketing and Decision Sciences
 Hamblin, Vicki L. / Foreign Languages and Literatures
 Hammond, Joyce / Anthropology
 Hansen, Julia / Economics
 Hansen, Thor A. / Geology
 Harder, K. Peter / Economics
 Hardman, Pamela / English
 Hardy, John T. / Environmental Sciences
 Harris, F. David / Engineering Technology
 Harris, Lyle E. / Journalism
 Hartsfield, Nora A. / Mathematics
 Haug, Peter / Management
 Hawthorne, Carol / Educational Administration and Foundations
 Hayden, Davis C. / Psychology
 Hayes, Susanna A. / Psychology
 Hearne, James W. / Computer Science
 Heid, William H. / Fairhaven
 Helfgott, Leonard M. / History
 Hemley, Robin C. / English
 Hendryson, Mary Ann / Economics
 Henniger, Michael L. / Educational Curriculum and Instruction
 Henson, Steven / Economics
 Hoelscher, Karen J. / Educational Curriculum and Instruction
 Hoffman, Joan M. / Foreign Languages and Literatures
 Hogan, Eugene J. / Political Science
 Hoover, Kenneth R. / Political Science
 Horn, Thomas C. R. / History
 Howard-Snyder, Frances / Philosophy
 Howell, Kenneth W. / Educational Curriculum and Instruction
 Hudson, Hud / Philosophy
 Hung, Ken / Finance, Marketing and Decision Sciences
 Hutton, Marguerite R. / Accounting
 Hyman, Ira E. Jr. / Psychology
 Iglitzin, Karen / Music
 Inverarity, James / Sociology
 Israels, Chuck / Music
 Ives, Fred M. / Computer Science
 Jack, Dana C. / Fairhaven
 Jack, Rand F. / Fairhaven
 Janson, Carol / Art
 Jensen, Robert A. / Art
 Jewett, Robert I. / Mathematics
 Jimerson, Randall C. / History
 Johnson, James L. / Computer Science
 Johnson, Jerry L. / Mathematics
 Johnson, Mildred / Mathematics
 Johnson, Nancy J. / English
 Johnson, Vernon D. / Political Science
 Johnston, Thomas A. / Art
 Jongejan, Anthony / Educational Administration and Foundations
 Jusak, Debra S. / Computer Science
 Kanhai, Rosanne D. / English
 Kaplan, Edward H. / History
 Kasprisin, Lorraine / Educational Administration and Foundations
 Keep, William C. / English
 Keiper, Robert / Educational Curriculum and Instruction
 Keleman, Kenneth / Management
 Kelley, Bridget / Educational Curriculum & Instruction
 Kennedy, Kathleen A. / History
 Klm, Robert H. / Educational Administration and Foundations
 Kimball, Linda A. / Anthropology
 Kimmel, Arthur / Foreign Languages and Literatures
 King, Donald M. / Chemistry
 King, Rosalie Rosso / Art/Engineering Technology
 Kintz, B. L. / Psychology
 Kitto, Kathleen L. / Engineering Technology
 Klein, Marvin L. / Educational Administration and Foundations
 Kleinknecht, Ronald A. / Psychology
 Knutzen, Kathleen / Physical Education, Health and Recreation
 Kohn, Hubertus E. / Biology
 Kraft, Gerald F. / Biology
 Krieger, Milton H. / Liberal Studies
 Kriz, George S. / Chemistry
 Krogh, Suzanne L. / Educational Curriculum and Instruction
 Laffrado, Laura / English
 Lampman, Gary M. / Chemistry
 Landis, Wayne G. / Environmental Sciences
 Lerner, Daniel M. / Fairhaven
 Lawson, Robert / Educational Administration and Foundations
 Leaf, David S. / Biology
 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
 Lippman, Louis G. / Psychology
 Lippman, Marcla Z. / Psychology
 Livingston, Mary Morgan / Educational Administration and Foundations
 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
 Lyne, William / English
 McClendon, John C. / Fairhaven
 McCormick, Patrick F. / Art
 McInnis, Raymond / Library
 McIntyre, Mary A. / Art
 McKay, Floyd / Journalism
 McLeod, Donald B. / Fairhaven
 McRandle, Carol C. / Speech Pathology and Audiology
 Mahoney, Eldon R. / Sociology
 Malone, Violet M. / Educational Administrations and Foundations
 Mancuso, Susan K. / Educational Administration and Foundations
 Mariz, George E. / History
 Marrs, Lawrence W. / Educational Administration and Foundations;
 Educational Curriculum and Instruction
 Marshall, Robert C. / Anthropology
 Mason, David T. / Fairhaven
 Mathers-Schmidt, Barbara / Speech Pathology and Audiology
 Matthews, Geoffrey B. / Computer Science
 Matthews, Robin A. / Environmental Sciences
 Mayer, J. Richard / Environmental Sciences
 Menninga, Larry D. / Computer Science
 Merrifield, David E. / Economics
 Metzger, Mary J. / English
 Miles, John C. / Geography and Environmental Social Sciences
 Miller, John A. / Chemistry
 Miller, Laurence P. / Psychology
 Mills, Perry / Theatre Arts
 Miner, Ralph E. / Political Science
 Montague, Phillip / Philosophy
 Mookherjee, Debnath / Geography and Environmental Social Sciences
 Moore, James E. / Physical Education, Health and Recreation
 Moore, John S. / Finance, Marketing and Decision Sciences
 Morgan, David R. / Biology
 Mork, Theodore A. / Educational Curriculum and Instruction
 Morris, Jack / Music
 Morse, Joseph G. / Chemistry
 Morton, Todd / Engineering Technology
 Moscovici, Hedy / Biology
 Moskowitz, Steven M. / Engineering Technology

UNIVERSITY PERSONNEL

- Muller-Parker, Gisèle / Biology
 Murphy, Dennis R. / Economics
 Nelson, David M. / Economics
 Nelson, Karna L. / Educational Curriculum and Instruction
 Nelson, Phillip A. / Computer Science
 Oberoi, Harinder Singh / Engineering Technology
 Olney, Thomas J. / Finance, Marketing and Decision Sciences
 O'Reilly, Maureen E. / Theatre Arts
 Osborne, Martin I. / Computer Science
 Oslapas, Arunas P. / Engineering Technology
 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
 Petersen, Lois E. / Management
 Pilgrim, Tim A. / Journalism
 Plinney, Robert H. / Educational Curriculum and Instruction
 Plumlee, E. Leroy / Management
 Popen, Sharalyn / Educational Administration and Foundations
 Price, Kay / Educational Curriculum and Instruction
 Prim, Merle M. / Psychology
 Prody, Gerry A. / Chemistry
 Pullen, Jane Ann / Educational Administrations and Foundations
 Pultz, Mary Arne / Biology
 Purdy, John / English
 Purtil, Richard L. / Philosophy
 Qualley, Donna J. / English
 Quigley, Robert J. / Physics and Astronomy
 Rangel-Guerrero, Daniel / Foreign Languages and Literatures
 Ratto, Jo Ann / Engineering Technology
 Raudebaugh, Robert A. / Engineering Technology
 Read, Thomas T. / Mathematics
 Reay, John R. / Mathematics
 Reynolds, Mary Ann / Accounting
 Rice, Karen B. / Library
 Richardson, John G. / Sociology
 Richardson, Larry S. / Communication
 Rickey, Melissa M. / Educational Curriculum and Instruction
 Riggins, Ronald D. / Physical Education, Health and Recreation
 Ritter, Harry R., Jr. / History
 Ritter, Marian B. / Library
 Robbins, Lynn A. / Geography and Environmental Social Sciences
 Roberts, Franklin C. / Educational Administration and Foundations
 Roberts, Jane E. / Home Economics
 Ross, June R. F. / Biology
 Ross, Steven C. / Finance Marketing and Decision Sciences
 Rubie, Michael R. / Accounting
 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
 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
 Schermer, Elizabeth R. / Geology
 Schneider, David E. / Biology
 Schwartz, Sy / Educational Administration and Foundations;
 Educational Curriculum and Instruction
 Seal, Michael R. / Engineering Technology
 Segal, Judith / Libraries
 Sello, Michael T. / Speech Pathology and Audiology
 S'eiltin, Tanis M. / Fairhaven
 Senge, Steven V. / Accounting
 Shaffer, Ronald W. / Psychology
 Shaw, Albert C. / Music
 Shaw, Laura L. / Psychology
 Shen, Yun-Qiu / Mathematics
 Simpson, Carl H. / Sociology
 Singleton, William R. / Accounting
 Skinner, Knute / English
 Sleeman, Allan G. / Economics
 Slentz, Kristine L. / Educational Curriculum and Instruction
 Slesnick, Irwin I. / Science Education
 Smeins, Linda E. / Art
 Smith, Allison D. / English
 Smith, Bradley F. / Environmental Science; Geography and
 Environmental Social Sciences
 Smith, Kenton D. / Art
 Smith, Peter / Library
 Smith, William E. / English
 Spanel, Leslie E. / Physics and Astronomy
 Spich, Robert S. / Finance, Marketing and Decision Sciences
 Springer, Mark C. / Management
 Steffens, Pete S. / Journalism
 Stephan, G. Edward / Sociology
 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. / Foreign Languages and Literatures
 Sulkln, Stephen / Shannon Point Marine Center / Biology
 Summers, William C. / Environmental Sciences
 Sylvester, Charles D. / Physical Education, Health and Recreation
 Sylvester, Robert / Music
 Symes, Dal S. / Library
 Symes, Ken M. / English
 Takagi, Midori / Fairhaven
 Talbot, James L. / Geology
 Taylor, Lee H. / Theatre Arts
 Terey-Smith, Mary / Music
 Terich, Thomas A. / Geography and Environmental Social Sciences
 Thompson, Richard W. / Psychology
 Thorndike, Robert M. / Psychology
 Tomlonovic, Kathleen / Foreign Languages and Literatures
 Towner, John C. / Educational Curriculum and Instruction
 Trent, Carol / Biology
 Trimble, Joseph E. / Psychology/Educational Administration and
 Foundations
 Truschel, Louis W. / History
 Tyler, Vernon O., Jr. / Psychology
 Tyson, Leann / Physical Education, Health and Recreation
 Underwood, John H. / Foreign Languages and Literatures
 Ural, Saim / Computer Science
 Urso, Robert A. / Art
 Utendale, John F. / Educational Administration and Foundations
 Vajda, Edward J. / Foreign Languages and Literatures
 van Boer, Bertil H., Jr. / Music
 van Deusen, Nancy E. / History
 Vander Velde, Philip B. / Educational Administration and
 Foundations
 Vander Yacht, Douglas R. / Theatre Arts
 Vanderstaay, Steven / English
 Vassdal-Ellis, Elsi M. / Art
 Vawter, Richard D. / Physics and Astronomy
 Vernacchia, Ralph A. / Physical Education, Health and Recreation
 Verner, Jane / Educational Administration and Foundations

Verosky, John M. / Mathematics
 Vogel, Richard F. / Engineering Technology
 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
 Waterman, C. Fred / Library
 Webber, Herbert H. / Geography and Environmental Social Sciences
 Weir, Sara J. / Political Science
 Weiss, Rudolf / Foreign Languages and Literatures
 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
 Wodzicki, Antoni / Geology
 Woll, John W. / Mathematics
 Wolpov, Ray / Educational Curriculum and Instruction
 Wonder, Bruce D. / Management
 Ypma, Tjalling J. / Mathematics
 Yu, Ming-Ho / Environmental Sciences
 Yu, Ning / English
 Yusa, Michiko / Foreign Languages and Literatures
 Zelne, Lina / Speech Pathology and Audiology
 Ziegler, David W. / Political Science
 Zoro, Eugene S. / Music
 Zurfluh, Linda / Educational Administration and Foundations

LIBRARIES

Librarians

JUDITH SEGAL (1996) University Librarian. BA, Brooklyn College of the City University of New York; MA, Brandeis University; MLS, DLS, Columbia University.
 MARIAN L. ALEXANDER (1970) Associate Professor. AB, Occidental College; MLS, University of California, Los Angeles.

ROBERT LOPRESTI (1987) Associate Professor and Government Documents Librarian. Head of General Reference and Coordinator of Reference and Instruction Services. BA, Juniata College; MLS, Rutgers, The State University.
 RAYMOND G. McINNIS (1965) Professor and Social Sciences Librarian. BA, University of British Columbia; MLS, University of Washington.
 DONNA E. PACKER (1982) Associate Professor and Head of Access Services. Acting Head of Technical Services. BA, BLS, University of British Columbia; MBA, Western Washington University.
 DIANE C. PARKER (1984) Professor. BA, University of California, Berkeley; MLS, University of Washington.
 KAREN B. RICE (1989) Associate Professor and Head of Catalog Department. BS, University of Wisconsin; MSLS, University of North Carolina at Chapel Hill.
 MARIAN A. RITTER (1969) Associate Professor and Music Librarian. BME, MLS, University of Portland.
 PETER A. SMITH (1990) Associate Professor and Science/Technology Librarian. BA, MA, MLS, Wayne State University.
 DAL S. SYMES (1987) Associate Professor and Humanities Librarian. BS, MA, Utah State University; MA, University of Denver; PhD, University of New Mexico.
 C. FRED WATERMAN (1967) Assistant Professor, Business/Economics Librarian. BS, MLS, University of Pittsburgh.

DEGREES AND CERTIFICATES

Degrees granted from August 1994 to June 1995, inclusive:

Master of Education	266
Master of Arts	118
Master of Science	68
Master of Music	9
Master of Business Administration	21
Bachelor of Arts in Education	269
Bachelor of Arts	1,503
Bachelor of Science	439
Bachelor of Fine Arts	2
Bachelor of Music	12
Total	2,707
<i>Recommended for certification to the State Superintendent for Public Instruction — August 1994 to June 1995, inclusive:</i>	
Initial Teacher Certificate	436
Continuing Teacher Certificate	16

APPENDICES

Appendix A WWU POLICIES ON AFFIRMATIVE ACTION, EQUAL OPPORTUNITY, AND DISCRIMINATION

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 on-going 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 Center for Equal Opportunity 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 Center for Equal Opportunity 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 CEO'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 Center for Equal Opportunity.

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 Center for Equal Opportunity 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 Center for Equal Opportunity 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 Center for Equal Opportunity 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 Center for Equal Opportunity 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 Section IIA. Such reports will be treated with respect and diligence.

6. 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 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.

7. 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 which 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).

8. 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.

Appendix B STUDENT RIGHTS AND RESPONSIBILITIES CODE

WAC 516-22-005 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, copying, 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 516-23-050 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 516-22 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 Permitted," WAC 516-22-150.

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.

- (a) 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.
- (b) 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.
- (c) 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.
- (d) 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.
- (e) 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.
- (f) 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.
- (g) 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.

- (1) *Warning* — A notice in writing to the student that the student has violated the *Student Rights and Responsibilities Code*.
- (2) *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.
- (3) *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.
- (4) *Educational Activities* — Activities designed to foster student development may include, but are not limited to: Community service, attendance at educational programs, or written assignments.
- (5) *Restitution* — Compensation for loss, damage, or injury. This may take the form of appropriate service and/or monetary or material replacement.
- (6) *Residence Hall Relocation* — Transfer of living arrangements to another University residence hall or apartment.
- (7) *Termination of University Residences Agreement* — Separation of the student from University Residences.
- (8) *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.

(9) *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:

- (1) lacking the capacity to respond to pending disciplinary charges due to a mental disorder; or
- (2) 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 Residences 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

Academic dishonesty includes the following acts:

- (a) Giving unauthorized information to another student or receiving unauthorized information from another student during any type of examination or test.
- (b) Obtaining or providing without authorization questions or answers relating to any examination or test prior to the time of the examination or test.
- (c) Using unauthorized sources for answers during any examination or test.
- (d) Asking or arranging for another person to take any examination or test in one's place.
- (e) 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:
 - (1) Submitting a paper purchased from a term-paper service.
 - (2) Substituting synonyms for words in another's writing and claiming the writing to be one's own.
 - (3) Claiming credit for someone else's artistic work, such as a musical composition or arrangement.
 - (4) Using someone else's lab report as a source of data or results.
 - (5) Collaborating with others in a required assignment without the approval of the instructor.

3. Procedures

- (a) An instructor suspecting an act of academic dishonesty shall discuss the matter thoroughly with the student involved. Arrangements for this discussion shall be made by the instructor within ten (10) 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.

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.

- (b) 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**

This policy is in revision. Please see the Office of Student Affairs, OM 390, for possible modifications of procedures.

WAC 516-26-010 Purpose. The purpose of this chapter is to implement 20 USC Sec. 1232g, the Family Educational Rights and Privacy Act of 1974, by establishing rules and procedures to ensure that information contained in student records is accurate and is handled in a responsible manner by the university and its employees.

WAC 516-26-020 Definitions. For purposes of this chapter the following terms shall have the indicated meanings:

- (1) "Student" shall mean any person 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) "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.
(b) The term "education records" does not include the following:
 - (i) Records of instructional, supervisory or administrative personnel and educational personnel ancillary thereto which are in the sole possession of the maker thereof and which are not accessible or revealed to any other person except a substitute;
 - (ii) If the personnel of the University's Department of Safety and Security do not have access to education records under WAC 516-26-080, the records and documents of the department which are kept apart from records described in WAC 516-26-020(2)(a) are maintained solely for law enforcement purposes and are not made available to persons other than law enforcement officials of the same jurisdiction;
 - (iii) 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 except that 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 education records and not excepted; or
 - (iv) Records concerning a student which are created or maintained by a physician, psychiatrist, psychologist, or other recognized professional or paraprofessional acting in his 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 or his designee.

WAC 516-26-030 Access to 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 Vice President for Student Affairs shall prepare a list of the types of student education records which are maintained by Western Washington University.
- (3) A student wishing access to his or her education records shall submit a written request for access to the Vice President for Student Affairs. A request for access shall be acted upon by the Vice President for Student Affairs within a reasonable period of time, not to exceed 20 days.
- (4) The Vice President for Student Affairs shall provide students of the University with an opportunity for reasonable access to education records, provided that the Vice President for Student Affairs 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 Vice President for Student Affairs 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 challenge a decision by the Vice President for Student Affairs to withhold certain of the student's records by filing an appeal with the Student Rights and Responsibilities Committee.
- (6) This section shall not prohibit the University Registrar from providing a student with a copy of the student's academic transcript without prior clearance from the Vice President for Student Affairs.

WAC 516-26-035 Access to 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.
 - (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 to 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. Such a waiver may not be required 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 Records.

- (1) The Vice President for Student Affairs 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 Vice President for Student Affairs shall respond to reasonable requests for explanations or interpretations of the contents of student education records.

WAC 516-26-050 Challenges to Content of Records — to Release of Records — or to Denial of Access to 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 students;
 - (b) Have the opportunity to correct or delete 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 Vice President for Student Affairs the nature of the corrective action sought by the student.

WAC 516-26-060 Challenges — Hearing Before Student Rights and Responsibilities Committee.

- (1) If informal proceedings fail to resolve the complaint of a student, the student may file with the Vice President for Student Affairs a written request for a hearing before the Student Rights and Responsibilities Committee of the University.
- (2) Within a reasonable time after submission of a request for hearing, the Student Rights and Responsibilities Committee shall conduct a hearing concerning the student's request for corrective action.
 - (a) The student and the University shall be given a full opportunity to present relevant evidence at the hearing before the Student Rights and Responsibilities Committee.
- (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 Rights and Responsibilities Committee 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 Rights and Responsibilities Committee 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 Rights and Responsibilities Committee shall have authority to order that the student be permitted access to the records.
- (6) The decision of the Student Rights and Responsibilities Committee 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.

Except as provided in WAC 516-26-080, 516-26-085 or 516-26-090, 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.

WAC 516-26-075 Release of Personally Identifiable Information or Education Records — Nature of Consent Required.

Where the consent of a student is required under WAC 516-26-070 for the release of education records or personally identifiable materials contained therein, the student's consent shall be in writing, shall be signed and dated by the student, and shall include a specification of the records to be released, the reasons for such release, and the names of the parties to whom the records may be released.

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 the information is required for a legitimate educational purpose 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.

- (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 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 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.
- (3) 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 Directory Information.

- (1) The University may release "directory information" concerning a student to the public unless the student requests in writing of the Vice President for Student Affairs 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 and home address, telephone listing, 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 Student Records.

Except as otherwise provided by law, the University shall not be precluded under this chapter from destroying all or any portion of a student's education records, 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 that the student has a right to each of the following:

- (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) Consent to disclosures of personally identifiable information contained in the student's education records, except to the extent that these regulations and the regulations promulgated pursuant to the Family Educational Rights and Privacy Act allow;
- (4) File a complaint with the United States Department of Education under 34 CFR 99.64 concerning alleged failures by the University to comply with the requirements of the act;
- (5) Information concerning the cost to be charged for reproducing copies of the student's records; and
- (6) Obtain 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

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 F, 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 (or dean in Huxley and Fairhaven), who then directs the Registrar to make the specific grade change. A copy of the memo to the Registrar will be sent to the student and faculty member.

If a resolution is not achieved between the student and the instructor within five (5) days after the first meeting between the student and instructor, the student has five (5) days to ask the academic unit head, or designee, to attempt to informally resolve the issue. The unit head, or designee, will meet with both parties to clarify the issues and attempt to resolve them. If the issue is resolved within five (5) days after the student has sought the assistance of the unit head, the unit head, or designee, shall prepare an informal agreement, in writing, for both sides to sign. No reasons need be given. Such an agreement, once signed by both parties, may not be appealed.

If an agreement cannot be reached within the five-day review period, and the student still wishes to pursue the grievance, the student shall request the unit head or designee to present the case to the dean of the college. The unit head has five (5) days to present the material to the dean. The material presented should include all of the documents relevant to the case and an analysis of the issues. The dean shall continue the process of seeking an informal resolution and collect more material as necessary. If a resolution can be reached, the dean shall prepare an informal agreement as above. Such an agreement, once signed by both parties, may not be appealed.

If the student has a grievance against an academic unit, the student shall first thoroughly discuss the matter with the unit head. The student must meet with the unit head within ten (10) days of receiving notification of the action or decision of the unit which gives rise to the grievance. If the grievance is not resolved within ten (10) days of the initial meeting between the student and the unit head, the student may request, in writing, further review by the dean of the college, following the procedures for grievance against individual faculty.

If the grievance against a faculty member or academic unit is not resolved at this stage, the dean shall make a decision based on the merits of the case. The reasons for the decision shall be in writing and shall be given to both the student and the instructor. 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 Huxley and Fairhaven colleges, the chairperson of the college personnel committee.
- (3) The unit head "designee" can be any faculty member or administrator from the academic unit.
- (4) Reference to "days" means "school days" and includes the registration period and the week in which exams are scheduled.

Appendix 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 suit in a court with jurisdiction.

3. Responsibility for Implementation

The Director of the Center for Equal Opportunity has overall responsibility for assuring University compliance with nondiscrimination laws and regulations, and receives formal complaints.

The Center for Equal Opportunity 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 activity. Complainants, respondents, and participants in these processes are obligated 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. Violations of confidentiality may be the basis for claims of unprofessional conduct, student conduct code violations, or charges of slander.

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 Center for Equal Opportunity when handling such matters and are advised to maintain documentation sufficient to demonstrate a timely, appropriate and adequate response.

(3) *Role of the Center for Equal Opportunity.* If resolution satisfactory to the complainant does not occur, or if the complainant does not wish to bring the matter to the chair or supervisor, the complainant may contact the next person in the administrative line or the Center for Equal Opportunity 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 Center for Equal Opportunity 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 send written notification to the Center for Equal Opportunity that the situation is resolved or that no further University action is desired. The written

notification will be retained in active files for a period of 30 calendar days, and in archived files under "Unsubstantiated Illegal Discrimination Complaints" for a period of 3 years.

B. Written Complaints

(1) *Filing the written 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 Center for Equal Opportunity (CEO). The complainant will submit a formal complaint form (available from the CEO) which will include a written statement describing the alleged discrimination. Upon receipt by the CEO, 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 CEO Director, at his or her discretion, or upon written application to the CEO 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 CEO 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 CEO 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 CEO 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;
- (b) 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 of the case filing date the respondent may submit to the CEO Director a written response to the complaint. 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 and report completed.* Within forty-five (45) working days of the case filing date, the CEO 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) The investigation will be conducted by the Center for Equal Opportunity. Each party to the complaint may request that the CEO be assisted in the investigation by one member of the party's constituent group. Such representatives will be appointed by the Provost and trained by the CEO. (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 CEO 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 CEO 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 CEO Director and/or his/her designee(s) alone will conduct all personal interviews.
- (e) A copy of the investigative report and findings will be provided to the complainant and respondent(s). When the report is complete,

it will be forwarded to the appropriate Vice President, and the appropriate Dean and department chair.

(f) Should either the complainant or respondent dispute details of the report or findings(s), rebuttal statements may be filed with the Center for Equal Opportunity within ten (10) working days of receipt of findings for inclusion in the investigative file. The CEO Director may choose to conduct further investigation upon receipt of a rebuttal statement, not to extend longer than five working days unless availability of witnesses necessitates further extension. Complainants may also file a complaint with an external agency within established time limits.

(6) *Review by Vice President.* By the 60th working day after the case filing date, the appropriate Vice President or designee will assess the investigative report, review any rebuttal statements, and determine appropriate actions. 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. Complaint Initiated by Administration

The President, Provost, Vice Presidents, Deans, Directors, Supervisors or Chairs, if given sufficient cause, may request that the Center for Equal Opportunity conduct an investigation. The Dean or Vice President 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. In those cases, the CEO will use the same notification and process guidelines outlined in the internal complaint procedure. In the event that the investigation indicates that illegal discrimination has occurred, appropriate disciplinary action may be taken. The administrator who initiated the complaint will not be involved in reviewing the findings or determining sanctions. Appeal of any such action may be filed under the appropriate grievance procedure or relevant disciplinary process.

D. Investigative Record

(1) *Records custodian.* The Center for Equal Opportunity 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 CEO Director, other written materials considered in the course of the investigation, and the CEO Director's written report. The investigative records shall be maintained under appropriate security in the Center for Equal Opportunity.

(2) *Records retention.* If the CEO Director's report concludes that illegal discrimination did not occur, the investigative file will be retained in the Center for Equal Opportunity files for thirty (30) days and in archived files for a period of three (3) years. No further action will be taken by the University as to that complaint.

(3) *Investigative records not subject to public disclosure.* Investigative records pertaining to claims of discrimination in employment or unfair practices under chapter 49.60 RCW, the state's Law Against Discrimination, are not subject to public disclosure under the Public Records Disclosure Law, Chapter 42.17 RCW. In the event disciplinary action is taken against an employee, those personnel records relating to specific instances of misconduct may be subject to disclosure pursuant to the Public Records Disclosure Law.

E. Sanctions

Sanctions to be considered by the President, Provost, Vice Presidents, Deans or Directors — or in the case of students, the University Conduct Officer — 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. At the option of the respondent, the administrator 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.

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 (as referenced in section II.A.1), 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.

APPENDICES

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) 220-7900

Office of Federal Contract Compliance
Regional Director, Region X
1111 Third Avenue, Suite 610
Seattle, WA 98101-3212
Phone: (206) 553-4508

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. 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 Center for Equal Opportunity.

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 Center for Equal Opportunity; 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 S16-23 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 Center for Equal Opportunity 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.

C. 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.

Appendix H PARKING AND TRANSPORTATION

It is recommended that vehicles not be brought to the campus unless absolutely necessary. Due to the geographical location of the campus and limited parking resources available on and around campus, it is not possible to cover the desires of the University community.

Use of alternative means of transportation is recommended. The Transportation Management Program (TMP) is designed to manage University parking resources and to provide a variety of transportation options — carpooling, riding the bus, bicycling, or walking. The use of one or a combination of these options will provide reasonable access to campus. Major elements of the TMP include reduced permit rates and preferential assignments for registered carpools, rideshare matching, commuter permit packets, and the Campus Express. Details about participating in the TMP may be obtained by contacting the TMP Coordinator at (360) 650-3553.

Additionally, Whatcom Transportation Authority (WTA) provides convenient transit service 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 operated by University Residences is also available seven nights a week from 7 to 11 p.m. The routes serve all 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 S16-12. Violators of parking regulations are subject to impound. All students who utilize parking facilities on campus are required to purchase a parking permit and register their vehicles, motorbike or motorcycle. Early application is recommended. Forms are available beginning late May for an assignment for the subsequent school year. For further information, contact the Parking and Transportation Services Office on campus (360) 650-2945.

Appendix I SATISFACTORY ACADEMIC PROGRESS POLICY

To be eligible for financial aid (including federal student loans not based on financial aid eligibility) you must make satisfactory academic progress towards a degree or certificate program.

General Policy Requirements

1. Maintain the required grade point average.
2. Complete the minimum required credits.
3. Complete your degree or certificate within the specified time frame.

Grade Point Average Requirements

The Satisfactory Academic Progress Policy requires that you meet the scholastic standards of the University, which expect an undergraduate student to maintain a 2.00 cumulative grade point average (GPA). The 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. The University's scholastic standards for undergraduate and graduate students are fully described in the general catalog.

Minimum Credit Requirements

Prior Academic Record Requirements

Before you receive financial aid, your prior academic record will be reviewed. You will be expected to have satisfactorily completed at least 80% of the credits you have attempted at WWU. If you do not meet this requirement, you will not be eligible for financial aid. To gain eligibility, you may petition to explain the circumstances that prevented you from successfully completing the credits you attempted (see the reinstatement options listed in this policy).

Current Academic Record Requirements

To make satisfactory progress and to maintain eligibility for financial aid, students must successfully complete the minimum number of credits per year and per quarter as listed below.

For all students, failure to complete any credits in a quarter will suspend future aid. Not considered as completed credits are classes for which students receive an F, Z, U, N (no pass), W, X; or do not receive a grade or classes from which students withdraw.

Undergraduate and Postbaccalaureate Students:

Full-time

- Must enroll for a minimum of 12 credits.
- Must complete 36 credits by the end of the academic year (fall through spring quarters). If you receive aid for less than or more than 3 quarters during the academic year, you must average 12 completed credits for each quarter you attend.

Three-quarter Time

- Must enroll for a minimum of 9 credits to receive aid; must average 9 completed credits for each quarter attended.

Half-time

- Must enroll for a minimum of 6 credits to receive aid and must complete 6 credits each quarter.

Less Than Half-time

- Must complete all credits for which you enroll.

Graduate Students

Full-time

- Must enroll for a minimum of 10 credits.
- Must complete 30 credits by the end of the academic year (fall through spring quarters). If you receive aid for less than or more than 3 quarters, you must average 10 credits completed for each quarter.

Half-time

- Must enroll for a minimum of 5 credits and must complete 5 credits per quarter.

Recipients of Washington State-funded Financial Aid

If you receive state-funded aid, you are expected each quarter to complete the credits for which you received the aid or you will be put on probation. State-funded aid programs include: State Need Grant, State Work Study, State Educational Opportunity Grant, or conditional award for special education. If you complete less than 6 credits (5 for graduate students) your state-funded aid will be canceled for future quarters. The canceled aid will not be replaced with other federal or institutional grants or work study.

Monitoring of Satisfactory Academic Progress

Your yearly academic progress is monitored after spring quarter. However, if you receive state aid, you will be monitored quarterly to ensure you complete the minimum quarterly credits. If you attend summer quarter, a separate monitoring will be conducted at the end of summer quarter.

Please note:

- Not counted for satisfactory academic progress are: courses for which you received an F, Z, U, N (no pass) grade or did not receive a grade; courses from which you withdrew.

- An incomplete (K) grade will not count as completed course work until a final grade is posted by the Registrar. You must notify Student Financial Resources in writing once the completed grade has been posted in the Registrar's system. An exception is made for graduate thesis credits, which may show as incomplete.
- Audited classes do not count for satisfactory academic progress.
- Repeated classes will count towards the minimum credit requirement. However, these credits also are counted in the total number of attempted credits for the maximum time frame.
- All credits must be completed at WWU or through an exchange program sanctioned by WWU.

Consequences of Not Making Satisfactory Progress

Probation

- If you complete fewer credits per quarter than the required quarterly average, you will be considered on financial aid probation. You can continue to receive financial aid until the end of the academic year while in a probationary status.
- However, if you do not meet the minimum quarterly requirement for state aid (6 credits for undergraduates, 5 credits for graduate students), state-funded financial aid for the remaining quarters of the academic year will be canceled.

Suspension

- If you do not meet the minimum annual credit requirements, your financial aid application for future quarters will not be processed, and any financial aid already awarded for future quarters will be canceled.

Reinstatement of Eligibility

If you do not make satisfactory academic progress, you may use the following options for reinstating your eligibility:

1. You may petition if you have unusual circumstances. With your petition you should include any supporting documentation that supports your case. Your petition will be reviewed for circumstances beyond your control that prevented you from making progress. If your petition is denied, you will need to follow one of the options below for reinstatement.
2. If you did not make satisfactory progress because of a "K" grade (incomplete) and the grade is now complete *and* posted in the Registrar's Office, you need to notify the Student Financial Resources Office using the satisfactory progress petition form. Your petition should include: a) an explanation of why you were unable to complete your degree within the time allowed; b) document the number of credits still necessary to complete your degree or certificate; c) state the quarter you plan to graduate; and d) include a senior evaluation from the Registrar's Office as the required documentation to submit with the petition.
3. Attend the summer quarter immediately following the academic year in which you did not meet satisfactory progress standards. You only need to complete the number of credits necessary to make up the deficit that caused your loss of eligibility. Once completed, you must petition for reinstatement of your eligibility. Please note: under this option you are not eligible for financial aid for the summer quarter if you attend WWU.
4. If you are a full-time student, you can attend a subsequent quarter and successfully complete 15 credits (12 credits for graduate students) without financial aid from WWU. By completing this required credit load, you will be demonstrating the ability to perform at the normal full-time course load, will be meeting the minimum requirement for the additional quarter of attendance (12 credits for undergraduate; 10 credits for graduates), and you will be making some progress toward the deficit which initially caused you to lose your eligibility.
5. If you are a part-time student, you may contract with the Student Financial Resources for the number of credits which you must complete in order to reinstate your eligibility.
6. Student Financial Resources invites students to re-petition if they have been unable to reinstate themselves using Options 1-5 and have been unable to attend a college or university for a full academic year. Your petition for reinstatement should explain why you have not been able to reinstate yourself using the available options and how continued ineligibility would be an undue hardship.

If your eligibility for financial aid is reinstated, the amount of your financial aid award will be based on available funds. It is possible that you will not receive your original financial aid award.

Maximum Time Frame

The maximum credits you are allowed to attempt and still be eligible to receive financial aid are listed below.

Undergraduate Students:

- May attempt 125% of the minimum credit hour requirements for their field of study (as defined in the general catalog). No additional allowance is granted for concurrent completion of a double major.

Graduate Students:

- May attempt up to 90 credits for completion of the graduate degree.

Postbaccalaureate Students Pursuing a Second Undergraduate Degree or a Certification Program:

- May attempt up to 75 credits for completion of the additional degree.

Once you have reached the maximum attempted credit limit, you are no longer eligible for financial aid. If you believe unusual circumstances prevented you from completing your degree within the time allowed, or if you believe that your attempted credit totals are inaccurate, you may petition for a review of your eligibility. Your petition should include a) an explanation of why you were unable to complete your degree within the time allowed; b) document the number of credits still necessary to complete your degree or certificate; c) state the quarter you plan to graduate; and d) include a senior evaluation from the Registrar's Office as the required documentation to submit with the petition.

Definition of Credit Hours Attempted

"Credit hours attempted" are defined as registered, enrolled hours as of the Add/Drop deadline on each quarter. If you receive financial aid for a quarter, the total hours attempted are defined as the minimum hours required for financial aid disbursement, or actual hours enrolled, whichever is higher. A repeated course is counted as an attempted course each time the course is taken. Transfer credits are also counted in the attempted credit total.

**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, LSI, 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.

NON-DISCRIMINATION POLICY

Western Washington University is committed to assuring that all programs and activities are readily accessible to all eligible persons without regard to their race, color, religion, national origin, sex, age, disability, marital status, sexual orientation, Vietnam Era or disabled veteran status. The laws under which the University operates include:

Title VI of the Civil Rights Act of 1964, which prohibits discrimination based on race, color or national origin in any program or activity receiving federal financial assistance.

Title IX of the Education Amendments of 1972, which prohibits sex discrimination in all federally assisted education programs.

Section 504 of the Rehabilitation Act of 1973, which prohibits discrimination against persons with disabilities by the recipients of federal financial assistance.

The Washington State Law Against Discrimination, RCW 49.60, which prohibits discrimination on the basis of race, creed, color, national origin, sex, marital status, age or disability.

The Americans with Disabilities Act of 1990, which prohibits discrimination on the basis of disability by a public entity, and which requires reasonable accommodation for qualified persons with disabilities.

The Civil Rights Act of 1991, which amends Title VII and other federal civil rights statutes.

Persons with questions regarding the University's policies relating to these laws should contact the Center for Equal Opportunity, Old Main 375, (360) 650-3306 (voice/TDD).

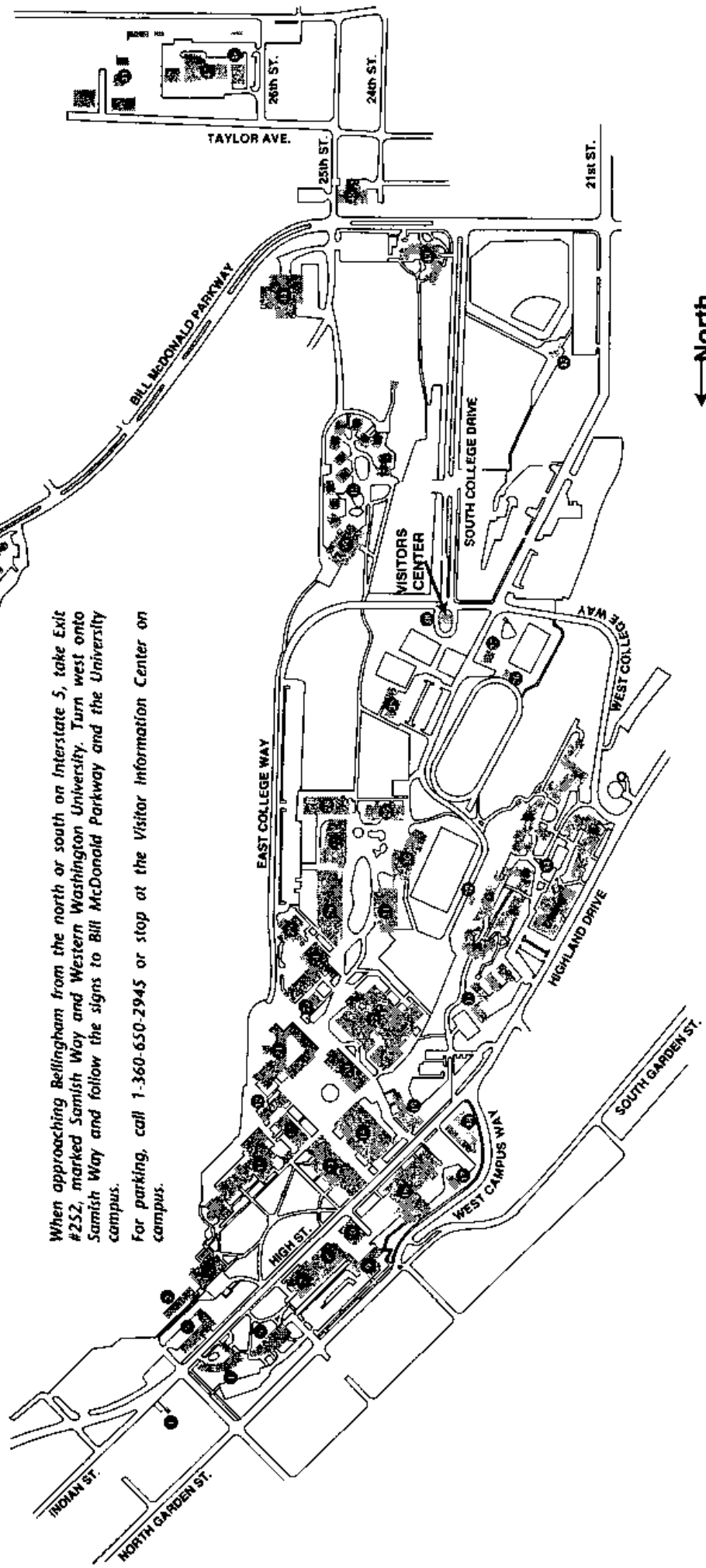
WESTERN WASHINGTON UNIVERSITY CAMPUS MAP

Map Key

Alumni House	1
Archives, Washington State	45
Arntzen Hall	27
Art Annex	23
Baseball Service	42
Biology Building	30
Birmann Wood Apartments (Residence)	48
Bond Hall	20
Bookstore	10
Buchanan Towers (Residence)	43
Carver Gymnasium	22
Canada House	17
Chemistry Building	31
College Hall	19
Commissary	44
Edens Hall North (Residence)	2
Edens Hall South (Residence)	6
Environmental Studies	28

Engineering Technology Building	26
Fairhaven Academic	39
Fairhaven Complex (Residence)	40
Fine Arts	24
Fraser Hall	12
Haggard Hall	15
Higginson Hall (Residence)	3
Highland Hall (Residence)	33
High Street Hall	18
Humanities	13
Mailroom	35
Maintenance-Motor Pool	46
Mathes Hall (Residence)	5
Miller Hall	21
Nash Hall (Residence)	4
Old Main	11
Parking and Transportation Office	37
Parks Hall	29

Performing Arts Center	16
Physical Plant	47
Public Safety (University Police)	35
Recycling Center	41
Ridgeway Commons	34
A Alpha (Residence)	T Gamma (Residence)
B Beta (Residence)	U Omega (Residence)
D Delta (Residence)	Z Sigma (Residence)
K Kappa (Residence)	
Steam Plant	25
Track Bunker	32
Track Storage	36
Viking Addition	9
Viking Commons	7
Viking Union	8
Visitor Information Center	38
Wilson Library	14



When approaching Bellingham from the north or south on Interstate 5, take Exit #252, marked Samish Way and Western Washington University. Turn west onto Samish Way and follow the signs to Bill McDonald Parkway and the University campus.
 For parking, call 1-360-650-2945 or stop at the Visitor Information Center on campus.



INDEX

- Academic Advising and Tutoring 21, 22
 Academic Dishonesty Policy 312
 Academic Facilities 4
 Academic Grievance Policy 35, 318
 Academic Policies 29
 Academic Probation 35
 Academic Programs 4, 85, 209, 229, 238, 260, 275
 Academic Progress, Satisfactory 322
 Accounting 212
 Accreditation of University 4
 Administrative Officers 301
 Admission, Freshman 8
 Admission, Graduate 51
 Admission to Teacher Education 288
 Admission, Transfers 9
 Admission, Undergraduate 8
 Advanced Placement 29
 Affirmative Action/Equal Opportunity Policy/
 Discrimination 310, 318
 Student Grievance Policies 318
 Alcohol and Drug Counseling 24
 Alcohol and Other Drugs Policy 324
 Alumni Services 23
 American Cultural Studies 87
 Anthropology 55, 89
 Apartments, On-campus 20
 Appendices 310
 Application Procedures 8
 Archives/Records Management 73
 Art 56, 239
 Art History 240
 Arts and Sciences, College of 85
 Assessment 4
 Assistantships, Graduate 51
 Astronomy 177
 Athletics 22
 Attendance Requirements 31
 Audiology 201
 Auditors 11, 13, 31
 Bachelor Degree Requirements 36
 Bills and Charges (see Tuition and Fees)
 Biology 57, 94
 Bookstore 27
 Botany (see Biology)
 Business and Economics, College of 58, 209
 Business Administration 58, 219, 223
 Calendar, Official 6
 Campus Map 325
 Campus Recreation 27
 Canadian-American Studies 101
 Career Exploration/Professions (See Career Services Center)
 Career Services Center 22
 Center for Equal Opportunity 310
 Certificates Issued, 1994-95 309
 Certification 55, 275, 287, 294
 Challenge, Course 29
 Changes in Registration 12, 31
 Cheating 312
 Chemistry 58, 102
 Chinese 135
 Classical Studies 135
 Clubs and Organizations 27
 Code of Ethics for the Faculty of WWU 310
 Communication 107
 Computer Science 59, 111
 Computing Facilities 5
 Conference Services (See Institutes and Conferences)
 Continuing Certification 288, 294
 Continuing Education 43
 Counseling Center 23
 Course Numbering System 30
 Courses (see individual subjects)
 Creative Writing 67, 126
 Credits and Credit Loads 30
 Credits, Transfer Policy 10
 Dance 172, 255
 Daycare Facilities 26
 Degrees Granted, 1994-95 309
 Degrees Offered 4, 85, 209, 229, 238, 260, 275
 Dentistry (professional) 48
 Deposit, Housing 20
 Disabled Student Services 26
 Early Childhood 292, 293
 Earth Science 140
 East Asian Studies 115
 Economics 214
 Educational Administration and Foundations 61, 277
 Educational Curriculum and Instruction 63, 287
 Education, Woodring College of 60, 275
 Electronic Engineering Technology 118
 Elementary Education 291
 Employment, Student 16
 Engineering (professional) 50
 Engineering Technology 66, 117
 English 67, 125
 Environmental Science 68, 260
 Environmental Studies 260, 267
 Environmental Toxicology and Chemistry 261
 Equal Opportunity (See Center for Equal Opportunity)
 Ethnic Student Center 27
 Examinations, Final 33
 Extension Programs 44
 Faculty 306
 Faculty Retired (Emeritus) 302
 Faculty Ethics Code 319
 Faculty/Student-Designed Major
 (self-designed majors) 84, 85, 153, 205, 229, 264
 Fairhaven College 229
 Fees 13
 Field Experience 45
 Finals Preparation Week 32
 Finance, Marketing and Decision Sciences 218
 Finances 13
 Financial Aid 16
 Satisfactory Academic Progress 322
 Summer 17
 Fine and Performing Arts, College of 238
 Food Services 19
 Foreign Languages and Literatures 69, 132
 Foreign Study (See International Programs/Exchanges)

Forensics.....	28	Medical Care and Services	24
Former Students Returning	10	Medicine (professional)	49
French	135	Multicultural Services	25
Full-time Status	31	Music	74, 246
General Science	85, 140, 193	Natural Science/Science Education	75
General Studies	45	New Student Programs/Family Outreach	25
General University Requirements	36	Non-Discrimination Policy	324
Geography and Environmental Social Sciences	69, 261	Non-Resident Status	13
Geology	71, 139	Off-Campus Education (See Extension Programs)	
German	136	Orientation (See New Student Programs)	
Grading System	33	Outdoor Activities	27
Graduate School	51	Parking and Traffic	322
Graduation Fees	14	Parking Fees	14
Graduation Requirements	36	Pass/No Pass Grading	33
Grants.....	16	Philosophy	164
Greek	136	Physical Education, Health and Recreation	77, 166
Grievance Policies, Student	318	Physical Therapy (professional)	49
Health (See Student Health Center)		Physics and Astronomy	177
Health Education	166	Plagiarism	315
High School Students	9	Plastics Engineering Technology	120
History	72, 144	Political Science	78, 182
Honors Program	46	Post-Baccalaureate Professional Schools	48
Housing and Dining (See University Residences)		Prerequisites	30
Housing, Off-Campus	20	President Emeritus	306
Humanities.....	40, 153, 154	Probation, Academic	35
Human Services	284	Professional Transfer Programs	50
Huxley College of Environmental Studies	260	Psychology	79, 187
Incomplete Grades.....	33	Publications (student newspaper, magazines)	28
Independent Learning	43	Reading	292
Industrial Design	118	Re-admission.....	10
Industrial Technology	119	Recreation	171
Institutes and Conferences	44	Recreational Activities	27
International Programs	48	Refund of Fees	14, 15
International Studies and Programs	47	Registration.....	12
International Students	8	Reinstatement	35
Internship	22	Repeating Courses	34
Internship, Teaching	294	Research	4
Intramurals.....	27	Reservations, Room	20
Japanese	137	Residence Halls	19
Job Opportunities (after graduation).....	22, 23	Residence Life	26
Journalism	150	Residency Status	13
Late Registration/Course Adds	14	Running Start (High School Students).....	9
Latin	137	Russian	137
Latin American Studies	145	Scholarships	16
Law (professional)	49	Scholarship Standards	34
Learning Disabled (See Disabled Student Services)		Science Education.....	193
Leaves of Absence	31	Sculpture Collection	5
Liberal Arts Option	48	Secondary Education	290
Liberal Studies	153	Sexual Harassment of Students, Policy	311
Librarians	309	Shannon Point Marine Center	5
Libraries	5	Social Studies Education.....	195
Library Instruction.....	48	Sociology.....	81, 196
Library Science	285	SPAN	31
Linguistics	156	Spanish	137
Living Costs	13	Special Education	292
Loans, Student	18	Speech Pathology and Audiology.....	82, 201
Major, Self-Designed (See Faculty/Student Designed Major)		Stress Management and Biofeedback Center	24
Management	222	Student Activities	26
Manufacturing Engineering Technology.....	119	Student Affairs	21
Marine Biology.....	57, 97	Student/Faculty-Designed Major	
Mathematics.....	73, 157	(See Faculty/Student-Designed Major)	
Mathematics/Computer Science	163	Student Financial Resources.....	16
MBA	226	Student Health Assessment and Information Center	23
Media (FM radio, student TV news show).....	28	Student Health Center	24

INDEX

Student Internship	291, 294	Transfer Programs (See Professional Transfer Programs)	
Student Life, Office of (See Student Support Services)		Trustees, Board of	301
Student Records Policy	316	Tuition and Fees	13
Student Rights and Responsibilities	312	Tutoring	22
Student Support Services	25	University Extended Programs	43
Student Teaching (See Student Internship)		University Personnel	301
Study Abroad	48, 116, 134	University Residences	19
Teacher Certification	294	Veterans	18
Teaching English as a Second Language (TESL)	206	Wellness Center	23
Technology (See Engineering Technology)		Western Gallery/Outdoor Sculpture Collection	5
Technology Education	120	Withdrawal from Courses/University	31, 32
Technology, Engineering (See Engineering Technology)		Women Studies	207
Termination of Enrollment	32	Woodring College of Education	275
Theatre Arts	83, 255	Writing Proficiency Requirements	38
Transcripts	14	Zoology (see Biology)	
Transfer Admission	9		





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