



WESTERN WASHINGTON UNIVERSITY BULLETIN

GENERAL CATALOG 1993/94

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 (206) 650-3000.



WESTERN WASHINGTON UNIVERSITY (USPS 679-900)

Vol. 89

July, 1993

No. 2

Western Washington University Bulletin (USPS 679-900) is published five times a year in February, July, August, September and October by Western Washington University, 516 High Street, Bellingham, Washington 98225-5996. Second-class postage paid at Bellingham, Washington, and additional offices.

Postmaster: Send address changes to Western Washington University, Mail Services, Bellingham, Washington 98225-5996.



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 marine laboratory, the Computer Center and the Performing Arts Center; distinguished programs as wide ranging as vehicle technology, music, environmental studies, journalism, business and education; art and architecture created by such as Noguchi, Caro, Judd and Bassetti. The University occupies 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	4	Psychology; Science Education; Social Studies Education; Sociology; Speech Pathology and Audiology; Student/Faculty-Designed Major; Teaching English as a Foreign Language; Women Studies.	
UNIVERSITY CALENDAR	6		
UNDERGRADUATE ADMISSION	7	COLLEGE OF BUSINESS AND ECONOMICS	193
REGISTRATION	10	Accounting; Economics; Finance, Marketing and Decision Sciences; Management; Master of Business Administration.	
TUITION AND FEES	11	FAIRHAVEN COLLEGE	211
STUDENT FINANCIAL RESOURCES	14	COLLEGE OF FINE AND PERFORMING ARTS	219
UNIVERSITY RESIDENCES	16	Art; Music; Theatre Arts.	
STUDENT AFFAIRS	18	HUXLEY COLLEGE OF ENVIRONMENTAL STUDIES.	240
UNIVERSITY ACADEMIC POLICIES	25	Environmental Studies; Geography and Regional Planning.	
UNIVERSITY GRADUATION REQUIREMENTS	32	WOODRING COLLEGE OF EDUCATION	256
ALL-UNIVERSITY PROGRAMS	38	Educational Administration and Foundations; Human Services; Library Science; Educational Curriculum and Instruction.	
GRADUATE SCHOOL	42	OFF-CAMPUS EDUCATION CENTERS	280
COLLEGE OF ARTS AND SCIENCES	76	UNIVERSITY PERSONNEL	282
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; Home Economics; Journalism; Liberal Studies; Linguistics; Mathematics; Nursing; Philosophy; Physical Education, Health and Recreation; Physics and Astronomy; Political Science;		APPENDICES	291
		CAMPUS MAP	302
		INDEX	303

THE UNIVERSITY

Western Washington University is located in Bellingham, a city of 50,000 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.

ACCREDITATION

The University is accredited by the Northwest Association of Schools and Colleges, the National Council for the Accreditation of Teacher Education and the American Assembly of Collegiate Schools of Business to offer work at the bachelor's and master's degree levels. 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.

While it is a University requirement that students 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, Environmental Protection Agency, Canadian Embassy, Readers' Digest, National Endowment for the Humanities, USDA Forest Service, American Chemical Society, National Park Service, Apple Computer Inc., Office of Naval Research, U.S. Small Business Administration and agencies of the State of Washington and the federal government.

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 manuscript typing and other services.

ACADEMIC FACILITIES

The main campus and its 77 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.

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 600,000 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 5,600 current 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. Members of the library faculty offer instruction in effective use of the library.

Computing Facilities

Academic Technology and User Services provides consultation and software support, handouts and

reference materials for computer users at WWU. Call (206) 650-3333 for detailed information.

Equipment supporting academic computing includes a DEC 5500 Unix machine and a DEC Vaxserver 4000-300 VMS machine, with terminals located in all academic buildings.

Microcomputers are available to all students across campus, with general-purpose software in both IBM and Macintosh environments. 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 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 Undergraduate Research Participation Program, a Minorities in Marine Science Undergraduate Program during winter and spring quarters, 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 20 people.

The Shannon Point Marine Center of Western Washington University provides a marine outlet for the Shannon Point Marine Center Consortium of Western and Eastern Washington universities and Skagit Valley, Everett and Edmonds community colleges.



UNIVERSITY CALENDAR

1993-94 ACADEMIC YEAR*

Fall Quarter 1993

September 17-22 — Registration

September 23 (Thursday), 8:00 a.m. — Classes begin

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

December 6-10 — Final examination week

December 11 (Saturday) — Commencement

Winter Quarter 1994

January 3 (Monday) — Registration

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

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

February 21 (Monday) — Presidents Day Holiday

March 14-18 — Final examination week

March 19 (Saturday) — Commencement

Spring Quarter 1994

March 28 (Monday) — Registration

March 30 (Tuesday), 8:00 a.m. — Classes begin

May 30 (Monday) — Memorial Day Holiday

June 6-10 — Final examination week

June 11 (Saturday) — Commencement

Summer Quarter 1994

June 20 to July 29 — Six-Week Session

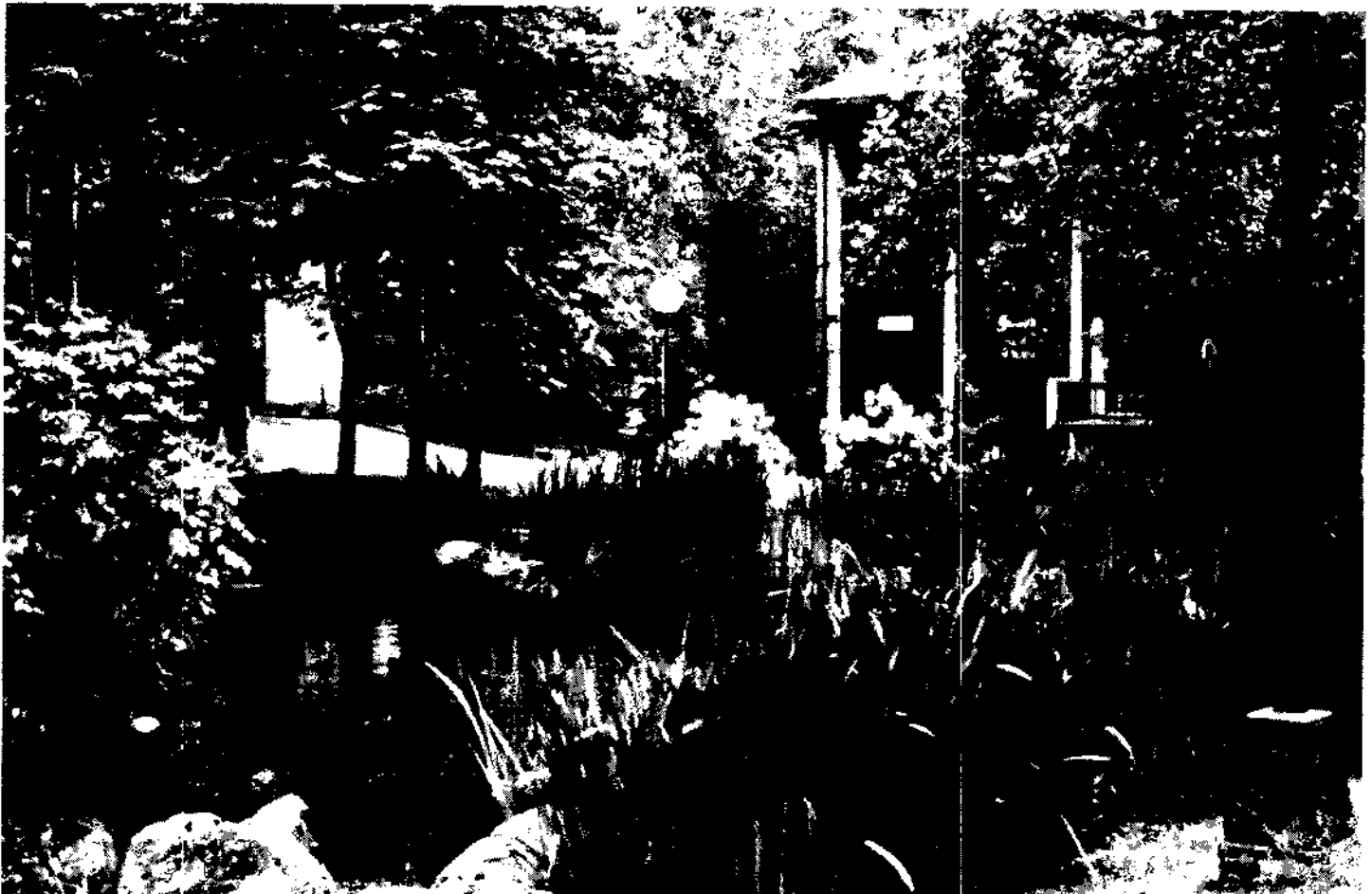
June 20 to August 19 — Nine-Week Session

June 20 (Monday) — Registration

June 21 (Tuesday) — Classes begin

July 4 (Monday) — Independence Day Holiday

August 20 (Saturday) — Commencement



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

UNDERGRADUATE ADMISSION

Old Main 200, (206) 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 making 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.

The Uniform Undergraduate Application for Admission to Baccalaureate Colleges and Universities in the State of Washington is required of all freshman, transfer and postbaccalaureate applicants. International students must complete the International Student 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

High school applicants may apply after December 1 of their senior year. Transfer applicants may submit applications up to two quarters prior to enrollment. Students are generally notified of admission status within 6 to 8 weeks after the application deadline.

- Fall Quarter
 - Freshman - March 1
 - All others - April 1
- Winter Quarter - October 15*
- Spring Quarter - January 15*
- Summer Continuing to Fall
 - Freshman - 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.

Credentials from Washington state institutions may be hand delivered in an official, sealed envelope. Transcripts

* Due to application processing time constraints, out of country international student applications are not accepted for winter and spring quarters.

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 submit a personal medical history.

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-to-Student Program at (206) 650-3861.

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. Additionally, the Admissions staff may review applications for admission from underrepresented students of color on an individual basis to determine potential for success.

Disabled Students

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. However, at time of application, students with disabilities are encouraged to submit additional information, including professional documentation, which may assist the Admissions Committee in the review process. Failure to do so will not hinder one's success in the admissions process.

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. No financial assistance is provided to international students.

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,

UNDERGRADUATE ADMISSION

quality and nature of course work, grade trends, and SAT or ACT scores. Residency, special talent and individual circumstances may be considered.

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.

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

Mathematics: Three years, including two years of algebra beyond pre-algebra, and geometry.

Science: Two years of college preparatory science, including one year of an algebra-based chemistry or physics course.

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 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.

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. 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.

Regardless of number of college credits, Running Start students 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.

TRANSFER ADMISSION

Minimum requirements for transfer admission include a 2.0 cumulative GPA as well as a 2.0 in the quarters prior to application review and enrollment. Students applying with fewer than 40 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.

Admission priority is given to Washington state residents



transferring directly from a Washington state community college with the Direct Transfer Agreement associate degree. Cumulative GPA, number of transfer credits, academic program, individual circumstances, residency and space availability may also 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 *Transfer Guide*, distributed to interested prospective transfer students.

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 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 Service - up to 30 credits granted according to ACE guidelines

Exceptions to Western's transfer of credit policies may be made upon petition to the credit evaluation staff in the Registrar's Office after enrollment.

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 include at least 90 credits, 75 of which must be 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 non-matriculated enrollment options offered through University Extended Programs.

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. Students applying to return after dismissal from the University must follow reinstatement procedures detailed in the Academic Policies section of 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 Washington state employees and citizens over 60 years of age who are eligible for tuition reduction. All other non-matriculated students should contact University Extended Programs to explore options for non-matriculated status. Permission to audit is also granted quarterly, on a space-available basis.

REGISTRATION

Old Main 230, (206) 650-3430

Registration for fall quarter takes place in September prior to the start of the term. For winter, spring and summer quarters, there is a period of advance registration for continuing students, while new students register on the first day of the quarter.

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.

An orientation and advising program for new transfer students is held before the start of each term. Each transfer student who has accepted an offer of admission will be sent complete information about orientation and advising.

REGISTRATION AT START OF QUARTER

Students who do not participate in early registration may register at the start of the quarter. (See the calendar at the front of this General Catalog.) Before registration, each

new student should have received additional information and instructions, including a date for his or her academic advisement and program planning conference.

Students may register through the first week of the quarter. However, entering classes late may cause difficulty.

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.

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."



TUITION AND FEES

Student Fiscal Services, (206) 650-2865

At Western the various expenses of a student who is single and a resident of the State of Washington are about \$3,062 each quarter.

Approximate Quarterly Expenses, 1993-94

Tuition and Fees	\$ 711
Room and Board	1,380
Books and Supplies	206
Personal Expenses	765

Below are actual costs of various expenses for several student categories and brief descriptions of the financial assistance available at Western through the Office of Student Financial Resources. (Room and board and financial aid at Western are discussed in later sections of this catalog.)

TUITION AND FEES

(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.

1993-94

<i>Student Classification</i>	<i>Quarterly Total</i>
Southeast Asian Veterans*	\$ 153
Resident ¹ , General	657
Non-Resident, General	2,316
Resident ¹ , Graduate Degree	1,046
Non-Resident, Graduate Degree	3,179

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

* For Washington residents only

¹Residency — 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.

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.

<i>Student Classification</i>	<i>Quarterly Total</i>
Resident ¹ , General	\$ 56
Non-Resident, General	222
Resident ¹ , Graduate Degree	95
Non-Resident, Graduate Degree	308

1994-95

<i>Student Classification</i>	<i>Quarterly Total</i>
Southeast Asian Veteran*	\$ 153
Resident ¹ , General	752
Non-Resident, General	2,658
Resident ¹ , Graduate degree	1,200
Non-resident, Graduate Degree	3,645

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

<i>Student Classification</i>	<i>Quarterly Total</i>
Resident ¹ , General	\$ 66
Non-Resident, General	256
Resident ¹ , Graduate Degree	110
Non-Resident, Graduate Degree	355

Quarterly Tuition and Fees — Nine or fewer credits

1993-94

For each credit (minimum charge to students is for two credits):

Southeast Asian Veteran*	\$ 15
Resident ¹ , General	66
Non-Resident, General	232
Resident ¹ , Graduate	105
Non-Resident, Graduate	318

1994-95

Southeast Asian Veteran*	\$ 15
Resident ¹ , General	75
Non-Resident, General	266
Resident ¹ , Graduate	120
Non-Resident, Graduate	364

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.

TUITION AND FEES

University Extended Programs

Fees for courses offered through University Extended Programs and the Center for Regional Services vary in accordance with the nature of the course. The University Extended Programs bulletin describes charges in detail.

DESCRIPTION OF TUITION AND FEES

Tuition and fees are due at the time a student registers for classes. Due dates are published in the annual *Timetable of Classes*.

1993-94

	Tuition	Service & Activities Fee	Operations Fee
Res., Gen.	\$25.50	\$94.50	\$ 537.00
Non-Res., Gen.	98.50	94.50	2,123.00
Res., Grad.	25.50	94.50	926.00
Non-Res., Grad	98.50	94.50	2,986.00

1994-95

	Tuition	Service & Activities Fee	Operations Fee
Res., Gen.	\$25.50	\$96.50	\$ 630.00
Non-Res., Gen.	98.50	96.50	2,463.00
Res., Grad.	25.50	96.50	1,078.00
Non-Res., Grad.	98.50	96.50	3,450.00

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

Orientation Fee

A mandatory fee of \$45 is charged to all newly matriculated students upon registration for their first quarter of attendance.

Health Services

A mandatory fee of \$44 is charged per quarter to each student who registers for six or more credits of on-campus courses. (Subject to approval.)

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.

Parking

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

	Quarterly Total
Campus resident parking	\$ 35
Commuter parking	18
Motorcycle parking	9

Late Registration/Late Course Adds

A fee of \$10 per week is charged for late payment of tuition/fees beyond the deadline listed in the *Timetable of Classes*.

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.

Reinstatement

Students who receive permission to be reinstated after being withdrawn for non-payment are charged \$25 for each week after withdrawal.

Special Examination Charges

Course Challenge	\$ 25
	per course

Graduation Fees

Baccalaureate degree	\$ 8
Master's degree	5
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 graduation fees.)

Transcripts

Requests should be submitted to the Registrar's Office one week in advance of need.

Transcript Fee	\$ 5
--------------------------	------

Other Special Fees

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

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 required of new students.

* See the University Extended Programs bulletin and the Summer Session Bulletin for the refund policy of fees listed in these bulletins.



A refund of one-half of tuition and fees, excepting course fees, 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. After the 30th day, no refunds are granted.*

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.

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.

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 Loan has been disbursed to a student while attending the University, failure to appear for an exit interview before graduation or withdrawal constitutes failure to meet a financial obligation and transcripts may be withheld.

* Subject to change to meet federal law.

STUDENT FINANCIAL RESOURCES

Old Main 240, (206) 650-3470

Western Washington University makes every effort to provide financial assistance to eligible applicants through loans, work, scholarships, grants or some combination of these student aid programs. It is expected that students will meet part of their needs through earnings from summer and school year employment, and that parents will contribute in proportion to their financial ability.

WHAT IS FINANCIAL AID

Financial aid is monetary assistance which is made available to help meet both direct and indirect educational costs. Direct educational costs include items such as tuition and fees, books and educational supplies. Indirect educational costs are those personal and living expenses incurred (room, board, laundry, entertainment, etc.).

There are four categories of financial aid programs.

Grants are gift aid and do not have to be repaid. They are awarded on the basis of financial need. Grants are normally available only to undergraduate students; however, some partial tuition and fee waivers are available to students in master's degree programs. Additional information on individual grant programs is available from Student Financial Resources.

Scholarships usually are awarded on the basis of merit criteria but may have financial need criteria attached. WWU offers merit scholarships to entering freshmen, transfers and returning students in recognition of outstanding academic ability.

Entering students who are National Merit Finalists are guaranteed a minimum of \$1,000 in scholarship funding per year for four consecutive years. Scholarships are available through University departments and colleges; in addition, the University recognizes exceptional minority students with a Minority Achievement Program scholarship. A list of scholarships, with brief descriptions of eligibility requirements, is included in the *Scholarship Prospectus* available from Student Financial Resources.

Educational Loans generally are subsidized by the federal government and carry an interest rate that varies (by program) from 5 to 12 percent. Payments may be deferred until after the student has left school in most programs. Western participates in the Perkins Loan, the Stafford Student Loan, the Parent Loan to Undergraduate Students and the Supplemental Loan to Students. Some loan programs are not subsidized by the federal government. Additional information on federal student loan programs is available at Student Financial Resources.

Student Employment involves employment opportunities both on campus and in the local community. Financial need may or may not be a prerequisite for employment, depending upon the employment program. Under work-study, which is a form of financial assistance provided by federal and state governments, the employer pays a portion of the student employee's salary and the

federal or state program picks up the balance. These types of incentives encourage employers to provide employment opportunities which otherwise might not be available to students. The University places a strong emphasis on providing quality work experiences for its students. On campus, 40 percent of the student employment opportunities are paraprofessional positions. Additional information regarding student employment programs is available in the Student Employment Center, Old Main 260.

Community Service involves sharing of one's time, talent, hope and vision. Western Washington University encourages students to become involved in helping others. Whether it is health care, child care, mentoring youth, adopting a grandparent, literacy training, tutoring or assisting in community projects, student involvement can make a difference.

Community service and volunteer opportunities are available through Western's Student Employment/Volunteer Center and within the residence hall system.

WHEN AND HOW TO APPLY FOR FINANCIAL AID

To apply for financial aid, students must complete the Free Application for Federal Student Aid (FAFSA).

To be considered for priority funding, applicants need to mail the Free Application by February 28 prior to the start of fall quarter. Applications received after the priority deadline will be considered for available funds.

Applicants for financial aid at WWU are considered for funding from a variety of federal, state and institutional aid programs. Applications are evaluated to determine each student's relative financial need, and awards are made with careful adherence to federal, state and institutional guidelines.

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.*
- Are admitted 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.

* 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.

- 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 submit the same application materials required during the preceding academic year (the Free Application for Federal Student Aid). In addition, a separate summer application is required. Financial assistance for summer quarter is usually limited to Pell Grant, Stafford Loans, Supplemental Loans and PLUS loans. These programs are available only if the student applicant has not used his/her entire eligibility during the regular academic year. Summer applications will be available beginning March 1 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.

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.

Western Signature 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.

Western 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 Stafford Loan. Students must first submit their Stafford Loan application to a lender. 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 120 days, whichever comes first.

Student Financial Resources reserves the right to refuse any of the short-term loan programs to students with a history of poor repayment.

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

High Street Hall #6, (206) 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 are coeducational. The University also has student apartments. Assignments to on-campus accommodations 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 a wardrobe or closet. The occupant furnishes pillow and case, sheets, blankets, towels, alarm clocks 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 a residence hall space are made by completing an application and sending it to the Office of University Residences, High Street Hall, Western

Washington University, Bellingham, Washington 98225-9113. Space is limited, so apply immediately for highest priority in assignment. You will receive a housing application after you are notified that you are admitted to the University.

No deposit is required with the application but must be 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 a 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

Birnam 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 Birnam Wood apartments are made by date of application. Students are expected to occupy the apartments in groups of four, and the rental rates are established on that basis. 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 a particular 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 \$3,732 for the 1992-93 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 and quarterly rental rate for University residence, contact the Office of University Residences, Western Washington University, Bellingham, Washington, 98225-9113, (206) 650-2950.

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. For those who do not live locally, you may call the Off-Campus Housing hotline by phoning (206) 650-6550. This is a recorded listing service, so you may dial any time, day or night and listen to only the category you are interested in.

STUDENT AFFAIRS

Western's Division of Student Affairs is committed to providing the best possible university environment for students in order to aid them in their academic, personal and cultural development. Assisting students as they seek to gain the fullest value from their university experience is a basic function of the many offices which make up this important component of the University.

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. Concerned with the physical, psychological and personal growth of students, the staff of Student Affairs offices provide services through residence hall life, academic advising, tutoring, financial aid, student activities, counseling, intramurals, career planning and placement, health services and intramural athletics. In addition, the division is well known for its long tradition of supporting experiences which enable students to supplement classroom learning, i.e., through budget management of student fees, leadership programs in a number of student activities, and active participation in intramurals and club sports.

VICE PRESIDENT FOR STUDENT AFFAIRS

Office of Student Affairs

Old Main 390, (206) 650-3839

The Office of Student Affairs is the central administrative office for the Division of Student Affairs. The Vice President for Student Affairs and staff maintain close working relationships with student leaders, faculty and University staff to ensure that the ongoing needs of students are addressed.

Ethnic Minority Services

Old Main 285, (206) 650-3843

The Division of Student Affairs and the University are committed to the implementation of programs and services to enhance the academic, cultural and social support of minority students. The Multicultural Services Center, in conjunction with the Ethnic Student Center, ensures the division's support for the orientation, advising, mentoring programs, leadership training and other activities for minority students. Under the leadership of the Vice Provost for Diversity, the division works with the Provost's Office to ensure a comprehensive, University-wide approach to recruitment and retention of minority students.

Office of Student Life

Old Main 390, (206) 650-3846

Designed as a student advocacy and problem-solving office, Student Life staff are available to help students take action on a variety of difficulties they may encounter while at the University. Issues addressed range from transition to the University, personal/family emergencies and personal safety to sexual/general harassment, student conduct and

student grievances. Staff provide extensive information/referral services and educational programs including orientation, family programs and life skills workshops.

Orientation

The university experience offers a variety of learning opportunities — both in and out of the classroom. Orientation activities assist new students in their transition to the University and Bellingham community. In addition, the orientation program offers formal and informal activities for new students to interact with faculty, staff and other students.

Orientation programs provide students the opportunity:

- To begin the academic advising process and register for courses.
- To become familiar with Western's services and facilities.
- To meet faculty, staff, returning and new students.
- To complete required placement tests.

Student Rights and Responsibilities

The complete text of the Guide to Student Rights and Responsibilities is included as Appendix C at the back of this catalog.

ACADEMIC ADVISING SERVICES

Academic Advising Center

Old Main 380, (206) 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.
- Information and advice on professional transfer programs, e.g., pre-engineering, pre-medicine, nursing.
- Assistance with establishing and successfully implementing academic goals.
- 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.
- Community college transfer information.
- 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 (206) 650-3850.

Disabled Student Services

Old Main 275, (206) 650-3083 (voice),
(206) 650-3725 (TDD)

With an emphasis on an independent and non-restrictive life, the Office of Disabled Student Services (DSS) offers necessary and appropriate support services to those with physical disabilities and learning disabilities.

Hidden disabilities require documentation by a qualified professional (e.g., heart condition or learning disability). All disability information is confidential.

After determining what services are needed for a particular disability, DSS will provide services appropriate for you from the following list:

- Orientation to services.
- Campus orientation.
- Proctoring of exams (extended time or taped).
- Classroom relocations and elevator and lift keys for mobility-impaired students.
- Textbook taping.
- Computer access program.
- Information and referral for on- and off-campus resources.
- Advocacy with faculty.
- Allowing tape recorders for lectures.
- Academic advising.
- Career and personal counseling.
- Sign language interpreters.

Many of these services are available on the main campus only.

Tutorial Center

Old Main 387, (206) 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 review sessions before selected

exams. Students seeking extra help with such study skills 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
- Review sessions for many GUR courses
- Supplemental Instruction (SI) workshops for selected courses
- Study skills workshops and tutorials
- 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 (206) 650-3855.

CAREER SERVICES CENTER

Old Main 280, (206) 650-3240, fax (206) 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:

- Assess interests and abilities.
- Examine personal values and needs.
- Identify their transferable skills.
- Explore occupations.
- Analyze job market trends.
- Relate career choices to educational programs.

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 comprehensive career and job market information to assist individuals with their career planning and job search. Reference materials are available to relate academic majors to career fields, explore occupations, study job market conditions, and identify and research prospective employers. Also available are job opportunity boards containing announcements for current position openings in business, industry, government, non-profit organizations and education.

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.

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 valuable 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 AND HEALTH SERVICES

Being a healthy college student means having the confidence and energy to live each day to its fullest. In part, good health is up to you: how you live your life and care for your mind and body. 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 and Health Services is an organization with a variety of services dedicated to keeping you well or caring for you when you are sick. We care about your health. We hope that while you are here at Western we can teach you ways to care about your own health and to improve and maintain your overall well-being so that you may achieve your personal, academic and career goals.

We invite you to take advantage of our services. Some are free, others are available at a reduced cost if you have paid your Student Health Fee and not received a refund.

Primary Prevention and Wellness Center

Miller Hall 271, (206) 650-3074

The goal of the Primary Prevention and Wellness Center is to help you learn that *you* have the greatest influence on your own state of well-being. Developing a healthy

lifestyle means (a) learning how to reduce the major risks to your health as a college student, (b) learning how to make responsible decisions for managing many common illnesses and injuries, and (c) learning when you need the services of a health-care practitioner and how to get 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.

For many manageable health concerns, the Primary Prevention and Wellness Center has designed the Student Health Assessment and Information Center to help you take more responsibility for your 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.

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.

Stress Management and Biofeedback Center

Miller Hall 262, (206) 650-3164

Part of staying well at Western means learning to handle the challenges, growth, uncertainty and stresses that are part of college life. Biofeedback is a learning process which helps you develop skills in controlling various body functions such as muscle tension, blood flow and heart rate. These skills are useful in reducing the painful result of stress such as headaches, anxiety and insomnia. Biofeedback training helps you develop skills which constitute a drug-free way of controlling negative impacts of stress. They can be a valuable tool to make your college experience be a more relaxing and enjoyable one.

Western students may schedule a free initial assessment and evaluation appointment for stress management and biofeedback services. After this initial assessment, a number of different service options — some free and

some at a reduced cost -- are discussed. These services may include:

- Stress management groups.
- Individual one-to one biofeedback training.
- Self-guided work with reading and/or relaxation tapes.

In both the group and one-to-one training, self-management techniques are taught. These include autogenics, abdominal breathing, progressive relaxation, stretching, imagery and symptom charting. In addition, time is spent assessing sources of stress and reviewing the effectiveness of various stress management techniques.

The Center also offers Western students the opportunity to enroll in a full-year internship. Advanced stress management skills are systematically studied, enriching students with a skill base of great use to possible current and future career goals.

Counseling Center

Miller Hall 262, (206) 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 and only released to appropriate professionals when the student gives consent.

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, articles and videotapes located in SHAIC and available to Counseling Center clients.

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, (206) 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. Services include:

- Alcohol/Drug Assessment: Assessment of individual patterns of use and potential risks with specific personalized feedback designed to help individual students change their drinking/drug use patterns and alcohol/drug-related risk factors.
- Brief Counseling: Individual discussion of issues from alcohol/drug information and concerns about friends, family members, partners or roommates to personal impact assessment from alcohol/drug use of self or others.
- Alcohol Skills Training: Group educational sessions designed to equip students with skills necessary to assess their expectations of alcohol or drugs, measure the effects these substances have had on their health and behavior, learn techniques to avoid over-drinking and to refuse alcohol and drugs when they want to.

Student Health Center

High Street Hall 25, (206) 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: WWU requires that all new students born after January 1, 1957, provide written proof of immunity to rubeola measles to the Student Health Center *before they will be allowed to register for classes*. A measles shot must have been received after January 1, 1968, and when recipient was at least one year of age or proof of immunity via a blood titer must be submitted to obtain clearance to register. Clearance can be accomplished by completing the Medical Health History and mailing it to the Student Health Center. You must be *sure* to record the applicable information in the measles immunization section to receive clearance.

The Health Center is available to all students currently enrolled for six or more credits. The mandatory health services fee provides students with unlimited access to the Center, without charge for office visits. Students will be charged for any prescription medications dispensed, equipment purchased, and lab tests and procedures performed. *It is not necessary to be a member of any health insurance plan to use this service.*

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.

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. 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.

All new students, including graduate students, must submit a signed health history form. This form must be on file at the Student Health Center before the student receives registration privileges. 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.*

RESIDENCE LIFE

High Street Hall 41, (206) 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 the Office of Residence Life, including volunteer positions in hall government and committees and paid positions such as computer room coordinator and resident adviser. 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.

STUDENT ACTIVITIES

Viking Union 202, (206) 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; Men's and Women's Centers; 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, 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 works a required number of hours per week at the Center.

FM Radio

Operated by the Associated Students, KUGS broadcasts in stereo at 89.3 on the FM dial. 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 and managers.

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 gear — is available for rent from the Outdoor Center Rental Shop.

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. More than 75 different organizations exist within the Associated Students, including groups such as the Black Student Network, Political Science Association, French Club, Amnesty International, Amateur Radio Society, International Club, Science Fiction and Fantasy Club, Society of Automotive Engineers, Computer Club, SCUBA Club, MEChA, Native American Student Union, Asian/Pacific Islander Student Union 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, a cash machine, a delicatessen, 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 Black Student Network, Native American Student Union, MEChA, Asian/Pacific Islander Student Union and the International 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.

ATHLETICS

Carver Gym 100, (206) 650-3109

Intercollegiate athletics involve many students as participants and spectators. Men's sports include basketball, crew, cross-country, football, golf, soccer, fastpitch softball, tennis, and track and field; women's sports include basketball, cross-country, tennis, track and field, crew and volleyball. The University Athletic Program is a member of, and governed by, the National Association of Intercollegiate Athletics. For further information contact the Athletic Office, Carver Gymnasium. (206) 650-3109.

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, (206) 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, (206) 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 fundraising activities, purchasing equipment and uniforms, and serving on the Sport Club Council. All WWU students, faculty, staff and alumni are eligible to become sport club members. Current WWU sport clubs include baseball,

fastpitch softball, fencing, ice hockey, judo, lacrosse, rugby, sailing, skiing, snowboarding, volleyball, water polo and water skiing.

Instructional Classes

Carver Gym 101, (206) 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, (206) 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, (206) 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, (206) 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, stage bands, 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

Publications include the *Western Front*, a twice-weekly newspaper; *Klipsun*, a twice-quarterly magazine; *Jeopardy*, the annual literary magazine; and *The Planet*, the 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

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, (206) 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

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. Such achievement may be demonstrated by:

- 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.

College Board Advanced Placement Examinations in certain subjects. The department concerned determines the minimum acceptable score. Normally, a score of three or higher results in advance placement and credit as shown.

Challenge examination or procedures prepared by the department concerned.

The following regulations govern course challenges:

- Students desiring to challenge a course should apply to the director of the Testing Center by the fourth week of the quarter. The time and procedure to be followed in completing the evaluative process will be announced by the director. A special fee is charged for each challenge examination (see Tuition and Fees section).
- The result of the challenge is recorded as "Satisfactory" or "Unsatisfactory" on the student's permanent record and is not used in computing grade point averages.
- The challenge application will normally be denied:
 - If the student is currently enrolled in the course.
 - If the student has previously established credit for a similar course at this or another university.
 - If the student has previously failed the course.
 - If the student has previously challenged the course and failed.
 - If the student has previously audited the course.
 - If, in the judgment of the director of the Testing

Department	Subject Examination	WWU Courses/Credit
Biology	Biology	Biology 101, 102 (8 credits)
Chemistry	Chemistry	Chemistry 121, 122 (10 credits)
Computer Science	Computer Science A or AB	Computer Science 120 (5 credits)
English	English composition and literature or English composition and language	*English 101 (4 credits) plus general elective Humanities (4 credits) or *English 101 (4 credits) plus general elective Humanities (4 credits)
History	U.S. History European History	History 103, 104 (American History 10 credits) History 113 (5 credits)
Mathematics	Mathematics Calculus AB Mathematics Calculus BC	Math 124 (5 credits)
Physics	Physics	Physics 121 (5 credits)
Political Science	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.

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.

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 *Study Abroad* (2-1.5). These courses are offered through the WWU Study Abroad 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.

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 during the drop/add period at the start of the quarter.

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.
- An employed student is expected to reduce his or her academic program and credit load accordingly.

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

CORRESPONDENCE CREDIT

Correspondence credit earned through a fully accredited college or university may be accepted toward the bachelor's degree up to a maximum of 45 credits.

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. Regularly enrolled full-time students do not pay an additional fee for auditing. 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 changes to or from audit cannot be made after the first week of the quarter.

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.*

Graduate students should consult the dean of the Graduate School for a definition of "normal progress."

ADDING A COURSE

A student may add a course during the drop/add period at the start of each 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 is required at the discretion of the instructor. The 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 Office of The Vice President/Dean for Student Affairs and medical leaves through Counseling and 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 file a Change-of-Program form in the Registrar's Office. Discontinued attendance without official withdrawal results in a failing grade (Z).

Course withdrawal during the drop/add period at the start of each quarter is considered to be a change of initial registration and no grade of W results.

From the end of the drop/add period until the end of the fourth week of each quarter, course withdrawal results in a grade of W. (Deadline dates are published in the *Timetable of Classes*.)

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

Late course withdrawal, with a grade of W, is permitted on a limited basis from the beginning of the fifth week through the ninth week of instruction each quarter. Late withdrawals are allowed only in accordance with the following schedule:

For 0-44 total credits earned*, three late Ws permitted during this 45-credit period; 45-89, one during this 45-credit period; 90-134, one during this 45-credit period; 135-179, one during this 45-credit period; etc.

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

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

* Includes credits transferred to Western.

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.

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 \$25 for each week beyond the withdrawal.

WITHDRAWAL FROM THE UNIVERSITY

Formal withdrawal from the University 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.

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.

PROGRESS TOWARD DEGREE AND EXCESSIVE WITHDRAWALS

Due to enrollment limitations, the University reserves the right to deny unlimited access to classes by students who make insufficient progress toward a degree. Students who fail to make progress toward a degree or who repeatedly withdraw from the University after registering may have their enrollment privileges reviewed.

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.

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 elsewhere in 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/FAIL GRADING

Students may choose the Pass/Fail 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. 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/Fail grading are as follows:

- Courses required for the major and minor, supporting courses, professional education requirements, writing proficiency requirement and General University Requirements may not be taken pass/fail. Courses graded P/NP may not be applied to master's degree programs.
- At the time of registration, students must designate the courses for which they wish to receive a Pass/Fail grade. They may change this designation by the regular change of registration procedure through the fourth week of a quarter.
- Prerequisites, work required and credit allowed are not affected by election of the Pass/Fail option.
- In computing grade averages, neither the P nor NP grade in Pass/Fail 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/Fail 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/Fail option.

NOTE: Excessive use of the Pass/Fail 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. Students who enter the University in the fall of 1991 or later may repeat any other course only once. If a course not designated as repeatable for credit is retaken, the following will apply:

- Credit will be awarded only once.
- Only the last grade earned will be considered in

calculation of the student's grade average (unless the last grade is K, W or NP).

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. In the meantime, the student's grade average will reflect both course grades.

GRADE REPORTS

Within a few days after the end of each quarter the Registrar sends a grade report to each student. The student indicates, at the time of registration, the address to which the grade report is to be sent.

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 GRADE AVERAGE

A former Western student who returns to the University after an absence of five years or more and whose Western cumulative grade point average was less than 2.00 may be given permission to start a new cumulative grade average. Complete information regarding this policy and the procedure is available from the Academic Advising Center.

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 Honor:

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.

Within each college which awards *cum laude* or *magna cum laude* status upon graduation, the determining factor in granting such distinction shall be rank-in-class based upon cumulative grade average. *Magna cum laude* shall be awarded to each student whose cumulative 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 cumulative grade average places him or her from the 92nd through 96th percentiles among graduating seniors during the previous academic year.

In computing cumulative grade averages to determine graduation honors, the Registrar shall count only those grades earned at Western Washington University, including all grades in courses subsequently repeated and all grades earned prior to approval of a "fresh start" grade average.

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.

Only students who earn a first bachelor's degree are eligible for graduation honors.

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 marks 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 appropriate academic 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 and for contract and correspondence courses through the Independent Study 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 275.

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 prior to the fifth week of the quarter (in summer quarter, prior to the fourth week). Petitions received by those deadlines are reviewed for readmission to the following 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

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.

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. Normally, Western Washington University's baccalaureate degrees require 180 credit hours. Some fields require a larger number of credit hours, and students who major in these fields should anticipate that they may require more than four years to complete their programs. Students majoring in these fields are encouraged to seek advisement early in their academic careers. Also, programs that are highly sequential necessitate careful planning, the lack of which may result in extended work beyond the minimum required.
- At least one full year of residence study (45 credits minimum), including the final quarter before issuance of a degree. Study Abroad programs are acceptable as residence credit to a maximum of 45 credits. Correspondence, 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 writing proficiency requirements.
- 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.
- 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 — "THE BLUE BOOK"

During orientation each entering student is provided a personal cumulative record and planning book. Typically referred to as "The Blue Book," it records transfer credit, provides a convenient check list for completion of General University Requirements, and includes space for records regarding admissions test scores, completion of major requirements, procedures for declaration of major and the student advisement process. Transfer student blue books indicate the manner in which transfer credits are used to meet General University Requirements. The blue book also is used to record the student's senior evaluation, a document which provides a record of all courses completed and those needed for completion of a baccalaureate degree.

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 no later than the last day of classes of the quarter prior to the final quarter, and it is strongly recommended that the student apply at least two quarters in advance of completion. Complete instructions are available in the Registrar's Office.

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 school or college which offers the major and must schedule a new senior evaluation.

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 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.

A student who has already earned a baccalaureate degree may enroll to earn a second undergraduate degree associated with a different major. Such a student must enroll officially in the school or 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. A degree application and evaluation should be scheduled in the Registrar's Office early during the program.*

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, and (3) 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. 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. Requirements for teaching credentials may be completed at the same time the B.A. or B.S. degree is earned, or subsequently. 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.

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.

All students must pass a writing proficiency course before

graduation. Before taking the writing proficiency course, students must pass the junior writing exam (JWE), which 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. This exam is given several times each quarter by the Testing Center. 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.

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, humanities, social science, natural science, mathematics, and non-Western and minority cultural 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.

* 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.

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.

SCHEDULING OF GUR COURSES

With the foregoing in mind, students entering as freshmen should *not*, ordinarily, attempt to complete the GUR before beginning a major. On the contrary, 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.

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. 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.

Transfer Credit to Satisfy GUR

Transfer students from Washington state community colleges may satisfy the GUR by taking courses listed in the *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 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.

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 must complete all other graduation requirements for baccalaureate degrees as listed in the bluebook and catalog.

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.

COMMUNICATION AND CRITICAL ANALYSIS

The Communications requirement provides opportunity to develop the skills and techniques of articulate verbal expression and critical thinking. It comprises 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. Freshmen, and transfer students with fewer than 90 credits, entering in fall quarter, 1994, and thereafter, must complete Block B by the time they accumulate 90 credits.

A. 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.

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 (3); 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.

Select a minimum of 20 credits from the following:

ART HISTORY 190, Art Appreciation (3); 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 250, Survey of Classical Literature (5); 350, Greek Mythology (3).

ENGLISH 214, Introduction to Shakespeare (5); 215, Survey of British Literature (5); 216, Survey of American Literature (5); 238, Society Through its Literature (5); 281, Western World Literature: Classical and Medieval (5); 282, Western World Literature: Renaissance and Neoclassical (5); 283, Western World Literature: Romantic and Modern (5); 336, Literature of the Bible (5) (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); 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, Foundations 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

GRADUATION REQUIREMENTS

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 (5); 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 (5); 205, Economic Geography (5); 209, Geography and World Affairs (2).

JOURNALISM 340, The Press and Society (3).

LINGUISTICS 201, Introduction to Linguistic Science (5); 204, Sociolinguistics (3).

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); 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); 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 315, East and South Asia (5); 319, Africa (5); 321, India, Pakistan and Bangladesh (3); 322, The Middle East (3).

HISTORY 261, Black History in the Americas (5); 273, Latin America (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); 361, Black History in the Americas: The Slavery Era (5); 385, Precolonial 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); 273, Artistic Expression and Society in China and Japan (4); 274, Society and Literature 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.

Freshmen, and transfer students with fewer than 90 credits, entering in fall quarter, 1993, and thereafter, must complete the mathematics requirement by accumulation of 90 credits. Students enrolled prior to fall quarter, 1993, must complete the requirement by accumulation of 120 credits.

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

- Math 102, Intermediate Algebra, and Math 151, Introduction to Math.
- Math 102, Intermediate Algebra, and Phil 102, Introduction to Logic.
- Complete one of the following courses: Math 103, 156, 240, or any mathematics course for which one of these courses is a prerequisite.
- Any computer science course numbered 110 or higher.
- Math 281, 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 103. Contact the Testing Center, Old Main 120, for details. Achievement tests meet University requirements 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. Freshmen, and transfer students with fewer than 90 credits, entering in fall quarter, 1995, and thereafter, 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 (5).

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 (3) and 124, Quantitative Chemistry Laboratory (2); 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 102, Plate Tectonics and Continental Drift (4); 212, Historical Geology (4); 214, Environmental Geology (3); 315, Minerals, Energy, and Society (4); 252, The Earth and Its Weather (4).
- PHYSICS 122, Physics with Calculus II (5).
- 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, 124.
- GEOLOGY 211, 212 and one of 214, 310, 316, or 340.
- PHYSICS 114, 115, 116 or 121, 122, 123, 125.

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
- Field Experience
- Honors Program
- International Programs and Exchanges
- Library Instruction
- Freshman Seminar
- Professional Transfer Programs

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

UNIVERSITY EXTENDED PROGRAMS

University Extended Programs offers educational opportunities for groups and individuals who wish to continue their personal and/or educational goals outside the regular curriculum schedule.

Continuing Education offers credit and non-credit courses and certificate and degree programs in the evening and on weekends, on and off campus. These courses are listed in the University Extended Programs catalog, a quarterly publication.

Conference Services coordinates workshops, meetings, seminars and conferences for public and private organizations, providing an opportunity for working professionals and special interest groups to update and expand their knowledge.

Independent Learning offers a variety of educational alternatives. Correspondence courses provide flexibility and give an opportunity to earn WWU credits. Students may take correspondence courses while on or off campus, working at their own pace. Contract courses, which are designed by the student and a faculty adviser, provide students an opportunity to work on a special project when students are not enrolled in on-campus courses.

For further information or to receive the University Extended Programs catalog, contact University Extended Programs, Western Washington University, Old Main 400, Bellingham, WA 98225-9042, or phone (206) 650-3320.

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.

INTERNATIONAL PROGRAMS AND EXCHANGES

WWU offers a wide variety of study abroad opportunities. The most popular are quarter and year-round liberal arts programs in England, France, Germany, Italy, Japan, Greece, Spain and Mexico. 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. International Programs and Exchanges co-sponsors semester and academic-year programs at universities in France, Spain, Japan and the People's Republic of China. These feature intensive language study, international business, civilization and culture. Through its membership in ISEP, WWU can provide year-long exchanges with 90 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. Foreign 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) study at foreign universities, and (d) independent study arranged through departments and colleges by the International Programs and Exchanges. WWU offers a minor in foreign 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 100 colleges and universities in 46 states and territories which allows students to study for a semester or year on exchange at resident tuition rates. Participants explore their academic interests at a host college, while experiencing a different culture, geographical setting and climate (there are member institutions in Alaska, Hawaii, Virgin Islands and Puerto Rico).

Contact International Programs and Exchanges, Old Main 530B, (206) 650-3298, for further information on study, travel and work abroad.

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 entrance exams, *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 105, Modes of Knowing (Part B of the Communications requirement)
- Honors 151, The Western Traditions I (Humanities)
- Honors 153, The Western Traditions II (Humanities)
- Honors 155, The Non-Western Traditions (Non-Western and Minority Cultural Studies)
- One Honors science course from Honors 157, 158 or 159 (Science). Waived for science and mathematics majors.
- One Honors social science course from Honors 251, 252, or 253 (Social Science)
- One Honors philosophy course from Honors 255 or 256 (Humanities)

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)

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.

151 THE WESTERN TRADITION 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.

153 THE WESTERN TRADITION 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.

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 SCIENCE I — PHYSICS (4)

Laws of motion. Conservation of energy and momentum. Gravitation. Electricity and magnetism. Sound and light waves. Radioactivity. Fission and fusion.

158 SCIENCE II — 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 SCIENCE III — 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 (5)

Examination of basic psychological processes utilizing results of research investigations.

252 SOCIOLOGY (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.

253 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.

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.

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 sources and incorporating the results into subsequent written assignments. Offered by members of the library faculty.

FRESHMAN SEMINAR

Designed for first-year students, the Freshman Seminar, University 101, is aimed at helping new students succeed in the University.

Through the seminar, freshman students will have an opportunity to learn more about Western's traditions and values, develop skills for success inside and outside the classroom, and increase awareness of student opportunities and responsibilities at Western. Topics such as study skills, faculty expectations, the campus community, using Wilson Library and choosing a major will be explored.

The class will be small and will emphasize working with other students in the class and with the instructor.

University

101 VALUES AND TRADITIONS IN HIGHER EDUCATION (2)

Prereq: freshman or sophomore status. An introduction to the purposes and values embodied in higher education and an exploration of how those purposes and values can be achieved at Western.

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. The following courses are required for application to the University of Washington School of Dentistry:

- Biol 201, 202, 203, 212, 348
- Chem 121, 122, 351, 352
- Physics 114, 115, 116 (or 121, 122, 123)

- Also recommended: Biology 210, 349
- Electives: Equally important is a background in the social sciences and humanities. Although there are no firm requirements, courses in English literature, economics, sociology, psychology, anthropology and philosophy are excellent scientific and humanistic studies for pre-dental students

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 September at the end of the junior year.

Early consultation with the program adviser at Western is strongly recommended. Students will find it valuable to engage in early and regular discussions of matters such as selection of a major, graduation requirements, course sequences, MCAT, medical school application procedures

and other pertinent information. Students also are urged to contact the pre-professional advisement office (Old Main 380) during the first quarter of their premedical program.

Typical freshman year curriculum:

- Chem 121, 122, 123, 124
- Biol 201
- English 101
- Math 124
- General University Requirements

Premed students choosing majors other than biology should also seek advising in their major department.

Information regarding osteopathic, podiatric and all other fields of medical practice is also available from the program adviser.

Adviser: Dr. Gerald F. Kraft, chief premedical adviser, Department of Biology

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, 124
- 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.

Architecture

Adviser: Dr. Robert Raudebaugh, Department of Engineering Technology

Dental Hygiene

Adviser: Dr. John C. Whitmer, Department of Chemistry

Engineering

Adviser: Dr. Leslie E. Spanel, Department of Physics/Astronomy

Fisheries

Adviser: Dr. Gerald F. Kraft, Department of Biology

Forestry

Adviser: Dr. Hubertus Kohn, Department of Biology

Medical Technology

Adviser: Dr. Gerald F. Kraft, Department of Biology

Nursing

Adviser: Renée Warren, Academic Advising Center

Occupational Therapy

Adviser: Dr. Evelyn E. Ames, Department of Physical Education, Health and Recreation

Optometry

Adviser: Dr. J. J. Veit, Department of Physics/Astronomy

Pharmacy

Adviser: Dr. Don C. Williams, Department of Biology

Veterinary Medicine

Adviser: Dr. Herbert Brown, Department of Biology

GRADUATE SCHOOL

Dr. Moheb A. Ghali, Dean, Old Main 430, (206) 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.)

Approximately 24 departments and colleges — from anthropology to theatre arts — offer graduate study leading to one of the above degrees.

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) 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. WWU is on a quarter calendar system.

Several of WWU's graduate programs offer courses or program elements at locations outside Bellingham, mainly in the Puget Sound region. The summer session on WWU's campus includes a number of special arrangements for graduate study: intensive study during a limited period of time, instructional and research seminars, professional seminars, and courses offered by visiting faculty. The University's Summer Bulletin lists these special arrangements.

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. At this time, 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 a continuing teaching certificate should contact the Certification Office in the Woodring College of Education. Additionally, students should consult with the appropriate program adviser and the Graduate Office.

If you have questions not answered here, write to the dean of the Graduate School, Western Washington University, Bellingham, WA 98225-9037.

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 and other admission materials are available upon request to the Graduate School. An application fee of \$35 (subject to change) is charged for each set of admission materials submitted by applicants, whether initial application or request to transfer into another WWU graduate program. 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 dates and do not admit for all quarters (see discussion under specific programs):

- Initial application 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.
- All supporting materials 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. 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.
- A 3.0 undergraduate grade point average (on a 4.0 scale) in the last 90-quarter or 60-semester hours of study. (See later section on provisional admission for certain exceptions.)

- 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.)
- Graduate Record Examination (GRE) scores, which must be received by the Graduate School prior to an admission decision. MBA applicants must provide the GMAT score with their application (but not the GRE). Since registration for the GRE/GMAT must be made in advance, and it takes at least six weeks for resulting scores to reach the Graduate Office, applicants are advised to start planning for the GRE/GMAT at an early date, four to six months prior to the start of the quarter they wish to begin their program. The GRE also provides a computer-based testing program which offers a faster score-reporting service. Contact the Testing Center at (206) 650-3080 for further information. Current GRE Board policy, in effect since October, 1985, states that scores are reportable for five years.
- Favorable review and recommendation of applications by the graduate faculty in the program to which application is made.

Special Requirements

Certain programs have additional requirements or procedures; see the program descriptions. Students who are not native speakers of English must demonstrate competence in written and spoken English. This can be done by a satisfactory score of at least 565 on the TOEFL or by other means of validation. (Write the Graduate Office for details.)

International students must file with the Graduate Office a satisfactory statement of financial responsibility and of sponsorship. Current expenses for a full year's residence study are approximately \$16,000. 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 can be granted provisional admission. 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, at minimum, 45 or 48 quarter credit hours (45 with thesis, 48 without thesis). This minimum requirement, the basic program, must contain at least 35 or 38 credits of approved 500- or 600-level courses. A maximum of 10 credits of 400-level course work can be applied to the basic program (45 or 48 credits) if the 400-level courses are approved by the

appropriate graduate adviser and if they are contained on the "Plan of Study" filed by the student. 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. 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

For full-time graduate students, 16 credits of 500-level course work in a single term is the maximum allowed. A graduate student, only with the permission of the graduate dean, may enroll for 17-20 credits if no more than half of those credits are graduate level.

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

Transfer credit into the graduate program is limited to nine quarter (six semester) credits, must meet stated program requirements and be approved by the program adviser and the Graduate School (forms available from the Graduate School). Course work must be graded with a B, 3.0 or better, to be acceptable. Such credit should be approved in advance to prevent any misunderstanding or false expectations.

Only certain University Extended Programs' 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 often do not qualify for graduate credit toward a degree, even though the offerings bear a regular course number. Students should check with the Graduate Office or the program adviser before enrolling if graduate credit is of concern.

THESIS AND COMPREHENSIVE EXAMINATIONS

All master's programs require either a thesis/field project (Option I) or a comprehensive examination (Option II). Check the program descriptions that appear later in this catalog. The Graduate Office certifies 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. The chair must be from the student's major 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.

Most departments require that a student be advanced to candidacy prior to registration for thesis or field project. A card listing the thesis/field project committee and the topic under investigation should also be 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 once, but only if the graduate faculty of the particular program endorses the student's request to repeat the examination.

PLAN OF STUDY

The student and the program adviser together develop a "Plan of Study." This plan is signed by the adviser, the student and the graduate dean. Then it is filed in the Graduate Office, with copies to the student and the adviser. The plan should be completed before or during the student's first quarter of study at WWU. This is very important and should be attended to with dispatch. Amendments to the plan are made upon the request of the graduate program adviser and with the agreement of the Graduate Office. Amendment forms are available from the Graduate Office.

GRADES, GRADING, RETENTION

A maximum of 10 credits of C is allowed toward completion of the basic program (45 or 48 credits). More than 10 credits of C or lower grades removes a student from the master's program. (No graduate credit is allowed for D+ or lower 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 counts toward the 10 credit maximum, even if the course is repeated and a B or A is earned. Pass/Fail grades are not applicable toward a graduate degree. S grades are applicable, but not computed in the GPA. A K

(incomplete) 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 courses. In these cases, the K grades are allowed to stand until the thesis/field project 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 the core program (45 or 48 credits). 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.

DEGREE CANDIDACY — AWARDING OF THE MASTER'S DEGREE

Advancement to degree candidacy is formal recognition that the student has completed all admission requirements and has demonstrated satisfactory performance in at least 12 credits of graduate study. Advancement to candidacy is a prerequisite to earning the master's degree and should be accomplished as early as the student is eligible. Advancement is granted by the Graduate Council upon the recommendation of the student's program adviser.

The master's degree is earned at the end of the quarter in which the student completes all degree requirements. Recommendation for the degree is made to the Graduate Council by the student's adviser and thesis/field project chair. Application for the degree must be made no later than the end of the second week of the quarter in which the student wishes the degree officially recorded. A student must be enrolled for at least two credits during the quarter in which the program is completed or during the preceding (calendar) quarter. A commencement ceremony is held at the end of each quarter.

TEACHER CERTIFICATION

The School of Education, not the Graduate School, deals with the certification of K-12 teachers. For information, contact the Teacher Admission and Advisement Office in Miller Hall 206E, (206) 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 cannot 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 can 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 course proposals 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. Joan Stevenson.
Art (MEd): Dr. David Templeton.

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. Violet Malone, Dr. Tony Jongejan, Dr. John Utendale; School Administration — Dr. Paul Ford; Instructional Technology — Dr. Les Blackwell, Dr. Tony Jongejan, Dr. Frank Roberts; Student Personnel Administration — Dr. John Utendale.
Education (Curriculum and Instruction) (MEd): Elementary — Dr. H. O. Beldin; Exceptional Children — Dr. Sheila Fox; Secondary — Dr. Howard Evans; Reading — Dr. H. O. Beldin.
English (MA): Dr. Doug Park.
Environmental Science (MS): Huxley College — Chair, Graduate Program Committee.
Foreign Languages (MEd): Dr. John Underwood.
Geography (MS): Dr. Debnath Mookherjee.
Geology (MS): Dr. Christopher Sucek.
History (MA): Dr. James Rhoads.
Marine and Estuarine Science (MS): Dr. Gisèle Muller-Parker.
Mathematics (MS): Dr. Edoh Amiran.
Music (MMus): Dr. Ed Rutschman.
Physical Education (MEd): Dr. Kathleen Knutzen.
Political Science (MA): Dr. Donald Alper.
Psychology (MS): Dr. Dale Dinnel.
School Counselor (MEd): Dr. Arleen Lewis.
Science Education (MEd): Dr. John Miller.
Sociology (MA): Dr. John Richardson.
Speech Pathology and Audiology (MA): Dr. Lina Zeine.
Technology (MEd): Dr. Robert Raudebaugh.
Theatre (MA): Prof. Thomas E. Ward.

Summary of Procedures for the Master's Degree

<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
Registration	Student, Adviser, Graduate Office	Department, then Graduate Office	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 Dean	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."

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.

M.A. — ANTHROPOLOGY, THESIS ONLY

Program Adviser: Dr. Joan C. Stevenson, Arntzen Hall 316

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 April 15.

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-

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. David E. Templeton, Fine Arts 117

GRADUATE FACULTY

Embrey, Robert E., MFA, MA, photography.

Gleeson, Madge, MFA, graphic design.

Janson, Carol L., PhD, art history.

Jensen, Robert A., MFA, drawing and painting.

Johnston, Thomas A., MFA, printmaking.

Marsh, David F., MS, drawing and painting.

McCormick, Patrick F., MFA, ceramics.

McIntyre, Mary A., MFA, fabric and fibers.

Schlotterback, Thomas, PhD, art history.

Smeins, Linda E., PhD, art history.
 Templeton, David E., PhD, art history.
 Urso, Robert, MA, computer graphics.
 Vassdal-Ellis, Elsi M., PhD, graphic design
 Vike, Gene, MS, drawing and painting.

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 Dr. David E. Templeton, 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 690a or 690b (I:1-6)

Other Requirements

- Art History 501 (3), one course in history of art (3) and two studio courses (3 each) each in a different medium (I and II:12)

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:11-16; II:20)

Biology

College of Arts and Sciences

GRADUATE FACULTY

Brown, Herbert A, PhD, vertebrate zoology.
 Fonda, Richard W., PhD, plant ecology.
 Kohn, Hubertus, PhD, plant physiology.
 Kraft, Gerald F, PhD, aquatic entomology.
 Leaf, David S., PhD, cell and developmental biology.
 Mason, David T, PhD, limnology.
 Muller-Parker, Giselle, PhD, marine phytoplankton ecology.
 Parakh, Jai S., PhD, science education.
 Peele, Emily, PhD, marine microbial ecology.
 Ross, June R. P., PhD, DSc, evolution and ecology of marine organisms.
 Schneider, David E., PhD, physiological marine ecology
 Slesnick, Irwin L., PhD, science education.
 Sulkin, Stephen D., PhD, invertebrate larval biology.

Taylor, Ronald J., PhD, systematic botany (emeritus).
 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 received by March 1.

Graduate Teaching Assistantship (TA) Deadlines

Preferred consideration will be given to applications received by March 1.

M.S. — BIOLOGY, THESIS ONLY

Program Adviser: Dr. Emily R. Peele, Haggard Hall 325

Prerequisites

A bachelor's degree. Deficiencies in undergraduate courses or those subsequently revealed to the Advisory Committee must be removed. Applicants are directed to the current requirements of the basic B.S. degree with a major in biology for a summary of expected preparation for graduate work.

Specific Test Requirements

Graduate Record Examination, General; and Subject in Biology.

PROGRAM REQUIREMENTS

Requirements in Specialization

- Thesis research: Biol 690 (12)
- Graduate courses in biology, selected under advisement and approved by advisory committee (11)

Electives

- Courses selected under advisement and approved by advisory committee from 400- and 500-level courses in biology and supporting disciplines. No more than 10 credits may come from 400-level courses (22)

Foreign Language, Statistics-Computer Programming Proficiency

A student must show proficiency in either one foreign language or in statistics-computer programming before he or she is advanced to candidacy. The choice must be approved by the advisory committee. Proficiency may be demonstrated by:

- A reading knowledge of an appropriate foreign language, or
- Passing Biol 340 with a grade of A or B, and CS 205 or equivalent with a grade of A or B

Thesis and Examination

Degree candidates will submit a thesis based on

independent and original research on a problem approved by the advisory 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

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

Prerequisites

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

For full consideration, completed applications should be received by March 1. Applications should include a statement of interest and the identification of potential faculty supervisors. 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 Huxley College, the Department of Biology and Shannon Point Marine Center. Students graduating from the program have an understanding of coastal marine and estuarine environments, biota and topical management issues, and of 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

Akathaporn, Parporn, DBA, financial accounting.
Benson, Earl D., PhD, finance.
Bryce, Wendy J., PhD, marketing.

Fewings, David R., PhD, finance.
Garcia, Joseph E., PhD, organizational behavior.
Hagen, Daniel A., PhD, international/resource/labor/macro economics.
Hall, Pamela L., PhD, finance.
Hansen, Julia L., PhD, urban/labor/micro economics.
Harder, K. Peter, PhD, economic history.
Haug, Peter, PhD, operations management.
Henson, Steven E., PhD, microeconomics, applied econometrics.
Hung, Ken, PhD, business statistics/quantitative methods.
Hutton, Marguerite R., PhD, taxation.
Keleman, Kenneth S., PhD, organizational behavior/human resource management.
Kelley, Patricia C., PhD, business environment.
Lewis, L. Floyd, PhD, management information systems.
Lockhart, Julie A., MS/C.PA/CMA, managerial accounting.
Merrifield, David E., PhD, microeconomics/forecasting.
Moore, John S., PhD, business policy.
Murphy, Dennis R., PhD, managerial decisions/international finance.
Nelson, David M., PhD, macroeconomic theory/money markets.
Olney, Thomas J., PhD, marketing.
Owens, Eugene, PhD, organizational behavior/labor relations.
Paskin, Steven, PhD, financial accounting.
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.
Savey, Ronald N., MBA/CPA, financial accounting.
Senge, Stephen V., CMA, DBA, managerial/governmental 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, (206) 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.

Crook, Joseph R., PhD, organometallic chemistry.

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.

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.

Wicholas, Mark, PhD, inorganic and organometallic chemistry.

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

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

Program Adviser: Dr. Mark E. Bussell

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

Bellegarde, Françoise, PhD, functional programming, program transformation.

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.

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

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

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

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 450, 460, 520, 525, 530, 532, 535, 538
- Hardware/Computer Systems Organization: CS 420, 550, 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@lopez.cs.wvu.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.

Competency in Instructional Technology

Students admitted to programs in the Woodring College of Education are required to possess minimum competence in 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 218.

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 Educational Curriculum and Instruction office or the Graduate Office.

Educational Administration & Foundations

Woodring College of Education

GRADUATE FACULTY

Billings, Thomas, PhD.
Blackwell, Leslie, EdD.
Day, Lynn, PhD.
Fennimore, Flora, EdD
Ford, Paul, EdD.
Grover, Burton L., PhD.
Jongejan, Anthony, PhD.
Kasprisin, Lorraine, PhD.
Kim, Robert H., EdD.
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. All programs of the department require the Graduate Record Examination, General Test, prior to the admissions decision.

M.Ed. — ADULT EDUCATION ADMINISTRATION

Program Advisers:

Specialization I: Leadership — Dr. Violet M. Malone, Miller Hall 204c, (206) 650-3090

Specialization II: Instructional Design and Multimedia Development — Dr. Anthony Jongejan, Miller Hall 204b, (206) 650-3381

Specialization III: Human Services Administration — Dr. John Utendale, Miller Hall 314a, (206) 650-2977

Specialization IV: Vocational Rehabilitation Counseling — Dr. Violet M. Malone, Miller Hall 204c, (206) 650-3090

Program Manager: Jan Roehl, Miller Hall 311, (206) 650-3190

Program Goals

The Adult Education program is designed to prepare both entry-level and advanced practitioners for administrative work 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 choose between four areas of study: (1) leadership, administration and management of adult-focused organizations and systems, (2) an emphasis on instructional design and multimedia development, (3) leadership, administration and management in the human services, and (4) vocational rehabilitation counseling.

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.

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.

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

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
- Previous teaching experience is *not* required

Please forward all admissions materials directly to the Graduate School, Old Main 430.

Specific Test Requirements

Graduate Record Examination, General Test, prior to admission decision.

Program Options

Specialization I: Leadership

- Option I (Thesis/Field Project — 49 credits)
 - Basic Requirements: EdAF 501, 512, 513 (12)
 - Specialization Requirements: EdAF 575, 576, 577, 578, 599 [1], 690a or 690b [6] (23)
 - Field Experience Requirements: EdAF 592g,h,j,k with advisement (8-12)
 - Electives selected with advisement (2-6)
- Option II (Comprehensive Examinations — 49 credits)
 - Basic Requirements: EdAF 501, 512, 513 (12)
 - Specialization Requirements: EdAF 575, 576, 577, 578, 599 [3] (19)
 - Field Experience Requirements: EdAF 592g,h,j,k with advisement (8-12)
 - Electives selected with advisement (6-10)

Specialization II: Instructional Design and Multimedia Development

- Option I (Thesis/Field Project — 49 credits)
 - Basic Requirements: EdAF 501, 512, 513 (12)
 - Specialization Requirements: EdAF 449, 521, 522, 524 or 525, EdAF 575, 577, 599, 690a or 690b [6-9] (27-29)
 - Field Experience Requirements: EdAF 592g,h,j,k with advisement (8-10)
- Option II (Comprehensive Examinations – 49 credits)
 - Basic Requirements: EdAF 501, 512, 513 (12)
 - Specialization Requirements: EdAF 449, 521, 522, 524 or 525, EdAF 575, 577, 599 (21-23)
 - Field Experience Requirements: EdAF 592g,h,j,k with advisement (4-12)
 - Electives selected from EdAF 518, 574, 576, 578, 579 (2-12)

Specialization III: Human Services Administration

- Option I (Thesis/Field Project — 49 credits)
 - Basic Requirements: EdAF 501, 512, 513 (12)
 - Specialization Requirements: HS 486, EdAF 576, 577, 578 or HS 485, EdAF 581a,b,c,d [2-4] or HS 430 [2-4], EdAF 599 [1], 690a or 690b [6] (24-26)
 - Field Experience Requirements: EdAF 592e with advisement (8)
 - Electives selected with advisement (3-5)
- Option II (Comprehensive Examinations — 49 credits)
 - Basic Requirements: EdAF 501, 512, 513 (12)

- Specialization Requirements: HS 486, EdAF 576, 577, 578 or HS 485, EdAF 581 [2-4] or HS 430 [2-4], EdAF 599 [3] (20-22)
- Field Experience Requirements: EdAF 592e (12)
- Electives selected with advisement (3-5)

Specialization IV: Vocational Rehabilitation Counseling

- Option I (Thesis/Field Project — 49 credits)
 - Basic Requirements: EdAF 501, 512, 513 (12)
 - Specialization Requirements: EdAF 518 [1-5], 574 or 576, 577, 599 [1-3], EdAF 690a or b [6], HS 446 (20-26)
 - Field Experience Requirements: EdAF 592g,h,j,k with advisement (4-6)
 - Electives selected with advisement (5-13)
- Option II (Comprehensive Examinations - 49 credits)
 - Basic Requirements: EdAF 501, 512, 513 (12)
 - Specialization Requirements: EdAF 518 [4], 574 or 576, 577, 599, HS 446, and 447 or 448 (21-24)
 - Field Experience Requirements: EdAF 592g,h,j,k with advisement (6-8)
 - Electives selected with advisement (5-10)

M.Ed. — STUDENT PERSONNEL ADMINISTRATION IN HIGHER EDUCATION

Program Adviser: Dr. John F. Utendale, Miller Hall 314A, (206) 650-2977

Program Goals

This program is designed to prepare professionals for student personnel work in higher education. The program emphasizes the development of leadership and managerial skills, as well as theories of human and organization development.

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 six credits of thesis/field project research (I:6). Option II requires a three-credit elective plus a three-credit student affairs research paper and completion of the M.Ed. comprehensive exam (II:6). 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 15
- Personal resume
- A 300- to 500-word typed statement of purpose
- Personal interview with admissions committee (first week of March)
- Elementary computer competence is expected
- Previous teaching experience is *not* required

Please forward *all* admission materials directly to the Graduate School, Old Main 430.

Specific Test Requirements

Graduate Record Examination, General Test, prior to admission decision.

Basic Requirements

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

Requirements in Specialization

- Core courses — EdAF 555, 556, 557a, 557b, 557c, 558 (I and II:22)
- Research — EdAF 559 (II:3), EdAF 690a or b (I:6)
- Internship — EdAF 592f (I and II:14)
- Electives to be selected under advisement (I:0, II:3)

Graduation Requirements

- Thesis/field project (I:54)
- Non-thesis/non-field project (II:54) plus comprehensive examinations.

M.Ed. — SCHOOL ADMINISTRATION

Elementary, Secondary, Instructional Technology

Program Advisers:

On-campus: Dr. Paul Ford, Miller Hall 204C, (206) 650-4883

Program Manager: Judy Gramm, Miller Hall 204A, (206) 650-3708

Seattle Center: Dr. Linda Zurfluh, (206) 464-6103

Instructional Technology: Dr. Les Blackwell, Miller Hall 202, (206) 650-3387; Dr. Frank Roberts, Miller Hall 204E, (206) 650-3395; Dr. Anthony Jongejan, Miller Hall 204B, (206) 650-3381

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
- Letters of recommendation from sponsoring district
- 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

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

Specific Test Requirements

Graduate Record Examination, General Test, prior to admission decision.

Options

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

Option I is a minimum of 49 credits, including EdAF 690a (thesis) or 690b (field project). 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 690a or b (I:6)

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.

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.

Certificate of Advanced Study (CAS)

A specialized post-master's degree program at the sixth-year level is now offered to a limited number of candidates. A program description is available from the School Administration Office.

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 paid 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 in Miller Hall 171, (206) 650-6891.

Educational Curriculum and Instruction

Woodring College of Education

GRADUATE FACULTY

Atkinson, Charles M., EdD, special education.
 Beldin, H. O., PhD, reading.
 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.
 Howe-I, Kenneth W., PhD, special education.
 Keiper, Robert W., EdD, secondary education.
 Klein, Marvin L., PhD, elementary education, language arts.
 Krogh, Suzanne L., PhD, early childhood education.
 Mork, Theodore A., PhD, elementary education, reading, children's literature.
 Pinney, Robert H., EdD, secondary education.

Slentz, Kristine L., PhD, special education.
 Towner, 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 or field project, 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 or Credential under Option II.

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

M.Ed. — ELEMENTARY

The Elementary program consists of the systematic, scholarly study of research, theories and practices related to education of children. This degree program is intended for certificated individuals who plan to continue teaching elementary and pre-school children or work in a consultant, supervisory or administrative capacity with adults interested in the education of children. Within this program, the following areas of emphasis are available by advisement: general curriculum and instruction, consultant/supervisor, computer education, middle school education, library science, language arts, and science education.

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. H. O. Beldin, Miller Hall 251F, (206) 650-3816

Prerequisites

- All options: Graduate Record Examination, General
- Options I and IIa: undergraduate preparation and teaching certification and experience
- Option IIb: admission to Woodring College of Education through Teacher Education Admissions Office

Courses

- Option I: Thesis or Field Project [for certificated teachers] (45 credits)
 - EdAF 501, 512, 513 (12)
 - EdCI 521, 533, 535, 690a or b (16-21)
 - Electives by advisement (12-17)
- Option IIa: Seminar Paper [for certificated teachers] (48 credits)
 - EdAF 501, 512, 513 (12)
 - EdCI 521, 535, 539 (12)
 - Electives by advisement (24)
- Option IIb Teaching/Research [for certificate-seekers] (48 credits)
 - EdAF 501, 512, 513 (12)
 - EdCI 521, 535, 539, 564, 587, 591 (36)
 - Plus all requirements for teacher certification

NOTE 1: Master's plus certification students must also be admitted to the Woodring College of Education teacher

preparation program through the Education Admissions Office, Miller Hall 204, (206) 650-3378.

NOTE 2: Candidates in this program should understand that any 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.

NOTE 3: Candidates in this program may 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, 690a or b (16-21)
 - EdCI 518b, 530, 531a, electives (12-17)
- Option II: Seminar Paper (48 credits)
 - EdAF 501, 512, 513 (12)
 - EdCI 521, 535, 539 (12)
 - EdCI 518b, 530, 531a (10)
 - Electives by advisement (14)

M.Ed. — SECONDARY EDUCATION

The Secondary Education graduate program offers four areas of specialization. These are: (a) the curriculum consultant track for experienced teachers interested in curricular service careers; (b) the curriculum consultant instructional technology applications track with computer focus; (c) the teaching credentials track for those seeking certification; and (d) the high school/middle school track for certificated teachers.

NOTE: Enrollment in the Secondary Education graduate program is limited. The 20 top candidates will be selected from among the completed applications received each academic quarter. 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. Those eligible candidates will be reconsidered *one time only* as part of the applicant pool for the subsequent quarter.

Graduate Program Adviser: Dr. Howard Evans, Miller Hall 306D, (206) 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 is required for the curriculum specialization, the high school/middle school program and the instructional technology applications track.

(a) Curriculum Consultant Track

- Option I
 - EdAF 501, 512, 513 (12)
 - EdCI 555, 570, 572, 690a/b, EdAF 543a (22-25)
 - Electives under advisement (11-14)

(b) Consultant Track: Instructional Technology Applications

- Option I — Field Project Only
 - EdAF 501, 512, 513 (12)
 - EdCI 570, 571, 572, EdAF 550 (16)
 - Electives under advisement (18-22)
 - EdCI 690b (6-9)

(c) Secondary Teaching Credential Track

- Option II only
 - EdAF 501, 512, 513 (12)
 - EdCI 481/484, 490, 562/564, 571, 555/572, 573, 579, 596c (40)
 - Plus additional certification courses

(d) High School/Middle School Track

- Option I or II
 - EdAF 501, 512, 513 (12)
 - EdCI 555, 570, 572, 573, 574 (20)
 - Option I: Electives (8), EdCI 690a/b (6-9)
 - Option II: Electives (12), EdCI 579 (4)

NOTE 1: Master's plus certification students must also be admitted to the Woodring College of Education teacher preparation program through the Education Admissions Office, Miller Hall 204, (206) 650-3378.

NOTE 2: Candidates in this program should understand that any 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.

NOTE 3: Candidates in this program may 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.

M.Ed. — READING

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

Graduate Program Adviser: Dr. H. O. Beldin, Miller Hall 251F, (206) 650-3816

Prerequisites

Graduate Record Examination, General Test, teaching certification, teaching experience.

Courses

- Option I: Thesis or Field Project (45 credits)
 - EdAF 501, 512, 513
 - EdCI 484, 584, 586, 589, 594e, 594f, 690a or b
 - Electives by advisement
- Option II: Seminar Paper (48 credits)
 - EdAF 501, 512, 513

- EdCI 484, 584, 586, 589, 594e, 594f, 539
- 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. The number of elective credits varies depending on background and experience.

Currently certified teachers may choose to complete a thesis/field project (Option I — minimum 45 credits); or write comprehensive exams (Option II — minimum 48 cred ts).

Students seeking initial teaching certification plus a master's degree must complete a one-quarter residency (student teaching) in special education, comprehensive exams and a seminar paper, for a minimum of 48 credit hours.

NOTE 1: Master's plus certification students must also be admitted to the Woodring College of Education teacher preparation program through the Education Admissions Office, Miller Hall 204, (206) 650-3378.

NOTE 2: Candidates in this program should understand that any 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.

NOTE 3: Candidates in this program may 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. Sheila Fox, Miller Hall 318B, (206) 650-3332

Prerequisites

- Graduate Record Examination, General Test
- 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:
 - EdAF 310, EdCI 320, 465 (concurrent with 461a & b)
 - Psych 316
 - H Ed 445 or EdCI 435
 - EdCI 598b
- Graduate Foundation Courses* — required for all College of Education graduate students:
 - EdAF 501, 512, 513 (12)
- Fundamentals Block* — required for all students who are not endorsed to teach Special Education:
 - EdCI 461a & b (or 568), 469, 561, 562, 563 (17-19)

- Exceptional Children Masters Block* — required for all Exceptional Children graduate students:
 - EdCI 564, 565, 567, 598a
 - Electives by advisement, to total 45 credits for Option I or to total 48 credits for Option II.
- Early Childhood Option*

Students wishing to pursue an endorsement in Early Childhood Special Education may choose ECSE specialty courses as electives (10 credits).

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.
- Brunton, Rosanne, PhD, minority literatures, women's literature, feminist theory and criticism.
- Cary, Meredith, PhD, English and Irish fiction, women's fiction.
- Castañeda, Omar, MFA, creative writing (fiction), folklore (Maya studies), studies in realistic fictions.
- Cobb, Mary, PhD, English education, drama literature, composition research and pedagogy.
- Dietrich, Dawn, PhD, modern drama, performance studies, film studies, science and literature, postmodern theory.
- Donker, Marjorie, PhD, Renaissance literature, modern drama, rhetoric (historical).
- 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.
- Hill, Ingrid, PhD, creative writing (fiction and nonfiction), literature and society, Biblical literature.
- Keep, W.C., PhD, literature, creative writing (nonfiction).
- Lobeck, Anne, PhD, linguistics, literary theory, gender studies.
- Lundeen, Kathleen, PhD, British Romanticism, critical theory, poetry.
- Mason, John, PhD, American literature, English education, rhetoric.
- Park, Douglas, PhD, eighteenth-century British literature, English novel, rhetoric.
- Purdy, John L., PhD, contemporary American literature, Native American literatures, contemporary poetry.
- Skinner, Knute, PhD, creative writing (poetry), poetic forms.
- Smith, William E., PhD, Shakespeare, British Renaissance studies, composition and rhetoric.
- Symes, Ken, PhD, literature, rhetoric, nonfiction.
- Wright, Evelyn, PhD, English education, children's literature.

M.A. — ENGLISH, THESIS AND NON-THESIS

Program Adviser: Graduate Program Office, Humanities 327, (206) 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 31 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 this competence is demonstrated through a translation exam or through passing an advanced literature course with the literature in its original 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.

Foreign Languages

College of Arts and Sciences

GRADUATE FACULTY

French

Balas, Robert S., PhD.
 Bouchard, Louise-Marie, PhD.
 Bryant, William, PhD.
 Hamblin, Vicki, PhD.
 Kikuchi, Louise, PhD.

German

Brockhaus, Henrich, PhD.
 Robinson, Walter, PhD.
 Suess, Walter, PhD.
 Weiss, Rudolf, PhD.

Spanish

Cynan, Shaw N., PhD.
 Rangel-Guerrero, Daniel, PhD.
 Underwood, John, PhD.

M.Ed. — FOREIGN LANGUAGE EDUCATION, NON-THESIS ONLY (ALL SPECIALIZATIONS)

This program is not currently accepting new students. For further information, contact the department.

Specializations: French, German, Spanish

This program for teachers of French, German and Spanish is designed to be completed in three summers. Emphasis is placed upon the application of course work to the teaching of second languages. Where feasible, use is made of the Department of Foreign Languages' multi-media lab facilities.

Admission

In addition to standard requirements for admission to the Graduate School, the candidate must have an undergraduate major in French, German or Spanish and demonstrate target language competency. Admission will be subject to the approval of the departmental Graduate Committee. Students with insufficient background may be required to take such preliminary course work as deemed necessary.

Specific Test Requirements

For admission: Graduate Record Examination (General).

Exit exams: Exam in EdAF; exams in subject area (French/German/Spanish).

Basic Education Requirements

- EdAF 501, 512, 513 (12)

Required Core Courses

- FL 540, 542, 544 [taught in English] (12)

Requirements in Specialization

- French, German, Spanish (24)
 - The 24-credit requirement must include course work in each of the four areas in the field of specialization (French, German, Spanish): French/German/Spanish 501a,b, Language; 510a,b, Applied Linguistics; 520a,b, Culture; 530a,b, Literature

Foreign Studies

Language sections may develop foreign study components as an integral part of the program in partial fulfillment of requirements in the area of specialization.

Geography & Regional Planning

Huxley College of Environmental Studies

GRADUATE FACULTY

- Buckley, Patrick H., PhD, economic and development geography, quantitative methods.
- Delaney, Edward J., PhD, cartography, GIS and economic development.
- Monahan, Robert L., PhD, resource geography, Canadian-American studies (Interim Director, International Studies Program).
- Mookherjee, Debnath, PhD, comparative urbanization, regional development and planning.
- Scott, James W., PhD, historical geography of the North American West, history and bibliography of geography (Director, Center for Pacific Northwest Studies).
- Scott, Lallie F., PhD, climatology, soils and physical geography.
- Terich, Thomas A., PhD, shoreline processes, urban and regional planning.

Adjunct Faculty

- Berg, Richard H., PhD, PE, remote sensing, quantitative methods.
- Vernon, Manfred C., JD/PhD, environmental law, law of the sea.

M.S. — GEOGRAPHY, THESIS ONLY

Program Adviser: Dr. Debnath Mookherjee, Arntzen Hall 217. (206) 650-3277, (206) 650-3284

Program Goals

The Center for Geography and Regional Planning 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. 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.

Prerequisites

Students with a degree in geography or planning, 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 other fields 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

Please see Graduate School deadlines.

Additional Information

In addition to the required materials of the graduate school, the applicant is requested to submit a 300- to 400-word statement of purpose indicating why he or she wishes to pursue graduate work in geography.

Core Requirements

- Geog 501, History and Philosophy of Geography (4)
- Geog 510, Research Techniques (5)
- Geog 521, Seminar in Systematic Geography: Human, or 522, Seminar in Systematic Geography: Physical (5)
- Geog 551, Research Problem (5)
- Geog 590, Graduate Colloquium (2)
- Geog 690, Thesis (6)

Electives in Specialization

- To be chosen under advisement (9)

Supporting Courses

- Under advisement, normally from either the social sciences or the physical sciences. A minimum of nine credits to be taken (9)

Specific Test Requirements

Graduate Record Examination, General.

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.

Christman, R. A., PhD, mineralogy, earth science.
 Easterbrook, D. J., PhD, geomorphology, glacial geology.
 Engebretson, D. C., PhD, tectonics, paleomagnetism.
 Hansen, T. A., PhD, paleontology.
 Schermer, E. R., PhD, tectonics, structural geology, geochronology.
 Schwartz, M. L., PhD, coastal processes, science education.
 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. Christopher A. Suczek,
 Environmental Studies Center 240, (206) 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 can be completed in 12 months. The non-thesis option will not be offered in 1993-94. Contact the Geology Department or the Graduate School regarding possible offering in 1994-95.

Prerequisites

Students with a degree in geology, earth 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 geology. All students entering the M.S. thesis option must have a thorough knowledge of physical geology and must have completed a recognized geological field camp. They must also have completed one year each of calculus (which may include computer science and statistics), physics and chemistry. Deficiencies must be made up early in the graduate program and before being advanced to candidacy.

All students entering the M.S. non-thesis option must have an undergraduate degree in geology including a course in geomorphology or a degree in another science plus physical geology, geomorphology and an additional 15 credits of geology.

Specific Test Requirements

Graduate Record Examination, General; Department Comprehensive

Examinations are given in the first week of fall quarter to assess students' preparedness to take graduate courses in their proposed areas of specialization.

Questions will be at the level of undergraduate courses for geology majors in physical and historical geology.

Deadlines

Applications are due by May 1 with all supporting material needed by June 1 for fall quarter entrance. Students may enter the non-thesis option during fall quarter only.

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 February 28.

Supporting Material

Material in support of your application should include a statement of your background and purpose in addition to GRE scores, reference letters and official transcripts.

Program Requirements

Course Work — Thesis Option

45 credits; 35 or more credits of graduate (500- and 600-level) courses (no more than 10 credits may apply from 400-level courses). The 600-level credits shall include Geol 690 (12). The 500-level courses shall include Geol 580 (3) and Geol 595 (total of 3).

Electives in Specialization

Geology and supporting courses are selected under advisement through the program adviser and thesis committee chair. Students intending to study the specialties offered by the department also will be expected to be knowledgeable in the subjects under one of the specialty areas listed below:

Petrology, geochemistry, structure, or economic geology: Mineralogy, petrology and thin-section petrography, structural geology, and stratigraphy/sedimentation.

Geophysics: Mineralogy, petrology (without thin-section petrography), structural geology, stratigraphy and sedimentation, and have had at least one course in geophysics.

Applied geology or hydrology: Mineralogy, geomorphology, stratigraphy and sedimentation, and geophysics.

Stratigraphy/sedimentation: Historical geology, mineralogy, petrology, structural geology, stratigraphy and sedimentation, and paleontology.

Paleontology: Historical geology, paleontology, stratigraphy and sedimentation, and zoology.

Geomorphology: Mineralogy, petrology (without thin-section petrography), geomorphology, stratigraphy and sedimentation, and structural geology.

Specialization should be made as early as possible in the student's graduate career.

Course work - non-thesis option

(Not offered 1993-94; contact the Geology Department or the Graduate School regarding possible offering in 1994-95).

Required Courses

Geol 446, 447, 514, 530, 562, 570, 572, 573, 578, 579

Electives

10 credits from Geol 507, 540, 561, 574, 575, 595 and Geol 432

M.Ed. — NATURAL SCIENCE**Earth Science Specialization, Thesis and Non-Thesis**

Program Adviser: Dr. Robert A. Christman

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 105 (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., Russian/Soviet, Europe, Modern China.
De Lome, Roland L., PhD, 20th-century American history, American West, Pacific Northwest.
Dieh, Peter D., PhD, Medieval, Ecclesiastical, Social.
Eurich, S. Amanda, PhD, early modern France and European social history.
Friday, Christopher C., PhD, Pacific Northwest, U.S. West, Immigration.
Gallay, Alan, PhD, colonial America, South.
Helfgott, Leonard M., PhD, modern Middle East.
Hitchman, James H., PhD, 20th-century American and diplomatic history, U.S. maritime history.
Horr, Thomas C. R., PhD, early modern Europe, Renaissance and Reformation.
Kaplan, Edward H., PhD, Chinese history.
Mancke, Elizabeth, PhD, Canada, Early American.
Mariz, George E., PhD, intellectual history of 19th-century Europe, history of Great Britain.
Rhoads, James B., PhD, Director, Graduate Program in Archives and Records Management.
Ritter, Harry R., PhD, modern Europe, historiography.
Schwarz, Henry G., PhD, Chinese and Mongolian history.
Stewart, Mart A., PhD, 19th-century U.S., Civil War and Reconstruction, Environmental.
Truschel, Louis W., PhD, African history.
Whisenhunt, Donald W., PhD, U.S., 1930s.

FIELDS OF STUDY

- Archives and Records Management
- African History

* *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.*

- East Asian History
- British History
- Medieval History
- Middle Eastern History
- Modern European History (1500 to the present, including Russia)
- United States History
- Canadian History

M.A. — HISTORY, THESIS AND NON-THESIS

Program Adviser: Dr. James B. Rhoads, Humanities 278

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 A (thesis) and Option B (non-thesis):

Option A (Thesis): Basic Requirements

- Hist 501 (I:4)
- Hist 690a,b,c [thesis] (I:12)
- Four reading seminars* (I:16)
- Elective courses (I:13)

NOTE: The thesis option requires the writing of a comprehensive examination in two of the general fields of study listed above, as well as an oral defense of the completed master's thesis. It is recommended for those who wish to pursue further graduate-level study in history.

Option B (Non-Thesis): Basic Requirements

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

NOTE: The non-thesis option requires the writing of a comprehensive examination in two of the general fields of study listed above.

Electives

To complete a program in either Option A or B, 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).

Specific Test Requirements

Applicants are required to take the general section of the Graduate Record Examination prior to acceptance into the graduate history program. As noted above, Option A requires an oral defense of the master's thesis and a comprehensive written examination in two fields of study.

Option B requires a written comprehensive examination in two fields of study.

Language Requirement

Candidates must demonstrate a reading knowledge of an appropriate foreign language, to be determined by successful completion of an examination administered by the Foreign Languages Department (or, where appropriate and with departmental permission, a demonstrated competence in mathematics, statistics, accounting or computer programming).

GRADUATE PROGRAM IN ARCHIVES AND RECORD MANAGEMENT

Program Director: Dr. James B. Rhoads, Humanities 278

The Department of History coordinates an inter-departmental graduate program leading to the degree of Master of Arts in history with a concentration in archives and records management. The program is offered in cooperation with a number of agencies and organizations throughout the Pacific Northwest, which provide practical experience in archives administration and records management. 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 (1:4)
- Hist 595 (1:6)
- Hist 596 or 598 (1:4)
- Hist 599a,b (1:20)
- Hist 690a,b,c (1:12)
- Four reading seminars (1:16)
- Elective courses (1:12)

Electives

Electives, including appropriate courses in political science, business administration, computer science or library science, as well as in history, should be chosen in consultation with the graduate adviser and the program director.

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

Specific test and language requirements are identical to those required for the regular M.A. in history. In addition, there is a requirement of demonstrated computer literacy, as reflected by course work or examination.

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; 596 or 598; 599a,b (20).

Graduate Teaching Assistantship (TA) Deadlines

Date for receipt of graduate teaching assistantship applications is May 1 for all program specializations.

Huxley College of Environmental Studies

GRADUATE FACULTY

- Albers, James R., PhD, alternative futures, population and environment.
 Clarke, David E., PhD, environmental ethics.
 Frome, Michael, environmental journalism.
 Gayden, Ernst L., PhD, human ecology, applied human ecology.
 Hardy, John T., PhD, environmental toxicology, global climate change, biological oceanography.
 Landis, Wayne G., PhD, environmental toxicology and population biology.
 Maguire, Christine C., PhD, environmental systems and biometrics.
 Matthews, Robin A., PhD, stream ecology, watershed management.
 Mayer, J. Richard, PhD, aquatic chemistry, ground water studies.
 Miles, John C., PhD, environmental education and history, outdoor education.
 Robbins, Lynn A., PhD, social impact assessment, human ecology, global ecology.
 Storch, Thomas A., PhD, limnology, aquatic microbiology and algal ecology.
 Summers, William C., PhD, marine ecology, oceanography, fisheries, coastal management.
 Walker, Wendy, MS, environmental education, interpretation, curriculum.
 Webber, Herbert H., PhD, marine biology, estuaries, sampling design and data analysis.
 Yu, Ming-Ho, PhD, environmental biochemistry, nutritional toxicology.

M.S. — ENVIRONMENTAL SCIENCE, THESIS ONLY

Program Adviser: Chair, Huxley College Graduate Program Committee, Environmental Studies Center 539

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, 532, 533, 534, 544, 546, 559, 560

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, 546, 551, 555, 556, 557, 559, 560

Regional and Global Environmental Systems. This specialization focuses on large-scale regional and global environmental problems. Examination of the magnitude and extent of large-scale change and its probable impact on natural ecosystems, resources (food, water and energy) and society. Patterns of large-scale spatial and temporal change.

- Specialization courses: Envr 504, 505, 510, 531, 536, 544, 562, 592; Geog 510, 535

Prerequisites

A bachelor's degree and college-level course work including a minimum of one and one-half years of general 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. For the marine and estuarine science specialization (students matriculated through biology), biology subject test of the GRE.

Application

Students will be admitted into the M.S. in environmental science program fall quarter only. Priority consideration will be given to applications received by February 1. For all options the final application deadline is March 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: 8 credits of comprehensive environmental studies core (Envr 501, 502, 503); 12 credits or more under advisement from within one of the above three areas of specialization; 13 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.

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 the following core requirements:

- Envr 501, Research in Environmental Studies (2)
- Envr 502, Functioning of Environmental Systems (3)
- Envr 503, Perturbations of Environmental Systems (3)

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 the Huxley M.S. core courses (8 credits) and select 12 credits of specialization in marine and estuarine science from the following list:

- Envr 522, 531, 532, 533, 534, 538; Biol 503, 507

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 (which includes taking the biology subject test in addition to the general test of the Graduate Record Exam).

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.

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, Environmental Studies Center 539

The political science (environmental studies) curriculum is a joint offering of the Department of Political Science and Huxley College of Environmental Studies.

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 preference is given to students with course work in political science or related social sciences. Entering students should have completed undergraduate course work in American political processes and social science methodology. Admissions will be approved by the Graduate Committee. Any deficiencies must be made up early in the program before the student is advanced to candidacy.

Thesis Option (minimum 45 credits)

- Required courses (13 credits): Pol Sci 501, 502, Pol Sci/Envr 524
- One political science field from among four offered by political science; students will be required to complete

the core course plus at least one other 500-level course in the field (8-11 credits)

- Environmental policy studies field to be constructed by student in consultation with environmental policy studies adviser; must include two 500-level environmental studies courses and one other course (10-12 credits)
 - 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 credits)
 - Electives to total a 45-credit minimum
- Non-Thesis Option (minimum 48 credits)

- Same as above except for thesis but to include additional 12 credits of course work (at least four credits in each field; selected in consultation with environmental policy studies adviser)

M.Ed. — Natural Science/Science Education (Environmental Studies)

Adviser: Science Education Coordinator

Environmental Studies specialization: Dr. John Miles

Students seeking a graduate program emphasizing **environmental education** should consult the Graduate School's Natural Science/Science Education listing in this section of the catalog for a description of the M.Ed. in Natural Science/Science Education. Among this program's specializations is one in environmental studies, directed toward practicing public school teachers or those with teaching experience in an educational enterprise with a focus on environmental or outdoor education.

Mathematics

College of Arts and Sciences

GRADUATE FACULTY

- Amiran, Edoh Y., PhD, differential geometry, smooth dynamical systems.
- Chalice, Donald R., PhD, complex function spaces and associated measures.
- 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 224

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 210 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 are required for graduation: 504, 521, 522, 691 and 690 (for thesis) and at least one course from each of the following four lists: (1) 502, 503, 560, 564, 566; (2) 523, 525, 527, 528, 562; (3) 535, 542, 545; (4) 510, 511, 573, 575, 576.

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

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 average, 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). Two credits toward the degree will be awarded upon successful completion of the project, which will involve both an oral examination on the subject of the project and a colloquium presentation to the mathematical community. See the departmental graduate handbook for additional details.

FURTHER INFORMATION AND ADVICE

Students are 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 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, theory/analysis, orchestration.
 Cilliam, Jeffrey, MMus, piano accompanying, theory.
 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.
 Morris, Jack, MMus, opera, voice.
 Pullan, C. Bruce, MA, Chair, opera, conducting, voice, vocal pedagogy, musicianship.

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.
 Térey-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.
 Christman, Robert A., PhD, geology.
 Dallas Lee A., EdD, educational curriculum and instruction.
 Miller, John A., PhD, chemistry.
 Parakh, Jal S., PhD, biology.
 Schwartz, Maurice L., PhD, dean, Graduate School.
 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: Dr. Emily Peele
 Chemistry: Dr. J.A. Miller
 Earth Science: Dr. R. A. Christman
 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; Subject in Biology for applicants selecting this option.

Specializations — Secondary Programs

Biology, Thesis and Non-Thesis

- 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 and Non-Thesis

- 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 and Non-Thesis

- Requirements in specialization
 - Geology field course (I and II:5-10)
 - Geol 690 or Sci Ed 690 (I:6-12)
 - Sci Ed 598 (II:5)
 - 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. Applicant should have completed two quarters of science methods courses and the natural science education sequence with grades of B or better.

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, 582, 583, 584, 590, 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, 582, 583, 584, 590, 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 (3-13)

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 (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 (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.Ed. — PHYSICAL EDUCATION, THESIS OR FIELD PROJECT

Program Adviser: Dr. Kathleen Knutzen, CV 22, (206) 650-3055

Program Description

Graduate study leading to a Master of Education degree is offered in two areas: mastery of teaching and performance enhancement, and exercise science.

Prerequisites

Physical education major/minor or equivalent courses from: the exercise science, socio-cultural and professional activity areas.

Students applying for the Pedagogy specialization within the Mastery of Teaching and Performance Enhancement degree must present documented evidence of previous teaching experience.

Students applying for the *Sport and Exercise Psychology* specialization within the Mastery of Teaching and Performance Enhancement degree 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.



* EdAF 501 must be taken before EdAF 512 and 513.

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

Mastery of Teaching and Performance Enhancement (48-52 credits)

This degree is primarily a summer/off-campus program requiring attendance for a minimum of two consecutive on-campus summer quarters.

Mastery of Teaching and Performance Enhancement

- Basic Requirements: PE 505, 506, 507, 592 [6], 690a or 690b [6]; EdAF 501*, 512, 513. (35)

Specializations

Pedagogy

- Specific prerequisites required for entry:
 - Requirements: PE 504
 - Electives: Select 9 credits under advisement (13)

Sport and Exercise Psychology

- Specific prerequisites required for entry:
 - Requirements: PE 541, 542, 551, Psych 511
 - Electives: Select 6 credits from Psych 502, 504, 521, 524, 526, 527, 528 or their equivalent (17)

Exercise Science (51-56 credits)

This degree is an academic-year program which requires a two-year commitment since courses are offered on a two-year rotating basis.

- Requirements: PE 506, 520, 540, 543, 690a [6-9]; EdAF 501*, 512, 513 (32-37)
- Electives: Select 19 credits under advisement from the following: PE 502, 507, 510, 511, 513, 533, 541, 542, 544, 592 (19)

Political Science

College of Arts and Sciences

GRADUATE FACULTY

Alper, Donald K., PhD, American politics, political process, Canadian politics.

Clarke, David E., PhD, political theory, environmental politics (emeritus).

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, public finance, organization theory.
 Parris, Kristen D., MA, 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. Donald Alper, Arntzen Hall 415

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 sponsored with Huxley College of Environmental Studies. 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, applications should be received by February 1. Please include a statement of purpose with the application materials requested by the Graduate School.

Specific Test Requirements

Graduate Record Examination, General Test.

Degree Requirements

Basic Requirements

- Pol Sci 501, 502 (I and II:10)
- Pol Sci 690 [thesis option] (I:6-9)

Comprehensive Examination

Written and oral in two fields, thesis and non-thesis, except public policy non-thesis specialization. Comprehensive examination in public policy specialization covers this field only.

Thesis Option (minimum 45 credits)

Courses are selected under advisement from 400- or 500-level courses in political science (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 in political science (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.

Requirements in Public Policy Thesis Specialization (minimum 48 credits)

- Pol Sci 503, 510, 520, 521, 523, 540, 550 (II:27)
- 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 (II:11)

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, Environmental Studies 539

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 or a related field. 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 (8-11)
- 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 each field; 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.
 Crow, Lowell, PhD, physiological psychology, alcohol and behavior, psychophysiology.
 Cvetkovich, George, PhD, social psychology, environmental and population psychology.
 Dinnei, Dale L., PhD, educational psychology, cognition, problem solving.
 Elich, Peter J., PhD, educational, human learning, developmental.
 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.
 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.
 Meade, Robert D., PhD, human motivation, cross-cultural, human population problems.
 Miller, Laurence, PhD, experimental psychology, operant conditioning, psychological themes in films.
 Panek, David M., PhD, clinical, community, mental health, novelty and stimulus change.

Prim, Merle M., PhD, sub-human primate behavior, physiological psychology, sensory, comparative.

Shaffer, Ronald W., PhD, learning, perception, phenomenology.
 Sue, David, PhD, clinical community counseling, Asian-American issues, sex therapy.

Taylor, Christopher, PhD, industrial organizational, general experimental.

Taylor, Sandra L., PhD, clinical, psychopathology, personality theory.

Thompson, Richard W., PhD, physiological, comparative, psychopharmacology history and systems.

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

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

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

To qualify for financial aid or 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; and Subject in either Psychology or Education.

Course Requirements (78 credit minimum)

- Psych 502, 504, 532, 551, 553, 554, 555, 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 in the Graduate School office.

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. There are additional prerequisites for the behavioral toxicology curriculum (see below).

Specific Test Requirements

Graduate Record Examination, General; and Subject in Psychology.

Admissions Procedures

All applicants are initially screened for admission to the M.S. program in psychology irrespective of curriculum choice. Following this initial screening, applicants are reviewed by the curriculum committee corresponding to the curriculum chosen (i.e., general psychology, clinical/counseling psychology, school psychology or behavioral toxicology). In addition to the test requirements stated above, applicants for the M.S. mental health counseling curriculum will be required to submit additional materials as requested. Admission to, and completion of, a specified curriculum will be recorded on each student's transcript. Students will be admitted to one of the specialized curricula prior to the beginning of fall quarter.

To qualify for financial aid or 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 repeated 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. Robert Thorndike, 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 intent of the mental health counseling curriculum is to provide a general foundation in theoretical and applied perspectives which are used by mental health professionals. Special emphasis is placed on skill development, supervised practica with a variety of clients, and on-site internships in various community and mental health clinics. An important component of the mental health counseling curriculum is exposure to cross-cultural counseling strategies. Attention to work with families and children is also included in the concentration.

The specialized curriculum in mental health counseling is open only to students who have been admitted to the master's program in psychology on the criteria described above. Further documentation of the personal suitability of applicants for counseling is required through statements of personal commitment, letters of reference and interviews where possible.

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.
 Carmoży, 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. John Richardson, Graduate

Adviser, Department of Sociology,

Western Washington University

Bellingham, WA 98225-9081 (206) 650-3005

The Sociology Department is not admitting students to its graduate program during the 1993-94 academic year. The department plans to accept applications after September, 1993, for enrollment in September, 1994.

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 must be taken for at least 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.
 Mathers-Schmidt, Barbara, PhD, fluency disorders, neuromotor speech disorders, research methodology.
 McRandle, Carol C., PhD, audiology, aural rehabilitation.
 Seilo, Michael T., PhD, audiology, aural rehabilitation, speech acoustics perception.
 Webb, Loren L. PhD, audiology, aural rehabilitation.
 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, (206) 650-3178

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.

Admission

Enrollment is limited to 30 graduate students.

Deadlines

The speech pathology/audiology program is a lock-step program which offers courses in sequence once a year beginning in the fall. Completed applications are due by April 1 for priority consideration.

Graduate Teaching Assistantship (TA) Deadlines

The teaching assistantship application is due on April 1.

Speech-Language Pathology (60-69 credits)

- Requirements: SPA 502, 510, 515, 550, 551, 552, 552a, 553, 554, 555, 556, 557, 558, 575, 580*, 581**, 582**, 585, 586, 598a***, 599a***, 690 (6 credit minimum) or 691
- Electives: SPA 450, 462, 463, 464, 465, 466, 552b, 559, 560, 568a, 598b***, 599b***, and other 400- and 500-level courses selected under departmental advisement

* Two of three courses in this series are required. Required for students intending to apply for Washington State CDS Certificate.

** Two of three courses in this series 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 and Aural Rehabilitation (66-72 credits)

- Requirements: SPA 466, 502, 551, 561, 562, 563, 564a, 565, 566, 567, 568a, 568b, 568c, 570, 571, 572, 573, 574, 575, 577, 598a,b*, or 599a,b*, 690 (6 credit minimum) or 691
- Electives: SPA 450, 465, 465a, 510, 545, 553, 559, 560, 564b, 564c, 568d, 568e, 575, 580, 592, 596

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.

Comprehensive Examination and Thesis/Non-Thesis Oral Defense

A seven-hour written comprehensive examination is required and covers the student's area of specialization(s) 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

All students seeking certification as a Communication Disorders Specialist (ESA-CDS) in the public schools in the State of Washington must successfully complete a minimum of two quarters of public school internship in order to satisfy the Professional Education Advisory Board's requirements. Further information about CDS certification requirements may be obtained from the Internship Program director or the graduate adviser.

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.

Technology

College of Arts and Sciences

GRADUATE FACULTY

Raudebaugh, Robert A., EdD.
Seal, Michael, EdD.
Southcott, Marvin, MFA.

M.Ed. — TECHNOLOGY

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 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)

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.

* though 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.

M.A. — THEATRE

Program Adviser: Professor Thomas E. Ward, Performing Arts Center 395

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 (I I) and 595 (II) and one key course outside specialty
- Design/Technical Theatre
 - *511*, 512, 690 (I) or 691 (II) and 595 (II), and one key course outside specialty
- Directing
 - *571*, 572, 690 (I) or 691 (II) and 595 (II), and one key course outside specialty
- Dramatic Literature and Criticism
 - Three additional courses (beyond core) from 528a,b,c,d or e, 690 (I) or 691 (II) and 595 (II), and one key course outside specialty
- Playwriting
 - *585*, 586, 690 (I) or 691 (II) and 595 (II), and one key course outside specialty

Key courses outside specialty are selected under advisement.

Electives

Electives will be selected under advisement. No more than 10 credits of course work at the 400 level may be applied to the M.A. degree. No more than six credits of Theatre Arts 500 (Independent Studies) may be applied to the M.A. degree unless special approval is granted in advance by the graduate program adviser.

Language Requirement

Demonstrate a reading knowledge of an appropriate foreign language or related studies as approved by adviser.

In most instances knowledge of the subject matter and techniques of an allied discipline prove a valuable research or performance tool for the student, as a substitute for the language requirement. The department may require, in lieu of a language, the satisfactory completion of additional course work (beyond the basic 45-48 credits required for the M.A. degree) in 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 (conference course, projects); 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 writing the Graduate Office, WWU, Bellingham, WA 98225-9037. 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
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 Advisement 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 Advisement Center in Old Main.

Department Chairs

Dr. Robert Marshall	Anthropology
Dr. Richard Fonda	Biology
Dr. Mark L. Wicholas	Chemistry
Dr. Larry S. Richardson	Communication
Dr. James Johnson	Computer Science
F. David Harris	Engineering Technology
Dr. Richard K. Emmerson	English
Dr. Darrel Amundsen	Foreign Languages & Literatures
Dr. Christopher A. Sucek	Geology
Dr. Donald W. Whisenhunt	History
Carolyn J. Dale	Journalism
Dr. William Stoeber	Liberal Studies
Dr. Tjalling Ypma	Mathematics
Dr. Phillip Montague	Philosophy
Dr. Roy Clumpner	Physical Education, Health & Recreation
Dr. Robert J. Quigley	Physics/Astronomy
Dr. Kenneth R. Hoover	Political Science
Dr. Ronald A. Kleinknecht	Psychology
Dr. Carl H. Simpson	Sociology
Dr. Loren L. Webb	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 and ethnic studies. 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 32-37 credits

- Two courses from the social sciences, selected under advisement from Anth 104; Soc 201; Pol Sci 101 or 250; Hist 360; Geog 201; AmSt 202, 203, 204 or 205
- One course from: Hist 450 or 467
- Two courses from Eng 235, 317, 318, 319, 327, 330
- Art Hist 360 or 460 (plus prerequisites); or Music 202
- AmSt 301

Individualized Program of Study 33-38 credits

A program formulated by the student, a member of the American cultural studies faculty and the director of the program, and approved by the American studies faculty advisory committee. No program of study may substantially duplicate an existing departmental or college program. Ordinarily, the final approval of the student's course of study must be granted before the student reaches senior status.

The student may propose a broad, general program in American cultural studies, or focus on one major aspect of national cultural studies as, 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 20 credits

- AmSt 202, 203, 204 or 205
- AmSt 301
- Eng 318, 319
- Hist 467

Related Courses 5 credits

- Additional credits to be selected under advisement



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 22-24 credits

- AmSt 202, 301, 499
- Anth 361 or 462
- Eng 235, 330
- Hist 275 or Fair 311
- 3-4 credits under advisement, selected from areas such as cultural anthropology, education or sociology

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 26 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.

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.

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

Anthropology is that discipline which studies humankind in the widest perspective — its physical development, development through time, and the diversity of lifestyles people have created. Anthropology attempts to make generalizations about human nature, group life and culture. To achieve these goals, the anthropologist does fieldwork and comparative cross-cultural studies in time and space.

Anthropology shares techniques and methods with other behavioral sciences and also draws upon physical and biological sciences. Unlike other behavioral sciences, which deal primarily with the Western World, anthropology includes the broadest human context. Thus, anthropology provides theoretical and empirical bases for development of hypotheses about human behavior and for testing the limitations of such hypotheses.

Anthropology is divided into subdisciplines.

Archaeology investigates 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.

Anthropological linguistics investigates the interrelationships between human culture and language with special focus on unwritten languages, emphasizing the diversity of world languages and non-verbal human communication.

Cultural anthropology does fieldwork and attempts to describe each culture in its own perspective. On the basis of this experience, the study of hundreds of other field reports and other information, the cultural anthropologist does cross-cultural comparisons to test generalizations about human behavior.

Utilizing ethnographic, ethnological and ethnohistorical tools as well as information supplied by these subdisciplines, the anthropologist does comparative studies of cultures and of the processes of human development.

The Anthropology Department provides training in all of these areas.

Opportunities for fieldwork and library research are available in all areas and for advanced research leading to the master's degree in all areas. Archaeological surveys and excavations are conducted most summers. The department engages in a series of funded ethnohistorical projects, providing a wide diversity of research opportunities. Library holdings include the complete Human Relations Area File up 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 exist 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.

ANTHROPOLOGY FACULTY

- ROBERT C. MARSHALL (1985) Chair. Associate Professor. BA, Youngstown State University; PhD, University of Pittsburgh.
 DANIEL L. BOXBERGER (1983) Associate Professor. BA, The Evergreen State College; MA, Western Washington University; PhD, University of British Columbia.
 SARAH K. CAMPBELL (1988) Assistant 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) Assistant Professor. BA, Haverford College; MA, PhD, University of California, Los Angeles.
 JOAN C. STEVENSON (1979) Associate Professor. BA, University of Washington; MA, PhD, University of Wisconsin-Milwaukee.

BACHELOR OF ARTS

Major — Anthropology

65 credits

- Anth 201
- At least one course each in 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
- Anth 470 or 471 or 427 or 480 (where appropriate an internship, practicum or archaeological methods course may be substituted under advisement)
- At least 5 credits from the following: Anth 330, 351, 353, 424, 429, 431, 453, 475, 480, 481, 482, 484
- At least 5 credits from the following: Anth 361, 362, 364, 365, 460, 462, 463, 464, 465

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

Minor

25 credits

- Anth 201 and either 102, 210 or 215
- Electives under departmental advisement

Combined Major — Anthropology/Biology

83 credits including 20 in supporting courses

This major will provide interested students the opportunity to study in two disciplines related through human biology.

- Anth 201, 210, 215
- 10 credits in anthropology under advisement
- Biol 206, 207, 348, 349, 370, 490
- Biol 340 or Anth 335
- Chem 121, 122, 123 and either 251 or the 351, 352, 353 sequence
- Recommended elective courses: Biol 325, 465, 469, and 485; Anth 420, 423, 424, any "Peoples" courses relevant to the student interests, and additional courses under advisement

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 26 of this catalog.

102 INTRODUCTION TO HUMAN ORIGINS (4)

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.

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 (3)

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 anthropology with emphasis on the period beginning with I.H. Morgan and E.B. Tylor.

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 fieldwork.

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 (3)

Prereq: Anth 201 and 301. Reconstruction of the past of human

groups through the utilization of primary written sources and cognate archival materials. Particular attention is paid to ethnohistory as a check upon and a complement to the archaeological and ethnological records. Emphasis shall normally be placed upon Northwest aboriginal materials.

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.

448 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-linguistics.

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 FIELDWORK METHODS IN CULTURAL ANTHROPOLOGY (7)

Prereq: 15 credits in anthropology. The study of ethnographic fieldwork methods through exercises in class and a major fieldwork project in the community. Discussion of topics, including the anthropologist as fieldworker and the ethics of fieldwork.



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 26 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 (3)

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 FIELDWORK METHODS IN CULTURAL ANTHROPOLOGY (7)

Prereq: graduate status in the anthropology program or permission of instructor. The study of ethnographic fieldwork methods through exercises in class and a major fieldwork project in the community. Discussion of topics, including the anthropologist as fieldworker and the ethics of fieldwork.

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.

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.

MAJOR CONCENTRATIONS IN BIOLOGY

We strongly recommend that biology majors own a personal computer.

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.

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 bluebook by their faculty adviser, no later than one year before the bluebook is approved for senior evaluation by the department chairperson.

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 is housed in Haggard Hall and shares space in the Environmental Studies Center. Our teaching and research laboratories are adequate and well-equipped. The department frequently uses the facilities of the Sundquist Marine Laboratory at Shannon Point near Anacortes. This laboratory is an important focus of our 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. Very often we find ourselves involved in open-ended laboratory or field projects. Our cell-tissue culture lab has attracted a number of students interested in modern techniques so important in research and industry. The beautiful nearby Cascades 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.

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.

CISÈLE MULLER-PARKER (1990) Assistant 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) Assistant 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.

IRWIN L. SLESNICK (1963) Professor. AB, BS, Bowling Green State University; MS, University of Michigan; PhD, Ohio State University.

CAROL TRENT (1989) Assistant 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

STEPHEN NYMAN. BA, MS, Rutgers University; PhD, University of Rhode Island.

FREDERICK M. RHOADES. BA, Swarthmore; MS, Oregon State University; PhD, University of Oregon.

CARL L. WITHNER. AB, University of Illinois; MA, PhD, Yale University.

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 115, 251, 371 or Biol 323 (or Chem 121, 122, 123, 124, 251)
- Required core courses: Biol 201, 202, 203 (or 101, 102, plus one or more courses from Biol 201, 202, 203, selected with adviser's approval); Biol 321 or 370, 325, 384 or 485
- Upper-division biology courses approved by faculty adviser

Program Advisers: G. Kraft; Assigned Faculty

Combined Major — Biology/Anthropology

85 credits including 20 in supporting courses

- Chem 121, 122, 123, 124 and 251 (or 351, 352, 353)
- Biol 201, 202, 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 325, 326, 465, 469, 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

BACHELOR OF ARTS IN EDUCATION

Combined Major — Biology/Chemistry

111-112 credits

- Chem 121, 122, 123, 124, 333
- Option a: Chem 251, 461, 462, and Chem 371 or Biol 323, 324
- Option b: Chem 351, 352, 353, 354, 471, 472 and 473 or 474
- Biol 201, 202, 203, 321, 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, 125)

Program Adviser: I. Slesnick

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.

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, 124
- Chem 251 (or 351, 352; 353 recommended)
- Physics 114, 115; 116 recommended (or 121, 122, 123, 125)
- Math 124

Basic Requirements: Biology 15 credits

- Biol 201, 202, 203

Breadth Requirements: 15 credits

- Biol 321, 323, 325, 340

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, 470

Faculty Advisers: Fonda, Kohn

- Cellular Emphasis
 - Required core: Biol 322, 324, 345
 - Electives: Biol 408, 470, 471, 472, 473, 475, 479

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

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

Faculty Advisers: Fonda, Peele, Schneider

- General Biology
 - Selected upper-division courses

Faculty Advisers: Assigned Faculty

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

Faculty Advisers: Parakh, Slesnick

- Human Biology
 - Required core: Biol 348, 349
 - Electives: Biol 370, 384, 408, 449, 469

Faculty Advisers: Brown, Kraft

- Marine Biology
 - Required core: Biol 326, 406, 407, 456, 461; Chem 333 (or Envr 361); Geol 211
 - Electives: Biol 403, 405, 462; Envr 421a&b, 422, 431a&b

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

- Zoology
 - Biol 322, 326, 348, 349, 403, 407, 424, 461, 462, 463, 465

Faculty Advisers: 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

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

Cellular and molecular biology emphasis 110 credits

- Biol 201, 202, 203, 321, 322, 340, 345, 470, 471, 472, 473, 474, 475
- Chem 121, 122, 123, 124, 333, 351, 352, 353, 354
- Math 124, 125
- Physics 121, 122, 123, 125

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, 331, 341, 342; plus 13 credits in mathematics under advisement; Comp Sci 120 or 205, 439
- Chem 115, 251
- Physics 121, 122, 123, 125 (or Math/Comp Sci 335)

Faculty Adviser: see department chair

Minor — Biology

30 credits

- Supporting courses: Chem 121, 122, 123, 124
- 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 26 of this catalog.

101 INTRODUCTION TO BIOLOGY (4)

Prereq: Math 102. 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; 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.

130 MUSHROOMS, MOLDS AND MOSSES (3)

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

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, 124 recommended. The structure of biological molecules and macro-molecules; cell structure and organization; energy transformation; the synthesis of DNA and proteins.

202 GENERAL BIOLOGY II (5)

Prereq: Biol 201. Ways in which animals cope with the basic problems of survival: locomotion, nutrition and the utilization of food; integration of activities on both community and individual levels, reproduction and development.

203 GENERAL BIOLOGY III (5)

Prereq: Biol 201. An introduction to bacteria, fungi, algae, mosses and higher plants with emphasis on ecological relationships, evolutionary trends and adaptations; transpiration; plant development.

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 CELLULAR, MOLECULAR AND DEVELOPMENTAL BIOLOGY (3)

Prereq: Biol 201; Chem 251 or 351 and 352. Cell organelle structure and function, membrane phenomena, energy utilization and production, cellular biosyntheses, control of cellular activities, developmental processes at the cellular level.

324 MOLECULAR, CELL AND DEVELOPMENTAL BIOLOGY LAB (3)

Prereq: Biol 323. An introduction to techniques in molecular and cell biology and problems in developmental biology using bacteria and sea urchin and *Drosophila* embryos.

325 ECOLOGY (3)

Prereq: Biol 201, 202, 203. Community energetics and organismal-environmental relationships in marine, fresh water and terrestrial habitats.

326 ECOLOGY LABORATORY (2)

Prereq: Biol 201, 202, 203. Concurrent enrollment in Biol 325. Field experience working with ecological instruments and sampling methods. An independent research project is the final process in this lab.

340 BIOMETRICS (5)

Prereq: Biol 201, and 202 or 203. The design of biological experiments and appropriate statistical analysis of experimental data. Calculator required. Also offered as Envr 340.

345 FUNDAMENTALS OF MICROBIOLOGY (5)

Prereq: Biol 201, Chem 122, one quarter organic chemistry. Comparative morphology, taxonomy, physiology and relationship of microbes; bacteria, yeasts, molds and viruses.

348,349 HUMAN ANATOMY AND PHYSIOLOGY (5 ea)

Prereq: Biol 101; Biol 348 prerequisite to 349. Structure and function of the human body; emphasis on physiological principles and homeostatic mechanisms.

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.

384 BIOLOGY AND SOCIETY (4)

Prereq: Biol 101 or equivalent; junior standing. Recent developments in biology and their impact on the individual and on society; emphasis on potential effects on individual values and social implications of selected developments in such areas as behavior control, genetic alteration and organ replacement.

402 BIOLOGICAL LIMNOLOGY (5)

Prereq: Biol 325. Physical and chemical characteristics of fresh water in relation to biotic communities; field trips.

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; Biol 203 or 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.

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.

449 PATHOPHYSIOLOGY (5)

Prereq: Biol 348, 349. A study of the mechanisms of disease, the responses of the body to the disease process and the effects of the pathophysiologic mechanisms on normal function.

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.

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.

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 MAMMALOLOGY (5)

Prereq: Biol 202. Structural and physiological adaptations, population dynamics, distribution and classification of mammals with laboratory emphasis on local species. Normally offered in alternate years.

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 and 124; and 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, 124, 353 (or concurrent); Biol 471 prerequisite to Biol 472. A consideration of the structure and function of biological macromolecules; intermediary metabolism; membrane structure and function; bioenergetics. Also offered as Chem 471, 472.

473 MOLECULAR BIOLOGY (3)

Prereq: Biol 321; Biol 472 or Chem 472 or permission of instructor. An examination of the structure, replication and expression of genetic information. Also offered as Chem 473.

474 BIOCHEMISTRY LABORATORY (3)

Prereq: Biol/Chem 472 or concurrent; Chem 124, 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.

495 DEVELOPMENTAL BIOLOGY (2)

Prereq: Biol 321, and Biol 323 or 471. An examination of the molecular, cellular and genetic aspects of developmental biology 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 26 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: plant physiology; ecological methods; microbial ecology; the human genome project; deep-sea biology; embryonic development of animals.

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.

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.

515 PLANT GEOGRAPHY OF NORTH AMERICA (4)

Prereq: 25 credits of biology and permission of instructor (Biol 404 and 452 recommended). Vegetative zonation of North America emphasizing factors controlling distributional patterns and paleogeographical history of major biomes.

552 EVOLUTIONARY SYSTEMATICS OF VASCULAR PLANTS (4)

Prereq: 15 credits in botany and permission of instructor. Evolutionary systematics of vascular plants; phylogeny and evolutionary trends.

559 PLANT SPECIATION (4)

Prereq: 25 credits of biology; Biol 490 recommended. Reproductive strategies and evolutionary patterns relating to formation and stabilization of discrete biological units (microspecies, species and higher categories) among higher plants.

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.

571 ADVANCED TOPICS IN CELL 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.

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.

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.

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.

595 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 knowledge 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. It is a valid area of academic study with a strong interdisciplinary orientation.

For program advisement, contact D.K. Alper, director, phone (206) 650-3728, Canada House 201.

BACHELOR OF ARTS

Canadian-American Studies Major

50 credits

- Core Courses: Can-Am Studies 200, 401, 402; Eng

415a; French 101, 102, 103 (or equivalent), 280 or 201; Geog 313; Hist 277; Pol Sci 406

- Select additional credits from the following to complete the major: Anth 361, 411, 462; Can-Am Studies 400; Econ 464, 465; French 305, 401c, 417, 450; Geog 310, 345; Hist 477, 478, 390d, 390e; Journ 460; Pol Sci 301, 418g

Minor

30 credits

- Can-Am Studies 200; Geog 313; Hist 277; Pol Sci 406
- 12 additional credits under advisement from Can-Am Studies 400, 401, 402; Econ 464, 465; French 101 (or equivalent), 102, 103, 201, 280, 305, 401c, 417; Geog 345; Hist 477, 478, 390d, 390e; Pol Sci 418g

COURSES IN CANADIAN-AMERICAN STUDIES

Courses numbered X37, X97, 300, 400, 417, 445 are described on page 26 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) Assistant Professor. BA, Reed College; PhD, University of California, Berkeley.

JOSEPH R. CROOK (1970) Professor. BS, University of Nevada; PhD, Illinois Institute of Technology.

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.

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 WILSON (1966) Professor. BSc, University of Alberta; PhD, University of Washington.

PROGRAMS AND CAREER OPPORTUNITIES

The programs of study offered by the Chemistry Department are diverse and challenging, and provide the following benefits to the student:

- A wide variety of accredited programs, designed to meet diverse career goals.
- A faculty committed to excellence in undergraduate education.
- Close student-faculty contact and relatively small classes.
- Direct access to modern laboratory equipment and instrumentation.
- Opportunity for research work at the junior/senior level under the direction of a faculty adviser.

The Chemistry Department offers three basic degree programs: Bachelor of Science, Bachelor of Arts and Bachelor of Arts in Education. All three programs have a common core of study:

- One year of general chemistry and one year of college-level calculus (first year)
- One year of organic chemistry, one year of college physics and one quarter of analytical chemistry (second year)
- One year of physical chemistry (third year)

This provides the foundation for elective courses in the student's area of interest. Through choice of degree programs and electives, the student can prepare for careers in industry or government, teaching at the secondary level or further study at the graduate level.

Students planning to major in chemistry or biochemistry or to begin university transfer programs involving chemistry courses are advised to consult the department at the beginning of the first year to arrange for proper sequence of courses.



Students planning to transfer to Western after completing two years of college study elsewhere should complete as many of the following program requirements as possible prior to transfer in order to avoid delays in degree work completion:

- One year of general chemistry
- One quarter or one semester of analytical chemistry
- One year of organic chemistry
- One year of college-level calculus
- One year of college-level physics

Bachelor of Science. The department offers a B.S. program in chemistry and, with the Biology Department, a B.S. program in biochemistry/cellular and molecular biology. These are specifically designed for students interested in graduate study or careers in industry and government as laboratory scientists.

Bachelor of Arts. This program provides less intensive training in chemistry but, when combined with a minor in a related area, prepares students for a variety of career opportunities in fields such as:

- Chemical Sales & Marketing
- Computer Sciences
- Technical Writing (Journalism)
- Environmental Sciences
- Secondary School Teaching

Bachelor of Arts in Education. This program provides several program emphases (chemistry-biology,

chemistry-mathematics, and chemistry physics). Although requirements within these options differ in detail, the three programs are similar enough that the prospective teacher need not choose among them until the sophomore or junior year. Successful graduates are qualified to teach in their areas of concentration at the middle school or high school level. Prospective teachers with qualifications in more than one area will have a distinct advantage in seeking such positions. Detailed descriptions of each of these degree programs and course descriptions are given below.

BACHELOR OF ARTS

Major — Chemistry

86 credits

- Chem 121, 122, 123, 124, 333, 351, 352, 353, 354, 355, 441, 461, 462, 463, 464, 465
- One year of college physics and Math 124, 125, 224

Minor

24 credits

- Chem 121, 122, 123, 124
- A minimum of 9 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.

BACHELOR OF ARTS IN EDUCATION

Combined Major — Chemistry/Mathematics — Secondary

88-90 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, 124, 461, 462, 463
- 9-11 credits in chemistry to include a minimum of five credits in organic chemistry under departmental advisement
- Math 124, 125, 224
- Math 204, 305, 360, 483
- CS 120, Math-CS 207, 208
- Sci Ed 491, 492
- Supporting courses: one year of college physics (recommended sequence is Physics 121, 122, 123, 125)
- 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, 124
- Chem 461, 462, 463
- 9-11 credits in chemistry including five credits in organic chemistry under departmental advisement
- Physics 121, 122, 123, 125, 221, 222, 231, 232
- 9 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, 124, 333
- Chem 351, 352, 353, 354, 355
- Chem 434, 441, 461, 462, 463, 464, 465
- Supporting courses: Physics 121, 122, 123, 125; Math 124, 125, 204, 224
- 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, 124; Math 124*, 125, 224

Second Year

Chem 333, 351, 352, 353, 354, 355; Comp Sci 110 or 210; Physics 121, 122, 123, 125

* Students not prepared for calculus should begin with Math 103 or 105.

Third Year

Chem 441, 461, 462, 463, 464, 465; Math 204

Fourth Year

Chem 434, plus electives (see above)

Interdisciplinary Major — Biochemistry/Cellular and Molecular Biology

108 credits

Biochemistry Emphasis

(For cellular and molecular biology emphasis, see the Biology Department section of this catalog.)

- Biol 201, 202 or 203, 321, 345
- Chem 121, 122, 123, 124, 333, 351, 352, 353, 354, 461, 462, 466, 471, 472, 473, 474, 475
- Math 124, 125, 224
- Physics 121, 122, 123, 125

This program is specifically designed for students who seek graduate study or employment in biochemistry or molecular biology.

DEPARTMENTAL HONORS

Students participating in the University Honors Program may also earn departmental honors by completing both the University Honors Program requirements and Chem 498.

GRADUATE STUDY

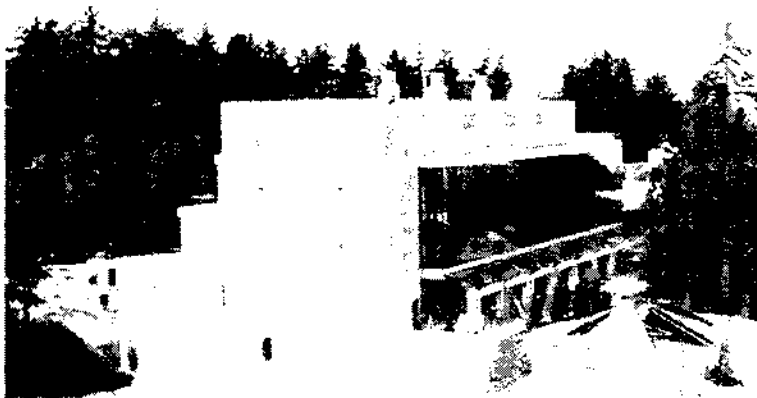
For concentrations leading to the Master of Education or the Master of Science degrees, see the Graduate School section of this catalog.

COURSES IN CHEMISTRY

Courses numbered X37; X97; 300, 400; 417, 445 are described on page 26 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 103 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 (5,5,3)

Prereq: Math 103 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 in 121 and 122 only.

124 QUANTITATIVE CHEMISTRY LABORATORY (2)

Prereq: Chem 123 (or concurrent). Quantitative measurement in the laboratory, including gravimetric, volumetric and spectrophotometric analysis.

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 124. 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. Not recommended for students with Biol 323. 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. S/U grading.

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.

425c Physical Organic Chemistry. Prereq: Chem 353, 463 or concurrent.

425d Group Theory and Spectroscopy I. Prereq: Chem 463.

425e Group Theory and Spectroscopy II. Prereq: Chem 425d.

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

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

425m Organometallic Chemistry. Prereq: Chem 441.

425n DNA-Binding Proteins. Prereq: Chem 473 or Biol 473 or concurrent.

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.

434 INSTRUMENTAL ANALYSIS (4)

Prereq: Chem 333; Chem 462 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 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 124, 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 26 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, 462 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.

551 PHYSICAL ORGANIC CHEMISTRY (3)

Prereq: Chem 353 and 463, or permission of instructor. Modern concepts of physical organic chemistry and their use in the elucidation of reaction mechanism; relation of structure to chemical reactivity.

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 I (3)

Prereq: Chem 463. Correlation of mathematical group theory with molecular symmetry and application of symmetry groups to the interpretation of molecular spectra. Principle applications will be to infrared and Raman vibrational spectra.

563 GROUP THEORY AND SPECTROSCOPY II (3)

Prereq: Chem 463, 562. Continuation of Chem 562 with applications of symmetry and group theory to quantum chemistry, molecular orbitals, and electronic spectra of molecule and crystals.

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. Normally offered in alternate years. 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.

576 DNA-BINDING PROTEINS (3)

Prereq: Chem 473 or Biol 473 or concurrent. Structure and function of proteins that bind to DNA.

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.

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 for credit.

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

The Department of Communication provides the focus for a strong liberal arts education and professional preparation. Students develop additional depth from other academic departments. The department offers degree programs in communication and communication education. In addition, the department maintains its commitment to the liberal arts tradition by offering courses in support of the General University Requirements and other majors.

Two degrees are granted: the Bachelor of Arts and the Bachelor of Arts in Education. The Bachelor of Arts degree can lead to placement in industry, government or graduate studies beyond the B.A. level. The Bachelor of Arts in Education degree gives certification for elementary or secondary school teaching.

COMMUNICATION

Students in communication qualify for a wide variety of employment and career opportunities. The entire communication field is growing rapidly, and increased diversification of employment opportunities is expected.

Students with a communication degree find employment opportunities in the public and private sectors of business and government, and in such professions as the ministry and law. Graduates face a growing range of media-oriented employment possibilities including TV and radio stations, commercial media production facilities, and industrial and governmental in-house media applications. Scholarship, teaching, and organizational or skills training provide additional outlets for graduates.



A strong attention to writing and research provides students with skills needed for entry-level employment in public relations, organizational training and other communication-related positions.

Undergraduates are offered a wide variety of activities sponsored by the department. These include a nationally active program in debate and forensics; radio and television activities presenting news and public affairs programs over local media; and opportunity to develop teaching skills through the Personalized System of Instruction (PSI) Fundamentals of Speech program. These activities provide an opportunity to practice and develop skills in realistic settings both inside and outside the classroom.

The departmental internship program provides a culminating experience for seniors approaching the job market. A wide variety of internships in private and public sectors is available for qualified students.

COMMUNICATION EDUCATION

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. As much of the elementary classroom activity involves communication skills, it is recommended that the prospective teacher seek admission to the Woodring College of Education and select a communication program to accompany the professional elementary preparation program.

The Department of Communication offers broad opportunities for learning, both theoretical and practical. Further information and guidance may be obtained by contacting the department chair.

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) Assistant 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) Assistant Professor. BA, Fudan University; MA, PhD, Northwestern University.

DECLARATION OF MAJOR

- A 2.75 cumulative grade point average (GPA) is required 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 applicant's most recent four quarters as a full-time student.
- Complete the following with a B or better: Comm 101 or 235 or 312 and Comm 220



- Upon fulfilling the GPA and prerequisite course requirements, the department has established the following policy for declaring a communication major:
 - At the end of the second week of each quarter, students will submit a portfolio of their work. The department will review portfolios and announce names of successful applicants at the end of the fourth week of each quarter. The portfolio will include the following items: (a) transcripts of all college work completed to date; (b) a letter of intent to major in communication; (c) a resume including college work, work experience, recreational and avocational activity, internships, awards and honors, and public service activities; (d) samples of academic work including the student's best research paper or, if not available, significant written work represented in a collegiate assignment; (e) letters of recommendation from employers, associates, teachers and supervisors; (f) a proposed program of study. (See recommended list of departmental course options and supporting minors.)
 - Students will be admitted into the major in rank order based on evaluation of their portfolios.

BACHELOR OF ARTS

Major — Communication

70 credits

Students contemplating a major in communication are encouraged to register as communication pre-majors at the earliest possible opportunity.

- Satisfy departmental course requirements for declaration of major
- Complete the following: Comm 398, 498 and Lib Sci 125 or Library201
- Select 27 credits of departmental courses, under advisement. See advisers for recommended course lists.
 - 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, 400, 436, 449, 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 from a recommended list, 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, 331, 327, 340

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

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

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

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).

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 26 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: interpersonal, rhetorical, mass communication and intercultural.

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.

239 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; Journ 104. The preparation of news, advertising and public affairs copy for radio and television.

312 SPEECH FOR THE TEACHER (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.

327 THEORY AND PRACTICE OF INTERPERSONAL COMMUNICATION (3)

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 or 312. Theory and practice in the art of public discourse.

340 TV PRODUCTION I (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 I (3)

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

345 RADIO NEWS STAFF (2)

Prereq: Comm 343; written permission of instructor; junior status. Participation on the news staff of local radio stations. Practicum in reporting, writing, producing and announcing. 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.

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 (3)

Prereq: one of the following: Comm 220, 327, 420; departmental majors only. Emphasizes the role of communication as central in human organizing. Describes the relationships among communication theories and other theories of organizational behavior. Applies theories to varied organizational settings.

430 RHETORICAL CRITICISM (4)

Prereq: Comm 230; senior status; departmental majors only. Survey of major theorists and theories of rhetorical criticism and applications to the understanding of contemporary public discourse. Normally offered alternate years.

435 PRINCIPLES OF PERSUASION (4)

Prereq: Comm 235; departmental majors only. Study of principles that influence attitudes and opinions in persuasive situations. Normally offered alternate years.

436 ADVANCED FORENSICS AND DEBATE (1-3)

Prereq: 6 credits in Comm 235 and/or 236. Emphasis on intercollegiate debate with opportunity for experience in

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.

440 TV PRODUCTION II (3)

Prereq: Comm 340; written permission of instructor. Advanced theory and technique of television production. Laboratory experience utilizing media services television facilities.

442 TELEVISION NEWS PRODUCTION (2)

Prereq: Comm 240, 242, 340; written permission of instructor; concurrent enrollment in Journ 431, 432 or 433, or Art 442 recommended. Participation on staff of University television news programs. Practicum in the gathering, preparation and presentation of televised news. Repeatable to 4 credits.

443 BROADCAST COMMUNICATION II (3)

Prereq: Comm 343; departmental majors only. Laboratory practice in production of radio news, public affairs and documentaries.

449 FIELD INTERNSHIP IN MASS COMMUNICATION (6-12)

Prereq: senior status; written permission of adviser; departmental majors only. Supervised work in mass communication for a broadcast station, media production house, government agency or other appropriate business. Regular meetings, written reports and a paper on an approved topic related to the internship are required. (All other academic requirements must be completed prior to the internship.) S/U grading.

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 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.

459 FIELD INTERNSHIP IN COMMUNICATION (3-12)

Prereq: senior status; written permission of adviser; departmental majors only. Supervised work in communication with an educational institution, public agency or private enterprise. A paper on an approved topic related to the internship is required; other work may be required as determined by the supervising faculty member. 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: ISSUES AND RESPONSIBILITIES (4)

Prereq: senior status; written permission of instructor; departmental majors only. Examines in detail the ethical concerns and responsibilities related to various aspects of the communication field and the practice of communication. Topics include deception, the ethics of persuasion and social responsibilities of communicators.

COMPUTER SCIENCE

The most recent 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: their theory, analysis, design, efficiency, implementation and application. The field is further defined by elaborating 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 which probe the areas listed above, the Computer Science Department offers introductory classes which can be of great benefit to students in other fields of study. There is a computer literacy course designed to introduce students to machines and to familiarize them with standard word processing, spreadsheet and database packages. There is a course in computer-enabled communications which deals with effective use of computer networks, allowing access to resources remote from campus. There is a course in visualization tools which explains the use of software packages designed to visualize scientific phenomena. Many of these services are accessible with a minimum of technical prerequisites.

There are courses oriented toward business applications of computing, such as "Business Computer Systems" and "Systems Analysis." Courses oriented toward mathematical applications, such as "Numerical Analysis" and "Operations Research" are offered within the Mathematics Department.

The Bachelor of Science in computer science degree program at Western is accredited by the Computing Sciences Accreditation Board, which has been established by the Association for Computing Machinery and the Institute of Electrical and Electronic Engineers.

The major computer support for the undergraduate program is provided by two VAX systems: a VAX 4000, running VMS, and a network of DEC 5000 family workstations, running UNIX. The machines are equipped with several editors and compilers for most of the major programming languages. While the primary mode of student access is through terminals located in Bond Hall, the central machines may be reached from other terminal rooms and PC laboratories scattered across campus and also by means of dial-up modems. A cluster of advanced workstations provides additional support for advanced work in computer graphics or VLSI design courses. The department has a local area network which includes high-powered color-graphics workstations, an Intel iPSC/1 Hypercube, a SUN III workstation and two AT&T System 3B-2s, all running UNIX. Access to the national and international computing community is available through

Western's connection to the Internet. Several laboratories containing microcomputers are open for student use. A hands-on laboratory is available for computer science majors. The laboratory is organized around Motorola 68000 VME-BUS based systems.

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, Physics/Astronomy 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 a broad conceptual base as well as considerable experience with applications. 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 up with the changes and 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 which is 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.

Advice to Freshmen

Freshmen intending to major in computer science or computer science education should note that the first computer science course designed for majors is CS 120, with a prerequisite of Math 105, pre-calculus. The first quarter of calculus, Math 124, is required to continue with the introductory computer science sequence, that is, to register for CS 221. While the balance of the calculus sequence—Math 125, 226—is not required to finish the introductory computer science series, the full year of calculus is necessary for some of the upper-division courses. Students are encouraged to complete the calculus sequence as soon as possible. In general, students should take the mathematics portion of the computer science major as soon as possible, as that experience will be very helpful in computer science. The Mathematics Department has a placement examination which will determine the proper first mathematics course.

Information on the mathematics placement examination is available through the Mathematics Department.

Advanced Placement

A student will be given credit for CS 120 upon presentation of an appropriate score on the Advanced Placement Exam, Computer Science, A or AB. The student should apply to the Department of Computer Science office, Bond Hall 302, for information on this matter.

Advice to Transfer Students

Computer science majors who expect to enter Western from a two-year college should attempt to obtain certain mathematics and computer science courses at the two-year college. In particular, such students should take as many of the following mathematics courses as possible: linear algebra, discrete mathematics and three quarters of calculus. They should, if possible, learn to program in a higher-level language, preferably Pascal. Such programming experience may allow the student to bypass CS 120. Those students who have followed a program of studies centered around data processing are welcome to the computer science program at Western. They will find, however, that a certain number of their courses will not apply toward a degree in computer science.

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.

INFORMATION

A person interested in the study of computer science is welcome to write, phone or visit the Department of Computer Science, Western Washington University, Bellingham, Washington 98225-9062. Phone (206) 650-3805.

COMPUTER SCIENCE FACULTY

- JAMES L. JOHNSON (1981) Chair. Professor. BS, University of Louisville; MS, PhD, University of Minnesota.
- FRANÇOISE BELLEGARDE (1990) Associate Professor. BS, University Reims; MS, University Bordeaux; PhD, University Nancy.
- 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) Associate 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.

BACHELOR OF SCIENCE

Major — Computer Science

92 credits plus 6-8 credits of science beyond the GUR science requirement

- CS 120, 221, 222, 223, 224, 310, 320, 401, 405, 410, 420, 425, 430, 460.
- 3 credits from the language series CS 215, 216, 217
- Math 124, 125, 204, 226, 341
- Math-CS 375
- 12 credits chosen from CS 400, 402, 415, 417, 439, 450, 471, 480, Math-CS 335, 435, 436, 475, 476, of which a maximum of 4 credits may be from CS 400 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, 122, 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; 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, 224
- 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

59-61 credits

- CS 120, 221, 222, 223, 224, 310, 320, 405, 425
- Math 124, 204
- EdAF 444, 452, 453

- Two courses chosen from: CS 401, 410, 420, 430, 450, 460, 480

Minor — Computer Science Education

30 credits

- CS 120, 221, 222, 223, 224
- 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.

Physics/Computer Science: See the Physics/Astronomy 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 26 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-ENABLED COMMUNICATIONS (3)

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 105. Computer programming in a high-level, block-structured language, such as Pascal.

205 SCIENTIFIC COMPUTING (3)

Prereq: Math 105 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) and data acquisition (interface with library instruments). Elementary programming concepts.

206 EXPLORATORY DATA ANALYSIS (3)

Prereq: Math 102. 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.

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. S/U grading.

216 FORTRAN (1)

Prereq: CS 110, 120 or equivalent. Programming using the FORTRAN language. S/U grading.

217 COBOL (3)

Prereq: CS 110 or 120 or equivalent. Programming using the COBOL language; emphasis on file handling.

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.

224 PROGRAMMING PROJECT (2)

Prereq: CS 222. Programming project integrating the experience gained in the programming aspects of the previous courses. Software methodology. Example projects might be some portion of a text editor, a database system, a string processor, a circuit simulation, a game tree or a graphical interface.

310 ASSEMBLER LANGUAGE PROGRAMMING (4)

Prereq: CS 221. Computer structure; data representation; assembly language; addressing techniques; program segmentation and linkage; macros and conditional assembly; accessing operating system services including I/O; structure of assemblers.

320 COMPUTER LABORATORY (4)

Prereq: CS 310 or equivalent. Machine level programming; input/output; interrupts; device controllers; implementing system primitives.

401 COMPUTABILITY AND AUTOMATA (3)

Prereq: CS 223, 224. Computability, recursive functions, grammars and their accepting automata.

402 ARTIFICIAL INTELLIGENCE (3)

Prereq: CS 223, 224. 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. Algorithm paradigms: divide and conquer, greedy algorithms, backtracking, branch and bound. Discussion of NP-completeness. Correctness proofs of algorithms.

410 PROGRAMMING LANGUAGES (3)

Prereq: CS 223, 224, 310, experience with two high-level languages. Introduction to the structure of programming languages; syntax and semantics; properties of algorithmic languages; special purpose languages.

415 BUSINESS COMPUTER SYSTEMS (3)

Prereq: CS 217, 221. Components of a business computer system (accounts receivable, accounts payable, etc.), controls, systems flow-charting, programming project.

420 COMPUTER ORGANIZATION (3)

Prereq: CS 223, 320. Digital logic; arithmetic logic; control unit logic; microprogramming; memory and addressing logic; input/output logic; computer architecture.

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. Data structures required for the flexible representation

of data relationships. Models used in database design, including semantic data model, entity-relationship model, relational model and the CODASYL network model. Query languages. Theory of functional dependencies; normal forms of relations. Programming projects.

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.

450 COMPILER THEORY AND DESIGN (4)

Prereq: CS 223, 224, 410; CS 401 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)

Prereq: CS 223, 420. (The latter may be taken concurrently.) Principles of operating systems; concurrent processes; resource management; process management; file systems; protection.

471 SYSTEMS ANALYSIS, DESIGN AND IMPLEMENTATION (3)

Prereq: CS 415. Steps in analysis and design, planning tools, cost analysis, implementation analysis and post-implementation analysis, and long-range systems planning. The discussion of design and implementation emphasizes computerized systems.

480 COMPUTER GRAPHICS (4)

Prereq: CS 215c, 223, 224, 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.

Graduate Courses

Courses numbered 500; 517; 545; 597 are described on page 26 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 SEMANTICS OF PARALLEL COMPUTATIONS (4)

Prereq: CS 401 or equivalent. The principal models of parallel computations relevant to the design and specification of parallel computer systems and to the formal definition of parallel programming languages.

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. Transaction processing, recovery, security. Query optimization. Distributed systems, logic-based systems, object-oriented systems.

532 PROGRAMMING ENVIRONMENTS (4)

Prereq: CS 450 or equivalent. Aspects of the study of programming languages other than syntax, semantics and compilers. Topics include

intermediate representation, interpreters, portability, support environments, interactive verification and debugging.

535 FUNCTIONAL PROGRAMMING (4)

Prereq: CS 401 or equivalent. Programming as a mathematical activity and program development through the application of algebraic laws. Application of program transformation to optimization. Lambda calculus foundations of functional computing.

538 OBJECT-ORIENTED COMPUTING (4)

Prereq: graduate status or permission. Object-oriented programming plus an examination of object-oriented concepts applied to programming languages, applications and database systems. Architectural issues in OOP systems and directions for future research and development in OOP concepts and systems.

550 MICROPROCESSOR SYSTEM DESIGN (4)

Prereq: CS 420 or equivalent. Design of digital systems using microprocessors as controlling elements. Comparison of microprocessor architectures and system bus structures. Microprocessor communications and interfacing. Software/hardware tradeoffs.

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 COMPUTER COMMUNICATIONS NETWORKS (4)

Prereq: permission of instructor. Electronics of the physical layer through high level representations of the abstract layers of communications protocols. Network architectures, dataflow models and analysis, local area networks, 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 plays a vital role in present-day global affairs. Half of humankind lives in this region, which is becoming increasingly important in world economics and politics. The Center for East Asian Studies provides a focal point for interaction with East Asia and for studies of the region.

The program in East Asian studies stresses the interdisciplinary study of the region and is designed to attain three objectives. First, it offers students an opportunity to acquire accurate, detailed and comprehensive knowledge of a region which is increasingly important in world affairs. Second, it prepares students who are attracted by the growing job opportunities related to East Asia in business and government or who wish to teach courses on East Asia in community colleges and high schools. Third, it provides solid undergraduate training for students who plan to enter East Asian graduate studies at Western or elsewhere.

Students interested in pursuing a major in East Asian studies should consult James Hearne, director of the Center for East Asian Studies, (206) 650-3792, for advisement.

PARTICIPATING FACULTY

PATRICK BUCKLEY, Geography. Geography and economics of Japan.

CATHERINE PEASE CAMPBELL, Foreign Languages and Literatures. Modern Chinese fiction.

ROBERT CAMPBELL, Foreign Languages and Literatures. Historical linguistics.

JAMES HEARNE, Computer Science. Chinese philosophy, Chinese science, East Asian language computing.

ED KAPLAN, History. Ancient and medieval Chinese history, Chinese economic history.

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.

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

KATHLEEN TOMLONOVIC, Foreign Languages and Literatures. Chinese language and literature.

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, 302 and either East Asian Studies 367 or 368 or Hist 372

- Additional credits from courses approved by the Center for East Asian Studies, of which at least 8 must be at the 400 level

Minor — East Asian Studies

30 credits

The following minor may be combined with a major in history or in political science for a major concentration, or may be elected as a minor by majors in other fields. For description of courses, see the sections of cooperating departments.

- East Asian Studies 201 and 202
- Either East Asian Studies 367 or 368 or Hist 372
- Additional credits from courses approved by the Center for East Asian Studies, of which at least 4 must be at the 400 level

COURSES IN EAST ASIAN STUDIES

Courses numbered X37, X97; 300,400; 417,445 are described on page 26 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.

313 EARLY MONGOLIA (4)

Prereq: East Asian 210. The history, society and culture from the early 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 THE LITERATURES OF EAST ASIA IN TRANSLATION (5)

Selected readings in Chinese, Japanese, Korean and Mongolian literary masterpieces from earliest times to early modern times.

368 THE LITERATURES OF EAST ASIA IN TRANSLATION (5)

Selected readings in Chinese, Japanese, Korean and Mongolian literary masterpieces from early modern times to the present.

400 DIRECTED INDEPENDENT STUDY (1-5)

465 PEOPLES OF INNER ASIA (3)

Prereq: East Asian 210 or Anth 201 or equivalent or permission of instructor. Ethnographic: in-depth study of the present and past peoples and cultures of Inner Asia. Emphasis on special topics including ecology, economics, language, religion and society.

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

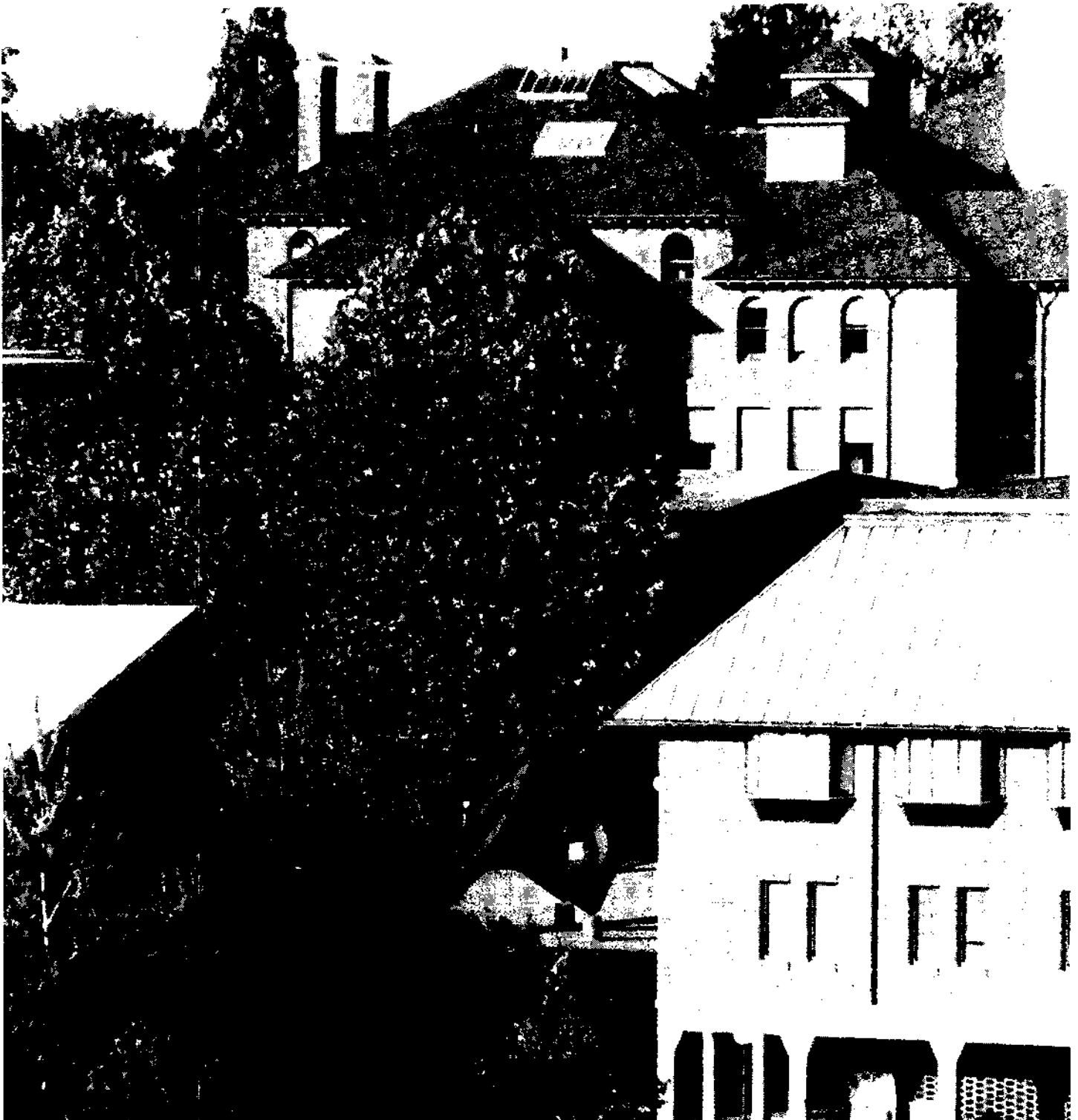
Courses from other parts of the University approved for inclusion in the East Asian studies major or minor are:

- AmSt 205
- Anth 362, 425, 464
- Art Hist 270, 370, 470, 471
- Fairhaven 251, 312 (limited to one time only)
- Geog 315
- Hist 370, 371, 372, 390, 480, 481, 482, 483, 484, 485
- Lib St 272, 273, 274, 275, 370, 371

— Pol Sci 307, 430, 431

The Center for East Asian Studies also offers tutorials in advanced Chinese, advanced Japanese and advanced Korean. Elementary and intermediate Mongolian (15 credits each) are taught summers at Inner Mongolia University.

East Asian Studies students may also spend up to one year at Asia University, Tokyo; Tsuda College, Tokyo; Inner Mongolia University, Hohhot; or Foreign Language University, Beijing.



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
- Vehicle Research Institute

The Department of Engineering Technology offers six academically excellent programs to prepare graduates for rewarding 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 WWU'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

- F. DAVID HARRIS (1990) Chair. Professor. BSEE, Newark College of Engineering; MAT (Physical Sciences), Rhode Island College; MSEE, Rensselaer Polytechnic Institute; Registered Professional Engineer.
- 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.
- KATHLEEN L. KITTO (1988) Associate 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.
- ARUNAS P. OSLAPAS (1991) Assistant Professor. BFA, Montana State University; MFA, University of Illinois.
- 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.
- ROBERT WIEDMEYER (1992) Lecturer. BSMET, Western Washington University.
- CHARLES E. YUNGHANS (1988) Associate Professor. BSEE, Valparaiso University; MSET, Western Michigan University.

Adjunct Faculty

- CLAUDE HILL (1967) Professor Emeritus. BA, MEd, University of Washington.
- 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 a major in the department are urged to declare the major as early as possible 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.

For further information, contact the Department of Engineering Technology, Ross Engineering Technology Building 204, (206) 650-3380.

COMPLETION OF THE GUR

Major programs in engineering technology require some courses that also fulfill GUR requirements. Examples include the natural sciences and communications. Working closely with a departmental adviser helps you



avoid taking unnecessary credits and will help you graduate on time.

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.

Students desiring to begin studies in electronics engineering technology must first be accepted as majors by having their backgrounds evaluated by the Engineering Technology Department at Western Washington University. Admission to the University does not guarantee acceptance into either of the two programs. A fixed number of students will be selected as majors in each program at specific times during the year. Detailed information about the programs, preliminary consultations and advising, policies for acceptance as a major, and procedures and dates for applying are available in the Engineering Technology office and will be mailed to prospective students upon request.

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 103, 105, 124, 125, 321
- Physics — 15 credits: Physics 114, 115, 116 or 121, 122, 123, 125
- 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

138 credits

Industrial Design Core: 47 credits

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

Professional Practice Series: 30 credits

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

ETec Electives: 4 credits

Supporting Courses: 57 credits

- Art 101, 201, 202, 220, 230, 250, 260, 270
- Art History 220, 240, 270
- Math 105
- Physics 114, 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, 251, 333, CS 101, Math 103, 105, 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

* Optional.

Commission of the Accreditation Board for Engineering Technology (TAC/ABET).

Major — Manufacturing Engineering Technology

146 credits

Manufacturing Core: 86 credits

- ETec 110, 111, 201, 220, 221, 222, 223, 224, 225, 251, 322, 326, 327, 328, 333, 352, 354, 420, 421, 423, 424, technical electives (8 credits)

Supporting Courses: 60 credits

- Mathematics, 18 credits: Math 105, 124, 125, 240
- Computer Science, 5 credits: CS 120
- Business, 8 credits: Mgmt 460, 463
- Physics, 15 credits: Physics 121, 122, 123, 125
- 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, 251, 322, 326, 333, 334, 335, 336, 337, 421, 423, 424, 433, 434, 435, 436, technical electives (4 credits)

Supporting Courses: 59 credits

- Mathematics, 18 credits: Math 105, 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.

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, 251, 322, 333, 334, 335, 336, 337, 423, 424, 433, 434, 435, 436, technical electives (13 credits)

Supporting Courses: 55 credits

- Mathematics, 18 credits: Math 105, 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.

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, 251, 280, 333a
- 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 103 and 105)

NOTE: To expand teaching eligibility, technology education majors should seek additional certification endorsement. Some of the courses for additional certification may be included in the GUR and the technology education major or may be taken after graduation.

The professional block courses are to be taken simultaneously in the spring quarter just prior to the student internship. The courses are taught on a competency-based model, with pedagogical, technical, managerial and professional competencies listed for achievement by candidates. Through problem-solving activities in a school technology education laboratory setting, students demonstrate competency to an acceptable level and will not receive credit for course work until such competence is clearly shown. Technology education majors do their internship only in the fall quarter.

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

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 26 of this catalog.

101 INTRODUCTION TO TECHNOLOGY (4)

Explores the engineering and technology behind the machines and devices that most modern Americans take for granted. Topics from electronics, materials technology, robotics, computer-aided design, power and other areas of technology are studied in the classroom and in the laboratory.

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 103 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.

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 105, Physics 114, Chem 115. 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 221. 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 105. Basic concepts and skills in machine metal processes.

224 APPLIED STATICS (3)

Prereq: Physics 114, Math 105. 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; and 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.

251 ELECTRICAL TECHNOLOGY I (4)

Prereq: Physics 115 or 123; Math 105; IT, MET, PET 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.)

271 CIRCUIT ANALYSIS I (4)

Pre- or co-req: Math 102, 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; techniques of torque and power measurement. Chassis dynamometer testing and port air flow testing.

281 POWER TRANSMISSION (5)

Principles and practices of mechanical and fluid transmission of power. Theory and practice of over-running clutches and rolling drag reduction testing.

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. Visitations 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 rational 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.

321 MACHINE DESIGN (4)

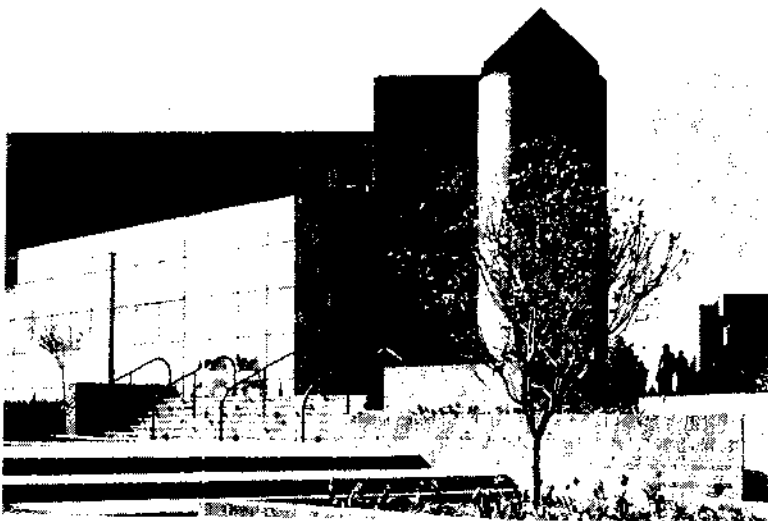
Prereq: ETec 225, Math 124, Physics 116. Design of components of machines (connections, bearings, gears, etc.) with an emphasis on industrial practices. Theoretical dynamics also is included.

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 251. 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: CS 101, ETec 223. Examines many techniques to factor cost into manufacturing decisions. Topics covered include capital allocation, product cost estimating, work measurement, value engineering and maintenance management. Projects require use of applications software and C programming.

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.

331 ADVANCED WOODS (4)

Prereq: ETec 231. Skill and development in the more complex woodworking processes with related information on the woodworking industry.

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.

333a PLASTICS (5)

Prereq: general chemistry course; ETec 110, TE or ID major or written permission. Polymer science and analysis of basic plastics; experience in product design, tooling and processing of thermoplastics and thermosetting materials. (For TE and ID programs only.)

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.

352 ELECTRICAL TECHNOLOGY II (4)

Prereq: ETec 251; 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 105, 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 AND MACHINERY (5)

Prereq: ETec 372, EET major or written permission. A study of DC and AC motors and generators, transformers, power distribution systems and instrumentation. Laboratory investigation of characteristics of above components and systems.

377 ENGINEERING METHODS (4)

Prereq: junior status, EET major or written permission. A study of the proper techniques to be used to obtain laboratory data and analyze results. Basic instrumentation and measurement techniques, error analysis, and grounding and shielding methods. Structured laboratory with formal report preparation.

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 Tech 280.

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 and systems of the automobile and other engines.

384 TOOLING FOR LIMITED PRODUCTION OF MOTOR VEHICLES (5)

Prereq: ETec 280 or permission of instructor. Concurrent enrollment in ETec 385 and 386. Methods of tooling and production for space frame type chassis and suspension systems. Study of jigs and fixtures for machine sawing of steel alloys and TIG welding of components.

385 TOOLING AND PRODUCTION METHODS FOR REINFORCED COMPOSITE VEHICLES (3)

Prereq: ETec 280 or permission of instructor. Concurrent enrollment in ETec 384 and 386. Methods of tooling a glass or other fiber reinforced body for an automobile body.

386 ASSEMBLY AND TESTING OF LIMITED-PRODUCTION AUTOMOBILES (2)

Prereq: ETec 280 or permission of instructor. Concurrent enrollment in ETec 384 and 385. Assembly of suspension, steering, brakes, clutch drive line, engine and other related components to a limited-production vehicle. Alignment and testing of assembled vehicle.

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.

403 PRODUCT DESIGN FOR TEACHERS (4)

Prereq: teaching major. Product design fundamentals taught and analyzed, then translated to establish usable curriculum. Summers only.

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.

413 ARCHITECTURAL PROBLEMS (3)

Prereq: ETec 313. Advanced residential planning, cost estimating; FHA standards, building codes; individual and group research.

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.

420 INDUSTRIAL ROBOTICS (4)

Prereq: ETec 322, 326, 354. 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: JWE, Eng 302, 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 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.

428 DIRECTED RESEARCH IN MATERIAL SCIENCE (1-3)

Prereq: permission of instructor. Research under supervision in an area of material science. May be taken three times.

429 DIRECTED RESEARCH IN MANUFACTURING (1-3)

Research under supervision within one of the areas of metals technology. May be taken three times.

433 ENGINEERING POLYMERS (3)

Prereq: ETec 333. Concepts of polymer science; study of structure, properties and applications of plastics materials; design and development of plastic tooling; analysis and experiences in thermoplastics molding and forming processes.

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 and 433. 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 333, 433, Chem 308. Principles of polymer formulation and modification. Additives and modifying agents. Laboratory experiences in polymer reactions and compounding. Mechanical, thermal and chemical analysis of polymer structures.

437 ADVANCED TOPICS IN POLYMER ENGINEERING TECHNOLOGY (3)

Prereq: ETec 433, 434 and written permission. Special topics related to recent developments in polymeric materials and processes in advanced technological areas such as biomedical, microelectronics, environmental and aerospace.

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.

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. May be taken three times.

455 COMMUNICATION SYSTEMS (4)

Prereq: ETec 405; pre- or co-req: ETec 378, EET major or written permission. Upper-division study of modem 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 376, Math 321, EET major or written permission. 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 (1)

Prereq: ETec 374, EET major or written permission. Students define objectives and prepare project proposals for ETec 474. This course should be taken during the quarter immediately preceding 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.

478 AUTOMATED SYSTEMS DESIGN (5)

Prereq: ETec 374, ETec 477, EET major or written permission; ETec 457 recommended. Investigation of techniques utilized in automated inspection, automated test and measurement, automated manufacturing and robotics, and environmental control systems. Study of developments in robot vision systems and other current areas. Use of distributed data acquisition, host computer and control equipment in automated system design. Design and implementation of an automated system.

479 DIRECTED RESEARCH IN ELECTRONIC TECHNOLOGY (1-3)

Advanced study in problems chosen and conducted under supervision. May be taken three times.

480 ADVANCED EMISSION CONTROL (3)

Prereq: ETec 280 and 380. Experimental research in emission control on operating laboratory engines. Topics center around temperature control on NO_x, 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. May be taken three times.

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.

499 SENIOR PROJECT (1)

Prereq: junior or senior status. The demonstration of competence in the major through a culminating project which presents a written, pictorial and photographic summary of work done in the major or of a comprehensive senior-level project.

Graduate Course

Courses numbered 500; 517; 545; 597 are described on page 26 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.

- 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 non-fiction prose, exposition and argumentation.

In teacher education, the department prepares majors for teaching at the secondary and elementary levels. Students are urged to support their major by means of auxiliary courses in drama, reading, linguistics, speech, journalism, history and computer science, or work in other subjects that are related to English language and literature.

The Department of English is committed to enhancing the diversity of its faculty, students and curriculum. The literature of women and minorities is taught in survey and

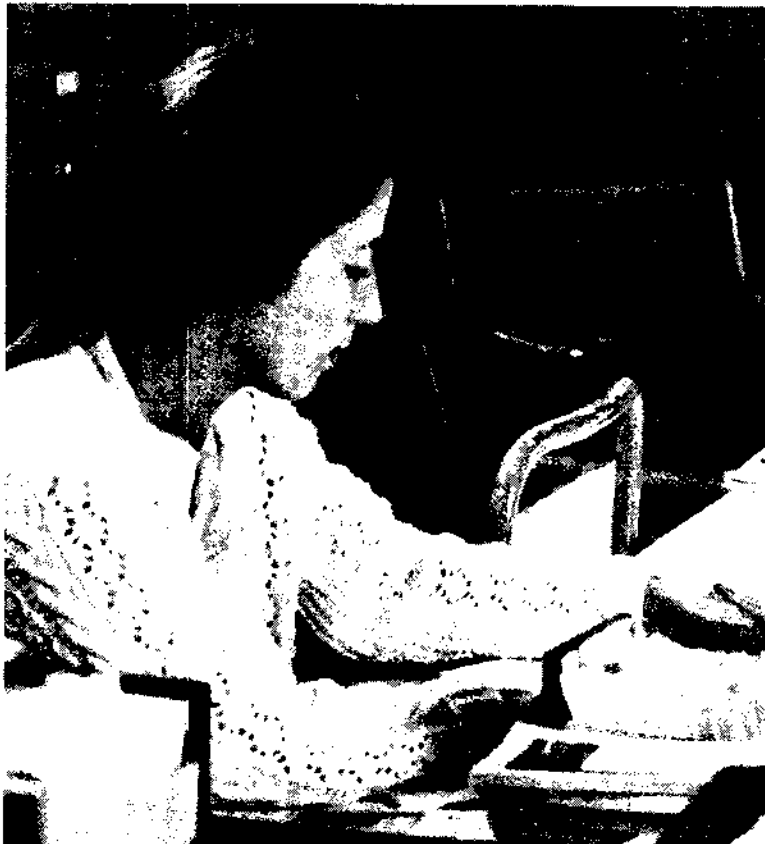
historical period courses as well as in courses devoted to women and minority writers.

ENGLISH FACULTY

- RICHARD K. EMMERSON (1990) Chair. Professor. BA, Columbia Union College; MA, Andrews University; PhD, Stanford University.
- BONNIE J. BARTHOLD (1980) Professor. BA, University of Arizona; MA, Ohio State University; PhD, University of Arizona.
- BRUCE BEASLEY (1992) Assistant Professor. BA, Oberlin College; MFA, Columbia University; MA, Ph.D., University of Virginia.
- ROSANNE D. BRUNTON (1990) Assistant Professor. BA, M.Phil, University of the West Indies, Trinidad; PhD, Pennsylvania State University.
- 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.
- MARY COBB (1987) Assistant Professor. AB, Oklahoma Baptist University; MA, PhD, University of Washington.
- DAWN DIETRICH (1992) Assistant Professor. BA, Eastern Michigan University; MA, PhD, University of Michigan.
- MARJORIE J. DONKER (1967) Professor. BA, Western Washington State College; MA, PhD, University of Washington.
- MARC GEISLER (1992) Assistant Professor. BA, Bates College; MA, PhD, University of California, Irvine.
- INGRID HILL (1991) Assistant Professor. BA, MA, University of Michigan; PhD, University of Iowa.
- WILLIAM C. KEEP (1966) Associate Professor. BA, PhD, University of Washington.
- LAURA LAFFRADO (1993) Assistant Professor. AB, Vassar College; MFA, University of Montana; MA, PhD, State University of New York, Buffalo.
- MERRILL E. LEWIS (1962) Professor. BA, MA, University of Oregon; PhD, University of Utah.
- ANNE LOBECK (1990) Associate Professor. BA, Whitman College; MA, PhD, University of Washington.
- KATHLEEN LUNDEEN (1991) Assistant Professor. BA, MA, PhD, University of California, Santa Barbara.
- JOHN B. MASON (1986) Associate Professor. BA, University of Northern Colorado; MA, DA, PhD, University of Oregon.
- DOUGLAS B. PARK (1979) Professor. AB, Hamilton College; PhD, Cornell University.
- JOHN PURDY (1991) Associate Professor. BA, Western Oregon State College; MA, University of Idaho; PhD, Arizona State University.
- 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) Associate 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.
- EVELYN C. WRIGHT (1972) Associate Professor. BS, Illinois State University; MA, PhD, Northwestern University.
- NING YU (1993) Instructor. BA, Beijing University of Aeronautics and Astronautics; MA, University of Connecticut.

BACHELOR OF ARTS

Students majoring in the Bachelor of Arts program in English or English with a writing concentration must declare their major before the end of their junior year. Declared majors and minors will be given preference in registering for upper-division courses. Students are



strongly urged to meet with the department adviser early in their careers at Western.

Major — English

55 credits

- Eng 304
- Two courses from Eng 306, 307, 308
- Two courses from Eng 309, 310, 311
- Two courses from Eng 317, 318, 319
- One course from Eng 404, 405
- One course from Eng 370, 436, 438, 439

Electives in English up to the 55 credits required for the major must be taken at the 300 and 400 levels, with at least 12 credits at the 400 level.

Major — English — Writing Concentration

60 credits

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.

- Eng 304
- 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)
- 12 credits from one of the following four groups:
 - Eng 451*, 455, 457
 - Eng 453*, 455, 456
 - Eng 401, 402, 454*, 455
 - ThA 485, 486, 487, 488; Eng 455; Fair 454
- One additional upper-division writing course in English or another department
- Electives in English up to the 60 credits required for the major must be taken at the 300 and 400 levels (Eng 370 recommended)

Minors

English

24 credits

- Eng 304
- 20 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

English majors minoring in creative writing cannot count the same courses in both programs.

- 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

English majors minoring in women's literature cannot count the same courses in both programs.

- Eng 304
- 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 304, 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 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 (Eng 364 recommended)

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 304, 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 (Eng 364 recommended)

Students should consult the English education faculty adviser for distribution of electives and should consult the elementary program adviser for teacher certification requirements.

* Eng 451, 453 and 454 may be repeated for a total of three times with a limit of one course per quarter.

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 304
- 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 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 304
- 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 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 304, 370, 436, 443, 444
- One of the following: Eng 301, 302, 350, 351, 353, 354, 401; Fair 354
- One elective in British literature 300 or 400 level
- One elective in American literature 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 304, 370, 441
- Eng 442 (or an other 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 26 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, 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 REVIEW OF SYNTAX AND USAGE (5)

Emphasizes a basic command of standard written English such as correct usage and punctuation, sound sentence and paragraph structure, and avoidance of errors in diction, S/U grading.

101 LANGUAGE AND EXPOSITION (4)

May not be taken concurrently with English 100. A course in writing expository prose on topics drawn from personal experience or assigned reading. Practice in strategies for finding information, focusing on a topic, organizing a thesis, developing an idea, evaluating and revising preliminary drafts, summarizing written information; practice in writing the in-class essay. 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 (5)

Reading and discussion of a selected number of Shakespeare's plays: histories, comedies, tragedies and romances.

215 SURVEY OF BRITISH LITERATURE (5)

Reading and discussion of major works from each of the recognized periods of British literature with some attention to the historical context of the work.

216 SURVEY OF AMERICAN LITERATURE (5)

An overview of American literature and thought from 1620 to 1940.

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 non-fiction prose by Native American writers.

238 SOCIETY THROUGH ITS LITERATURE (5)

A thematic approach to literature. Different themes will be treated from year to year, showing with various literary forms present society and its problems. May be taken only once for GUR credit.

281, 282, 283 WESTERN WORLD LITERATURE (5 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 JWF. 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 JWF. 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.

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: MODERN (4)

Prereq: Eng 202.

317 AMERICAN LITERATURE: BEGINNINGS TO 1860 (4)

Prereq: Eng 202.

318 AMERICAN LITERATURE: 1860-1920 (4)

Prereq: Eng 202.

319 AMERICAN LITERATURE: 1920 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.

330 SURVEY OF NATIVE AMERICAN LITERATURES (4)

Prereq: Eng 202. Comparative study of various tribal and pan-Indian literatures, including traditional oral texts in bilingual format and early and contemporary works by Native authors in English.

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 (5)

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 (5)

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, non-fiction 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, non-fiction 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 THE WRITING OF NON-FICTION PROSE (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.

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.

404 THEORY OF LITERATURE (4)

Prereq: Eng 202. The nature and judgment of literature as a form of art; various critical approaches to literary interpretation; writing of critical studies.

405 HISTORY OF LITERARY CRITICISM (5)

Prereq: Eng 202 and 15 credits in literature at the 300 or 400 level. Reading and analysis of major documents of criticism, from Plato and Aristotle to 20th-century critics.

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.

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 (5)

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 (5)

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.

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 texts in Old, Middle, 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 different 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 LANGUAGE AND LEARNING (4)

Prereq: Eng 370 or permission of instructor. The development of writing ability in children and other topics as background for the teaching of language arts.

443 COMPOSITION FOR SECONDARY TEACHERS (4)

Prereq: Eng 436. Study of the theory and practice of teaching writing in the secondary schools; emphasis on the nature of composition and on developing methods and materials applicable to teaching composition.

444 LITERATURE IN SECONDARY SCHOOLS (5)

Prereq: Eng 202 and 12 credits in literature at the 300 or 400 level. Survey of resources for teaching literature in secondary schools, methods and practice in teaching literary works in classrooms.

446 WORKSHOP IN THE TEACHING OF ENGLISH (2-5)

Prereq: Eng 440, 443, or 444. Practical work in the teaching of English.

451 CREATIVE WRITING WORKSHOP: FICTION (4)

Prereq: Eng 351 or equivalent and written permission of instructor. Opportunity for disciplined expression in writing fiction. Study of appropriate models. May be repeated for a total of three times with a limit of one course per quarter.

453 CREATIVE WRITING WORKSHOP: POETRY (4)

Prereq: Eng 353 or equivalent and written permission of instructor. Opportunity for disciplined expression in writing poetry. Study of appropriate models. May be repeated for a total of three times with a limit of one course per quarter.

454 CREATIVE WRITING WORKSHOP: NON-FICTION PROSE (4)

Prereq: Eng 354 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. May be repeated a total of three times with a limit of one course per quarter.

455 CREATIVE WRITING SEMINAR (4)

Prereq: two courses in creative writing and permission of instructor. Normally restricted to students who have had considerable writing experience. Study of appropriate models. Open to students working in any genre.

456 EXAMINING AND COMPOSING POETIC FORMS (4)

Prereq: Eng 304. 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.

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

Courses numbered 500; 517; 545; 597 are described on page 26 of this catalog.

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

501 THEORIES OF LITERATURE (5)

Examination of theories of literature as they affect the practice of literary criticism and scholarship. Some attention to methods of research and documentation in English studies.

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 NON-FICTION PROSE (5)

Individual projects in non-fiction along with examination of classic and modern models of non-fiction. 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 (3)

Prereq: appointment as a teaching assistant or permission of instructor. Elective. Offered once a year in the fall. S/U grading.

514 LINGUISTIC THEORY AND LITERARY ANALYSIS (5)

Introduction to the link between linguistic analysis and literary theory, from both a historical and analytical perspective.

In the following literature seminars, the specific subject matter covered will

vary from year to year. Subtitles indicate subject matter most recently covered.

515 SEMINAR: TOPICS IN LITERARY THEORY (5)

Prereq: Eng 501 and five graduate credits in literature. Offerings examine major theorists or movements in literary theory from classical tradition to current developments. Repeatable under different topics.

520 STUDIES IN FORMS OF POETRY (5)

Offerings such as "Verse and Stanza Patterns" or "The Imagist Tradition" examine the characteristics, history and criticism of poetic forms. Repeatable under different topics.

525 STUDIES IN FORMS OF FICTION (5)

Offerings such as "Romance and Realism in the Novel" or "The Rhetoric of Fiction" examine the characteristics, history and criticism of fictional forms. Repeatable under different topics.

530 STUDIES IN FORMS OF DRAMA (5)

Offerings such as "The History Play" or "Theories of Comedy" examine the characteristics, history and criticism of dramatic forms. Repeatable under different topics.

535 STUDIES IN FORMS OF NON-FICTION PROSE (5)

Offerings such as "The Informal Essay" or "The Art of Polemic" examine the characteristics, history and criticism of non-fictional prose forms. Repeatable under different topics.

540 STUDIES IN LITERARY MODES (5)

Offerings such as "Theories of Satire" or "The Pastoral Vision" examine modes and themes that may cut across the various forms of poetry, fiction and drama. Repeatable under different topics.

550 TOPICS IN AMERICAN LITERARY HISTORY (5)

Offerings examine major authors, periods or movements in American literary history. Repeatable under different topics.

560 TOPICS IN BRITISH LITERARY HISTORY (5)

Offerings examine major authors, periods or movements in British literary history. Repeatable under different topics.

570 CULTURAL PATTERNING IN LITERATURE (5)

Focuses on demonstrations of how cultural assumptions underlie literature and criticism. Topics — such as gender, race or class — vary. Repeatable under different topics.

575 MASTERPIECES BEYOND STANDARD LITERARY HISTORY (5)

Readings in conventionally neglected areas. Identifies and analyzes masterpieces overlooked by conventional literary history. Topics — such as gender, race or class — vary. Repeatable under different topics.

594 PRACTICUM IN TEACHING (2-5)

Prereq: Eng 501 and permission of instructor. Supervised teaching for M.A. candidates. S/U grading.

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.

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.

690 THESIS WRITING (5)

FOREIGN LANGUAGES AND LITERATURES

The Department of Foreign Languages and Literatures offers major and minor programs for both the general student and the prospective foreign language teacher.

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.

WILLIAM H. BRYANT (1970) Professor of French. BA, University of Hawaii; PhD, University of Missouri.

ROBERT E. CAMPBELL (1991) Instructor of Japanese. BA, International Christian University, Tokyo, Japan; MA, University of Hawaii, Honolulu.

SHAW N. GYNAN (1986) Associate Professor of Spanish. 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.

LOUISE S. KIKUCHI (1979) Associate Professor of French. BA, University of Hawaii; MA, PhD, University of California, Santa Barbara.

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

VLAD MIR MILICIC (1962) Professor of Russian and Linguistics. Certificate of Baccalaureate, Gymnasium for Boys, Belgrade; MA, University of Chicago.

DANIEL RANGEL-GUERRERO (1969) Associate Professor of Spanish. AA, Sierra College; BA, Stanford University; MA, PhD, University of Oregon.

WALTER L. ROBINSON (1960) Professor of German. BA, MA, PhD, University of Texas.

WALTER F. SUESS (1991) Assistant Professor of German. BA, Ruhr-Universität, Bochum, Germany; MA, California State University, San Francisco; PhD, University of California, Davis.

KATHLEEN M. TOMLONOVIC (1987) Associate Professor of Chinese. BA, Marycrest College; MA, Fordham University; MA, University of Iowa; PhD, University of Washington.

JOHN H. UNDERWOOD (1988) Associate 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.

MICH KO YUSA (1983) Associate Professor of Japanese and East Asian Studies. BA, International Christian University (Tokyo); MA, C. Phil, PhD, University of California, Santa Barbara.

BACHELOR OF ARTS

Language Major — French, German or Spanish

55 credits above the 100 level; GPA of 2.5 or above in major language.

Required Courses

- Maximum of 15 credits at the 200 level

- Two 401s in French, or 401 and 402 in German or Spanish (must be taken on campus)
- All remaining credits must be at the 300 level or above (280, 385 and 425 are not applicable to major)

Language Minor — Chinese, French, German, Japanese, Russian or Spanish

25 credits at the 200 level or above; GPA of 2.5 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 2.5 or above in minor language.

Minor — Classical Studies

27 credits

Required Courses

- Classical Studies 250, 350
- 19 credits from the following: Classical Studies 450; History 413; Philosophy 364; Art History 420

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

55 credits in the language above the 100 level; GPA of 3.0 required in the language.

- Maximum of 15 credits at the 200 level
- Two 301s in French, or 301 and 302 in German or Spanish
- 314 (phonetics)
- German only: 305 and 331 or 332

- Two 401s in French or 401 and 402 in German or Spanish (must be taken on campus)
- Two literature courses

B. Endorsement Requirements

FL 410, 420 and 430 (11 credits); GPA of 3.0 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 in the second language toward the 55 credits required for the major. 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 3.0 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 quarterly
- Complete the endorsement sequence FL 410, 420, 430 and 314 (phonetics)

Additional work in the language may also be required. Students should consult the foreign language education adviser.

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. The possibility of a foreign studies program in Québec is being explored. 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. 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. 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).

DEPARTMENTAL MISSION STATEMENT

A primary goal of all language skills courses is competence in the language. In addition, students are expected to acquire:

- A broad background in the literature and culture of the foreign language community
- Knowledge about the linguistic structure of the language

in teacher education, the department prepares the student to teach at the secondary level and also provides training for those who may have the opportunity to introduce foreign language study and culture at preschool and primary levels.

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 26 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 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 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

Courses numbered 500; 517; 545; 597 are described on page 26 of this catalog.

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

540 SECOND-LANGUAGE ACQUISITION: THEORY (4)

Prereq: graduate status or permission of department. Second-language acquisition discussed in terms of current theories of cognition. Groundwork for these discussions focus on structural and communicative aspects of language; social context of language; notional-functional syllabus, grammatical syllabus; learner strategies; learning theory; interlanguage; acquisition of language components, vocabulary. Offered summers only.

542 SECOND-LANGUAGE ACQUISITION: METHODS (4)

Prereq: graduate status or permission of department. Theory and practice of current methods and techniques in terms of their theoretical bases and application (Natural Approach, Comprehension Approach, TPR, etc.). Discussion of practical solutions to teaching problems. Includes classroom observation and in-class peer teaching. Offered summers only.

544 LANGUAGE LEARNING AND TECHNOLOGY (4)

Prereq: graduate status or permission of department. Introduction to computer-assisted language learning and the use of video in the classroom. The course focuses on software evaluation and current development with authoring systems and videotapes; introduction to materials development with authoring systems; use of video in the classroom; interactive video; videotaping as a source of materials. Offered summers only.

Chinese

101, 102, 103 FIRST-YEAR CHINESE (5 ea)

Prereq: Chinese 103 or equivalent; 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.

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.

Classical Studies

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

250 SURVEY OF CLASSICAL LITERATURE (5)

A survey of the most significant Greek and Latin authors in modern English translations. Every major classical genre will be included, beginning with Greek epic and ending with late Roman fiction.

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 various topics.

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 primarily for students with two years of high school French 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. Can be substituted for French 103. Offered fall quarter only.

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.

260 ATELIER FRANÇAIS (5-12)

Prereq: French 103 or equivalent. Review of basic French grammar; intensive oral practice; simple composition, with vocabulary building.

Discussion of modern French culture. S/U grading. Offered summers only.

280 FRENCH FOR A READING KNOWLEDGE (4)

Emphasis on reading and translation. Useful for students meeting graduate reading requirement. S/U grading. Some background in the French language is recommended.

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 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 9 credits; 6 credits required for majors.

314 PHONETICS (4)

Prereq: French 202 or equivalent. Emphasizes improvement of pronunciation, contrasts English and French pronunciations and teaches phonetic transcription.

330 CIVILISATION ET CULTURE (3)

Prereq: one third-year course. An introduction to French-speaking cultures 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.

360 ATELIER FRANÇAIS, INTERMEDIATE LEVEL (5-12)

Prereq: 10 credits of 200-level French or equivalent. Advanced French grammar and stylistics; intensive oral practice; extensive practice in reading and writing. Discussion of modern French culture. S/U grading. Offered summers only.

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 9 credits; 6 credits required for majors.

405 COMMUNICATION ET DISCOURS (3)

Prereq: 6 credits of 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 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 various topics.

460 ATELIER FRANÇAIS, ADVANCED LEVEL (3-6)

Prereq: 10 credits of 300-level French or equivalent. Review of advanced French grammar and stylistics; readings and discussion of modern French texts; oral and written reports and presentations; *précis* writing. S/U grading. Offered summers only.

Graduate Courses in French

Courses numbered 500; 517; 545; 597 are described on page 26 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 primarily for students with two years of high school German 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. Can be substituted for German 103.

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 THIRD-YEAR COMPOSITION (3 ea)

Prereq: German 203 or equivalent; to be taken in sequence. Written and oral composition and grammar, and vocabulary building.

305 GERMAN 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 203 or equivalent. 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 various topics.

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.

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. Repeatable. S/U grading.

401, 402 ADVANCED COMPOSITION AND GRAMMAR (3 ea)

Prereq: German 302. Advanced written and oral expression.

405 ADVANCED CONVERSATION (3)

Prereq: German 302. Advanced conversational practice on topics reflecting current events in German-speaking countries; students give expository talks and discuss articles taken from periodicals; vocabulary building. S/U grading.

FOREIGN LANGUAGES AND LITERATURES

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. S/U grading.

442 GERMAN LITERATURE IN THE TWENTIETH CENTURY (3)

Prereq: 9 credits in upper-division German. Selections reflecting development of recent German literature.

450 STUDIES IN GERMAN LITERATURE (3)

Prereq: 9 credits in upper-division German or equivalent, and permission of department. Major authors and movements. Repeatable with various topics.

Graduate Courses in German

Courses numbered 500; 517; 545; 597 are described on page 26 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.

350 READINGS IN GREEK LITERATURE (3)

Prereq: Greek 203 or equivalent. Readings in major genres. Repeatable with various topics.

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.

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.

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.



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 FIRST-YEAR SPANISH (5 ea)**

Spanish 101 is for absolute beginners or with permission of instructor. Courses to be taken in sequence. Fundamentals of understanding, speaking, reading and writing.

104 REVIEW OF ELEMENTARY SPANISH (5)

Designed for students with two years of high school Spanish to prepare them for the second-year level through review and development of basic structure and vocabulary.

201, 202 SECOND-YEAR 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 THIRD-YEAR SPANISH (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.

330 HISPANIC CULTURE (3)

Prereq: Spanish 202 or equivalent. Survey of Hispanic civilization (peoples, traditions, contemporary issues). Repeatable with various topics.

340 INTRODUCTION TO HISPANIC LITERATURE (3)

Prereq: Spanish 301 or equivalent. May be taken concurrently with

Spanish 301 with permission of instructor. Selected works of major Hispanic authors, with emphasis on reading improvement and methods of textual interpretation.

350 MAJOR WORKS IN HISPANIC LITERATURE (3)

Prereq: Spanish 340 or equivalent. Study of genres and trends during various periods in Hispanic literature. Specific topics to be listed. Recent topics have included: "La Poesía hispano-americana desde el modernismo," "Contemporary Mexican Literature," "Modern Spanish Theater," "Generation of '98," "Latin American Short Story." Repeatable with various topics.

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 various topics.

450 STUDIES IN HISPANIC LITERATURE (3)

Prereq: two courses in upper-division Spanish. Major authors and movements. Recent topics have included: "El Quijote," "Golden Age Theater," "Modern Spanish Poetry." Repeatable with various topics.

Graduate Courses in Spanish

Courses numbered 500; 517; 545; 597 are described on page 26 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 12 faculty members who have a broad range of backgrounds covering the entire field of geology. There are about 50 undergraduate students declaring geology majors and approximately 25 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

JAMES L. TALBOT (1976) Chair. Professor of Geology. BA, University of Cambridge; MA, University of California, Berkeley; PhD, University of Adelaide.

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.

ROBERT A. CHRISTMAN (1960) Professor. BS, MS, University of Michigan; PhD, Princeton University.

DON J. EASTERBROOK (1959) Professor. BS, MS, PhD, University of Washington.

DAVID C. ENGBRETSON (1983) Professor. BA, Western Washington University; MS, PhD, Stanford University.

THOR A. HANSEN (1985) Professor. BS, George Washington University; PhD, Yale University.

ELIZABETH R. SCHERMER (1990) Assistant Professor. BS, Stanford University; PhD, Massachusetts Institute of Technology.

MAURICE L. SCHWARTZ (1968) Professor. BA, MS, PhD, Columbia University.

CHRISTOPHER A. SUCZEK (1977) Associate Professor. AB, University of California, Berkeley; PhD, Stanford University.

ANTONI WODZICKI (1977) Professor. BE, University of Otago; MS, University of Minnesota; PhD, Stanford University.

Research Associates

GLENN W. BERGER (1986). BS, MS, PhD, University of Toronto.

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.

ROBERT E. DRAKE (1992). BA, Pomona College; MA, University of California, Riverside; PhD, University of California, Berkeley.

HARVEY M. KELSEY (1992) BA, Princeton University; PhD, University of California, Santa Cruz.

CHARLES A. ROSS (1992) BA, University of Colorado; MS, PhD, Yale 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
- Chem 121, Math 124, Physics 114 or 121; 10 additional credits selected from Math 125, 240; Physics 122; Chem 122, 123, 124; Biol 201, 202, 203

Minor — Geology

25 credits

- Geol 211, 212
- Electives under departmental advisement

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

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.

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, 124
- Physics 114, 115, 116 (or 121, 122, 123) and Astron 315
- Biol 201, 202, 203
- Sci Ed 491, 492
- 3 additional credits under advisement

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 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 205
- Chem 121, 122, 123, 124; Math 128 or Math 124 and 125, Physics 121, 122

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.

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 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, 221

DEPARTMENTAL HONORS

A geology major who wishes to graduate with departmental honors must include Geology 399.

Students in the University honors program also must satisfy this departmental requirement.

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 26 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.

102 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.

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. 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.

306 MINERALOGY (6)

Prereq: Geol 211. 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 101 or 121 or equivalent. Nature and origin of major structural features within the ocean basins and distribution of recent marine sediments.

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)

406 OPTICAL MINERALOGY (3)

Prereq: Geol 306. Optical properties and identification of minerals with the polarizing microscope.

407a PETROLOGY (4)

Prereq: Geol 306. Origin, occurrence and classification of igneous, sedimentary and metamorphic rocks; hand specimen identification of rocks. Not open to those with credit in Geol 420.

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 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 (3)

Prereq: Geol 310 or permission of instructor. Stream processes, equilibrium in fluvial environments, channel adjustments mechanics of sediment erosion and transport.

414 GEOLOGY OF WASHINGTON (3-5)

Prereq: Geol 101 or 211. The significant geologic features of Washington State; field studies. Offered summer only.

415 STRATIGRAPHY AND SEDIMENTATION (4)

Prereq: Geol 212; 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; fluid specimen study of rock samples from selected mining districts.

440 GLACIAL GEOLOGY (4)

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

446 MICROCOMPUTER APPLICATIONS FOR SCIENTISTS (3)

Prereq: permission of instructor, prior use of microcomputers, upper-division standing in the sciences. Scientific problem solving using spreadsheets (QPRO) and equation solvers (MathCAD); the Windows environment is used to integrate numerical solutions into lab reports. S/U grading.

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.

452 APPLIED GEOPHYSICS (5)

Prereq: Geol 352. Geological applications of geophysical techniques.

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.

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. A discussion of the geological and geochemical processes that control the chemical composition of surface and groundwater.

472 HYDROLOGY (4)

Prereq: Geol 211, Math 105, calculus desirable. 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.

Graduate Courses

Courses numbered 500; 517; 545; 597 are described on page 26 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.

514 FLUVIAL GEOMORPHOLOGY (3)

Prereq: Geol 310, calculus recommended. Fluvial hydraulics. Mechanics of sediment erosion and transport. Channel adjustments to water and sediment discharge. Offered in alternate years.

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 420 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 419, 420 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 420 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 PALEOECOLOGY (4)

Prereq: Geol 316 or permission of instructor. Independent or class study in interpretation of fossil organisms from skeletal morphology and associated features; reconstruction of marine ecosystem relations from the study of assemblages of fossils.

540 GLACIAL GEOLOGY (4)

Prereq: permission of instructor. Physics of glacial movement; processes of glacial erosion and deposition; effects of Pleistocene climatic changes.

550 STRUCTURAL ANALYSIS OF DEFORMED ROCKS (4)

Prereq: permission of instructor. Analysis of geologic structures at all scales. Structural regimes and plate tectonics.

553 PLATE TECTONICS (4)

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

554 GEOTECTONICS AND EARTH PHYSICS (4)

Prereq: Geol 352; Geol 553 recommended. Mechanical and thermal properties of the earth, with special application to orogenic belts. Normally offered alternate years with Geol 555.

556 PRINCIPLES OF OROGENY (5)

Prereq: Geol 318, 352, and 407 or 420. Application of geologic and geophysical tools to gain understanding of earth's orogenic 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 (3)

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. 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 105, one year of calculus. 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.

580 FIELD SEMINAR IN REGIONAL GEOLOGY (3)

Prereq: graduate status. Weekend field excursions to introduce graduate students to the geology of the Pacific Northwest and areas of research interest. S/U grading.

595 SEMINAR IN CONTEMPORARY GEOLOGY PROBLEMS (1)

Prereq: graduate status in department. Presentation of contemporary subjects in geology. Repeatable to 3 credits. S/U grading.

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

DONALD W. WHISENHUNT (1991) Chair. Professor. BA, McMurry College; MA, PhD, Texas Tech University.

SUSAN E. COSTANZO (1993) Instructor. BA, MA, Northwestern University.

PETER D. DIEHL (1992) Assistant Professor. BA, Yale University; MA, PhD, University of California, Los Angeles.

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.

SUSAN AMANDA EURICH (1986) Associate Professor. BA, Portland State University; MA, PhD, Emory University.

CHRISTOPHER C. FRIDAY (1992) Assistant Professor. BA, Lewis and Clark College; MA, PhD, University of California, Los Angeles.

ALAN GALLAY (1988) Associate Professor. BA, University of Florida; MA, PhD, Georgetown University.

LEONARD M. HELFGOTT (1970) Professor. BA, MA, PhD, University of Maryland.

JAMES H. HITCHMAN (1966) Professor. BA, Willamette University; MA, PhD, University of California, Berkeley.

THOMAS C. R. HORN (1964) Assistant Professor. BA, University of Pittsburgh; MA, PhD, University of California, Berkeley.

EDWARD H. KAPLAN (1968) Associate Professor. BS, Georgetown University; MA, PhD, The University of Iowa.

ELIZABETH MANCKE (1989) Assistant Professor. BA, Colorado College; MA, University of British Columbia; PhD, Johns Hopkins University.

GEORGE E. MARIZ (1970) Professor. BA, MA, PhD, University of Missouri.

JAMES B. RHOADS (1983) Professor. BA, MA, University of California, Berkeley; PhD, The American University.

HARRY R. RITTER (1969) Professor. BA, University of Arizona; MA, PhD, University of Virginia.

HENRY G. SCHWARZ (1969) Professor of East Asian Studies and History. BA, MA, PhD, University of Wisconsin.

MART A. STEWART (1992) Assistant 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.

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 (3 credits)
- Electives under advisement



* Half must be in upper-division courses.

The department recommends that majors take the maximum permissible number of history courses in the General University Requirements program. Twelve history credits of General University Requirements may be applied toward a major or minor. (See the General University Requirements in the College of Arts and Sciences section of this catalog.) 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.

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, 386, 441, 442); Germany (Hist 431, 432); Latin America (Hist 273, 474); Russia (Hist 434)
- 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.

* Half must be in upper-division courses.

BACHELOR OF ARTS IN EDUCATION

The department recommends that students take its offerings in the General University Requirements program, up to 12 history credits of which may be applied toward a major or minor in history. (See the General University Requirements section of this catalog.)

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 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.

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

- 15 credits in Spanish 100- and 200-level courses, or demonstration of proficiency
- 15 credits in courses relating to Latin America

For further information and advisement, consult the departments of 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 26 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.

233 SURVEY OF MODERN RUSSIAN HISTORY AND CULTURE (5)

Elements of Russian history and culture from the time of Peter the Great (1689) to the present, with particular emphasis on the autocratic and revolutionary traditions in Russian history.

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 (5)

From the period of early Spanish and Portuguese colonization to the present.

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 MEDIEVAL CIVILIZATION (5)

Prereq: Hist 111, Lbrl 121 or permission of instructor. A history of

medieval society, culture and politics from the invasion of Europe by the barbarians to the close of the Hundred Years War.

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.

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.

360 AMERICAN ECONOMIC HISTORY (5)

Prereq: sophomore status. American economic development from colonial times to the present, with particular emphasis upon later periods.

361 BLACK HISTORY IN THE AMERICAS: THE SLAVERY ERA (5)

Prereq: an introductory-level course to African, American or Latin American history. Africans in bondage in the Americas; African heritage of blacks in the Americas, slavery in Africa and the Americas, with emphasis on the United States, the Caribbean and Brazil.

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 once.

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.

366 WOMEN AND AMERICAN HISTORY (3)

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.

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 (3)

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 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 Eng and 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 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 (1337-1643).

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 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. From the wars of liberation to the First World War.

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.

434 THE RUSSIAN REVOLUTIONS AND THE SOVIET REGIME (5)

Prereq: junior status. An examination of the Bolshevik experience, with particular emphasis upon ideology and party history. Course addresses itself particularly to the question of why the revolution failed.

439 ENGLAND: 1688-1832 (5)

Prereq: Hist 113 or Lbrl 122 or equivalent. Political, social, economic and diplomatic history of England from the Glorious Revolution to the Reform Bill of 1832; constitutional developments of the period.

440 ENGLAND: 1832 TO THE PRESENT (5)

Prereq: Hist 113, Lbrl 123 or equivalent. Political, social, economic and diplomatic history of England from the Reform Bill of 1832 to today; development of parliamentary institutions; impact of the World Wars of the 20th century on British politics, economics and society.

441 FRANCE: 1453-1815 (5)

Prereq: Hist 112 or 113 or Lbr 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, Czechoslovakia, Hungary, Yugoslavia, Romania, Bulgaria, Albania — in European and world politics. Offered in alternate years.

450 AMERICAN COLONIAL HISTORY TO 1776 (5)

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.

453 THE MIDDLE PERIOD: 1812-1840 (5)

Prereq: junior status. The struggle between republican and democratic forces in a milieu of social, technological, economic, international and religious flux.

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 (5)

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.

456 THE NEW REPUBLIC (5)

Prereq: senior status. Social, political and economic adjustments to independence from the Articles of Confederation through the War of 1812.

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 (5)

Prereq: senior 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.

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.

483 ANCIENT JAPAN (5)

Prereq: one of the following or equivalent: Hist 280, East Asian 201, 202. Origins of the Japanese people, language and culture; the rise of the aristocratic age: court life, aesthetics, literary values, religious beliefs; the masterpieces of Heian literature; the decline of the aristocracy and the rise of the warrior class.

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 Uganda 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 (3)

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.

Graduate Courses

Courses numbered 500; 517; 545; 597 are described on page 26 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.

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.

520 RENAISSANCE AND REFORMATION (4)

Readings in the history of Europe from 1337-1848.

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.

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)

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 SOCIETY AND THOUGHT (4)

567 CONSERVATION IN ARCHIVES (3)

Prereq: Hist 595. 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)

595 HISTORY AND PRINCIPLES OF ARCHIVES ADMINISTRATION AND RECORDS MANAGEMENT (6)

Prereq: minimum of 25 undergraduate credits of history or allied discipline.

596 PROBLEMS IN ARCHIVES ADMINISTRATION (4)

Prereq: Hist 595. Detailed examination of problems in the administration of archives, manuscripts and primary source materials in other media.

598 PROBLEMS IN RECORDS MANAGEMENT (4)

Prereq: Hist 595. Detailed examination of problems in the management of current and semi-current records and other information resources.

599a,b INTERNSHIP IN ARCHIVES AND RECORDS MANAGEMENT (10 ea)

Prereq: Hist 596 or 598. Professional internship in a cooperating agency or organization.

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.

HOME ECONOMICS

Admission to Western's Home Economics Department programs has been suspended indefinitely, pending a decision regarding their continuation or termination.

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 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.

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.

JOURNALISM FACULTY

CAROLYN DALE (1977) Chair. Associate Professor. BA, MC, University of Washington.

LYLE E. HARRIS (1976) Professor. BA, MA, University of Montana; PhD, University of Missouri.

FLOYD MC KAY (1990) Assistant Professor. BA, Linfield College; MA, University of Maryland.

TIM PILGRIM (1992) Assistant 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

60 credits

- Journ 104 or 406
- 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 111, 112, 113, 114, 211, 212, 213, 214, 311, 312, 313, 314, 411, 412, 413, 414
 - (b) Journ 121, 122, 123, 221, 222, 223, 321, 322, 323, 421, 422, 423
- Journ 430
- 15 upper-division credits in other academic areas under departmental advisement
- Cumulative GPA of 2.50 or higher in major
- A maximum of 55 Journalism course credits may be applied toward the 180-credit minimum for graduation

Combined Major — Environmental Studies/Journalism

83 credits

See the Huxley College section of this catalog.

Minor — Journalism 25 credits

- Journ 104 or 406
- Journ 160 or 190, 204, 304, 340, 350
- Three staff courses, or equivalent professional experience:
 - Two from: Journ 111, 112, 113, 114, 211, 212, 213, 214, 311, 312, 313, 314, 411, 412, 413, 414
 - One from: Journ 121, 122, 123, 221, 222, 223, 321, 322, 323, 421, 422, 423

COURSES IN JOURNALISM

Courses numbered X37; X97; 300, 400; 417, 445 are described on page 26 of this catalog.

104 NEWSWRITING (3)

Prereq: ability to type 25 or more words per minute. Writing for news media; news elements and values; gathering news, structure and style of news stories; covering speeches and meetings, interviewing.

111, 112, 113, 114 NEWSPAPER STAFF (2 ea)

Prereq: freshman status; Journ 104. Participation on the staff of the University newspaper; critiques in news reporting, writing, editing and make-up; editorial writing.

121, 122, 123 PERIODICAL STAFF (2 ea)

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.

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 COPY EDITING (3)

Prereq: Journ 104. News copy desk operations; editing, headline writing; dummyming; page make-up.

211, 212, 213, 214 NEWSPAPER STAFF (2 ea)

Prereq: sophomore status; Journ 104. Participation on the staff of the University newspaper; critiques in news reporting, writing, editing and make-up; editorial writing.

221, 222, 223 PERIODICAL STAFF (2 ea)

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.

304 REPORTING (3)

Prereq: Journ 104. Interviewing, news coverage, including campus sources and standard community news sources, with emphasis on social agencies; 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.

311, 312, 313, 314 NEWSPAPER STAFF (2 ea)

Prereq: junior status; Journ 104. Participation on the staff of the University newspaper; critiques in news reporting, writing, editing and make-up; editorial writing.

321, 322, 323 PERIODICAL STAFF (2 ea)

Prereq: Journ 104; 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.

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)

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.

370 MEDIA ORGANIZATION AND MANAGEMENT (3)

Prereq: Journ 104 or Journ 190. Examination of key roles, such as the publisher, general manager and various levels of department heads of the business and editorial sides. Factors involved in publishing, staffing, fulfilling equipment needs, evaluating personnel, budgeting and marketing.

390 THE NEWS PROCESS (4)

Critical examination of the news process by visiting news media professionals. Repeatable to 12 credits.

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.

406 JOURNALISM FOR PUBLICATION ADVISERS (3)

Teaching public school journalism; news elements, values and writing for newspapers. Not open to students who have taken Journ 104.

411, 412, 413, 414 NEWSPAPER STAFF (2 ea)

Prereq: senior status, Journ 104. Participation on the staff of the University newspaper; critiques in news reporting, writing, editing and make-up; editorial writing.

421, 422, 423 PERIODICAL STAFF (2 ea)

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.

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)

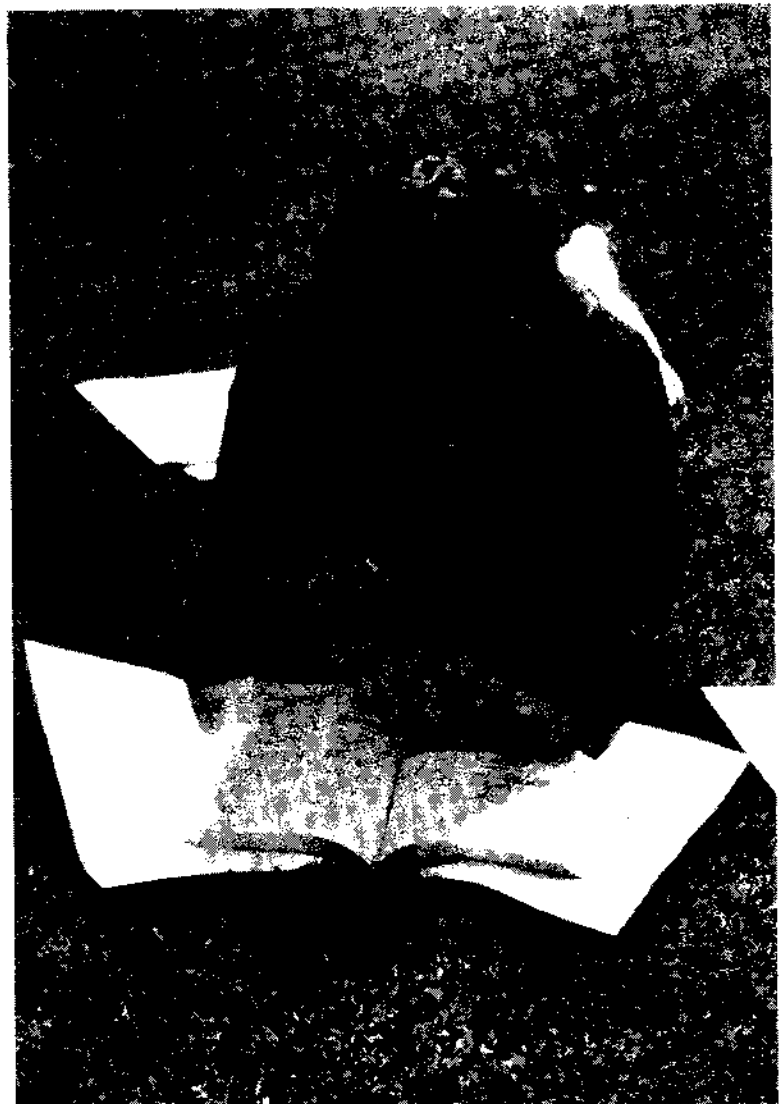
Prereq: Journ 350, 404 and three staff courses that include one each on *Klipsun* and *Western Front*. Students write about and photograph people who have ethnic, national, environmental or cultural backgrounds different from the dominant society; sensitivity to other cultural traditions; advanced reporting 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 ethics.



LIBERAL STUDIES

The Department of Liberal Studies is an interdisciplinary department offering courses in humanities, comparative cultural study and the academic study of religion. Traditionally, study in the "humanities" addresses major ideas about human beings and their place in the universe which have shaped Western society and culture, as these ideas are expressed in language, literature, philosophy, religion and fine arts. "Comparative cultural study," as conducted by the department, addresses these same concerns in the principal civilizations of the Orient and Africa. The "academic study of religion" brings the tools of modern scholarship to bear on the literature and institutions of the religions of mankind, understood as cultural forces. The department is "interdisciplinary" in that its faculty are trained in a variety of academic fields and bring multiple scholarly perspectives to their courses. The department's objectives, implied in its title, are those traditionally associated with "liberal education" and education in the "liberal arts."

The Department of Liberal Studies serves the Western Washington University community in the following ways:

- The department offers interdisciplinary courses which partially fulfill the WWU General University Requirements in humanities and in comparative, gender and multicultural studies. (See the University Graduation Requirements section of this catalog for the complete General University Requirements and options for satisfying them.)
- The department offers a B.A. in humanities and a B.A. in humanities (elementary education). These majors offer integrated study in the materials and perspectives of the humanities. See below.
- The department offers interdisciplinary minor programs in humanities and in the study of religion, and participates with other departments in the East Asian Studies program.



* Contact the department before enrolling.

** Librl 273 may be counted in one group only.

- 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).

LIBERAL STUDIES FACULTY

- WILLIAM K. B. STOEVER (1970) Chair. Professor. BA, Pomona College; MDiv, Yale Divinity School; MPhil, PhD, Yale University.
- 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**, 274, 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. Lbrl 302 and Eng 304 should be completed before enrolling in Lbrl 417a-d. 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 in order to prepare properly for 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**, 274, 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. Lbrl 302 and Eng 304 or 301 should be completed before enrolling in Lbrl 417a-d. 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 in order to prepare properly for 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

* Contact the department before enrolling.

** Lbrl 273 may be counted in one group only.

- Two courses from Lbrl 271, 272, 273, 274, 275, 276, 277
- 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; Hist 267, 287; Phil 113
- Remaining credits from the following: Anth 330; Eng 336; Lbrl 332, 333, 335, 378; Hist 387; Soc 363; other appropriate courses under advisement

For advisement regarding either minor, contact the Liberal Studies office.

LIBERAL STUDIES COURSES

Courses numbered X37, X97, 300, 400, 417, 445 are described on page 26 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. (These courses 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)

These courses must be taken in sequence to satisfy the GUR Humanities 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.

274 SOCIETY AND LITERATURE IN CHINA AND JAPAN (4)

Study of Chinese and Japanese authors from traditional and modern times; emphasis on forms of literary expression as a guide to social attitudes and value systems.

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. 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 enrollment in Lbrl 499.



LINGUISTICS

Linguistics describes language from different structural perspectives and is useful to students preparing for careers in anthropology, psychology, speech, education and language teaching. It also can be useful to those interested in the nature and implications of language.

Minor — Linguistics

24-25 credits

Basic Courses

- Linguistics 201, 301, 302, 303, 314

Additional work according to department chosen:

- Anthropology — Anth 448 and 5 additional credits selected under departmental advisement
- English — English 370, 471
- Foreign Languages — a minimum of six credits in a foreign language, selected under departmental advisement and SPA 356
- Speech Pathology/Audiology — SPA 356 (for other courses consult the director)

For advisement and/or a minor in linguistics, consult Dr. Rudolf Weiss (Humanities 253), director of the interdisciplinary program in linguistics.

COURSES IN LINGUISTICS

Courses numbered X37; X97; 300, 400; 417, 445 are described on page 26 of this catalog.

201 INTRODUCTION TO LINGUISTICS SCIENCE (5)
Survey of linguistic method and theory.

204 SOCIOLINGUISTICS (3)
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.

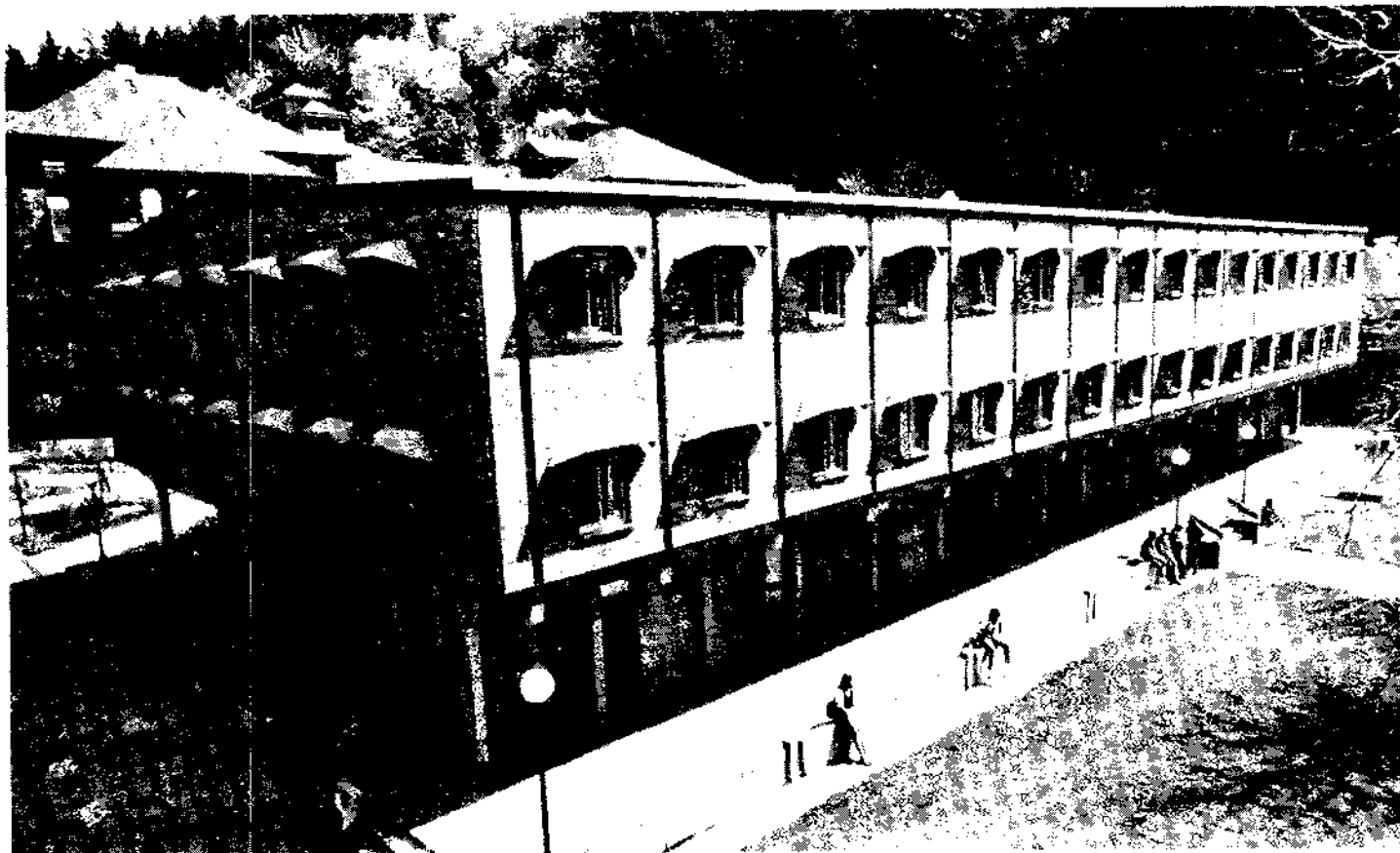
301 PHONOLOGY (5)
Prereq: Ling 201. Theory, methods and problems of phonological analysis and description.

302 MORPHOLOGY (3)
Prereq: Ling 201. Theory, methods and problems of morphemic analysis and description.

303 SYNTAX (3)
Prereq: Ling 201. Comparative survey of modern theories of grammar with special reference to syntax.

314 PHONETICS (5)
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 READINGS IN LINGUISTICS (3)
Prereq: permission of instructor. Directed research on topic selected by student; may not be repeated.



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.

Students who have completed one quarter or more of college calculus may not receive credit toward any major or minor offered by the Mathematics Department for any of Math 102, 103, 105, 151 or 155 except by permission of the department chair.

ADVICE TO ENTERING STUDENTS

The B.S. degrees in mathematics, applied mathematics and mathematics/computer science, and the B.A. 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 (discrete mathematics)
- Math 312 (proofs in elementary analysis)
- CS 120 (computer programming)

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 B.S. 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 A.A. 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 of 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.

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 two programs for outstanding students. One — graduation with distinction in mathematics — rewards exceptional achievement in mathematics. The other — 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. A student may apply to participate in either of the programs, or in both.

Graduation with Distinction

A student may graduate with distinction in mathematics by doing each of the following:

- Complete one of the following majors, including at

least 32 quarter hours of mathematics courses taken at Western:

- B.S. Mathematics
- B.S. Applied Mathematics
- B.S. Mathematics — Computer Science
- B.A./Ed. Mathematics — Secondary

The cumulative GPA for mathematics classes taken at Western should be at least 3.5.

- Pass a comprehensive examination to be given at the beginning of spring quarter covering Math 124, 125, 224, 225, 226, 204, 304, 331.

A student interested in graduating with distinction should contact the department chair not later than the beginning of the junior year.

Graduation with Honors

For All Students

Complete one of the majors listed above.

For Entering Freshmen

Students who enter the program as freshmen may graduate with honors in mathematics by completing the usual requirements for the Honors Program (see Honors Program section of this catalog) with the following modifications:

- Satisfy the GUR in science by taking one of the following one-year sequences under advisement. The sequence in physics is recommended for most students:
 - Physics 121, 122, 123, 125
 - Chem 121, 122, 123, 124
- The student may choose to substitute the comprehensive examination described under the Graduation with Distinction section above for the senior project.

For Transfer Students

Complete the usual requirements for graduation through the Honors Program (see Honors Program section of this catalog) except for the possible substitution of the comprehensive examination for the senior project.

A student interested in the Honors Program should contact either the Mathematics Department chair or 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 (206) 650-3785.

MATHEMATICS FACULTY

- TJALLING J. YPMA (1987) Chair. Associate Professor. BSc, University of Cape Town; MS, DPhil, Oxford University.
- EDOH Y. AMIRAN (1989) Assistant Professor. BA, University of Chicago; PhD, Massachusetts Institute of Technology.
- 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) Associate 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) Associate Professor. BA, Humboldt State University; MA, PhD, University of California, Santa Cruz.
- FRANCIS H. HILDEBRAND (1968) Professor. BS, Kent State University; MS, University of Illinois; PhD, Michigan State.
- 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) Assistant 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.
- RONALD A. WARD (1991) Associate Professor. BS, Eastern Nazarene College; PhD, Florida State University.
- JOHN W. WOLL (1968) Professor. BS, Haverford College; PhD, Princeton University.

BACHELOR OF ARTS IN EDUCATION

Major — Mathematics — Elementary

50 credits

- Math 124, 125, 204, 209, 281, 302, 341, 360, 419, 431
- CS 120
- 4 credits in mathematics (200+ level) as advised

It is recommended that the student also take EdAF 452.

Major — Mathematics — Secondary

71 credits

- Math 124, 125, 204, 209, 224, 226, 302, 331, 341, 360, 419, 483
- CS 120
- At least four courses selected from the following: Math 304, 312, 401, 402, 441, and Math-CS 375.

It is recommended that the student also take EdAF 452.

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
- 4 credits in mathematics (200+ level) as advised

Combined Majors

See the Chemistry Department section of this catalog for the mathematics-chemistry major. 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 plus 20-21 credits in supporting courses

- Math 124, 125, 204, 224, 225, 226, 304, 312
- Math 209 or 302
- Not fewer than 31 credits in mathematics or math-computer science, including at least two of the following sequences: Math 331-432, Math 341-342 or Math 441-442, Math-CS 335-435, Math-CS 375-475, Math 401-402, Math 423-424; and to include at least 20 credits from 400-level courses in mathematics or math-computer science except Math 419, 481, or 483

Supporting Courses

- CS 120
- One of the following sequences:
 - Physics 121, 122, 123, 125
 - Chem 121, 122, 123, 124
 - CS 221, 222, 223, 224
 - Econ 206, 207, 306, 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 plus 20-21 credits in supporting courses

- Math 124, 125, 204, 224, 226, 304, 312, 331
- Math 209 or Math 302
- CS 120
- 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
- One other 400-level course from Math, Math-CS, or CS 405, 439, 480
- One of the following sequences:
 - Physics 121, 122, 123, 125
 - Chem 121, 122, 123, 124
 - CS 221, 222, 223, 224
 - Econ 206, 207, 306, 475

Minor — Mathematics

36 credits

(Not available to computer science majors.)

- Math 124, 125, 224
- Math 204
- CS 120
- 12 credits of approved electives from Math 209, 225, 226 and upper-division courses except Math 481 and 483

Combined Major — Mathematics-Computer Science

91 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, 224
- 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 26 of this catalog.

(Courses in Mathematics-Computer Science are listed after the listings in Mathematics.)

102 INTERMEDIATE ALGEBRA (5)

Prereq: suitable score on the Basic Algebra 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. Cannot be counted toward majors or minors in mathematics or computer science.

103 PRECALCULUS I (5)

Prereq: suitable score on the Intermediate Algebra 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.

105 PRECALCULUS II (5)

Prereq: suitable score on the Intermediate Algebra mathematics placement test or suitable score on the Precalculus mathematics placement test or at least C- in Math 103. Data analysis, modeling,

trigonometry, inverse functions. Graphing calculator required. Cannot be counted toward majors or minors in mathematics or computer science.

117 TOPICS IN MATHEMATICS (variable)

Prereq: permission of instructor. A supplement to one or more math courses offered at the 100 level.

124 CALCULUS AND ANALYTIC GEOMETRY (5)

Prereq: suitable score on the Precalculus mathematics placement test or at least C- in Math 105. 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 students 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.

151 INTRODUCTION TO MATHEMATICS (3)

Prereq: suitable score on the Basic Algebra mathematics placement test. Not open to students with credit in Math 103. 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. Students interested in studying a single area of mathematics in detail should consider substituting a course from Math 103, 105, 124, 156, 204, 240.

156 ALGEBRA WITH APPLICATIONS TO BUSINESS AND ECONOMICS (4)

Prereq: suitable score on the Intermediate Algebra 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 Precalculus mathematics placement test or at least C- in Math 156 or Math 105. Limits, rates of change, differentiation, graphing and optimization, integration, business applications, partial differentiation. Math 124 may be substituted for Math 157. Cannot be taken for credit by a student who has already completed another college-level calculus course.

204 ELEMENTARY LINEAR ALGEBRA (4)

Prereq: Math 124. Systems of linear equations; matrices; the vector space \mathbb{R}^n ; linear independence, bases, subspaces and dimension in \mathbb{R}^n ; introduction to determinants and the eigenvalue problem; applications.

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.

217 TOPICS IN MATHEMATICS (variable)

Prereq: permission of instructor. A supplement to one or more math courses offered at the 200 level.

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 204 and 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 Algebra 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.

281 MATHEMATICS IN GRADES K-8 (4)

Prereq: either of the following: (1) suitable score on the Intermediate Algebra mathematics placement test; or (2) grade of C- or better in Math 102 at WWU. Concepts in arithmetic, informal geometry and measurement development from a problem-solving perspective. Not acceptable for any departmental major except B.A./Ed., Elementary, and does not satisfy GUR mathematics requirement except for those who complete the B.A./Ed., Elementary.

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. A student cannot receive credit for both Math 302 and Math 305.

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.

350 PROBLEM SOLVING SEMINAR (3)

Prereq: Math 224 or permission. Techniques of problem solving in mathematics with particular emphasis on selected topics in discrete mathematics, calculus and elementary real analysis.

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.

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 432. Discrete, continuous and positive systems, stability analysis, bifurcations, applications.

412 MATHEMATICAL MODELING COMPETITION (1)

Prereq: permission of instructor. Preparation for participation in the national mathematics modeling competition. Repeatable.

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, 225. 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.

481 METHODS OF TEACHING MATHEMATICS IN GRADES K-8 (4)

Prereq: Math 281 with grade of C- or better. Survey of instructional modes and teaching strategies. Topics include sequencing, evaluation, remediation, problem solving and attitudes.

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.

Graduate Courses

Courses numbered 500, 517, 545, 597 are described on page 26 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.

504 ABSTRACT LINEAR ALGEBRA (4)

Prereq: Math 304 or equivalent. Abstract vector spaces, linear transformations, spectral theory.

510 MATHEMATICAL MODELING (4)

Prereq: Math 432. Discrete, continuous and positive systems, stability analysis, bifurcations and their applications.

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 ANALYTICAL 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, 304, 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.

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.

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.

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 COMBINATORICS (3)

Counting techniques, generating functions, coding, coloring and relations with probability theory.

570 OPTIMIZATION (4)

Prereq: Math 304 and 521. Topics taken from nonlinear programming, calculus of variations or the theory of optimal control.

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.

576 NUMERICAL SOLUTION OF ORDINARY DIFFERENTIAL EQUATIONS (4)

Prereq: Math 331. The initial value problem: Runge-Kutta methods, linear multistep methods, implicit methods, stability and stiff problems; systems and higher-order equations. Boundary value problems: shooting method, finite differences, collocation.

595 TEACHING INTERMEDIATE ALGEBRA (1)

Prereq: appointment as TA teaching Math 102. 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 26 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. Linear programming, duality theory, sensitivity analysis, applications.

375 NUMERICAL COMPUTATION (4)

Prereq: Math 204, CS 120. Fortran and numerical software libraries, computer arithmetic, solution of a nonlinear equation and optimization in a single variable; matrix factorization; matrix iterative techniques.

435 OPERATIONS RESEARCH I (4)

Prereq: Math 224, 304 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.

476 NUMERICAL SOLUTION OF ORDINARY DIFFERENTIAL EQUATIONS (4)

Prereq: Math 331, Math-CS 475. The initial value problem: Runge-Kutta methods, linear multistep methods; stability and stiff problems; systems and higher-order equations. Boundary value problems: shooting method; finite differences; collocation.

NURSING

RN-BSN PROGRAM

Admission to Western's RN-BSN program has been suspended indefinitely, pending a decision regarding its continuation or termination.

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.

HUGH FLEETWOOD (1962) Associate Professor. BA, MA, PhD, The University of Michigan.

HUD HUDSON (1992) Assistant 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

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 26 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: one course in philosophy. 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: one course in philosophy. Great philosophical thinkers in the empiricist tradition, their problems and their methods: Hobbes, Locke, Berkeley, Hume, et al. Normally offered in odd-numbered academic years.

368 HISTORY OF PHILOSOPHY: KANT AND POST-KANTIAN PHILOSOPHY (4)

Prereq: one course in philosophy. Kant and post-Kantian philosophy with some attention to other significant movements such as utilitarianism, early existentialism and pragmatism. 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.

420 ETHICAL THEORY II (3)

Prereq: Phil 320. An intensive examination of selected topics and methods in ethical theory. Normally offered in odd-numbered academic years.

425 PHILOSOPHY OF MIND (3)

Prereq: Phil 102 and one 300-level course or instructor's permission. A study of the mind through the examination of such topics as the mind-body problem, intentionality, consciousness, 'qualia,' introspection and knowledge of other minds. Philosophical theories on these topics — such as dualism, behaviorism, type physicalism, functionalism and eliminativism. Normally offered in odd-numbered academic years.

430 METAPHYSICS II (3)

Prereq: Phil 330. An intensive examination of selected topics and methods in metaphysics. Normally offered in even-numbered academic years.

NOTE: Whether an academic year is odd- or even-numbered is determined by whether fall quarter is in an odd- or even-numbered calendar year.

PHYSICAL EDUCATION, HEALTH AND RECREATION

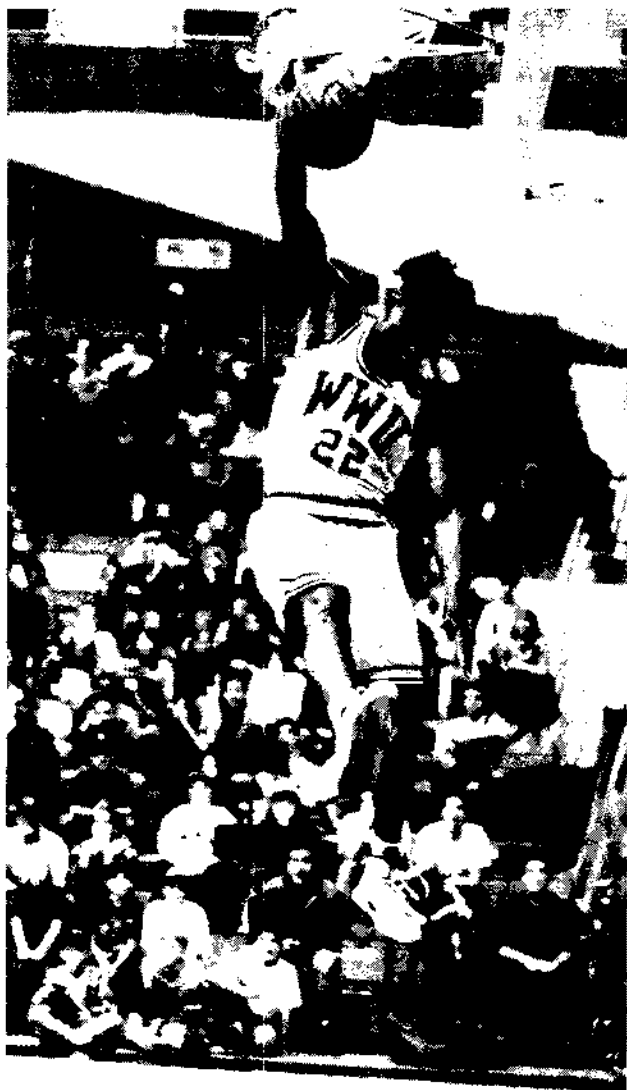
The department offers degree programs for students interested in professions related to exercise and sport science, physical education, health fitness, health education and recreation.

FACULTY

The department currently consists of 11 faculty members whose backgrounds span the entire range of physical education, health 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.

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, industry, 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

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

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

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, horsemanship, hiking and alpine travel.

FACULTY

ROY A. CLUMPNER (1975) Chair, Professor. BS, University of Wisconsin, Lacrosse; MA, California State University, San Jose; PhD, University of Alberta.
 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; PhD, University of Oregon.
 KATHLEEN KNUTZEN (1977) Professor. BA, MA, Western Washington State College; PhD, University of Oregon.
 BOYDE LONG (1966) Associate Professor. BS, MA, University of New Mexico.
 JAMES E. MOORE (1977) Associate Professor. BA, University of Oregon; MA, Antioch University; MEd, PhD, Oregon State University.
 RONALD D. RIGGINS (1977) Professor. BA, Laverne College; MS Recreation, ReD, Indiana University.
 CHARLES D. SYLVESTER (1984) Professor. BS, MA, University of Maryland; PhD, University of Oregon.
 LEA ANN TYSON (1991) Assistant 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.

Adjunct Faculty

LINDA L. BERGEN (1987) Head Athletic Trainer. BA, ATC, California State University, Long Beach.
 JEFF DAVIS (1987) Certified Water Sports Instructor. U.S. Sailing Association, Levels I and II Instructor Trainer; Windsurfing Instructor Trainer.
 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.
 BRAD JACKSON (1985) Head Coach, Men's Basketball. BA, Washington State University; MA, Seattle Pacific University.
 MARTIN MULHOLLAND (1993) Lecturer. BEd, Exeter University; MSc, University of Oregon.
 ROBERT SMITH (1987) Associate Athletic Director; Head Coach, Football. BA, University of Washington.
 LINN STORDAHL (1993) Health Education. BS, Montana State University; MA Colorado State University; MS, University of Montana.
 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

88-111 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, adult fitness, biomechanics, physical therapy and sport psychology. Supporting courses from chemistry, physics, computer science and nutrition are included to provide more in-depth analysis of principles associated with human structure and function.

There are no prerequisites for entry into the program; however, students must complete PE 203, Biol 348 and HEd 252 within their first two quarters in the program. Each student is assigned an adviser; students must schedule an appointment to meet with the adviser and receive written approval before beginning the physical education sequence.

- General Courses: 10 credits
 - PE 203, Biol 348, HEd 252
- Developmental Skills/Fitness Leadership: 9 credits
 - PE 102, 103, 113, 208, 256
 - Select 2 credits from PE 120, 122, 136, 139, 154, 167, 168
- Exercise Science Foundations: 23 credits
 - PE 301, 302, 303, 307, 485, 490
- Socio-Cultural: 10 credits
 - PE 309 or 310; 407
 - Select 3 credits from PE 308, 309, 310, 409
- Field Experience: 6 credits
 - PE 491

Specializations (select one)

A. Fitness and Exercise Science

35 credits

The 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, adult fitness setting or workplace fitness setting; (b) graduate study in exercise physiology/adult fitness; or (c) graduate study in biomechanics. Students are required to obtain faculty authorization for the approved set of courses leading to emphasis in one of the three aforementioned areas.

- Select from the following: Biol 349; Chem 115, 121, 122, 123, 124, 251, 371; Comp Sci 110; HEd 435; Enrv 352, 454; Math 240; PE 304, 403, 440; Physics 114, 115, 116

B. Pre-Physical Therapy

53 credits under advisement

The pre-physical therapy option is available for students who wish to pursue post-baccalaureate study in a physical therapy certification program. In order to satisfy the admission requirement for most physical therapy professional programs, students should select 53 credits under advisement from the following:

- Biol 201, 202, 203, 340, 345, 349, 370; Chem 121, 122, 123, 124, 251; Physics 114, 115, 116; Psych 201, 314, 316; Math 240; CS 101, 110; PE 304

C. Athletic Training

41 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. Written permission must be obtained from both parties before students may pursue this specialization. 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.

This specialization must be pre-approved by the athletic training adviser and the athletic trainer of Western Washington University.

- Biol 349; PE 304, 403, 409, 440, 491; HEd 345; Psych 201; Envr 352

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

68 credits

This major provides a concentrated study of instructional techniques, pedagogy, exercise and sport science, and socio-cultural aspects of physical education and sport. Completion of the requirements leads to teacher certification in K-12 physical education.

* Those students who want to emphasize elementary school teaching should select PE 350, and take 220 and 250 as the courses required from the 200 level. Those emphasizing secondary should select PE 306.

Prerequisites for entry into the major: (1) student must be accepted into the Woodring College of Education with a minimum 2.75 grade point average; (2) student must meet with program coordinator to be assigned an adviser. Students must complete PE 203 and Biol 348 within their first two quarters in the program.

- Introduction to Physical Education: 3 credits
 - PE 203
- Instructional Techniques: 18 credits
 - PE 208, 220, 232, 243, 245, 250, 251, 256
- Pedagogy: Analysis of Teaching; Practicum: 14 credits
 - PE 350, 392 (2 credits), 401, 492, 496
- Exercise and Sport Science: 23 credits
 - PE 301, 302, 303, 307, 485, 490
- Socio-Cultural: 10 credits
 - PE 308 or 310; 309, 407

K-12 Physical Education Supporting Teaching Endorsement

38-40 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: 10 credits
 - Biol 348, HEd 252, PE 203
- Instructional techniques: select two courses from:
 - PE 220, 245, 250, 251 (3 credits), 256
- Exercise and Sport Science: 13 credits
 - PE 302, 303; 309 or 310
- Pedagogy: 11 credits
 - *PE 306 (or PE 350 plus 220 and 250), 401, 496

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.

- Biol 348
- HEd 252
- PE 203, 220 (2 credits), 250, 251 (2 credits), 350, 301, 302, 303, 307, 309 or 310, 407, 485

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 and medical-care 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 150,151 and 152). 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 which include a 2.75 GPA. Prerequisites for declaring the school health education major are completion of HEd 150, 151 and 152, and 2.75 GPA.

General Courses

13 credits

- Chem 115*
- Nutrition — PE 440 or Envr 352
- Psych 201* or Soc 201*

Health Education

32 credits

- HEd 150, 151, 152, 252
- HEd 345, 346
- HEd 407, 447, 450, 460, 470

Human Development

20 credits

- Biol 348, 349
- Behavioral/Social Sciences — 10 credits under advisement

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

* Meets General University Requirements

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.

- HEd 150, 151, 152, 252, 345, 346
- Nutrition — PE 440 or Envr 352
- PE 303 or Biol 348

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 target populations.

Prerequisites for entry into the major are completion of HEd 150, 151 and 152, and a 2.50 GPA. 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 or Envr 352
- Psych 201* or Soc 201*

Health Education

49 credits

- HEd 150, 151, 152, 252
- HEd 345, 346
- HEd 407, 435, 447, 450, 451, 460

Human Development

28 credits

- Upper-division psychology or sociology course
- Biol 348 and 349; 345 or 449
- PE 303
- Journ 405

Concentration

15 credits

Students select supporting courses that relate to the settings in which they wish to practice.

- Recommended courses for community-based:**
 - Comm 240
 - Anth 422

- Psych 315, 316, 353, 360
- Soc 333, 360
- HEd 220, 250, 470
- Envr 454
- Geol 214

Recommended courses for worksite-based:

- PE 208, 302, 403, 440
- Rec 377, Psych 320
- Tech 328

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	Win	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 program is popular, and the number of major and minor students is limited. The deadline for completing the application process is noon on the final day of classes for fall term.

BACHELOR OF ARTS

Major — Recreation

66 credits

- Prereq: Rec 171
- Phase I: Rec 271, 272, 274, 275, 276
- Phase II: Rec 372, 373, plus 2 of 4: Rec 375, 376, 377, 378

- Phase III: Rec 471
- Phase IV: Rec 444, 450, plus 2 of 3: Rec 421, 474, 476

Support Area

Recreation majors must develop a 25-credit support area. Support-area prescriptions are worked out cooperatively with the student's faculty adviser and must have the adviser's final approval. They may range from traditional minors in sociology, environmental studies and other fields to interdisciplinary studies incorporating courses from a broader spectrum of University course offerings. Support areas are designed on the basis of previous experience in recreation related programs, skills and interests, and professional aspirations.

Example Support Areas: business administration, sociology, special education, communications, retail management, psychology, journalism, natural resource management, environmental planning, physical education, cultural arts, commercial recreation, biology, health promotion.

Minor

35 credits

- Prereq: Rec 171
- Complete Phases I and II

GRADUATE STUDY

For a concentration leading to the Master of Education 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 26 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)

- 102 CONDITIONING/AEROBIC FITNESS
- 103 JOGGING
- 108 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 SOCIAL DANCE
- 122 FOLK AND SQUARE DANCE
- 123 SCOTTISH COUNTRY DANCING

130-139 DUAL SPORTS (1 ea)

- 132 BEGINNING BADMINTON
- 133 INTERMEDIATE BADMINTON
- 136 BEGINNING TENNIS
- 137 INTERMEDIATE TENNIS
- 139 RACQUETBALL

The student furnishes equipment for PE 136, 137, 139.

140-149 TEAM SPORTS (1 ea)

- 142 BASKETBALL
- 144 SOCCER
- 145 VOLLEYBALL
- 148 LACROSSE
- 149 RUGBY

150-170 INDIVIDUAL SPORTS (1 ea unless otherwise noted)

- 150 ARCHERY
- 151 GYMNASTICS

154 GOLF

157 BEGINNING SKIING

Fee: \$150.

158 INTERMEDIATE SKIING

Fee: \$150.

159 ADVANCED SKIING

Fee: \$150.

160 SAILING

Prereq: swimming test. Fee: \$35.

161 WINDSURFING

Frereq: swimming test. Fee: \$35.

162 HORSEMANSHIP

Fee: \$160.

163 SAILING INSTRUCTOR TRAINING COURSE (3)

Frereq: demonstrate basic sailing competence, swimming test. Fee: \$35.

164 KAYAK TOURING

Frereq: advanced level in swimming proficiency test. Fee: \$35.

165 INTERMEDIATE SAILING/BEGINNING RACING

Frereq: swimming test and basic sailing skills required. Fee: \$35.

166a ADVANCED SAILING/RACING

Frereq: PE 165 or written permission. Advanced sailing skills, racing a boat with spinnaker and trapeze. Fee: \$35.

166b SAILBOAT RACING INSTRUCTOR TRAINING (2)

Frereq: 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.

166c WINDSURFING INSTRUCTOR TRAINING (3)

Frereq: intermediate sailing skill. Instructional techniques of teaching basic windsurfing. U.S. Sailing Association Certification. Fee: \$35.

167 BICYCLING

168 KARATE

The student enrolling in 157, 158, 159, 160, 161, 162, 163, 164, 165 and 166a,b,c pays cost of transportation and individual instruction. Students in 157, 158, 159 and 167 also furnish own equipment.

180-193 INTERCOLLEGIATE SPORTS (2 ea)

- 180m INTERCOLLEGIATE FOOTBALL
- 181 INTERCOLLEGIATE BASKETBALL
- 183 INTERCOLLEGIATE TRACK AND FIELD
- * 85 INTERCOLLEGIATE GOLF
- * 86 INTERCOLLEGIATE TENNIS
- * 89 INTERCOLLEGIATE CROSS COUNTRY
- * 90 INTERCOLLEGIATE CREW
- * 92w INTERCOLLEGIATE VOLLEYBALL
- * 93m,w INTERCOLLEGIATE SOCCER

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 organization, research, physical fitness and skill competency testing; relationship between physical education and athletics.

Majors in elementary education with an emphasis in physical education should take PE 220 and 251 for 2 credits each.

208-256 INSTRUCTIONAL TECHNIQUES (2 ea unless otherwise noted)

Selectively required of majors and/or minors in physical education as these courses deal with teaching of the sport. Prereq: competency in skills and knowledge of the sport.

208 STRENGTH TRAINING FOR FITNESS CONDITIONING

220 RHYTHMS AND DANCE K-12 (2-3 cr)

232 RACKET SPORTS

243 CONTEMPORARY RECREATIONAL ACTIVITIES

Senior status preferred.

245 TEAM SPORTS

250 BODY MANAGEMENT AND MOVEMENT

251 GYMNASTICS K-12 (2-3 cr)

256 TRACK AND FIELD

301 BIOMECHANICS (4)

Prereq: completion of math GJR. 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 ATHLETIC INJURIES AND TRAINING (3)

Prereq: Biol 348. Care and prevention of athletic injuries; procedures for building physical stamina; experience in taping procedures.

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 and six credits from PE 208-256. 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.

341-347 SPORTS OFFICIATING (2 ea)

Officiating techniques for individual and team sports.

- 342m BASKETBALL
- 342w BASKETBALL
- 343 TRACK AND FIELD

350 GAMES AND SPORTS: STRATEGIES FOR TEACHING IN ELEMENTARY AND MIDDLE SCHOOLS (2)

Prereq: admittance to the Woodring College of Education and PE 250. Focusing on skill development, cooperative and competitive activities, and modified games and sports. Includes teaching strategies to address various needs of children at differing ability and developmental levels.

380-387 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)
- 387 TENNIS (2)

392 PHYSICAL EDUCATION OBSERVATION/TEACHING EXPERIENCE WITH CHILDREN (2)

Prereq: admittance to the Woodring College of Education and PE 250 or 306. Observation and micro-teaching experience in school settings. Analysis of teaching episodes.

401 SECONDARY SCHOOL METHODS AND PROFESSIONAL PRACTICUM (5)

Prereq: admittance to the Woodring College of Education, junior status and completion of 20 credits in the program. Seminar, observation and practical experience in teaching physical education in secondary schools.

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.

408 SEMINAR IN SPORT PSYCHOLOGY (3)

Prereq: Psych 201, 311; 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.

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.

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.

491 FIELD EXPERIENCE IN PHYSICAL EDUCATION ACTIVITIES (3)

Prereq: senior status and written permission of supervisor. Practical volunteer experience in agencies such as hospitals, fitness facilities, physical therapy clinics, on-campus fitness programs, community youth sport organizations and athletic training facilities. Repeatable with permission. 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. 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 26 of this catalog.

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

502 RESEARCH TOPICS IN PHYSICAL EDUCATION (2-5)

Prereq: graduate status. Supervised study in topics relating to sociology/psychology of sport, biomechanics, exercise physiology, history, curriculum, pedagogy, human growth and motor development.

504 CURRICULUM IN PHYSICAL EDUCATION (4)

Prereq: teaching experience. Physical education programs, based on the needs, interest, abilities of students. Includes curriculum development.

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 PHYSICAL EDUCATION (4)

Prereq: graduate status or EdAF 501 or taken concurrently. Purpose and design of various methods with emphasis upon experimental, descriptive, survey methods usually incorporated in schools, agencies, colleges; computer application.

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 PHYSICAL EDUCATION (3)

Prereq: graduate status. Directed readings, analysis, discussion of current literature on physical education 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, by lecture and recreation.

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 SEMINAR IN BIOMECHANICS (4)

Prereq: PE301, 302 or equivalent. Application of mechanical principles to analysis of motor skills and athletic events.

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.

551 APPLIED SPORT AND EXERCISE PSYCHOLOGY (3)

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. S/U grading.

690a THESIS (6-9)

Prereq: formal advancement to candidacy for the master's degree.

690b FIELD PROJECT (6-9)

Prereq: formal advancement to candidacy for the master's degree.

COURSES IN HEALTH EDUCATION

Courses numbered X:17; X97; 300, 400; 417, 445 are described on page 26 of this catalog.

150 CONSUMER HEALTH (2)

Analysis of media promotion of health products and services; health quackery; guidelines for choosing health care; consumer protection.

151 SOCIETY AND DRUGS (2)

Physiological and behavioral effects of legal and illegal drugs; societal substance use and abuse; alternatives to drug use.

152 SOCIETY AND SEX (2)

Sociological, psychological and biological aspects of human sexuality.

220 CANCER: FACTS AND FICTION (1)

An educational series providing basic overview of cancerous diseases; risk factors; prevention; methods of treatment; community resources; coping with cancer.

250 HEALTH OF THE COLLEGE STUDENT (3)

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.

252 STANDARD FIRST AID AND PERSONAL SAFETY (2)

Principles and application of techniques of basic first aid for emergencies due to illness and injury. Students are eligible for an ARC Standard First Aid Certificate and an Adult CPR Certificate upon successful completion of the course.

345 HEALTH PROMOTION/DISEASE PREVENTION I (3)

Prereq: junior status: HEd 150, 151, 152 recommended. Relationship of lifestyle choices to well-being; health assessment and risk factors; behavioral change strategies (stress and relaxation); leading causes of morbidity and mortality; immunity and infection.

346 HEALTH PROMOTION/DISEASE PREVENTION II (3)

Prereq: HEd 345. Examines underlying beliefs/assumptions that drive decision-making in health and health promotion; considers ethical, cultural and political issues in health and health education.

407 PRINCIPLES AND PRACTICES OF HEALTH EDUCATION (3)

Prereq: HEd 345, 346. Historical perspectives of health education; professional issues and ethics; principles and practices of health education. Writing proficiency 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.

447 COMMUNITY HEALTH (3)

Prereq: HEd 345, 346, 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, 346 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 (1)

Prereq: senior status; admission to teacher education. Identification and prevention of physical, emotional and sexual abuse of young people; prevention of substance abuse; responsibilities of teachers.

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, 346; or permission of instructor. Organization of comprehensive school health education programs; analysis of critical health issues and risk-taking behaviors of young people.

COURSES IN RECREATION

Courses numbered X37, X97, 300, 400, 417, 445 are described on page 26 of this catalog.

201 FOUNDATIONS OF RECREATION AND LEISURE (3)

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 and minors 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 and minors 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 and minors 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 (2)

Prereq: Rec 201; majors and minors only. Participation in a recreation and park agency in the delivery of recreation services. S/U grading.

276 RECREATION PROGRAMMING I (2)

Prereq: Rec 201; majors and minors only. Leading and processing recreation experiences in community, outdoor and therapeutic recreation settings: individual, group and environmental factors.

372 MANAGEMENT OF RECREATION AND PARK SERVICES (4)

Prereq: Phase 1. Entry-level administrative skills associated with managing personnel and organizational resources within parks and recreation systems.

373 RECREATION PROGRAMMING II (4)

Prereq: Phase 1. Systems approach to programming methods for

individual and group program planning in all parks and recreation settings.

375 PARK AND FACILITY DESIGN AND OPERATION (4)

Prereq: Phase I 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.

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.

377 INDUSTRIAL RECREATION (4)

Prereq: Phase I or written permission. Providing recreation and employee service programs in organizations: planning, organization, marketing, leadership and evaluation.

378 HUMAN RELATIONS: CONCEPTS AND SKILLS (4)

Prereq: Phase I; recreation majors. Knowledge of human relations concepts and development of basic helping skills needed by recreational professionals working in a variety of settings, including outdoor, community and institutional.

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

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.

474 OUTDOOR PROGRAM DEVELOPMENT (3)

Prereq: Phase III or appropriate experience and written permission. Methods and techniques in the organization, implementation and evaluation of recreation programs in outdoor settings. Emphasis on outdoor adventure programming.

476 TOURISM PLANNING AND DEVELOPMENT (3)

Prereq: Phase III 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.

480 LEISURE AND SOCIETY (2)

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 seven major programs. Each of these 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 these core courses, and more sophisticated upper-division laboratories are offered in electronics, optics, holography, lasers and electro-optics.

Students majoring in physics 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 requires a Ph.D. degree. 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.

The department offers three versions of the physics Bachelor of Science degree: the physics concentration, the math-physics concentration and the optics concentration. The three concentrations differ only in the choice of four or five upper-division courses. The physics concentration is probably best for students planning to become experimental physicists. The math-physics concentration

may be preferable for students who are interested in theoretical physics. The optics concentration is recommended to students considering careers in optics, optical science or optical engineering. (See the Optics section below for more information about the optics concentration.)

The department also offers two concentrations leading to the Bachelor of Arts degree. Each of these concentrations requires fewer physics credits than the Bachelor of Science degree, so a student has more options for exploring other fields. A student who is not planning to go on to graduate school in physics or astronomy might wish the additional freedom and flexibility that distinguishes the B.A. degree from the B.S.

ASTRONOMY

Although cultures all over the world have observed and formed theories about stars, planets and the universe throughout history, today is undoubtedly the golden age of astronomy. More and bigger telescopes, increasingly sophisticated electronic instrumentation, computers and the space programs of several nations have all combined to bring an unprecedented flood of discoveries.

To become a professional astronomer requires a Ph.D. in astronomy, so anyone seriously considering a career as an astronomer should plan on going to graduate school. Students planning to become astronomers should select the physics Bachelor of Science program. Any of the three concentrations (described in the Physics section above) provides the solid background in physics, mathematics and computer science that astronomy graduate schools expect students to have. Students are advised to take Astron 315, 316, 320 and 416 in addition to the courses required for the major. Physics 485, a course devoted to Fourier transform methods, also is strongly recommended. (The department also offers an astronomy concentration as a Bachelor of Arts option, but this degree is more appropriate for students who do not plan to become astronomers.)

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 with the optics concentration. After obtaining a solid foundation in geometrical and physical optics, junior-level students in the optics concentration study the principles of laser operation and some of the many applications of lasers. Some students construct their own lasers or do independent project work in the department's well-equipped laser laboratory. The senior year begins with a course in modern optics. Here, the

student receives a rigorous grounding in Fourier optics and the theory of coherence. Laboratory experiments are performed in spatial filtering and optical image processing. An electro-optics course follows and includes the study of modulators, beam deflectors, nonlinear optics, imaging devices, light sources and detectors, and fiber optics. Holography rounds out the program, with a great deal of time spent producing many different types of holograms in the laboratory. Optics concentration students also are advised to take Physics 485 (Fourier transform methods) and Physics 356 (analog and digital electronics).

Optical science and optical engineering have become important fields for both industry and government. Although many optics concentration students will wish to go on to graduate school in optical science or engineering, there are job opportunities available to the graduate with just the Bachelor of Science degree. 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 latest developments in optical science and engineering.

COMPUTER SCIENCE

Increasingly, the equipment used in physics, astronomy and other fields is run by computers. Data acquisition, storage, manipulation and analysis may all be carried out by one major piece of software. Writing the programs for such applications requires more than just a knowledge of computer programming, since one also must understand the basic problems that need to be solved by the software, and this requires understanding the physical phenomena. Students who select the physics/computer science Bachelor of Science degree will acquire the computer science *and* physics backgrounds needed to work in these areas of applied computer science.

PHYSICS EDUCATION

Students planning to teach physics in the secondary schools must receive an endorsement in physics. The department offers a physics/mathematics Bachelor of Arts in Education degree that will enable a student to receive endorsements in both fields. The Chemistry Department offers a chemistry/physics Bachelor of Arts in Education degree that will enable a student to receive endorsements in both physics and chemistry.

ACADEMIC PLACEMENT

Advice to Freshman

The physics curriculum that forms the core of each of the seven majors is arranged in a logical sequence. 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) during the first quarter at Western.* Freshmen who have had some calculus in high school are advised to take Physics 121 (Physics with Calculus) that same first quarter, along with Math 124. Freshmen who have had no calculus at all may wish to 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 any 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 important area of physics that will be useful when taking later physics courses.

Advice to Transfer Students

Each of the seven majors offered by the department is based on the following common core:

- Physics 121, 122, 123, 125; Math 124, 125, 224*, 204
- Physics 221, 222*, 231, 232*; Math 225*, 226*, 331; CS 120*
- Physics 355*, 371*, 375*, 381*, 382*, 383*, 391*, 392*, 393*

The courses marked by an asterisk (*) are required in most of the seven majors, but not all. Each of the three concentrations of the physics B.S. degree also requires Physics 421 and 422 (Quantum Mechanics I and II) as well as Chem 121 (General Chemistry 1).

Students planning to transfer to Western should strive to take as many equivalents to the first grouping of courses above as possible. The college sequence equivalent to Physics 121-122-123 will usually be called introductory physics with calculus and will probably include a lab course equivalent to Physics 125 (which accompanies Physics 123). Math 124-125-224 is the first year of college calculus, and Math 204 is linear algebra. It is unlikely that a community college will have a course equivalent to Physics 221 and its lab, Physics 231. This course pair constitutes a rigorous introduction to optics.

DECLARATION OF MAJOR

A cumulative GPA of at least 2.50 must be maintained in the courses required by the major. This GPA requirement applies to admission to the major as well as graduation with a degree in the major. A freshman or transfer student who has not yet received grades at Western may be accepted provisionally.

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 after-hours access to department computers and laboratory equipment, employment by the department and, in some cases, office space.

INFORMATION

Interested persons are invited to contact the department chair in Bond Hall 152, phone (206) 650-3818.

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.
- RICHARD H. LINDSAY (1961) Professor. BS, University of Portland; MS, Stanford University; PhD, Washington State 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.
- DONALD L. SPRAGUE (1965) Associate Professor. BS, MS, PhD, University of Washington.
- 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.
- J. JOSEPH VEIT (1963) Professor. BSc, University of London; MSc, University of Birmingham; PhD, University of London.

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 ARTS

Major — Physics

85-86 credits

Core Courses (required of both concentrations)

- Physics 121, 122; Math 124, 125, 224, 204
- Physics 123, 125, 221, 222, 231, 232; Math 225, 226, 331
- Physics 375, 381, 382, 383, 391, 392, 393

The first group above should be taken the freshman year, the second group the sophomore year and the third group the junior year.

In addition, complete one of the following concentrations:

Physics Concentration

- Physics 371 plus 8 credits of upper-division physics courses

Astronomy Concentration

- Astron 315, 316, 320

Physics 119, Chem 121, CS 120 and Math 432 are recommended for both concentrations. Physics 371 and Astron 416 are recommended for the astronomy concentration. Physics 419 is recommended as a course to satisfy the writing proficiency requirement.

Minor — Physics

40 credits

- Physics 121, 122, 123, 125, 221, 222, 231, 232
- Math 124, 125, 224

BACHELOR OF SCIENCE

Major — Physics

110 credits

Core Courses (required of all three concentrations)

- Physics 121, 122, 123, 125; Math 124, 125, 224, 204; Chem 121
- Physics 221, 222, 231, 232; Math 225, 226, 331; CS 120
- Physics 371, 375, 381, 382, 383, 391, 392, 393
- Physics 421, 422

The first group above should be taken the freshman year, the second group the sophomore year, etc.

In addition, complete one of the following concentrations:

Physics Concentration

- Physics 355, 356
- 6 credits of 400-level physics courses

Math-Physics Concentration

- Math 304, 432, 438
- 2 credits of 400-level physics or mathematics courses

Optics Concentration

- Physics 355, 405, 409, 410, 411

Physics 119 and 485 are recommended for all three concentrations. Physics 362, 372, 403 and 412 are strongly recommended for the optics concentration. Physics 419 is recommended as a course to satisfy the writing proficiency requirement.

Combined Major — Physics/Computer Science

110 Credits

- Physics 121, 122, 123, 125; Math 124, 125, 226, 204; CS 120
- Physics 221, 231; Math 331, 432; CS 221, 222, 223
- Physics 355, 356, 381, 382; CS 224, 310
- Math-CS 375; plus 19 credits of upper-division courses in physics, computer science or math/computer science, of which at least 8 credits must be in physics and at least 3 credits must be in computer science or math/computer science

Physics 119, 222, 383, 485, and Math 224 and 225 are recommended electives. Physics 419 is recommended as a course to satisfy the writing proficiency requirement.

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

99 credits

- Physics 119, 121, 122; Math 124, 125, 224, 204
- Physics 123, 125, 221, 222, 231, 232; Math 209, 331
- Physics 355, 381; Math 302
- Math 360, 483; Sci Ed 491, 492; plus 15 credits of upper-division physics courses (Physics 382, 383, 391, 392 and 393 are recommended)

This major meets the requirements for Washington state teaching endorsements in both physics and mathematics.

Chemistry 121, CS 120, Math 225 and 226 are recommended electives. It is recommended that either Physics 419 or Math 419 be taken to satisfy the writing proficiency requirement.

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 26 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 103 and knowledge of elementary trigonometric functions. Kinematics and dynamics of particles; concepts of force, momentum and energy; behavior of 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 (5) F,W

Prereq: Math 124 (or concurrent). Kinematics and dynamics of particles; work and energy; collisions and conservation of momentum; rotational kinematics and dynamics. Laboratory.

122 PHYSICS WITH CALCULUS II (5) W,S

Prereq: Physics 121 and Math 125 (or concurrent). Oscillation; gravitation; fluid statics and dynamics; waves and sound; thermodynamics. Laboratory.

123 ELECTRICITY AND MAGNETISM (4) F,S

Prereq: Physics 122; concurrent enrollment in Physics 125 (lab) required for physics majors. Electrostatics; magnetic fields of steady currents; time-varying electric and magnetic fields; DC and AC circuits; electromagnetic waves.

125 E AND M LABORATORY (1) F,S

Prereq: concurrent enrollment in Physics 123.

201 THE SCIENCE OF SOUND (3) F

Motion, energy and sound waves; basic principles needed to understand the production, recording and reproduction of sound; subjective characteristics of hearing; noise and hearing loss. Laboratory.

202 SOUND SYSTEMS (3) W

Prereq: Physics 201. Electricity and amplifiers; crossover networks and

loudspeakers (design theory); recording and reproduction of sound; room acoustics; digital techniques and electronic alteration of sound. Laboratory.

203 MUSICAL ACOUSTICS (3) S

Prereq: Physics 201. Musical scales and temperaments; string, brass, woodwind, percussion and keyboard instruments; speech production and analysis; singing. Laboratory.

205 LASERS AND HOLOGRAPHY (3) F

Introduction to lasers, laser light and holography. Laboratory. Not intended for physics majors.

221 OPTICS (4) W

Prereq: Physics 122 and Math 224; concurrent enrollment in Physics 231 (lab) required for physics majors. Reflection and refraction at plane and spherical surfaces; lenses and aberrations; optical instruments; interference and interferometers; diffraction; polarization.

222 THERMAL PHYSICS (4) S

Prereq: Physics 122 and Math 224; concurrent enrollment in Physics 232 (lab) required for physics majors. Laws of thermodynamics; state variables; Maxwell relations; entropy; heat engines and refrigerators; thermal properties of matter.

231 OPTICS LABORATORY (1) W

Prereq: concurrent enrollment in Physics 221.

232 THERMAL LABORATORY (1) S

Prereq: concurrent enrollment in Physics 222.

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.

344 ACOUSTICS (3) S

Prereq: Physics 122 and Math 224. Generation, transmission and reception of acoustic waves. Applications to selected areas of practical acoustics.

355 FUNDAMENTALS OF ELECTRONICS (4) F

Prereq: Physics 123 (or 116 with permission). Principles of DC and AC circuit theory; diodes; bipolar and FET transistors; amplifiers; SCRs; opto-electronic devices; AM and FM modulation; transducers. Laboratory.

356 ANALOG AND DIGITAL ELECTRONICS (4) S

Prereq: Physics 355. 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; A to D and D to A conversion; microprocessors and noise. Laboratory.

357 SELF-DIRECTED DIGITAL LABORATORY (2) S

Prereq: Physics 123 (or 116 with permission). Not for students who have taken Physics 356. Self-paced study in advanced digital electronics; gating, counters, decoders, multiplexers, shift registers and semiconductor memories.

362 OPTICS II (3) S

Prereq: Physics 221, 371 (or concurrent). Thick lenses and lens systems; stops and pupils; Seidel aberrations; coherence; diffraction; grating types; Fresnel diffraction; interferometry; polarization.

371 ELECTRIC AND MAGNETIC FIELDS (4) W

Prereq: Physics 123; Math 225, 331 (or concurrent). Differential representation of electric and magnetic field laws; Maxwell's equations and electromagnetic waves in free space; dielectrics and conductors; reflection and refraction at a plane boundary; guided waves; dipole radiation.

372 OPTICS II LABORATORY (1) F

Prereq: Physics 362.

375 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; mechanics of rigid bodies; motion of rigid bodies in three dimensions. Oscillating systems.

381 QUANTUM PHYSICS (4) F

Prereq: Physics 123, 221 and Math 331; concurrent enrollment in Physics 391 required for physics majors. Dual nature of radiation and matter; the Bohr atom; Schrodinger's theory applied to the square well, the harmonic oscillator and one-electron atoms.

382 ATOMIC AND SOLID-STATE PHYSICS (4) W

Prereq: Physics 381; concurrent enrollment in Physics 392 required for physics majors. Quantum physics applied to multi-electron atoms, molecules and solids; spectra, structure and properties of solids.

383 NUCLEAR AND ELEMENTARY PARTICLE PHYSICS (4) S

Prereq: Physics 382; concurrent enrollment in Physics 393 required for physics majors. Structure, properties and decay of atomic nuclei; detection of nuclear radiation; nuclear reactions; introduction to elementary particles.

391 QUANTUM PHYSICS LABORATORY (1) F

Prereq: concurrent enrollment in Physics 381. Selected experiments in quantum physics.

392 ATOMIC PHYSICS LABORATORY (1) W

Prereq: concurrent enrollment in Physics 382. Selected experiments in atomic, molecular and solid-state physics.

393 NUCLEAR PHYSICS LABORATORY (1) S

Prereq: concurrent enrollment in Physics 383. Selected experiments in nuclear physics, including nuclear reactions using a particle accelerator.

403 HOLOGRAPHY (3) S

Prereq: Physics 221 and 231. Basic concepts of holography in thin and thick recording media; theory of elementary holograms and Gabor zone plates; major hologram types; interferometric holography. Laboratory.

405 LASERS (3) S

Prereq: Physics 221 and 382. Properties of laser light, basic laser principles, laser output and its modifications (intracavity elements, Q-switching, frequency doubling, etc.). Laser types: gas, solid, semiconductor and dye. Laser applications.

409 MODERN OPTICS (3) F

Prereq: Physics 362 and 382; concurrent enrollment in Physics 485 recommended. Fourier treatment of Fraunhofer diffraction with applications to optical data processing, etc. Theory of partial coherence with applications to stellar interferometry and Fourier transform spectroscopy.

410 MODERN OPTICS LABORATORY (1) W

Prereq: Physics 409.

411 ELECTRO-OPTICS (3) W

Prereq: Physics 221, 362, 382 (or concurrent). Principles of electro- and acousto-optic modulation of laser light; beam deflection; magneto-optics; wave propagation in non-linear anisotropic media; optical second harmonic generation; theory of optical waveguides; fiber communications and sensors; radiometry; detectors; imaging devices.

412 ELECTRO-OPTICS LABORATORY (1) S

Prereq: Physics 355, 405 (or concurrent), 409, 411. Selected advanced experiments in electro-optics, non-linear optics, fiber optics and laser spectroscopy.

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.

421, 422 QUANTUM MECHANICS (4 ea) F,W

Prereq: Physics 383, Math 225, 226. Review of Schrodinger's theory; eigenfunctions and eigenvalues; operator methods; angular

momentum and spin; stationary-state and time-dependent perturbations; multiparticle systems.

471 ELECTROMAGNETIC THEORY (3) S

Prereq: Physics 371. Dielectric materials; general methods for solving Laplace's and Poisson's equations for the electrostatic potential; magnetic materials; radiation from an arbitrary distribution of charges and currents; radiation from accelerated charges; relativistic electrodynamics. Normally offered alternate years; alternates with Physics 491.

479 RELATIVITY THEORY (3) S

Prereq: Physics 119 and 371. Review of special relativity. Tensor analysis and Riemannian geometry applied to the major Einstein predictions: advance of the perihelion of planetary orbits, the bending and retardation of light in a gravitational field and the Einstein red shift. Offered alternate years; alternates with Astron 416.

485 MATHEMATICAL METHODS OF PHYSICS I (3) F

Prereq: 15 credits in physics; Math 125. Fourier transforms with applications to physics and other relevant sciences.

486 MATHEMATICAL METHODS OF PHYSICS II (3) W

Prereq: 20 credits of physics; Math 225, 226 and 331. Applications of linear vector spaces, complex variables, group theory, etc.

491 STATISTICAL PHYSICS (3) S

Prereq: Physics 222, 382 and Math 226. Probabilistic interpretation of entropy; relationships between statistical mechanics and thermodynamics; Fermi-Dirac and Bose-Einstein statistics with applications. Offered alternate years; alternates with Physics 471.

COURSES IN ASTRONOMY

Courses numbered X37; X97; 300, 400; 417, 445 are described on page 26 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 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.

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.

416 ASTROPHYSICS (3) S

Prereq: Physics 383. Application of physics to stellar systems. Radiation theory; atomic spectra and chemical abundances in stellar atmospheres; nuclear synthesis in stars; evolution of stars. Offered alternate years; alternates with Physics 479.

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
 - Major: political science.
 - 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)

POLITICAL SCIENCE FACULTY

KENNETH R. HOOVER (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) Assistant 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) Assistant 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) Assistant Professor, BA, MA, PhD, Indiana University.
 GERARD F. RUTAN (1969) Professor, BA, MA, University of Montana; PhD, University of North Carolina, Chapel Hill.
 DEBRA J. SALAZAR (1990) Associate Professor, BSc, University of California, Berkeley; MSc, PhD, University of Washington.
 SARA J. WEIR (1989) Assistant 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 (206) 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
- Pol Sci 260
- One of the following: Pol Sci 460, 461, 462, 463
- Additional credits selected from the four 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 area. 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

International and Comparative Politics: Pol Sci 271, 272, 291, 301, 302, 303, 304, 305, 307, 308, 365 or 366, 370, 376, 390, 402, 406, 411, 417, 418a, 418b, 418c, 418d, 418g, 430, 431, 471

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, 365 or 366, 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, 365 or 366, 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, 410
- 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

BACHELOR OF ARTS IN EDUCATION

Major — Political Science

60 credits

Program Adviser: Dr. Sara J. Weir

This major/minor program meets the requirements for Washington state teaching endorsements in political science and social studies.

- Pol Sci 101, 250, 260, 271 or 272, 291, 311, 320
- 25 credits *under advisement* from the following courses: Pol Sci 343, 345, 346, 353, 360, 365, 376, 414 and 415, 420, 427, 446, 449, 450, 464, 465, 467
- Students must also complete the specific program requirements for social studies education. See the Social Studies Education Program section of this catalog.

Minor — Political Science

35 credits

- Pol Sci 101, 250, 271 or 272 or any other 400-level course (under advisement)
- Electives under departmental advisement to total 12 credits
- Soc St 426

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 26 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. Recommended for completion by the end of the sophomore year. Required of majors.

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 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 SOVIET POLITICS (5)

Prereq: Pol Sci 101 or 291 or equivalent. A survey of the Soviet political system: state structures, state-society relations, policy-making, foreign relations.

304 LATIN AMERICA (5)

Prereq: Pol Sci 101 or 291. Government and society in contemporary Latin America.

305 INTERNATIONAL POLITICS IN THE MIDDLE EAST (4)

Prereq: Pol Sci 101 or 270. 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 PUBLIC ADMINISTRATION (5)

Prereq: Pol Sci 250 or one course from Psych 201, Econ 207. Organizational structure and behavior, administrative processes and procedures, and individual behavior in complex public organizations.

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 270. 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 270. Background 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 (4)

Prereq: Pol Sci 270 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 270. 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: judicial power; separation of powers; and federalism.

417 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 different topics.

418 SPECIAL PROBLEMS (2-3)

(Not offered every year.)

418a SEMINAR IN INTERNATIONAL POLITICS (3)

Prereq: Pol Sci 270.

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.

418d SEMINAR IN EAST ASIAN POLITICS (3)

Prereq: Pol Sci 307 or equivalent.

418g CONTEMPORARY CANADIAN POLITICS (3)

420 ENVIRONMENTAL POLITICS (5)

Prereq: Pol Sci 101 or 250. History of environmental problems and their causes. 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. Also offered as Envr 420.

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.

426 POLITICS AND PUBLIC FINANCE (4)

Prereq: Pol Sci 250. The American political system and the development and maintenance of the structure of taxation and the distribution of governmental benefits.

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.

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 21 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 21 or Pol Sci 360 or equivalent. The development of major concepts in the classical liberal tradition, and the critique of that tradition by communarians 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.

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 (4)

Prereq: Pol Sci 260; Econ 206; or permission. The role of political/economics 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.

471 STATE POLICY, ESPIONAGE, AND INTELLIGENCE UTILIZATION (4)

Prereq: permission of instructor.

475 POLITICS AND INFORMATION (4)

Prereq: Pol Sci 250 or 270 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.

490 SENIOR SEMINAR IN AMERICAN GOVERNMENT AND POLITICS (4)

Prereq: senior status, political science majors only, except with permission. Advanced analysis and evaluation of American politics and government. Emphasizes contemporary theory and approaches in the literature.

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 26 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.

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.

542a,b PUBLIC SERVICE INTERNSHIP (5 ea)

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: 15 hours/week for 5 credits and 30 hours/week for 10 credits. (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.

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 28 men and women, all of whom hold a doctoral degree, 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. Concentrations of elective courses have been designed to guide students who wish to complete their requirements beyond the core program by following a prescribed program of studies in the following areas: cognitive, biopsychology, human development, humanistic psychology, industrial/organizational psychology, mental health, and social psychology. The requirements for the major in psychology can be completed by following one of the concentrations or by developing an individualized program of study with faculty 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.
- 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) Assistant 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.
- DAVID SUE (1985) Professor. BS, University of Oregon; MS, PhD, Washington State University.
- CHRISTOPHER J. TAYLOR (1968) Professor. AB, Wittenberg University; MS, PhD, Ohio 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.

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

* 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.

(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.

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; consult your adviser in psychology for assistance in selecting your elective courses

Elective Concentrations

The core program of required courses is designed to ensure a solid background in general psychology.

The requirements for the B.A. in psychology can be met by the 45-credit core program and any 15 credits in psychology. It should be noted that while some of the courses in the 45 required credits are specific (e.g. Psych 201, 306 and 307), others may be met from a series of choices. It is often useful for students to consult faculty advisers in consideration of these choices as well as the elective 15 credits.

The department also offers several areas of concentration within psychology. A student is not required to have a concentration, but these elective concentrations help the student to study certain areas of psychology in greater depth and breadth.

Students will always be able to complete the basic major in psychology, but the availability of the elective concentrations may depend upon departmental staffing and resources.

General: Advisers — R. Thompson, S. Carmean, L. Miller

Students who wish to maximize breadth of study in psychology are advised to select their electives according to the following program:

- At least one course from each of the following pairs: Psych 309, 310; 311, 312; 313, 314; 315, 316; 321, 322; 323, 324; 325, 326
- Two courses from both of the following groups: Psych 401-403, 404-406

Cognitive: Advisers — R. Shaffer, S. Carmean

- Core program to include Psych 324 and 405
- Psych 342 and 343
- Psych 323 is recommended

Biopsychology: Advisers — M. Prim, R. Thompson

- Core program to include: Psych 312, 316, 325, 326, 403, 406
- Electives from Psych 321-324

- Suggested biology courses in addition to the major: Biol 202, 348, 349, 370, 403, 408, 424, 463, 465

Human Development: Advisers — F. Grote and M. Lippman

- Core program in psychology to include Psych 316 and 403; two of the following: Psych 353, 355, 456a, 456b, 456c, 456d
- Electives under advisement

Humanistic-Phenomenological-Existential Psychology: Adviser — R. Shaffer

- Core program to include: Psych 313, 314, 322, 324, 402 or 403, 404 and 405
- Psych 342, 343, 347
- Electives from Psych 346 and additional credits under advisement

Industrial/Organizational Psychology: Adviser — B. L. Kintz

- Core program to include Psych 311 or 313, 315, 321, 322 or 324
- Psych 320
- Psych 420 or five elective credits of psychology under advisement

Mental Health Services: Advisers — M. Lewis, D. Sue and V. Tyler

- Core program to include: Psych 313, 314, and one course from 311, 312, 315, 316
- Psych 402, 431, 432
- Two quarters of Psych 449

Social Psychology: Adviser — G. Cvetkovich

- Core program to include Psych 315, 403
- Three of the following: Psych 309, 310, 320, 401, 420

See the Sociology Department section of this catalog for related course offerings.

Students who are planning to pursue graduate study in psychology are advised to take a supporting sequence of 15 credits (beyond the 101 survey course) in biology, chemistry, mathematics or physics.

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)

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
- 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

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 26 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.

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. Phylogenic comparison of animal behavior, learning, motivation and sensory processes in selected species of animals.

326 PHYSIOLOGICAL PSYCHOLOGY (5)

Prereq: Psych 201. The biological foundations of behavior.

327 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.

344 CONSCIOUSNESS AND ITS ALTERNATE STATES (3)

Prereq: Psych 201. Research and theory concerned with various states of consciousness; sleeping and dreaming, hypnosis, effects of psychoactive drugs, meditation and lateralization of function in the cerebral hemispheres.

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 perception and sensation. 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.

Graduate Courses

Courses numbered 500; 517; 545; 597 are described on page 26 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, operationism, 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.

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. S/U grading.

582 PRACTICUM IN RESEARCH IN PSYCHOLOGY (1-12)

Prereq: permission of instructor. Student initiates and conducts a project under faculty supervision. 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.

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.

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, 125 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.

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 26 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; EdCl 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.

480 SPECIAL PROJECTS IN SCIENCE FOR THE ELEMENTARY GRADES (2-5)

Prereq: Sci Ed 390; permission of instructor. Projects involving science instructional materials and curriculum. Repeatable.

490 SPECIAL PROJECTS IN SCIENCE TEACHING IN THE JUNIOR AND SENIOR HIGH SCHOOL (2-5)

Prereq: Sci Ed 491 or equivalent; permission of instructor. Projects involving science instructional materials and curriculum. Repeatable.

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 412, 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 EdCl 492. S/U grading.

GRADUATE COURSES

Courses numbered 500; 517; 545; 597 are described on page 26 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.

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.

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.

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.

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.

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.

598 RESEARCH PROJECT (6)

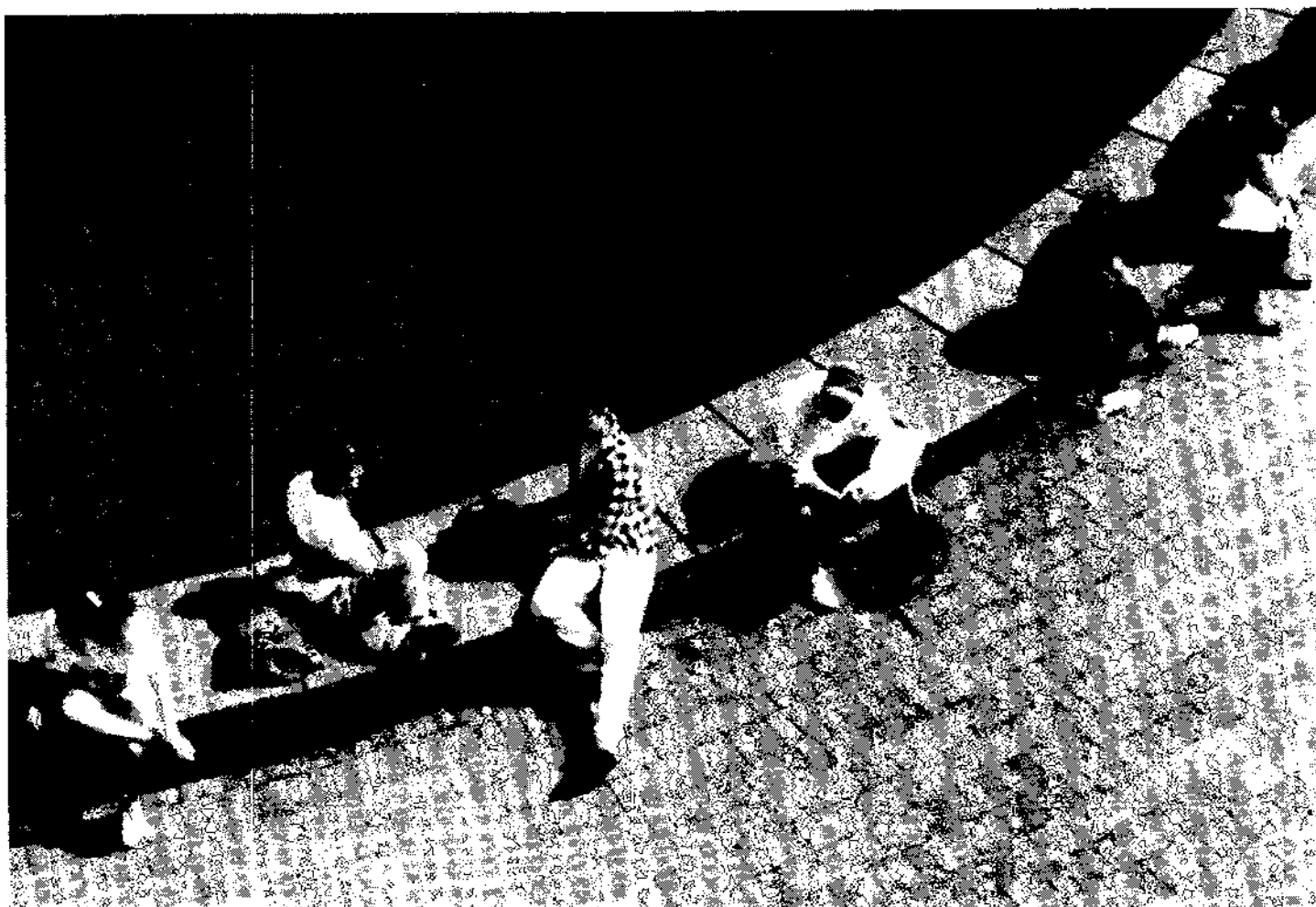
Prereq: admission to M.Ed. natural sciences program, and completion of 15 credits of 500-level courses including one of Sci Ed 590, 592, 593 or 594. Research in fields of biology, chemistry, earth science, general science, physical science, physics or education for non-thesis option.

690a RESEARCH (1-6)

Prereq: admission to program, permission of instructor. Restricted to thesis-related research.

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.



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 Dr. Peter J. Hovenier, program head. 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: Dr. Peter J. Hovenier

- Anth 201 or Soc 201
- Econ 206 or 446
- Geog 201 and Geog 310 or 311
- Hist 103, 104, 391
- Pol Sci 250
- 5 credits upper-division social science
- Soc St 425
- One course from Econ 446*, 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. Loucke
 - Economics — Adviser: Dr. David M. Nelson
 - Geography — Adviser: Dr. James W. Scott

- History — Advisers: Dr. Louis W. Truschel, Dr. Donald W. Whisenhunt
- Political Science — Adviser: Dr. Sara J. Weir
- Sociology — Adviser: Dr. John G. Richardson
- Social Studies — Adviser: Dr. Peter J. Hovenier
- 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: Dr. Peter J. Hovenier****

Required Courses:

- Hist 103, 104, 391 and 10 credits including one course in world, Western or Pacific Rim history or civilization
- Geog 201
- Pol Sci 250
- Econ 206 or 446 and 207 or 447
- Soc St 425 (elementary) or 426 (secondary)

Secondary students who major in economics, geography, history or political science may count course(s) credited for their 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 26 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.

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.

* Econ 446 counts only if not selected above.

** 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.

****The minor adviser for secondary students is the listed adviser for the academic major.

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

CARL H. SIMPSON (1978) Chair. Professor. BA, 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.

DIANNE C. CARMODY (1991) Assistant Professor. BA, MA, PhD, University of New Hampshire.

RENATA FORSTE (1992) Assistant Professor. BS, MS, Brigham Young University; PhD, University of Chicago.

JAMES INVERARITY (1985) Associate Professor. BA, University of Michigan; PhD, Stanford University.

E. R. MAHONEY (1970) Professor. BA, Chico State College; PhD, University of Oregon.

JOHN G. RICHARDSON (1974) Professor. BA, University of the Pacific; PhD, University of California, Davis.

G. EDWARD STEPHAN (1970) Professor. BA, San Francisco State College; PhD, University of Oregon.

DECLARATION OF MAJOR

Students wishing to declare a major in sociology must satisfy one of the following criteria:

- 2.50 overall GPA
- 2.50 GPA in the last 45 credits
- 2.50 combined GPA in Soc 210 and 215.

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's 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 210, 215 and 302
- Any writing intensive 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 300, 400, 410, 480
- 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 or 330
- Electives under departmental advisement

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 221, 320, 321, 421
- Electives under departmental advisement

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

Adviser: J. Richardson

- Any Soc 201, 221, 251, 255, 260, 268 (no more than two of these courses can apply to major); Soc 210, 215, 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
- 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

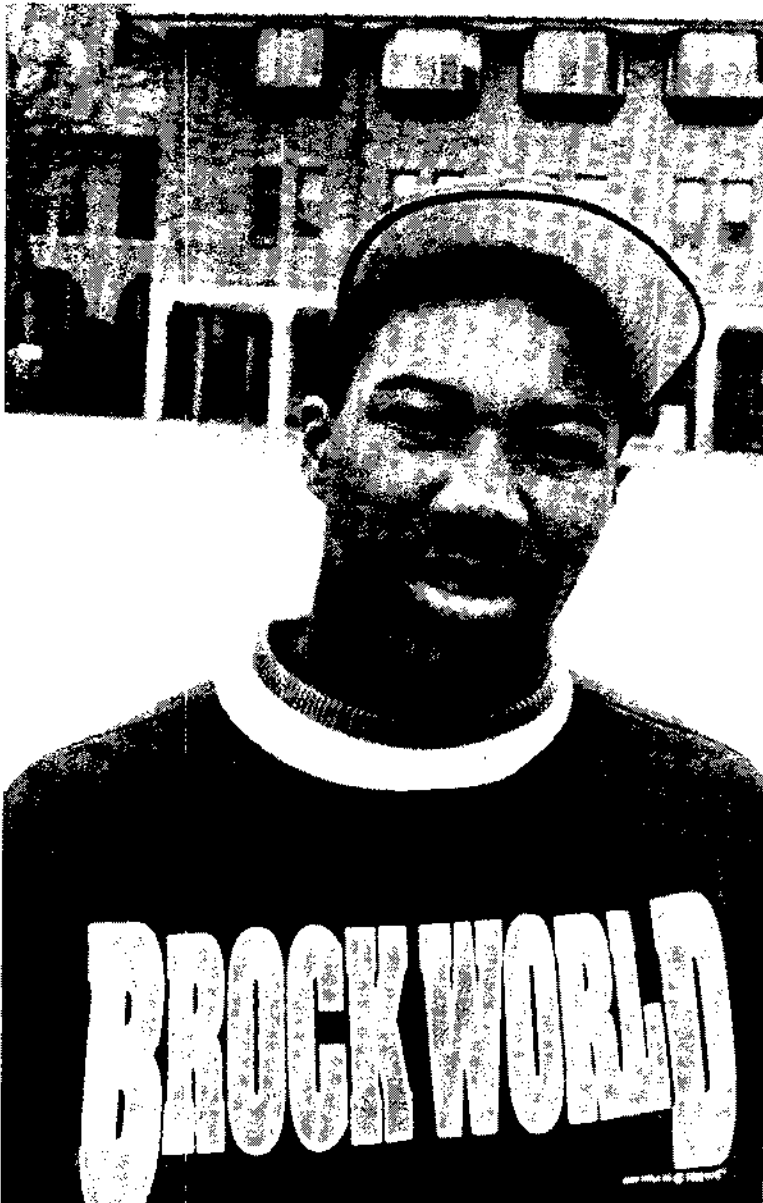
75 credits

Adviser: G. E. Stephan

- Math 124, 125
- CS 120
- Any one course from Soc 201, 221, 251, 255, 260, 268; Soc 210, 215, 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 26 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.

210 INTRODUCTION TO RESEARCH METHODS (5)

An introduction to scientific research in sociology: principles of research design, the nature of empirical observation, sampling and measurement techniques, principles guiding the interpretation of social scientific research.

215 SOCIAL STATISTICS (5)

Prereq: completion of mathematics GUR. Application of statistical reasoning and methods in sociological 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: 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.

320 COMPUTER APPLICATIONS FOR SOCIAL SCIENCE DATA (4)

Prereq: any Soc 201, 221, 251, 255, 260, 268 and Soc 215 or equivalent. Designed to integrate fundamental statistical knowledge with direct computer applications for the organization and analysis of data sets encountered in social science research. Training in the use of library statistical routines (e.g., 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 215 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.

338 SOCIOLOGY OF SEXUAL BEHAVIOR (5)

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 210, 215, 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.

363 SOCIOLOGY OF RELIGION (5)

Prereq: any Soc 201, 221, 251, 255, 260, 268 and 302, or permission of instructor. Religion as a force for change or stability; the social causes of religious beliefs; religion and the search for meaning; the structure and organization of religious groups. Special emphasis on recent experimentation with Eastern and charismatic religions.

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.

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)

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.

410 RESEARCH (3-5)

Prereq: permission of instructor. Independent investigation of a problem through field or library research, or active participation as research assistant on a faculty research project.

415 ADVANCED QUANTITATIVE ANALYSIS (4)

Prereq: any Soc 201, 221, 251, 255, 260, 268; Soc 210, 215 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 215, 320, 321; or permission of instructor. Theory and method of population analysis; measures of mortality, fertility and migration; population forecasting techniques.

426 ADVANCED TOPICS IN DEMOGRAPHY (4)

Prereq: Soc 215, 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: Soc 210, 215, 352. Detailed review of current theory and research in spouse abuse, elder abuse, and child abuse and neglect. Social, cultural, psychological and legal factors. Theoretical explanations of family violence. Involves extensive student participation and discussion.

456 POLICE AND SOCIETY (4)

Prereq: Soc 210, 215, 255, 302 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 and permission of instructor. Participant observation in research and applications in human services agencies and organizations. Elective credits only; does not apply toward sociology major. 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.

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)

Graduate Courses

Courses numbered 500; 517; 545; 597 are described on page 26 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. Repeatable with different subject area. Examines current research in a selected substantive field of sociology.

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. 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 degree. The Bachelor of Arts degree program offers a graduate and non-graduate track. The graduate track is considered to be a professional degree which qualifies the student for preparation at the graduate level. 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. Also, an equivalency program is available for those not seeking the advanced degree.

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 and by the National Council for the Accreditation of Teacher Education.

CERTIFICATION IN SPEECH-LANGUAGE PATHOLOGY/AUDIOLOGY

Two types of professional certification are available: state certification (Communication Disorders Specialist, ESA-CDS), 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 necessary for employment in hospitals and clinics. 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 in 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) 65C-3885.

SPEECH PATHOLOGY AND AUDIOLOGY FACULTY

LOREN L. WEBB (1965) Chair. Professor. BS, University of California, Berkeley; MA, University of Redlands; PhD, University of Washington. Undergraduate adviser (audiology/aural rehabilitation).

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).

BARBARA MATHERS-SCHMIDT (1991) Assistant 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, Aural Rehabilitation Clinic. Transfer student adviser (audiology/aural rehabilitation/hearing science).

MICHAEL T. SEILO (1970) Professor. BS, Northern Michigan University; MA, University of Arizona; PhD, Ohio University. Director, Audiology Clinic; audiology graduate adviser; undergraduate adviser (audiology/aural rehabilitation/speech acoustics/perception).

LINA ZEINE (1983) Associate Professor. BA, American University of Beirut, Lebanon; MA, University of Colorado; PhD, University of Kansas. Coordinator (graduate studies).

Clinic Staff

SUE BLACKADAR (1990) Speech-Language Clinic Supervisor. BS, Colorado State University; MS, Idaho State.

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).

DONNA HUNTER (1985) Audiology and Aural Rehabilitation Clinic Supervisor. BA, University of Saskatchewan; MS, Minot State College, North Dakota (audiology).

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.

MARY ANN WOOD (1991) Audiology and Aural Rehabilitation Supervisor; BA, MA, Western Washington 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 continue their studies through a graduate degree. 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

64 credits including minor

- SPA 351, 352, 353, 354, 356, 361, 371, 372, 373
- SPA 450, 451, 454, 457, 458a*, 458b*, 463
- Electives under departmental advisement
- Required minor

Minor — Speech-Language Pathology and Audiology

25 credits

(A minimum of 25 credits. More than 25 are recommended.)

- SPA 351, 354, 361, 371, 373
- Electives under departmental advisement

* Graduate track only

GRADUATE STUDY

For a concentration leading to the Master of Arts degree, see the Graduate School section of this catalog.

COURSES IN SPEECH-LANGUAGE PATHOLOGY AND AUDIOLOGY

Courses numbered X37; X97; 300, 400; 417, 445 are described on page 26 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, central nervous system, 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 351, 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 (3)

Prereq: SPA 352 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, cerebral development, localization and lateralization.

451 LANGUAGE DISORDERS II (3)

Prereq: SPA 354. 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, 373. Current principles, methods and materials used

in the assessment and treatment of a variety of communication disorders. Directed observation.

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.

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.

460 CLINICAL PRACTICE IN SPEECH-LANGUAGE THERAPY (3)

Prereq: SPA 458b, graduate track and written permission of the instructor.

462 AUDIOMETRIC TESTING (4)

Prereq: SPA 371 or permission of instructor. Introduction to the theory and application of pure tone, impedance and speech audiometry to the assessment of hearing function; implications for rehabilitation.

463 AURAL REHABILITATION (4)

Prereq: SPA 371; SPA 464a may be taken concurrently. Auditory training, speech reading and language training for the aurally handicapped.

464a,b,c CLINICAL PRACTICE IN AURAL REHABILITATION (2 ea)

Prereq: SPA 458b, 463, or 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 SIGN LANGUAGE OF THE DEAF (3)

Prereq: permission of instructor. Introduction to the theory and practice in use of the manual language methods with the hearing impaired.

465a INTERMEDIATE SIGNING (2)

Prereq: SPA 465. Theory and practice of total communication; intermediate sign language.

466 MEDICAL AUDIOLOGY (3)

Prereq: SPA 371. Pathologies of the hearing mechanism and their auditory manifestations. Discussion with physicians regarding diagnosis, referrals and report writing.

468a,b,c CLINICAL PRACTICUM IN AUDIOLOGY (2 ea)

Prereq: 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 26 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 the aphy 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 (3)

A survey of recent concepts, issues, techniques and methods in speech-language pathology and audiology.

552 ADVANCED DIAGNOSTIC METHODS IN SPEECH-LANGUAGE PATHOLOGY (3)

Prereq: SPA 457, 558 and permission of instructor. Specialized methods, tests and instruments used in the assessment and evaluation of a variety of communication disorders.

552a PRACTICUM IN DIAGNOSTIC METHODS IN SPEECH-LANGUAGE PATHOLOGY (2)

Prereq: SPA 457, 558 and permission of instructor. 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 disfunction. Some discussion of diagnostic methods.

557 ADVANCED SPEECH PATHOLOGY (3)

Diagnosis and treatment of laryngectomees, motor speech disorders 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 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, 464a,b,c or 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 audiologic research.

566 BIOACOUSTICS (3)

Prereq: SPA 561 or 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 C or better.

570 THE HEARING-IMPAIRED CHILD IN THE CLASSROOM (3)

Prereq: permission of instructor. The unique problems of the mainstreamed hearing-impaired child in the classroom; methods and techniques of working with this population.

571 HEARING AIDS (4)

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 SEMINAR: ELECTROPHYSIOLOGICAL TESTING (3)

Prereq: SPA 561, 566, 568a or permission of instructor. Current topics and issues in specialized areas of averaged electro-encephalic audiometry; research trends and problems. Lab required.

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 THE COMMUNICATIVELY DISORDERED (3)

Contemporary theories and techniques of counseling the communicatively disordered and their families.

577 PEDIATRIC AUDIOLOGY (3)

Prereq: SPA 371, 462, 568a or 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.

580 COMMUNICATION DISORDERS IN THE PUBLIC SCHOOLS (2)

Prereq: SPA 351 or permission of the instructor. Role of the professional in organizing and directing a speech-language therapy program in the public school setting. Required for CDS track.

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: graduate status, SPA 450 or equivalent. 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 556 and 557 or equivalent. Differential diagnosis assessment tools and theories of diagnostic methods. Treatment approaches for adult neurogenic disorders.

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, permission of the department, demonstrated proficiency in clinical skills, and a minimum of 200 supervised clinical clock hours; SPA 598a is prerequisite to 598b. Supervised off-campus experience providing opportunities to develop and demonstrate clinical competence in the management of communication disorders in an approved public school setting. (Only 3 credits of SPA 598a and 3 credits of 598b are applicable toward the M.A. degree — see "Requirements in Specialization.") S/U grading.

599a,b INTERNSHIP IN THE CLINICAL SETTING (8 ea)

Prereq: completion of the graduate major course requirements, permission of department, demonstrated proficiency in clinical skills and a minimum of 200 supervised clinical clock hours; SPA 599a prerequisite to 599b. Supervised off-campus experience providing opportunities to develop and demonstrate clinical competence in the management of communication disorders in an approved clinical setting. (Only 3 credits of 599a and 3 credits of 599b are applicable toward the M.A. degree — see "Requirements in Specialization.") S/U grading.

690 THESIS (1-9)

691 NON-THESIS OPTION (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.

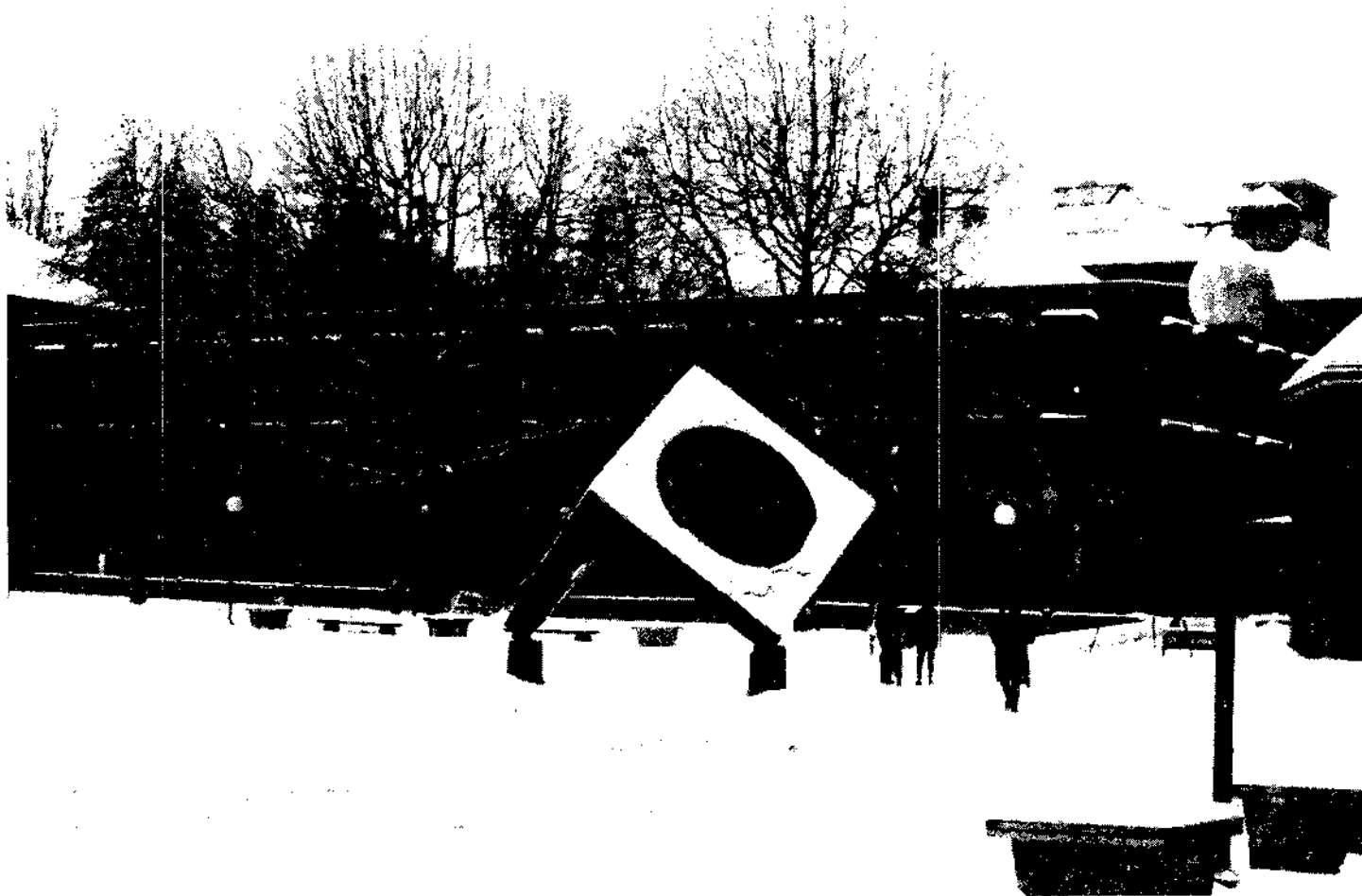
This major takes the form of a contract for an individualized course of study. The course of study may include courses from any department, program or college at Western that is open to the student and for which the student is qualified. The contract is developed by the student and an advisory committee 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 the advisory committee's approval. 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 (206) 650-3031.



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 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 28 credits, of which 25 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
- Ling 204
- 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 425) and/or communication (e.g., Comm 416), 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 would be granted a Western Washington University TESL certificate acknowledging successful completion of the program.

COURSES IN TESL

420a,b METHODS AND MATERIALS IN TESL (3 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 one-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 or Fairhaven College.

Close advisement is recommended, as new courses may apply to this minor.

For program advisement, contact Kathryn Anderson, director, phone (206) 650-4910, or Women Studies office, Miller Hall 177, phone (206) 650-3534.

PARTICIPATING FACULTY

KATHRYN ANDERSON, Fairhaven, Director. American women's history and politics, gender and communication, women's oral history.

BONNIE BARTHOLD, English. African literature, women and film.

KAREN BRADLEY, Sociology. Organizations, stratification, political sociology, cross-national research.

ROSEANN BRUNTON, English. Feminist literary theory, post-colonial literatures, imaginative literature by women of color.

KRIS BULCROFT, Sociology. Aging, family, intimate relationships.

MICHAEL BURNETT, Fairhaven. Women and fiction.

DIANE CARMODY, Sociology. Family, violence, criminology.

MEREDITH CARY, English. Gender equality in the study of literature and writing.

DAVN DIETRICH, English. Feminist theatre, 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.

LEONARD M. HELFGOTT, History. Women in the Middle East.

DANA JACK, Fairhaven. Women and psychology.

ANNE LOBECK, English. Linguistic analysis of gender, naming and representation.

JOHN McCLENDON, Fairhaven. Women and film.

MAUREEN O'REILLY, Theatre Arts. Women playwrights.

SARA WEIR, Political Science. Social and health policy, women and politics, feminist political theory.

Minor

30 credits

Core

13-19 credits

WS 211

- One course at 300 level or above in each of the following areas*
 - *Women in History and Politics*: Fair 313, 411, 418; Hist 489; Pol Sci 345, 469, 570a*, WS 311, 313.
 - *Women in Science and Society*: Anth 353, 417e, 453; Fair 321, 333, 344, 347, 442; Health Ed 152; Psych 219; Soc 201d, 332, 333, 368[†].
 - *Women in Language and the Arts*: Art History 490*; Eng 327*, 338, 341, 406*, 424, 425, 439; Fair 326*, 327*; ThA 428e*
- WS 411
- 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 26 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, including a focus on white and non-white women.

313 AMERICAN WOMEN STUDIES: 1850-PRESENT (5)

Prereq: Hist 103 or 104 or Eng 216 or another women studies course. Factors influencing the female gender role as it changed in the last century and a half from the "Cult of True Womanhood" to the "New Woman" to the "Feminine Mystique" to the "Liberated Woman." Emphasis on the impact of changing modes of American capitalism; women's efforts for equal rights and social reform; changing patterns of fertility; women's increased participation in the work force; changes in women's role in the domestic sphere.

315 ISSUES OF THE WOMEN'S MOVEMENT (3)

Prereq: Pol Sci 101, Soc 101 or permission of instructor. Psychological, social, political and economic issues promoted by the women's movement; sex stereotyping in the family, education, politics and economy; past efforts to overcome sex discrimination; contemporary legal and public policy issues related to women; women's life experiences in other countries; theories of women's liberation.

353 SEX AND GENDER IN CULTURE (4)

Prereq: 5 credits of anthropology. Cross-cultural study of gender stereotypes, gender and language, gender and work roles, gender and religion. Also listed as Anth 353.

411 SENIOR PROJECT (1-6)

Prereq: must have completed women studies core. An interdisciplinary research or field project which demonstrates the student's ability to apply knowledge of subject matter and methodology.

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.

* Topic subject to approval by adviser.

COLLEGE OF BUSINESS AND ECONOMICS

Dr. Dennis R. Murphy, Dean

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 organized into four departments: Accounting; Economics; Finance, Marketing and Decision Sciences; and Management. These departments are interdependent and their programs draw upon the whole College.

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. Allan G. Sleeman 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

Academic Programs Leading to Undergraduate and Graduate Degrees

Accounting BA
 Business Administration BA
 Economics BA
 Manufacturing Management BS*
 Master of Business Administration MBA**

* Pending final approval from HECB.

** Consult the Graduate School for further details.

Combined Majors

Interdepartmental majors are given in accounting-computer science, accounting-economics, business administration-computer science, 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. A student must have earned at least 75 quarter hours of college credit and have met specific academic standards prior to applying for admission to one of the majors offered in CBE. Students who wish to major in business administration or accounting must have earned at least a 2.75 GPA in the equivalent of the following courses: Acctg 240, 245; Econ 206, 207; Math 157; FMDS 205; Mgmt 271. Prerequisites for the economics program are listed in the departmental section. Prospective majors should consult the individual department sections of this catalog for departmental admissions criteria.

Enrollment in most upper-division courses (300 and above) is restricted to students who have been officially admitted to the College or who have been given special permission to enroll. Therefore, it is very important that students contact the appropriate department or the College of Business and Economics as early as possible. Applications for admission are made directly to the appropriate department. Academic advisement is provided by the faculty.

Students may enroll in lower-division courses without formal admission into the College of Business and Economics.

See the Admissions section of this catalog for policies and procedures relevant to admission to Western Washington University.

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.

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.

Professional Development Program. This is the outreach arm of the College, providing programs and seminars of interest to our constituency.

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 of management, with economic organizations using accounting information to plan, control and report their financial activity. A thorough knowledge of accounting is, therefore, necessary to understand the operation and financial condition of any complex business or governmental agency.

The Accounting Department offers a broad program of courses in accounting 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 wealth of career opportunities available to the accounting graduate when they select their accounting elective courses.

Because accountants must communicate effectively and must be proficient in mathematics, it is recommended that prospective accounting students take four years of English and at least three years of mathematics in high school.

DECLARATION OF MAJOR

To declare a major in accounting, a student (1) must have earned at least 75 credits and (2) must have completed the following foundation courses (or equivalents) with a grade point average at or above 2.75:

- Acctg 240, 245
- Econ 206, 207
- FMDS 205
- Mgmt 271
- Math 157

The minimum grade standard may be adjusted each year; however, any change in standards will be published in the *Timetable of Classes*.

A student may apply for acceptance as an accounting or combination accounting/computer science or accounting/economics major by obtaining forms and instructions from the departmental secretary.

Electronic spreadsheet competence is required in some 300/400-level accounting courses.

ENROLLMENT PRIORITIES

Because of heavy demand for accounting courses, the department has found it necessary to give priority for enrollment in all of its courses to students who have not previously received a grade in the course, including W or Z. The additional following priorities will be applied for registering for all upper-division courses:

- Students officially declared as majors in accounting, accounting/computer science or accounting/economics.
- Students who are officially declared majors in other departments in the College of Business and Economics.
- Other students who have completed Acct 240 and 245 (or equivalent at other institutions).

ACCOUNTING FACULTY

STEPHEN V. SENGE (1985) Chair. Associate Professor. BA, California Western University; MPA, Denver University; MA, DBA, Kent State University, CMA.

PARPORN AKATHAPORN (1992) Assistant Professor. BBA, Thammasat University, Thailand; MBA, DBA, Kent State University.

MARGUERITE R. HUTTON (1989) Assistant 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.

STEVEN PASKIN (1991) Assistant Professor. BS, MS, San Diego State University; PhD, University of Colorado.

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.

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) Assistant 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, 409
- Math 157

Combined Major — Accounting/Computer Science

107 credits

- Acctg 240, 245, 341, 342, 461

ACCOUNTING

- 6 upper-division accounting credits under departmental approval
- Comp Sci 120, 217, 221, 222, 223, 224, 415, 430, 471
- FMDS 205,* 330, 341, 495
- Mgmt 271, 311, 360, 482
- Econ 206, 207, 409
- 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 26 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.

242 PRINCIPLES OF FINANCIAL ACCOUNTING (4)

Prereq: Acctg 241. Emphasis on partnership and corporation accounting. Offered fall 1993 only.

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. 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 342. 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.

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

* May substitute Math 240 for FMDS 205.

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.

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.

In addition, the department offers combined majors in economics/accounting, economics/mathematics, economics/political science and economics/environmental studies.

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

To declare a major in economics, a student must have completed 75 credits; completed a course in college algebra (equivalent of Math 103); and completed Econ 206, 207, 208, and either 306 or 307, with an average grade of 2.75. Under exceptional circumstances, these requirements may be waived at the discretion of the chair. Further information and major declaration forms may be obtained from the department in Parks Hall 315.



Transfer students should contact the department about their major prior to registering to assure that they enter the course sequence correctly and to receive departmental evaluation of course work completed at other institutions.

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.

- ALLAN G. SLEEMAN (1977) Chair, Associate Professor. BSc (Econ), London School of Economics; PhD, Simon Fraser University.
- 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) Assistant 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.
- MARYANN 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 State College; PhD, Indiana University.
- DAVID M. NELSON (1977) Professor. BA, Whitworth College; MA, PhD, University of Oregon.
- DIANA WEYMARK (1988) Assistant Professor. BA, MA, Dalhousie University; PhD, University of British Columbia.

BACHELOR OF ARTS

Major — Economics

72 credits

- Econ 206, 207, 208, 303, 306, 307, 406 or 407
- FMDS 205
- At least one of Econ 470, Econ 475, or FMDS 305
- 36 credits of electives in the College of Business and Economics, under departmental advisement: at least 28 of these credits must be in economics; a minimum of 16 of the 28 credits of economics electives must be at the 400 level

Minor

24 credits

- Econ 206, 207
- Additional courses selected under departmental advisement; at least 12 credits must be at upper-division level

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

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, 410
- 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

100 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, 483
- 12 additional credits in upper-division economics courses, of which a minimum of 4 must be at the 400-level, to be selected under departmental advisement
- FMDS 205 (or equivalent); or Envr 340 (or equivalent)
- Econ/Envr 493 (or approved alternative)
- Envr 301, 302, 303, 401, 402, 436, 490; 464 or 465
- 16-17 additional credits in upper-division

environmental studies courses, under faculty advisement

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 26 of this catalog.

206 INTRODUCTION TO MICRO-ECONOMICS (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 MACRO-ECONOMICS (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 103 or equivalent. Introduction to the use of algebra and differential calculus in the formulation and comparative statics of simple micro and macro economic models.

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 MICRO-ECONOMICS (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 MACRO-ECONOMICS (4)

Prereq: Econ 207. 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.

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.

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.

387 ENERGY ECONOMICS (4)

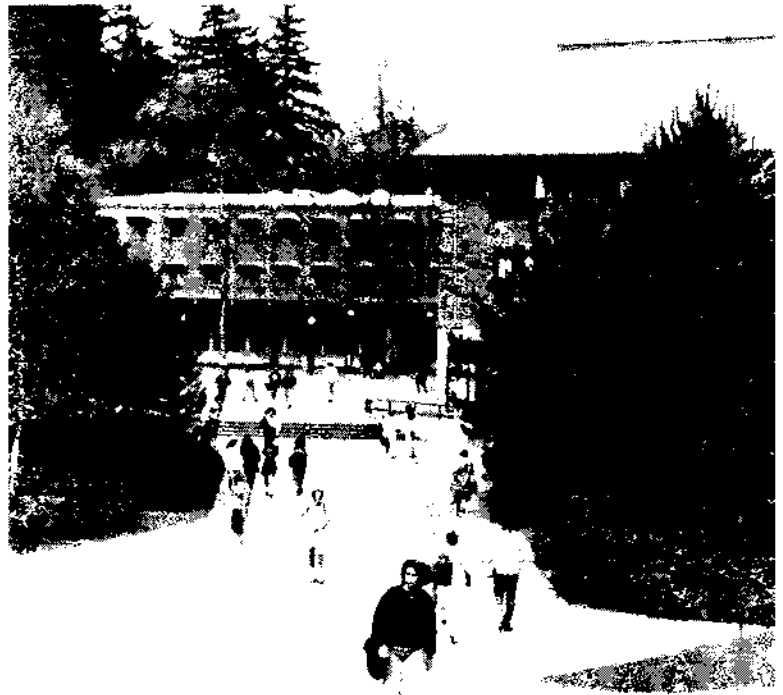
Prereq: Econ 206. The role of energy in the modern economy and the key aspects of energy supply and demand. Topics include oil and OPEC, regulation of natural gas and electric utilities, nuclear energy, conservation, solar power and unconventional energy sources, with an emphasis on public policy.

405 RADICAL ECONOMICS (4)

Prereq: Econ 206 and 207. 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 MICRO-ECONOMICS (4)

Prereq: Econ 306; Econ 208 or equivalent; FMDS 205 or Math 341 recommended. Application of quantitative and theoretical tools in key areas of micro-economics, 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 MACRO-ECONOMICS (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.

409 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.

410 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.

430 LABOR ECONOMICS (4)

Prereq: Econ 306 or 409. 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 409. 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 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 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 409. 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.

464 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.

465 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.

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.

480 URBAN ECONOMICS (4)

Prereq: Econ 206. Economic forces behind urban development, with emphasis on location decisions of households and firms. Economic analysis of urban problems including land use, transportation, housing and urban public finance.

483 RESOURCE ECONOMICS (4)

Prereq: Econ 306 or 409. Principles of efficient resource allocation over time, distributional equity and cost/benefit analysis. Examines exhaustible resources such as minerals, renewable resources such as fisheries and forests, and quasi-public goods including water and wilderness.

485 COMPARATIVE ECONOMIC SYSTEMS (4)

Prereq: Econ 206 or 207. A comparative analysis of the major economic systems; a critical appraisal of underlying philosophies, structures and individual performance.

486 ECONOMIC DEVELOPMENT (4)

Prereq: Econ 206 or 207. Causes and conditions characterizing the process of economic development. An evaluation of alternative approaches toward development policies.

487 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.

490 INTERNSHIP IN ECONOMICS (4-10)

Prereq: eligibility outlined in departmental internship policy statement. 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 26 of this catalog.

Admission to Graduate School or special permission required. See the Graduate School section of this catalog. These courses are offered irregularly in conjunction with the MBA Program also described in the Graduate School.

510 SEMINAR IN PUBLIC ECONOMICS (4)

Prereq: written permission of instructor. An analysis of the behavior of the public sector and the incidence of its attempts to achieve allocation, distribution and stabilization goals.

511 SEMINAR IN FINANCIAL INSTITUTIONS AND MONEY (4)

Prereq: written permission of instructor. The monetary and financial system. Relation of economic theory to monetary policy and economic activity.

525 SEMINAR IN LABOR ECONOMICS (4)

Prereq: written permission of instructor. Selected topics in the economics of labor markets and the process of collective bargaining.

561 SEMINAR IN INTERNATIONAL ECONOMICS (4)

Prereq: written permission of instructor. Detailed analysis of the pure and monetary theories of international trade and their relevance to the modern world.

582 SEMINAR IN REGIONAL ECONOMICS (4)

Prereq: written permission of instructor. Case studies in regional social accounting, growth and stability, intra- and interregional relations; concepts and criteria of regional planning.

FINANCE, MARKETING AND DECISION SCIENCES

The Department of Finance, Marketing and Decision Sciences (FMDS) provides the opportunity for study in several related fields of business administration. The primary fields include finance, marketing and management information systems. Additional course work is provided in international business, business statistics and business policy. These fields cover a variety of responsibilities in both public and private organizations. An emphasis on breadth, general knowledge and analytical skills pervades all levels of the undergraduate curriculum. Graduates from the FMDS Department will have completed a broad business program plus a wide range of non-business subjects, reflecting the department's belief that education should prepare students for satisfying achievements in life as well as business.

PROGRAM OBJECTIVES

Departmental programs have been designed to prepare students for leadership roles in business and the community. The educational objectives of the department are to:

- Encourage intellectual inquiry.
- Provide students with the perceptual and analytical skills necessary in making decisions and evaluating policy in business.
- Develop student understanding of the social, economic and regulatory environment of business.
- Enhance educational opportunities through research activities of faculty and students.

The program is designed for students with a variety of career goals including opportunities with financial institutions, manufacturing and retail firms, service industries and the public sector.

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 (see next section), a student will be assigned a faculty adviser with whom the student must consult concerning mandatory and elective courses in the chosen concentration. The faculty adviser may also be a source of information concerning career objectives and opportunities.

DECLARATION OF MAJOR

To be eligible to declare a major in business administration, a student (1) must have earned at least 75 credits and (2) must have completed the following foundation courses (or equivalent courses) with a grade point average at or above 2.75.

- Acctg 240, 245
- Econ 206, 207
- FMDS 205
- Mgmt 271
- Math 157

Declaration should be accomplished as early as possible since acceptance as a major provides priority access to upper-division classes. Transfer students may be considered for admission prior to enrollment at WWU.

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) Associate 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.

* 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.

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.

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 409
 - 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 446, 447, 448, 449
- Two courses from Acctg 331, 341, 375, Econ 306, 307, 311, 410, FMDS 345, 346, 456

International Business

- FMDS 470
- One course from: Econ 462, 463, 485, 486
- Two courses from FMDS 436, 473, Mgmt 366, 481, Acctg 451
- Three courses under advisement

Management Information Systems

- Mgmt 312, FMDS 309, 410, 411
- Three courses from: FMDS 413 (may be repeated), FMDS 414, Acctg 421, Comp Sci 415 (one COBOL course is highly recommended for the MIS concentration)

Marketing

- Mgmt 312, FMDS 439
- Three courses from FMDS 430, 431, 432, 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 26 of this catalog.

201 INTRODUCTION TO BUSINESS COMPUTER SYSTEMS I (2)

Prereq: Acctg 241 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 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 ADVANCED MANAGEMENT INFORMATION SYSTEMS (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.



348 ENGINEERING ECONOMY (4)

Prereq: junior status in engineering technology. (Not open to CBE majors.) Methods for evaluating benefits from proposed engineering ventures in relation to costs associated with the undertaking. Problems, such as the economic selection of equipment and economic justification of projects.

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 308 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.

413 TOPICS IN MANAGEMENT INFORMATION SYSTEMS (2-4)

Prereq: FMDS 308 or Acctg 321. Varying topics in management information systems such as use of commercial information utilities, data communications systems, business graphics and office automation. 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.

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.

434 MANAGEMENT OF DISTRIBUTION SYSTEMS (4)

Prereq: FMDS 330, computer literacy; FMDS 305 or equivalent and FMDS 430 recommended. Analysis of organizational structure, operations and management of wholesale, retail and other intermediaries in the channels of distribution.

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 MARKETING MANAGEMENT (4)

Prereq: FMDS 330, 341, computer literacy; FMDS 470 recommended. Formulation and implementation of international marketing strategies. Analysis of the contemporary global marketing environment; marketing mix issues and decisions in international markets; global competitive analysis and strategy; organizing for international marketing; current problems and practices in multinational firms.

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.

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 (4)

Prereq: FMDS 330, 341 or permission of instructor. Environment of international business and its impact on the firm. Globalization of markets, the multinational corporation, adjustments of business operations and products to foreign conditions.

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.



PROGRAM OBJECTIVES

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.

The department educational objectives are:

- 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.

THE CURRICULUM

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.

JOSEPH E. GARCIA (1985) Associate Professor. BA, State University of New York College at Cortland; MA, Western Washington State College; PhD, University of Utah.

PETER HAUG (1986) Associate 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.
 PATRICIA C. KELLEY (1990) Assistant Professor. BA, University of New Hampshire; MBA, PhD, Boston University.
 EUGENE OWENS (1975) Professor. BA, University of Arizona; MS, Purdue University; MS, George Washington University; PhD, University of California, Los Angeles.
 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) Assistant Professor. BA, JD, University of Washington; MA, Western Washington University.

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. The declaration procedures and the course requirements of the two majors contain significant differences. Those differences are outlined below.

DECLARATION OF MAJOR

Business Administration (Management)

To be eligible to declare a major in business administration (management), a student must have (1) earned at least 75 credits and (2) completed the following foundation courses (or equivalent courses) with a grade point average at or above 2.75.

- Acctg 240, 245
- Econ 206, 207
- FMDS 205
- Mgmt 271
- Math 157

Declaration should be accomplished as early as possible since acceptance as a major provides priority access to upper-division classes. Applications for admission to the major may be submitted at any time. Transfer students may be considered for admission prior to enrollment at WWU.

Upon acceptance to the major, each student is assigned a faculty adviser. The student shall arrange to meet with that faculty member for academic advisement prior to registering for the following quarter.

Manufacturing Management

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 following courses: Acctg 240, 245; Chem 115; Econ 206, 207;

FMDS 205; Math 157; Mgmt 271; Physics 114. Students failing to satisfy these requirements may petition for an exception with program faculty.

BACHELOR OF ARTS

Major — Business Administration (Management)

90-92 credits

- Foundation Courses (28 credits):
 - Acctg 240, 245
 - Econ 206, 207
 - FMDS 205
 - Mgmt 271
 - Math 157
- Core Courses (44 credits):
 - Econ 409
 - FMDS 305, 308, 330, 341, 495
 - Mgmt 311, 312, 322, 360, 482
- Elective Courses (18-20 credits)
 - A minimum of 18-20 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

Students may elect Mgmt 491 and 492 in lieu of FMDS 495.

Concentrations

Human Resource Management

- Select four courses from Mgmt 401, 404, 423, 424, 425, 426 or 427
- One course under advisement

Management

- Mgmt 401, 405, 406
- Select one course from Mgmt 301, 402, 471 or 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

BACHELOR OF SCIENCE**Major — Manufacturing Management***

141 credits

- 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 409
 - FMDS 305, 308, 330, 341, 495
 - Mgmt 301, 311, 312, 322, 360, 460, 463, 468, 469, 482
 - ETec 110, 220, 323
 - Plus six courses (24 credits) under advisement and Mgmt 490 (two internships, one credit each)

Students may elect Mgmt 491 and 492 in lieu of FMDS 495.

Minor — Business Administration

40 credits

- Acctg 240, 245
- Econ 206, 207
- FMDS 205, 330, 341
- Mgmt 271, 311
- Math 157

ENROLLMENT PRIORITIES

Because of high student demand for management courses, the department must give enrollment priority to students for whom those courses are requirements rather than electives. Priority is given to majors in 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 26 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.

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. Examination of concepts for planning, organizing, and controlling manufacturing and service operations. Topics include process systems, forecasting models, facility location and layout, production planning, inventory systems, project scheduling and quality assurance.

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 ORGANIZATION DEVELOPMENT (4)

Prereq: Mgmt 322 or equivalent. Current research and application to planned organizational change and internal training techniques.

405 INTRODUCTION TO MANAGERIAL BEHAVIOR (2)

Prereq: Mgmt 311. Applied managerial techniques explored in a supervised environment.

406 ADVANCED MANAGERIAL BEHAVIOR (4)

Prereq: Mgmt 405. Under supervision, students are responsible for design of and conduct of Mgmt 405 sessions. Comparison, analysis and critique of relative success of techniques explored.

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

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

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, forms of compensation and reward, compensation levels.

460 OPERATIONS DESIGN SYSTEMS (4)

Prereq: Mgmt 360. Examination of project planning and the design of integrated manufacturing systems. Covers critical path method (CPM), program evaluation and review technique (PERT), production systems, facility layout and location, group technology, and design of flexible, computer-integrated and just-in-time manufacturing systems.

463 OPERATIONS PLANNING SYSTEMS (4)

Prereq: Mgmt 360. Study of the principles and techniques for planning production. Topics include forecasting, master scheduling, capacity planning, material requirements planning (MRP), just-in-time (JIT) manufacturing and optimized production technology (OPT).

465 OPERATIONS CONTROL SYSTEMS (4)

Prereq: Mgmt 360. Study of the principles and techniques for controlling manufacturing and service operations. Topics include shop

floor control, inventory control, quality control management and scheduling for just-in-time (JIT) and flexible manufacturing systems (FMS).

468 OPERATIONS POLICY AND STRATEGY (4)

Prereq: Mgmt 360. Review of operations management principles and examination of current topics in domestic and international manufacturing and service operations. Detailed analysis of case studies in production and operations management.

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.

472 BUSINESS-ENVIRONMENT MEDIATION (4)

Familiarizes advanced business students with segments of the regulatory environment they are likely to interact with in the workplace. Focus on resolving conflict on environmental issues, environmental regulations and administrative process. Practicum assigned to provide experiential learning.

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)

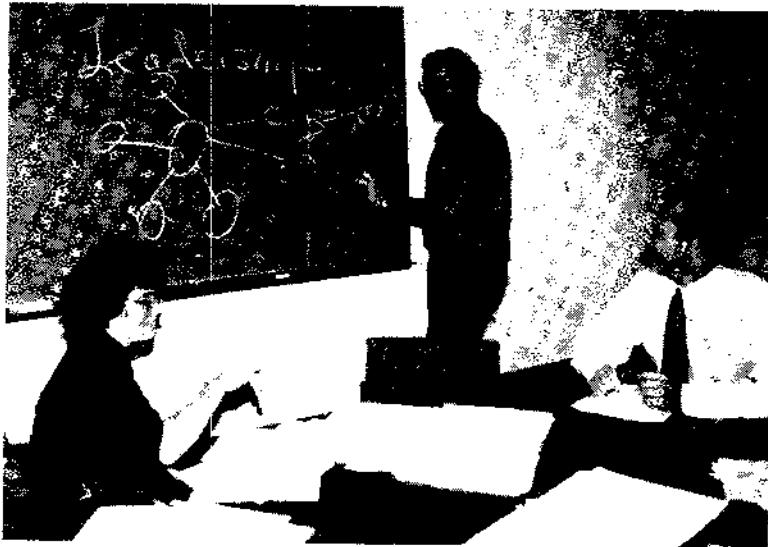
Prereq: business administration majors only. Practical application of skills and theories learned in the classroom through work or special project experience in private or public organizations. Repeatable to 12 credits.

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 algebra and 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 MICRO-ECONOMICS (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 MACRO-ECONOMICS (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 COMPUTER INFORMATION SYSTEMS (4)

Prereq: permission of graduate program director. A review of the current state of computer-based information systems as they relate to the managerial functions. Emphasis on the computer user and computer applications for management purposes.

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.

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.

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.

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 MACRO-ECONOMIC THEORY AND POLICY (4)

Prereq: MBA 502. Examination of current issues in macro-economic theory and policy. Emphasis on using macro-economic 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 SYSTEM MANAGEMENT (4)

Prereq: MBA 506. Acquisition, organization, monitoring and control of information resources. Discussion of issues unique to development of information systems.

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."

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. 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 (206) 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) Associate Professor. BA, MA, University of Iowa; PhD, University of Washington.
JOSEPH BETTIS (1975) Professor. BA, Southern Methodist; BD, Drew University; MA, PhD, Princeton University.

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.
 TANIS HINSLEY (1992) Assistant Professor. BA, University of Alaska, Fairbanks; MFA, University of Arizona.
 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.
 ROBERT H. KELLER (1968) Professor. AB, University of Puget Sound; BD, MA, PhD, University of Chicago.
 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.
 MARION RODRIGUEZ (1993) Associate Professor. BS, California State University; MEd, University of California, Los Angeles; JD, University of California, Berkeley.

Adjunct Faculty

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.

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 Course Schedule. 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 1993-95 Curriculum. The courses and studies listed in this catalog will be offered during the 1993-95 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 *Popular Culture in America; Through Latin Eyes; The Body: Gender, Society and Symbol; American Song; Child Sexual Abuse: The Community's Response; Multiculture Through Literature; Middle East and Film; The Starship and the Canoe; The Columbia River; Race, Law and the Politics of Exclusion: The Japanese-American Internment; and more.*

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

210/310/410 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.

215 SEXUAL MINORITIES (4)

Historical, sociological, political, psychological and cultural aspects of people who prefer modes of sexual expression other than exclusive heterosexuality.

216 WORLD RELIGIONS (4)

Study of the history, mythology and cultural context of various world religions. Repeatable with various topics to 12 credits.

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.

219 THE PHILOSOPHY OF NON-VIOLENCE (3)

Introduces the writings of Martin L. King and their background in the works of Tolstoy and Gandhi, comparing the philosophy of non-violence with pacifism and utopianism.

311 INDIAN HISTORY/FEDERAL POLICY (5)

Prereq: study of American history or politics, or study of or practical experience with Native American culture. An examination of Native American history with a special emphasis on the role of federal policy, statutory law and court decisions, and how they affect modern Indian tribes.

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.

313 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.

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 (4)

Prereq: at least one course in history or political science. The history of American involvement in Central America 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: UNDERSTANDING LEADERSHIP (4)

Prereq: courses in political science, social psychology or management. Historical study of elites in the U.S. The role of managers and organizers in politics, business and labor. Psychology of leadership and organizational dynamics.

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.

411 POLITICAL ECONOMY AND THE STATUS OF WOMEN (5)

Prereq: Fair 212 or Econ 206 or 207 or equivalent micro- or macro-economics. Examination of the connections between class and gender relations and the productive and reproductive spheres; labor force participation; occupational segregation; wage and other forms of discrimination.

412 CRITIQUE OF AMERICAN CAPITALISM (5)

Prereq: Econ 207; Fair 212 or equivalent plus upper-division status. The introduction of critical social theory and its application. Open to students from any field of study. The social problems and theoretical areas to be studied will be determined from students' academic and/or work-related backgrounds.

413 CURERS, CLIENTS AND CULTURE: CROSS-CULTURAL PERSPECTIVES ON HEALTH AND ILLNESS (4)

Prereq: cross-cultural studies or permission of instructor. Examines health belief systems in cross-cultural perspective, including the roles

of practitioner and patient; explanation, diagnosis and treatment of disease; the impact of modernization on non-Western medical systems, and ethnicity and health care in the U.S.

414 SEARCH FOR A METHOD: ADVANCED SOCIAL THEORY (4)
Prereq: Fair 204 or political theory or other social theory class. A look at 20th-century theoretical perspectives on society and the individual, concentrating primarily on "critical" theories such as Marxist social thought, feminist thought, etc.

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.

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.

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.

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 or instructor permission. 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 instructor permission. 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.

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.

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.

424 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 the reflection of the culture, history and sensibilities of the times.

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.

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.

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.

233a-c ORGANIC GARDENING (2 ea)
An ongoing student cooperative study, under faculty direction, of the principles and practice of organic gardening and appropriate technology, intended to enable greater self-sufficiency in harmony with the environment in rural or urban settings. Student participation in instruction.

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 AN INTRODUCTION TO QUANTITATIVE AND ANALYTICAL 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.

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 EXISTENTIALISM, PSYCHOANALYSIS AND ZEN (4)

Prereq: junior standing or instructor permission. These three philosophies offer a radical challenge to the understanding of human nature that has prevailed since the Enlightenment. Examines these challenges as well as themes common to the three: freedom, responsibility, community, health and knowledge.

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.

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: courses in human development, women studies or body awareness. Exploration, through the arts, of men's changing identities and roles. 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.

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 South-west 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.

451 CREATIVITY AND NATIVE AMERICAN ART (4)

Prereq: at least two studio art classes or permission of instructor. A studio/art history class that explores cross-cultural appropriation of art and ideas. Emphasis on art work of contemporary Native Americans,

their use and development of content and subject matter. Students create works of art in reference to artists being studied, with attention to developing their own visual vocabulary.

452 SHAMANISM: HEALERS, VISIONARIES AND DREAMERS (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.

COOPERATIVE, INDEPENDENT AND SPECIAL STUDIES

200/300/400 Independent Study (variable)

Prereq: Fairhaven College independent study permit card required for registration. By arrangement: fall, winter and spring. To enable students to study independently under faculty sponsorship. Repeatable.

275/375/475 a-z Cooperative Special Interest Studies (1-6)

Faculty- or student-initiated small special interest study groups formed around particular topics, themes, issues or activities. Repeatable with various topics. Topics will be listed in the Fairhaven College Quarterly Class Description booklet as they are offered.

280 PRACTICUM (Variable)

Prereq: approval by two or more Fairhaven faculty members via independent study procedures. By arrangement: fall, winter and spring. Fairhaven College independent study permit card required for registration. Learning through practical involvement outside the classroom; general exposure and experience. Repeatable.

297/397/497 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

Robert Sylvester, 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, a major 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, BA/Ed

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 and through the office of the dean of the College of Fine and Performing Arts.

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 requires at least 192 quarter hours of credit.

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.

Directions and contract forms will be issued to applicants by the dean's office only after the dean has granted preliminary approval to the applicant's concept for his or her student/faculty-designed major.

Department Chairmen

Linda Smeins	Art
Albert Shaw	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 and Richard Serra.

The Western Gallery provides diverse experiences in the visual arts for its constituencies, encompassing the University community and region while providing a point of reference to the national and international art scene. Through historical, contemporary and experimental art exhibitions, through the outdoor collection of contemporary sculpture, through the publications and through interpretative interdisciplinary programs, the Western Gallery is committed to creating an environment for learning. The gallery acts as a center for discussion and exchange of ideas on critical issues in contemporary art. The Western Gallery recognizes its role in expanding its audience's awareness of the visual arts as central to the dynamic and pluralistic nature of our society. Individuals interested in supervised work in the gallery are encouraged to volunteer their services.

ART FACULTY

LINDA E. SMEINS (1981) Chair, Associate Professor. BFA, University of Denver; MA, California State University, Long Beach; PhD, University of British Columbia.

ED BEREAL (1993) Assistant Professor. Alternative Education. Professional artist.

LAURA CRARY-ORTEGA (1993) Assistant Professor. BFA, Ohio University; MA, University of Pittsburgh; ABD, University of Pittsburgh.

ROBERT D. EMBREY (1971) Professor. BA, MA, MFA, University of Oregon.

ARISTOTLE GEORCIADES (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.

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.

DAVID F. MARSH (1957) Professor. BA, Central Washington State College; MS, University of Oregon.

PATRICK F. McCORMICK (1969) Professor. BFA, BA, University of Washington; MFA, Cranbrook Academy of Art.

MARY A. McINTYRE (1968) Professor. AB, MFA, Indiana University.

MICHAEL L. REED (1989) Assistant Professor. BS, California State University, Los Angeles; MA, California State University, Long Beach.

THOMAS SCHLOTTERBACK (1965) Professor. BFA, MFA, University of Kansas; PhD, The State University of Iowa.

DAVID E. TEMPLETON (1969) Professor. BFA, MA, University of Illinois; PhD, University of Minnesota.

ROBERT A. URSO (1969) Professor. BA, MA, University of Notre Dame, Indiana.

ELSI VASSDAL-ELLIS (1977) Professor. BS, MEd, Western Washington State College; PhD, University of Washington.

GENE E. VIKE (1962) Professor. BA in Ed, BA, Western Washington State College; MS, Pratt Institute.

Gallery Director

SARAH CLARK-LANCAGER (1988). BA, Randolph-Macon Woman's College; MA, University of Washington; PhD, Graduate Center, City University of New York.

Adjunct Faculty

SARAH CLARK-LANCAGER (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. George Thomas, Director, Whatcom Museum of History and Art.

FIRST-YEAR STUDENTS

Freshmen may elect courses of their choice at the 100- and 200-level which becomes the basis for subsequent study. Freshmen should seek advisement from the department chair during the first quarter at Western concerning the pre-registration process. All art majors should notice the art history core requirements and prerequisites for intermediate and advanced courses and develop appropriate sequencing in their academic plan of study.

Transfer students should seek advisement from the department chair concerning transfer of credit and orientation to department procedures during their first quarter of study. Lower-division prerequisite classes must be completed before enrolling in 300- or 400- level classes.

DEPARTMENTAL PRE-REGISTRATION

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. Early each quarter, declared art majors submit a request for courses to be taken the following quarter. Students are placed in classes prior to the University pre-registration process. This ensures art majors access to art courses and appropriate progress through academic programs. Priority for placement is given on a most-urgent-need basis. Art majors must have a signed contract in order to pre-register for 300- or 400-level classes.

Students are strongly advised to follow stated prerequisites and to take classes in the proper order. It is necessary to pass the Junior Writing Exam before being admitted to any of the designated writing proficiency art history courses.

BACHELOR OF ARTS

Studio Major

70 credits

- Art 101 or equivalent
- Art 120 or 130
- Art History 220, 230, 240
- Two of the following: Art History 301, 312, 317, 401, 440, 460, 490

Satisfactory completion of the studio major will be determined by contractual agreement between the student and a faculty committee. Individual advisement concerning this contract may begin whenever the student requests it. The contract should be written before the student has completed 24 credits in art. Concentrations may be developed in drawing, printmaking, painting, sculpture, ceramics, fibers, graphic design/illustration, 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.

Upon completion of the contract, studio majors will submit 10-15 slides of their work as verification of competency.

Portfolios may be reviewed for all art majors before access to upper-division studio courses.

Certain studio concentrations have limited enrollments. Entrance to 300-level courses in graphic design, illustration and production will be determined by portfolio review in the spring of each year. Portfolios will consist of 10 to 12 pieces created from at least five of the following art courses: Art 101, 120, 201, 202, 207, 270, 272. A second portfolio review will take place at the end of the junior year for admission into the senior sequence.

Studio Minor

30-35 credits

- Art 101 or equivalent
- Art 120 or 130

- Art History 240
- Electives under advisement

Major — Art History

70 credits

- Art History 220, 230, 240, 270
- Art History 375, 475, 490
- A minimum of 30 upper-division art history credits, including the following courses:
 - At least six credits from Art History 310, 320, 370, 410, 420, 470, 471
 - At least six credits from Art History 315, 330, 331, 429, 431, 432
 - At least six credits from Art History 316, 317, 340, 360, 440, 460
 - At least nine credits in studio courses
 - Supporting courses: 10 credits in appropriate courses outside the area of art history selected under departmental advisement
 - Reading knowledge of French, German or another second language appropriate to student's career plans

Minor — Art History

30-35 credits

- Art History 220, 230, 240, 270
- Remaining credits must be upper-division art history courses selected 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 Art Specialist

70 credits

- Art 101
- Art 120, 210, 220, 230, 240, 260, 270, 290
- Advanced studio (17 credits)
- Art History 220, 230, 240, 270, 301
- Art 280, 381, 382
- Writing proficiency course (3 credits)

Major — Elementary Education

50 credits

- Art 101, 120, 220, and 230
- Art History 220, 230, 240 and 301
- Art 280, 381, 382
- Art 240, 260 and 290
- Advanced studio (9 credits)
- Writing proficiency course (3 credits)

Supporting Teaching Endorsement

30 credits

- Art 101 or equivalent
- Art 120 and 230
- Art 280, 381, 382
- Art History 240
- Electives under advisement

BACHELOR OF FINE ARTS**Studio Major**

125 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 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
- 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.

INTERNSHIP

The Department of Art offers a field internship program for qualified students concentrating in graphic design/illustration or printmaking. Interns receive instruction and practical experience under the supervision of professionals in the field.

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 26 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.

201 DRAWING CONCEPTS AND SYSTEMS (3)

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.

202 LIFE DRAWING I (3)

Prereq: Art 101 or equivalent. Drawing from the live model. Individual and group critiques.

207 REPRESENTATION DRAWING (3)

Prereq: Art 101. Drawing what you see, for designers and illustrators. How to use line, shape and tone. Basics of light and perspective.

210 PRINTMAKING (3)

Prereq: Art 101 or equivalent. A lecture/lab course covering history, methods and practice of printmaking concepts. Introduction to the relief, intaglio (etching) and planographic (lithography) printmaking processes.

220 PAINTING (3)

Prereq: Art 101 or equivalent. Introduction to contemporary painting.

230 BEGINNING SCULPTURE (3)

Prereq: Art 101 or equivalent. Beginning problems in three-dimensional form and expression employing a variety of media. Introduction to contemporary concepts in sculpture.

240 CERAMICS (3)

Prereq: Art 101 or equivalent. Introduction to ceramics. Pottery and sculptural forms are hand-built using coil, slab and molded techniques. Introduction to glaze for mutation, kiln loading and firing.

242 COPY PREPARATION AND PASTEUR (3)

Prereq: Art 101, 120. Teaches techniques for preparing artwork for

reproduction, including single- and multiple-color techniques for forms, logos, stationery, ads and brochures. Will prepare artwork to be used for reproduction in Art 372 and 373.

250 METALS I (3)

Prereq: Art 130 or permission of instructor. Introduction to fabrication techniques in metals and a variety of other materials. May be applied toward a sculptural, mixed media and/or craft approach in creative expression.

260 FIBERS/FABRICS I (3)

Prereq: Art 101 or equivalent. 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 (3)

Prereq: Art 101, 120. Anatomy of letter forms, alphabets and calligraphy. Introduction to layout and design.

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 (3)

Fundamentals of film developing, enlarging, print finishing. Basic elements of black and white composition and visualization.

301 DRAWING WORKSHOP (5)

Prereq: Art 201 or 202. 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 15 credits.

302 LIFE DRAWING II (3)

Prereq: Art 202 or equivalent. Intermediate-level drawing problems from the live model. Some emphasis given to anatomy. Repeatable to 9 credits.

303 HUMAN FIGURE STUDY (5)

Prereq: Art 101, 201, 202, 220 or 230. Study of the human figure from an anatomical standpoint. Includes drawing, painting and sculpting. The student completes a portfolio including in-class work and other assignments in sketching and anatomy studies.

311 PRINTMAKING — LITHOGRAPHY (3)

Prereq: Art 201, 210. Planographic processes; emphasis on stone lithography.

312 PRINTMAKING — INTAGLIO (3)

Prereq: Art 201, 230. Intaglio processes: etching, engraving, drypoint, aquatint.

313a,b PRINTMAKING — COLOR (3,5)

Prereq: Art 311 or 312. Workshop in color problems for etching or lithography. Repeatable to 15 credits.

314 BOOK STRUCTURES (3)

Prereq: Art 210, 311. Lecture/lab course covering the history, methods and practice of adhesive and non-adhesive binding techniques and book structures for artists.

315a,b BOOK ARTS (3,5)

Prereq: Art 314, 372. Design and production of books in edition and one-of-kind formats employing letterpress, offset and printmaking techniques. Repeatable to 15 credits.

321a,b PAINTING WORKSHOP (3,5)

Prereq: Art 220, Art History 240 or concurrent enrollment. Intermediate problems in painting. Development of individual direction in form and expression. Repeatable to 15 credits.

325a,b WATERCOLOR PAINTING (3,5)

Prereq: Art 220. Beginning problems with various water soluble media. Repeatable to 15 credits.

331a,b INTERMEDIATE SCULPTURE (3,5)

Prereq: Art 230 and Art History 240. Directed exploration of contemporary issues and media in sculpture.

332a,b DIRECT METAL SCULPTURE (3,5)

Prereq: Art 331. Projects involve welding processes with emphasis on fabrication methods.

333a,b BRONZE CASTING (3,5)

Prereq: Art 331. Projects utilizing the lost wax, investment mold process for making sculpture.

341 a,b CERAMICS II (3,5)

Prereq: Art 240. Introduction to the potter's wheel as a tool; hand building, glaze formulation and kiln firing. Emphasis on functional ware forms. Weekly seminars. Repeatable to 15 credits.

342a,b CERAMICS WORKSHOP (3,5)

Prereq: Art 341. Intermediate problems in clay as a medium. Development of individual directions in pottery and/or ceramic sculpture. Weekly seminars. Repeatable to 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.

361 SURFACE DESIGN (5)

Prereq: Art 120, 260. Fabrics as a creative mode of expression. Use of pigments and dyes with silkscreening and direct application techniques. Consideration of repeat patterning, color and space. Repeatable to 15 credits.

367 FIBER STRUCTURE (5)

Prereq: Art 120 and 260. 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 15 credits.

370 INTRODUCTION TO COMPUTER GRAPHICS (3)

Prereq: Art 270. Computers and graphic software for artists and designers.

371 GRAPHIC DESIGN II (5)

Prereq: Art 207, 270, 370. A lecture studio class introducing the design of logos, posters, brochures and ads.

372 IMAGE GENERATION AND SYNTHESIS (4) 2 lectures and 4 lab

Prereq: Art 371. As a means for reproduction of original designs, this class deals with film generation by both conventional and darkroom and electronic means; image assembly for proofing and image carriers (plates, stencils, etc.). Includes theory and practice for line, tonal and process color images. Prepares film images for use in Art 373. Includes critical review of technology's effect upon design.

373 ART REPRODUCTION PROCESSES (3)

Prereq: Art 372. The study of design reproduction by lithography, screen, relief and electrostatic processes. Provides graphic design students with an understanding of the influences of technique. Images generated in Art 372 are reproduced using single and multiple-color printing techniques.

374 PUBLICATION DESIGN (3)

Prereq: Art 371. Publication design includes editorial, newsletter and product catalogs, with emphasis on using the computer as a design tool.

375 ELECTRONIC PREPRESS (3)

Prereq: Art 373. Allows students to reproduce pieces of their own design. An elective course that encourages students to pursue experience in commercial reproduction utilizing electronic prepress. Students refine techniques ranging from image generation to presswork and are encouraged to investigate further and critique the interactions of technology and design.

376 CARTOONING (3)

Prereq: Art 207. Basic course covering character development, movement and panel composition. Repeatable to 12 credits.

377 SERIGRAPHY (3)

Prereq: Art 101, 372. Screen printing process: emphasis on photographic stencil making.

378 BLACK AND WHITE ILLUSTRATION (3)

Prereq: Art 207. Concepts and techniques of black and white illustration; idea development, problem solving and printing considerations. Repeatable to 9 credits.

379 COLOR ILLUSTRATION (3)

Prereq: Art 378. Concepts and techniques of color illustration. Text, advertising, editorial and poster problems.

380 ART EDUCATING THE CHILD (3)

Prereq: EdAF 310 or equivalent. 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 (3)

Prereq: Art 290. Stresses photographic visualization and the development of personal style through concentrated studies of light and design, filters, the zone system, view camera, specialized materials and processes, archival processing.

391 COLOR PHOTOGRAPHY (3)

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 15 credits.

402a,b ADVANCED LIFE DRAWING (3,5)

Prereq: 9 credits of Art 302. Continuation of individually established concerns in the area of life drawing. Repeatable to 15 credits.

411a,b ADVANCED PRINTMAKING WORKSHOP (3,5)

Prereq: Art 313. Contemporary problems in printmaking processes. Repeatable to 15 credits.

421a,b PAINTING WORKSHOP II (3,5)

Prereq: Art 101 or equivalent; Art 301, 321 and Art History 240. 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 15 credits.

422 ADVANCED STUDIO WORKSHOP/SEMINAR (2-5)

Prereq: 15 credits in art history; 30 credits in any studio concentration. Individual direction in studio art. Emphasis given to concept development and meaning. Studio/seminar format. Repeatable to 15 credits.

425a,b ADVANCED WATERCOLOR PAINTING (3,5)

Prereq: Art 325. Painting workshop using aqueous media. Repeatable to 15 credits.

431a,b ADVANCED SCULPTURE WORKSHOP (3,5)

Prereq: Art 331, AH 301. 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 15 credits.

441a,b ADVANCED CERAMIC WORKSHOP (3,5)

Prereq: Art 342. Problems in advanced ceramics; self-directed projects and weekly seminars. Repeatable to 15 credits.

461 ADVANCED SURFACE DESIGN (5)

Prereq: Art 361. Continuation of individual problems in fabric-related areas employing a variety of materials. Repeatable to 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 15 credits.

470 TYPOGRAPHY (5)

Prereq: Art 374. Emphasis on letter forms as design and illustrative elements. Repeatable to 15 credits.

471 ADVANCED GRAPHIC DESIGN (5)

Prereq: Art 470. Advanced projects in logo design and graphic identity systems. Repeatable to 10 credits.

473 COMPUTER ILLUSTRATION (3)

Prereq: Art 370, 378. Concepts and techniques of computer

illustration, text, editorial, advertising, display and information graphics problems.

474 ADVANCED COMPUTER GRAPHICS (3)

Prereq: Art 374. Current topics in computer graphics. Advanced techniques and software. Repeatable to 6 credits.

475 SENIOR PROJECTS IN ILLUSTRATION (5)

Prereq: Art 378, 379. Directed work in graphic design aimed at preparing pieces for an illustration portfolio.

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 GRAPHIC REPRODUCTION (5)

Prereq: Art 375. Directed work in graphic reproduction aimed at preparing pieces for a graphic reproduction portfolio.

478 FIELD INTERNSHIP IN GRAPHIC DESIGN (3-15)

Prereq: senior status, art major, permission of instructor. Enrollment by portfolio review. Supervised field work in appropriate professional situations.

479 PROFESSIONAL PRACTICES IN GRAPHIC DESIGN, ILLUSTRATION AND GRAPHIC PRODUCTION (3)

Prereq: concurrent enrollment in Art 475, 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. Repeatable with various topics.

490 ADVANCED PHOTOGRAPHY WORKSHOP (5)

Prereq: Art 390 or 391. Application of advanced photographic concepts and techniques. Emphasis on self-directed project development. Studio seminar format. Repeatable to 10 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 20 credits.

Graduate Courses

Courses numbered 500; 517; 545; 597 are described on page 26 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 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 20 credits.

590a DRAWING; PRINTMAKING

590b PAINTING

590c SCULPTURE

590d CERAMICS

590e JEWELRY

590f FIBER/FABRIC

590g GRAPHIC DESIGN

690a THESIS (1-6)

Prereq: advancement to candidacy.

690b FIELD PROJECT (1-6)

Prereq: advancement to candidacy.

COURSES IN ART HISTORY

Courses numbered X37; X97; 300, 400; 417, 445 are described on page 26 of this catalog.

190 INTRODUCTION TO VISUAL DIALOGUE (3)

Introduction to the processes, materials, vocabulary and expressive means used in art. Concepts of content, significance and cultural interrelationships of art.

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)

A survey of Far Eastern art from 4000 B.C. to 1912 A.D. A review of art from specific periods and dynasties from India, China and Japan.

301 THEORY AND CRITICISM, MODERN (3)

Prereq: Art History 240. Introduction to and critical analysis of the development of the Western modern paradigm.

305 GALLERY WORKSHOP (1-3)

Prereq: 6 credits of art and/or art history and permission of instructor. Special problems in gallery operations.

310 PREHISTORIC AND TRIBAL ART I (3)

Prereq: Art History 220 or 230 or 240; Anth 215 or 361 or concurrent. Art of the Paleolithic and Neolithic cultures and Western hemisphere tribal cultures.

312 GRAPHIC DESIGN HISTORY (3)

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 THE HISTORY OF ARCHITECTURE FROM 1620 TO 1800 (3)

Prereq: Art History 240. European and American architecture, architectural theory and urban planning.

316 THE HISTORY OF ARCHITECTURE FROM 1800 TO 1895 (3)

Prereq: Art History 240. European and American architecture, architectural theory and urban planning of the 19th century as elements in the continuum of technological and cultural developments of the early modern age.

317 THE HISTORY OF ARCHITECTURE FROM 1895 TO PRESENT (3)

Prereq: Art History 240. European and American architecture, architectural theory and urban planning of the 20th century. Emphasis on solutions to environmental and social problems in public and domestic architecture.

320 ANCIENT ART I (3)

Prereq: Art History 220 and 230. Art of Ancient Egypt, Mesopotamia, Crete, Mycenae and peripheral areas.

330 MEDIEVAL ART (3)

Prereq: Art History 420 or 220 or 230 and permission of instructor. Western art from the fall of the Roman Empire to the beginning of the Renaissance.

331 15TH-CENTURY ITALIAN RENAISSANCE ART (3)

Prereq: Art History 220, 230. Fifteenth-century art in Italy, including contemporary and modern formulations of the Renaissance, the impact of classical antiquity and cultural ideals, patronage, mechanisms and stylistic innovations.

340 MODERN ART HISTORY I (3)

Prereq: Art History 240. The art of the 19th-century Western world.

360 AMERICAN ART TO 1913 (3)

Prereq: Art History 220 or 230 or 240 or 340. Art in the United States from the Colonial period to the Spanish American War.

370 ASIAN ART I (3)

The art of India and Southeast Asia from the Indus Valley civilization (c. 2500 B.C.) to the end of the 18th century.

375 METHODS AND WRITING IN ART HISTORY I(3)

Prereq: Art History 220, 230 and 240. An introduction to methods in art history with practical application in student research projects. Emphasis on development of analytical and writing skills.

401 THEORY AND CRITICISM, CONTEMPORARY (3)

Prereq: Art History 240. Recent theories in the art, art criticism and art history. Emphasis on developing skills in critical analysis. Writing proficiency course.

410 PREHISTORIC AND TRIBAL ART II (3)

Prereq: Art History 220 or 230 or 240; permission of instructor; Anth 215 or 364 or Art History 310 prerequisite or concurrent. Tribal arts of Africa and the South Pacific.

420 ANCIENT ART II (3)

Prereq: Art History 320 or 220 and permission of instructor. Art of the Ancient Greek and Roman civilizations.

429 16TH-CENTURY ITALIAN RENAISSANCE ART (3)

Prereq: Art History 220 and 230. Sixteenth-century art in Italy, including artist's career patterns, art theory and biographies, portraiture and gender, patronage, iconographic themes and stylistic shifts. Writing proficiency course.

431 NORTHERN RENAISSANCE ART (3)

Prereq: Art History 230, 331 or 429, or permission of instructor. Art of the Renaissance in Northern Europe. Writing proficiency course.

432 BAROQUE ART (3)

Prereq: Art History 230, 428 or 429 or 431 and permission of instructor. Art of the West during the 16th, 17th and 18th centuries.

440 MODERN ART II (3)

Prereq: Art History 240 or 340. Twentieth-century art and theory. European emphasis to World War II. Writing proficiency course.

460 AMERICAN ART, 1900 TO THE 1950s (3)

Prereq: Art History 240. Social analysis of art in the United States during the first half of the 20th century. Discussion of art produced by artists from Mexico and Canada. Writing proficiency course.

470 ASIAN ART II (3)

The art of China and Korea from the Shang Dynasty (1523 B.C.) to the end of the 18th century.

471 ASIAN ART III (3)

The art of Japan from the prehistoric Archaeological Age to the end of the 18th century.

475 WRITING AND METHODS IN ART HISTORY II (3)

Prereq: Art History 375 or permission of instructor. Contemporary methods in art history and criticism with practical application in student research projects. Writing proficiency course.

490 SEMINAR IN ART HISTORY (3)

Prereq: 12 credits in art history, or senior status, or permission of instructor. Each seminar deals with a separate and special art historical problem or project. Each student prepares research, with oral and written presentation of materials pertinent to the course. Repeatable to 15 credits.

Graduate Courses

Courses numbered 500; 517; 545; 597 are described on page 26 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 (3)

Prereq: graduate status, undergraduate art major or equivalent, art history minor or equivalent, permission of instructor. Repeatable to 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, avant-garde, 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 Ensemble, 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 (206) 650-3130.

The department is a full member of the National Association of Schools of Music.

MUSIC FACULTY

ALBERT C. SHAW (1978) Chair. Professor. BME, Wheaton College; MME, Drake University; DME, Indiana University.
 ROGER D. BRIGGS (1989) Associate Professor. BM, Memphis State; MM, PhD, Eastman School of Music.
 JEFFREY GILLIAM (1952) Assistant Professor. BMus, Eastman School of Music; MMus, University of Michigan.
 FORD D. HILL (1975) Associate Professor. AB, Wisconsin State University; MA, Indiana University.
 KAREN IGLITZIN (1986) Associate Professor. BM, Indiana University; MM, Yale University.
 CHUCK ISRAELS (1986) Associate Professor. BA, Brandeis University.
 PETER MARSH (1990) Professor. Diploma from USN School of Music.
 JACK MORRIS (1985) Associate Professor. BA, Brigham Young University; MM, Indiana University.
 C. BRUCE PULLAN (1975) Professor. BA, Kings College; Diploma in Ed., New College; MA, Cambridge University.
 CARLA J. RUTSCHMAN (1975) Associate 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.
 MARY TÉREY-SMITH (1967) Professor. BA, Liszt Academy of Music, Budapest; MA, University of Vermont; PhD, University of Rochester.
 DAVID WALLACE (1987) Associate Professor. BM, University of Michigan; MM, University of Wisconsin; DMA, Eastman School of Music.
 EUGENE S. ZORO (1969) Associate Professor. BM, MM, Eastman School of Music of the University of Rochester.

AFFILIATE MUSIC FACULTY

LAURIE BRIDGE, Class Piano
 NICHOLAS BUSSARD, Oboe
 GREGORY COX, Trombone
 DAVID FEINGOLD, Classical Guitar
 WALTER GRAY, Cello
 JACOB HAMM, Voice
 VIRGINIA HUNTER, Voice
 ERIN OVERTON JAMES, Flute
 CYNTHIA JEFFERSON, Horn
 MADELENE KLASSEN, Organ
 JULIA NOLAN, Saxophone
 TOM PARRIOTT, Trumpet
 CHRIS PERSAD, Trumpet
 FRANCINE PETERSON, Bassoon
 MARIANNE WELTMANN, Voice

NANCY BUSSARD, 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 Ensemble 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 Ensemble, 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 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 Brardt, 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 styles demonstrating potential beauty and body of tone, innate sensitivity to pitch and rhythm.

Classical Guitar — One piece from the classical guitar repertoire of the applicant's choice and one study from the collection "Twenty Etudes" by Fernando Sor, edited by Andres Segovia.

Jazz Guitar — Two or three standard jazz compositions (such as "Tune-Up," "Here's That Rainy Day," and "Straight No Chaser") with melody, chords and improvised solo. Major, dorian and mixolydian scales in all keys. Ability to sight-read sequences of major-seventh, minor-seventh and dominant-seventh chords in all inversions. Ability to sight-read jazz melodies.

Electric Bass — Two or three standard jazz compositions (such as "Tune-Up," "Footprints" and "Freedom Jazz Dance") with melody, improvised solo and appropriate bass lines. Major, dorian and mixolydian scales in all keys. Ability to improvise a bass line in different styles (Swing, Be-bop, Latin, Funk) from a given sequence of chords. Major-seventh, minor-seventh and dominant-seventh arpeggios in all keys. Ability to sight-read jazz melodies and chord symbols.

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 in-coming 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)

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
- Major performing ensemble each quarter in residence (minimum 24 credits)

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
- 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
- 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
- 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 311-318 or 411-418
- 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 piano, 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

* Additional course credits in applied music instruction beyond the required minimum of 6 may be obtained under the advisement of the appropriate area coordinator.

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

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

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 26 of this catalog.

101 FUNDAMENTALS OF MUSIC (3)

Open to all students. The study of musical construction for those unfamiliar with the fundamentals of notation (pitch and rhythm), major and minor scales, intervals, triads and keys, with particular attention to their practical application.

102, 103 INTRODUCTION TO MUSIC THEORY AND EAR TRAINING (3 ea)

Prereq: Music 101 or permission of instructor; each course prerequisite to the next. Courses designed to strengthen the prospective music major's knowledge of fundamental theoretical principles and to introduce the basic aural/reading skills needed to begin the musicianship sequence.

104 THE ART OF LISTENING TO MUSIC (3)

Open to all students. Non-technical basis for enjoyable listening to

music; performance practices relating to symphony orchestras, instrumental ensembles, opera, choral groups and solo performance.

105 MUSIC IN THE WESTERN WORLD (3)

Open to all students. An introduction to the principal genres, forms and composers of Western music within the framework of a study of the historical stylistic periods.

121, 123, 125 AURAL AND KEYBOARD SKILLS I (1 ea)

Prereq: music major status or approval of music theory area coordinator; each course prerequisite to the next. The development of aural competence in and visual familiarity with the sounds and symbols of the diatonic major and minor system. Exercises and drill in prepared and sight reading, dictation, error detection, accuracy of rhythm and intonation. S/U grading.

122, 124, 126 THEORETICAL AND ANALYTICAL SKILLS 1 (3 ea)

Prereq: music major status; each course prerequisite to the next. Study of and practical experience in using the basic materials of musical construction including notation, melody, harmony, rhythm and form.

160 PREPARATORY CLASS PIANO (1)

Prereq: music major status. Designed for students with no keyboard experience. Basic reading skills and technique.

164 CLASS VOICE AND PEDAGOGY (2)

Prereq: music major status. Tone production, song repertoire interpretation and pedagogy for non-voice majors.

202 JAZZ: GENESIS AND EVOLUTION (3)

Open to all students. Personalities, styles and social/cultural influences on jazz from its beginning to the present day.

205 SURVEY OF NON-WESTERN MUSICAL CULTURES (3)

Open to all students. A general introduction to the musical styles of major non-Western cultures, including those of Africa, India, Asia, Indonesia and Eastern Europe. Focus on the role played by music in each society.

211-218 APPLIED INSTRUCTION (1-4)

Prereq: music major status; minimum applied performance audition.

211 ORGAN

212 PIANO

213 STRINGS

214 WINDS AND PERCUSSION

215 VOICE

216 CLASSICAL GUITAR

217 JAZZ GUITAR

218 ELECTRIC BASS

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-tercian 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.

311-318 APPLIED INSTRUCTION (1-4)

Prereq: music major status; upper-division examination.

- 311 ORGAN
- 312 PIANO
- 313 STRINGS
- 314 WINDS AND PERCUSSION
- 315 VOICE
- 316 CLASSICAL GUITAR
- 317 JAZZ GUITAR
- 318 ELECTRIC BASS

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 aural 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 MMCP methodology. Observations.

363 FOUNDATIONS AND PRINCIPLES OF MUSIC EDUCATION (3)

Prereq: music major status. Historical, philosophical and psychological foundations of music education; learning theory, curricular structures and applications to classroom and ensemble teaching.

364 INSTRUMENTAL LAB FOR SECONDARY INSTRUMENTS/LAB BAND METHOD (2)

Prereq: 3 credits in Music 264; music major status. Pedagogy of and performance on secondary instruments in an ensemble environment. Repeatable for credit.

366 VOCAL DICTION (1 ea)

Prereq: music major status or permission of instructor. Must be taken concurrently with applied voice instruction. Familiarization and application of the phonetic structures of the major languages of singing and the use of the International Phonetic Alphabet as a basic tool for pronunciation.

- 366a ITALIAN
- 366b GERMAN
- 366c FRENCH

376 ADVANCED PIANO ACCOMPANYING (2)

Prereq: completion of major performance ensemble requirement or permission of instructor. Advanced instruction in accompanying skills. Repeatable for credit.

411-418 APPLIED INSTRUCTION (1-4)

Prereq: music major status; upper-division examination.

- 411 ORGAN
- 412 PIANO
- 413 STRINGS
- 414 WINDS AND PERCUSSION
- 415 VOICE
- 416 CLASSICAL GUITAR
- 417 JAZZ GUITAR
- 418 ELECTRIC BASS

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 PROBLEMS IN 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 PROBLEMS IN 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 ENSEMBLE (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.

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 26 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 school 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.

THEATRE ARTS

The Department of Theatre Arts offers:

- Bachelor of Arts in theatre arts
- Bachelor of Arts in Education with a major in theatre arts for secondary education
- Bachelor of Arts in Education with a double emphasis in theatre and English.

State certification to teach is received concurrently with both Bachelor of Arts in Education degrees. A teaching endorsement in drama also is offered to education majors. Each of the degree areas provide a sound undergraduate education that is academic and practical in nature. 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
- Musical Theatre
- 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.

Special features of the program include touring theatre (performing for elementary and high schools in sustained characterization for 60 performances) and summer stock, where student actors work intensely in various phases of production including rehearsal for as many as three shows in a day.

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, (206) 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.

THEATRE ARTS

NOLAN A. DENNETT (1989) Lecturer. BA, Brigham Young University; MA, Western Washington University.
 ROGER GERMAIN (1970) Assistant Professor. BA, Western Washington State College.
 MONICA C. GUTCHOW (1960) Assistant Professor. BS, University of Oregon; MFA, University of North Carolina, Greensboro.
 VICTOR H. LEVERETT (1977) Assistant Professor. BA, BA/Ed, Western Washington State College; MA, Washington State University.
 JAMES E. LORTZ (1989) Lecturer. BFA, University of Montana.
 PERRY F. MILLS (1981) Assistant 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) Assistant 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.

BACHELOR OF ARTS

Major — Theatre

82 credits

- Core requirements (54 credits): ThA 135 or 138, 160, 212, 213, 216, 222, 250, 270, 285, 322, 380, 381, two topics selected from 428 plus 6 credits of dramatic literature
- Concentration (15 to 18 credits) selected from one of the following areas:
 - Acting: ThA 260, 261, 263, 266, 360, 361, 363, 460, 461
 - Educational Drama: ThA 350, 351, 450, 452, plus 6 credits under advisement
 - Dance: ThA 255, 256 or 257 and 235, 238, 241, 242, 336, 432
 - Directing: ThA 260, 311, 314, 370, 470, 471
 - Dramatic Writing: ThA 385, 485, 486, 487, 488
 - Dramatic Literature: ThA 325, 327, 328, 365, 465, plus 6 credits under advisement
 - Musical Theatre: ThA 138, 260, 261, 266, 267, 360 and 366. Additional dance and voice lessons recommended
 - Technical Theatre: ThA 311, 312, 313, 314, 315, 411, 412
- Electives (13-15 credits)

Minor — Theatre

30 credits

- ThA 101, 160, 212, 222, 270
- One course selected from ThA 201, 231, 250, 260, 285
- One course selected from ThA 314, 322, 350, 371, 385
- Electives under advisement

BACHELOR OF ARTS IN EDUCATION

Major — Theatre (Secondary Education — Endorsement in Drama)

60 credits

- Core requirements (28 credits): ThA 160, 212, 213, 222, 270, 322, 380, 381
- Concentration in secondary teacher preparation (23 credits): ThA 215, 216, 260, 266, 314, 370, 428, 453

- Electives under advisement (select 3 courses for a total of 9 credits): ThA 250, 261, 311, 312, 360, 361, 366, 428

Completion of this major will lead to a primary endorsement in drama when taken in combination with a professional education program

Supporting Endorsement

Supporting endorsement in drama for Washington State Teacher Certification is met by completion of the following courses:

Drama — Supporting Endorsement — Secondary

26 credits

- ThA 101, 160, 212, 222, 255, 260, 270, 350, 371

Major — English/Theatre

94 credits (English 49 credits and Theatre 45 credits)

This major meets the requirements for Washington state teaching endorsements in both English and drama.

Theatre

45 credits

- Core requirements: ThA 101, 160, 212, 213, 222, 250, 260, 261, 270, 285, 322, 371, 380 or 381
- Recommended additional courses: ThA 360, 453, 470, 428

English

49 credits

See the English Department section of this catalog.

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	50-59
Acting	60-69
Directing	70-75
Playwriting	85-90

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 26 of this catalog.

All 200-level and above technique courses are by audition at the first class meeting.

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.

128 READING PLAYS (3)

Reading of play texts from a selected list of 300, which includes all dramatic periods and styles, and study of supporting materials including a glossary of dramatic terms, genre/style distinctions, etc.

135 BEGINNING MODERN DANCE I (2)

The study of basic principles of dance movement in terms of placement, technique, and space, time, energy concepts. Emphasis on dance technique, creative movement experiences and developing an appreciation of the dance as an art form. Open to non-majors. S/U grading. Repeatable to 6 credits.

136 SPANISH AND FLAMENCO DANCE I (2)

Fundamentals of Spanish and flamenco dance technique including postures, movements and introduction of footwork. Some basic repertoire covering the fundamental flamenco rhythms. Lecture includes basic history and interpretation of flamenco and Spanish dance.

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 JAZZ DANCE (2)

Emphasis on control and isolation of body parts, rhythm and alignment. 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: ThA 135 or equivalent. Further development of movement principles established in ThA 135. Open to non-majors. Repeatable to 6 credits.

236 SPANISH AND FLAMENCO DANCE II (2)

Prereq: ThA 136. Secondary level of Spanish and flamenco dance technique with the emphasis of learning the repertoire of sevillanas, tangos and rumba flamenca. Lecture leads to in-depth knowledge of the art of flamenco.

238 INTERMEDIATE BALLET (2)

Prereq: 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.

241 IMPROVISATION FOR ACTORS AND DANCERS (2)

How to create a scene or movement sequence through improvisation. Demonstrates how improvisation can be the tool of the director and the choreographer. "Training the thinking performer."

242 DANCE COMPOSITION I (3)

Prereq: ThA 235 or permission of instructor. Fundamentals of composition emphasizing theme and development; form or design; time force and spatial aspects in solo and some group studies.

250 INTRODUCTION TO 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.

255, 256 THEATRE/DANCE PRODUCTION (2 ea)

Prereq: permission of instructor. For theatre majors: instruction and experience in technical aspects of theatre arts organization and production. For non-majors: as for majors and may include performance. 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.

263 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.

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.

270 INTRODUCTION TO DIRECTING (2)

Theory and practice of stage direction. Students are required to attend all lectures and act in at least three directing scenes. S/U grading.

285 INTRODUCTION TO DRAMATIC WRITING (4)

Prereq: written permission of instructor. Beginning exercise in dramatic writing, with emphasis on primary forms and conventions.

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 RHYTHMIC ANALYSIS AND ACCOMPANIMENT (3)

Prereq: ThA 235 or equivalent. Technical aspects of music and rhythms and musical forms as applied to dance movements; the function of percussion and accompaniment for dance techniques, improvisations and accompaniment.

350 CLASSROOM DRAMA (3)

ThA 230 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.

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 AUDITION PREPARATION (2)

Prereq: ThA 260 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.

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.

367 ACTING TECHNIQUES FOR THE CAMERA (2)

Prereq: ThA 260. An introduction to auditioning and performance techniques used in acting for film and television.

370 PLAY DIRECTION (3)

Prereq: ThA 270 and a minimum of 3 credits of acting. 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.

385 INTERMEDIATE DRAMATIC WRITING WORKSHOP (4)

Prereq: written permission of instructor. Further practice in primary forms and conventions of drama. Longer forms. Introduction to mixed forms and contemporary styles.

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: permission of instructor. Significant topics of dance history from the Renaissance to the modern period with emphasis on the evolution of dance in Europe, Denmark and Russia during the 18th and 19th centuries.

433 LAB ANNOTATION (3)

Prereq: ThA 231, 235, or equivalent. An elementary course in dance notation. Reading and writing body movements, ballet and modern dance sequences with emphasis on directions, levels, arm and leg movements.

434 THE DANCE ARTS IN EDUCATION (3)

Prereq: permission of instructor or demonstrated competency at the intermediate level in dance technique. Materials and methods of instruction in the modern dance and ballet. Observation and teaching opportunities in a laboratory studio environment.

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.

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, ThA 370 and 30 hours in the major. Producing and directing a one-act play for public performance; special emphasis on working with the actor.

471 PLAY DIRECTION III (5)

Prereq: ThA 470 and written permission. Producing and directing a full-length play for public performance; emphasis on problems in high school, community and professional theatres.

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.

488 REVISION AND PRODUCTION SCRIPT PREPARATION (2)

Prereq: permission of instructor required. Supervised revision and script preparation for production in any medium, and/or opportunity for extra work on full-length scripts. Normally taken concurrently with ThA 485, 486 or 487 when student's work is ready for actual production. Repeatable to 6 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 26 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 565 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.

690 THESIS (1-9)**691 RESEARCH PAPER (1-3)**

Planning and execution of a publishable scholarly paper.

HUXLEY COLLEGE OF ENVIRONMENTAL STUDIES

Dr. Thomas A. Storch, Interim Dean

As we approach the beginning of the 21st century, one of the responsibilities of colleges and universities is to help society address environmental problems and issues. Knowledge is needed that is global in its frame of reference, interdisciplinary in its character and experimental in its work.

Huxley College was established in 1968 to develop programs of environmental studies that reflect a broad view of people in a physical, biological, social and cultural world. This interdisciplinary approach is supported by a curriculum rich in courses dealing with the natural and physical sciences as well as the political, economic and social aspects of environmental affairs. Most of Huxley's environmental courses are at the junior, senior and graduate levels. Therefore, students entering these programs must have a solid background in the natural and social sciences in preparation for interdisciplinary studies focusing on the environment.

In the fall of 1992, the Center for Geography and Regional Planning joined Huxley College, adding three new degree programs and providing a wide range of course offerings.



Disciplinary in orientation, the Center also utilizes an interdisciplinary approach in its undergraduate and graduate programs that supports and complements the environmental focus of Huxley College. 'The essence of geography' is reflected in the Center's many systematic, regional, human, physical, as well as 'techniques' courses that address the theoretical and applied aspects of human-environment interactions.

About 650 undergraduate students and 60 graduate students are currently enrolled in Huxley College, one of six colleges comprising Western Washington University. As members of the University student body, Huxley students have access to all library and computer facilities, and the academic, athletic and recreational activities of Western. At Huxley, there is opportunity for students to contribute to the growth and functioning of the College. Faculty meetings are open to students, and students work with faculty on College committees.

REGION AND RESOURCES

Huxley College is located at the interface of several important environmental regions: the mountains of the North Cascades range and the shores of Puget Sound and the Pacific Ocean, the urban industrial regions of Seattle and Vancouver, B.C., and the rural agricultural regions of Western Washington. Oil refining, logging, pulp and paper manufacture, primary aluminum production, fisheries and aquaculture are key industries in the area.

Instruction and research at Huxley College are conducted in Arntzen Hall and the Environmental Studies Center, a six-floor laboratory, classroom and studio facility on the WWU campus. The Center also houses the offices and laboratories of two organized research units: (a) the Institute of Environmental Toxicology and Chemistry, which provides opportunity for research on risk assessment and the effects of toxic substances, and (b) the Institute for Watershed Studies, which provides opportunity and specialized equipment for freshwater and watershed studies. Leona M. Sundquist Marine Laboratory at Shannon Point on Fidalgo Island, within easy traveling distance of the campus, provides facilities for marine studies.

DEGREE PROGRAMS

To achieve its purpose in undergraduate education, Huxley College has developed an integrated set of seven majors, each of which offers the student a number of options and emphases. These majors lead to a B.S. or B.A. in environmental studies or a B.A. in geography and regional planning.

B.S. Degree Programs

- Environmental Science
- Environmental Policy and Assessment
- Environmental Education

B.A. Degree Programs

- Environmental Studies
- Geography
- Geography/Education
- Urban and Regional Planning

In addition, B.A. degrees in environmental journalism and environmental economics are offered by Huxley College in cooperation with the Departments of Journalism and Economics. Students may also minor in environmental education, environmental studies, environmental science, geography and cartography.

ENVIRONMENTAL STUDIES

The environmental studies curriculum prepares students for a wide variety of careers involving environmental policy, management, science and education. Students whose concerns are with the effects of humans on environmental systems will find appropriate course work among Huxley College offerings, as will those who plan to concentrate their efforts on the social and humanistic dimensions of environmental problems.

The Huxley faculty are committed to providing students with a broad understanding of the social and scientific aspects of environmental studies.

Students are required to take core courses that cut across the broad spectrum of environmental studies prior to undertaking studies in areas of specialization. Students may pursue majors leading to the B.S. or B.A. degree as listed below.

Details of these majors are described following the list of environmental studies faculty.

Bachelor of Science

- Major: Environmental Science, Environmental Policy and Assessment, Environmental Education
- Minor: Environmental Science, Environmental Education

Bachelor of Arts

- Major: Environmental Studies
- Combined Major: Environmental Studies/Economics, Environmental Studies/Journalism
- Minor: Environmental Studies

ENVIRONMENTAL STUDIES FACULTY

THOMAS A. STORCH (1990) Professor and Dean of Huxley College of Environmental Studies, Director of Institute for Watershed Studies. BA, Ohio Wesleyan University; MS, PhD (Zoology), University of Michigan.
 JAMES R. ALBERS (1971) Professor. BS, Washington State University; MS, George Washington University; PhD (Physics), University of Washington.
 MICHAEL FROME (1987) Environmental Journalist-in-Residence. City College of New York; George Washington University.
 ERNST GAYDEN (1971) Associate Professor. PhD, Illinois Institute of Technology; MS, University of Chicago.
 JOHN (JACK) T. HARDY, (1989) Professor. BA, University of California, Santa Barbara; MS, Oregon State University; PhD (Marine Botany and Aquatic Ecology), University of Washington.
 WAYNE G. LANDIS (1989) Associate Professor and Director, Institute for Environmental Toxicology and Chemistry. BA, Wake Forest University; MA, PhD (Zoology), Indiana University.
 CHRISTINE C. MAGUIRE (1990) Assistant Professor. BA, William

Paterson College of New Jersey; MS, PhD (Zoology/Ecology), Rutgers University.
 ROBIN A. MATTHEWS (1986) Associate Professor. BS, University of California, Riverside; MSES, Indiana University; PhD (Aquatic Ecology), Virginia Polytechnic Institute and State University.
 J. RICHARD MAYER (1978) Professor. BS, Union College; MA, Columbia University; PhD (Organic Chemistry), Yale University.
 JOHN C. MILES (1968) Professor. BA, Dartmouth College; MA (Recreation and Park Management), University of Oregon; PhD (Environmental Education), Union Graduate School.
 LYNN A. ROBBINS (1971) Professor. BA, University of Utah; MA, PhD (Anthropology), University of Oregon.
 WILLIAM C. SUMMERS (1971) Professor. BME, PhD (Zoology), University of Minnesota.
 HERBERT H. WEBBER (1970) Professor. BSc, PhD (Zoology and Marine Biology), University of British Columbia.
 MING HO YU (1969) Professor. BS, National Taiwan University; MS, PhD (Plant Nutrition and Biochemistry), Utah State University.

Adjunct Faculty

RICHARD S. BENNETT, USEPA Corvallis Research Laboratory. 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 10. PhD (Limnology), New York University.
 ERIC CRECELIOUS, Battelle Pacific Northwest Laboratory. PhD (Oceanography), University of Washington.
 BEN EWING, Professor of Environmental Engineering Emeritus, University of Illinois at Urbana-Champaign. BS, MS, University of Texas, Austin; PhD, University of California, Berkeley.
 WALTER PEARSON, Battelle Marine Science Laboratory, Pacific Northwest Division. PhD (Oceanography), Oregon State University.
 WENDY WALKER, Interpretive Specialist; Freelance Interpretive Writer and Planner. BA, Teaching Certificate K-12, Western Washington University; MA, Florida State University.
 RUTH WEINER, Professor. BS, MS, University of Illinois; PhD (Physical Chemistry), The Johns Hopkins University.
 PETER WILLING. PhD (Water Resources Policy), Cornell University.

Affiliated Faculty

RANDALL S. BABCOCK, Associate Professor, Department of Geology.
 DANIEL L. BOXBERGER, Associate Professor, Department of Anthropology.
 MARK BUSSELL, Assistant Professor, Department of Chemistry.
 SARAH CAMPBELL, Associate Professor, Department of Anthropology.
 DAVID CLARKE, Associate Professor Emeritus of Political Science and Huxley.
 LOWELL CROW, Professor, Department of Psychology.
 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, Assistant 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, Associate Professor, Department of Computer Science.
 EMILY R. PEELE, Assistant Professor, Department of Biology.
 DEBRA J. SALAZAR, Associate Professor, Department of Political Science.
 DAVID E. SCHNEIDER, Professor, Department of Biology.
 MAURICE L. SCHWARTZ, Professor, Department of Geology.
 PETER A. SMITH, Assistant Professor and Science/Technology Librarian, Wilson Library.
 MART STEWART, Assistant Professor, Department of History.
 STEPHEN SULKIN, Acting Provost and Vice President for Academic Affairs; Professor and Director, Shannon Point Marine Center.
 RONALD TAYLOR, Professor Emeritus, Department of Biology.
 DON C. WILLIAMS, Professor, Department of Biology.
 H. WILLIAM WILSON, Professor, Department of Chemistry; Director, University Instrument Center.

ADMISSIONS AND DECLARATION OF MAJOR

Admission to the environmental studies program in Huxley College is selective and based upon preparation and prior academic performance.

A student must have earned at least 75 quarter hours of college credit and have met specific academic requirements prior to applying for admission to a major. All applying students must have completed:

- An expository writing course above the 101 level
- A course in economics, preferably microeconomics
- A course in philosophy, preferably ethics or moral philosophy
- Two quarters of general biology
- One quarter of general chemistry
- One quarter of pre-calculus

Students applying for admission to the major in environmental science must complete, in addition to the courses above:

- Third quarter of general biology
- Second and third quarters of general chemistry
- One quarter of calculus (second quarter recommended)

All students must complete an application to Huxley College for admission to the Environmental Studies Program. Students are encouraged to apply for pre-major status prior to completing all academic requirements for admission. Application forms are available through Western's Admissions Office or through Huxley College, Environmental Studies 539.

Enrollment in most upper-division courses (300 and above) is restricted to students who have been officially admitted to Huxley College or who have been given special permission to enroll. The following environmental studies courses are General University Requirements and are open to all students in the University: Envr 110, 202 and Geog 201.

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 to be admitted to Huxley College is application and admission 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 application form for Huxley College.

Students who have earned certain associate's degrees from community colleges in Washington State are considered to have completed 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 an associate's degree from community colleges with which Western has no formal agreement must complete Western's General University Requirements.

Students holding a B.A. or B.S. degree from an accredited college or university who are working toward a second

bachelor's degree will be considered as transfers who have completed the GURs.

REQUIREMENTS FOR BACHELOR'S DEGREES IN ENVIRONMENTAL STUDIES

In addition to the General University Requirements for graduation from the 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 Ed.
- At least one full year (45 quarter credits) as a member of Huxley College, including the final quarter before issuance of a degree.
- A cumulative grade point average of 2.0 (C) or better, with no grades less than C- acceptable in Huxley background courses or courses that define a student's major or minor.

Students interested in any of these degree programs should contact the Huxley College office, Environmental Studies 539, for advisement on admission to Huxley College and selection of a faculty adviser.

BACHELOR OF SCIENCE — ENVIRONMENTAL STUDIES

Students pursuing B.S. degrees will complete certain common requirements and, in addition, specific course requirements for a major. Three majors are available: (1) environmental science, (2) environmental policy and assessment, and (3) environmental education.

Common Requirements In Environmental Studies

21 credits

These requirements consist of three core courses and the choice of a senior thesis, a senior project or an internship.

Core Courses (11 credits)

- Envr 301 or Bio 325, Envr 302, 303

Senior Thesis (498a) (10-15 credits)

Normally taken 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. The thesis must be submitted to the student's adviser in at least first-draft form by the third week of the student's last quarter of study.

Internship (498b)

10-15 credits

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 is then documented by a written report with such items as slides, drawings, graphs or tables that may be necessary according to guidelines supplied by the College. Choice of internship and preparation of the report are under the supervision of faculty advisers.

The internship report must be submitted to the student's adviser in at least first-draft form by the third week of the student's last quarter of study.

Students whose full-time, quarter-long internships earn from 11 to 15 credits will accumulate more than the required 21 credits of common requirements.

Senior Project (498c)

10-15 credits

The senior project may be a creative community project, undertaken with faculty advisement, 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 interpreted nature trail in the community. The results of the project must be reported in written, taped, filmed or graphically portrayed form appropriate to the project and submitted in at least first-draft form by the third week of the student's last quarter of study.

Major — Environmental Science

90 credits

The Huxley College environmental science major is aimed at students having interests in general environmental science, aquatic ecology, environmental toxicology and chemistry, regional and global systems. The Huxley major in environmental science, through its required courses and choice of electives, permits a student to specialize in the above areas of study, as well as related areas, at a level appropriate for an undergraduate degree program.

This major is designed as a two-year, upper-division B.S. degree program based on the science and math background of incoming students gained or obtained in the prerequisite courses.

The environmental science major requires a total of at least 90 credits from:

Common requirements in environmental studies — 21 credits

- Envr 301 or Biol 325, Envr 302, 303 (11 credits)
- Envr 498a or 498b or 498c (10-15)

Environmental science core courses — 17-21 credits

- Biol 325
- Envr 340 or Biol 340
- Envr 358 or 455
- One of the following courses: Envr 401, 402, or 436
- One of the following three courses: Envr 321, 361, or 430a

Upper-division electives chosen under faculty advisement — 48-52 credits

Graduates of Huxley College who have completed the environmental science major have entered careers in a variety of areas including environmental toxicology, watershed management, environmental impact assessment, environmental health, air pollution control and hazardous waste management, in both the private and public sectors. Many graduates choose to pursue advanced studies.

Program in Marine Ecology

100 credits

The marine ecology program emphasizes the structure and function of marine ecosystems, especially coastal systems. It includes many aspects of marine biology and an introduction to oceanography. It is not constrained to one discipline, but relates easily to applied areas such as fisheries management and environmental restoration.

The program includes theoretical and practical course work, a marine laboratory residency, and allows for individual focus on, for example, mariculture, pollution, marine resource use or particular system functions. A foreign study-abroad is encouraged, but will require early and thorough advisement. Similarly, the background requirement for admission to the Huxley major in environmental science and GURs should be completed before undertaking the program.

Required background preparation (not part of major)

- Biol 201, 202, 203; Chem 121-124, 251; Physics 121, 122; Math 124, 125
- Huxley common requirements for environmental studies (21 credits)
- Required courses (ecology core) (12-13 credits)
 - Biol 325; Envr 340; Envr 361 or Chem 333
- Required courses (marine biology core) (24 credits)
 - Biol 456, 461; Envr 321
 - Two from Envr 421a,b; Biol 407; Envr 422
- Electives under advisement (42-43 credits)
- At least four courses taken from list available in the Huxley College office

Residency Requirement

Students in this program are required to complete one quarter's work in residence at Shannon Point Marine Center (or similar facility).

Major — Environmental Policy and Assessment

88 credits

The goal of this major is to give students understanding and skill in assessing the nature and magnitude of the



economic, political and social changes associated with environmental problems.

Prior to the latter half of this century, the impact of our rapidly expanding civilization on nature was almost imperceptible to most people, and claimed very little of the attention of politicians and economists. Today this impact has grown so that leaders of politico-economic systems — recognizing the impacts of resource depletion, desertification, climate change, population growth, and urban blight and congestion — realize that political and economic reforms are required to mitigate these effects.

By providing students with the knowledge and tools for understanding the magnitude of the contemporary challenge, this concentration helps students to train themselves for the increasing variety of employment opportunities in environmental administration, policy formation and enforcement which will emerge in the coming decades; and to become effective shapers of public opinion in whatever career field they may choose. Courses focus on domestic and foreign environmental policies, economics, social and environmental impact assessment, environmental design and risk assessment, and examine the philosophical and ethical issues which environmental constraint raises.

Many students completing the environmental policy and assessment major go on to advanced studies, and there is now an increasing selection of excellent graduate programs emphasizing environmental policy. Job placement has been high as well.

The major is based on two general objectives:

- The acquisition of basic scientific and social understanding of environmental problems.
- The learning of skills and method.

To meet the requirements of the major it is necessary to complete the following:

Common requirements in environmental studies — 21 credits

- Envr 301 or Biol 325, Envr 302, 303 (11)
- Envr 498a, 498b or 498c (10-15)

Major requirements — 29-30 credits

- Envr 415, 418, 436, 464, 465; Soc 215
- One of the following courses: Envr 401, 402

Upper-division electives chosen under faculty advisement from Huxley or other WWU colleges — 37-38 credits

Recommended lower-division preparation for the environmental policy and assessment major includes at least one college-level course in history and courses in introductory sociology and the American political system. Interested students should seek advisement early concerning their lower-division preparation.

Major — Environmental Education

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.

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 careers as teachers in public and private schools, as interpreters with resources management agencies, and as staff in programs for special populations such as juvenile offenders 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.

Common requirements in environmental studies — 21 credits

Major requirements — 33-35 credits

- Envr 371, 372, 473, 474, 476, 477, 483
- One of the following courses: Envr 401, 402 or 436

Electives under advisement — 34-36 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 extensively utilizing course work in other colleges at Western which specialize in various aspects of communications.

Common requirements in environmental studies — 21 credits

Major requirements — 26-28 credits

- Envr 371, 372, 377, 466, 481, 482
- One of the following courses: Envr 401, 402 or 436

Electives under advisement — 41-43 credits

Interested students should seek advisement early in order to formulate a degree program within either of the above options.

Student/Faculty-Designed Major

Students who wish to design their own majors in environmental studies should obtain complete guidelines from the Huxley College office, Environmental Studies 539. 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 Studies

64-75 credits

The Bachelor of Arts degree program gives insight into the historical, cultural and psychological roots of today's environmental problems. Since the dawn of civilization, humans have exploited the natural environment and built themselves artificial and cultural environments. Thus, among others, Greek, Roman, Medieval, Renaissance, industrial and modern periods have created distinctive human environments, each having its particular virtues and problems, and each being the expression of a particular cultural world view. The program is based on the belief that much light can be shed on contemporary environmental problems by studying literature, cultural history and the forms of environmental problems in the major regions of the world today.

The B.A. degree in environmental studies requires:

A. Huxley environmental studies courses — 28-34 credits

- Core courses: Envr 301, or Biol 325, Envr 302, 303 (11 credits)
- One of the following courses: Envr 401, 402 or 436 (3-5 credits)
- Electives under advisement, 300 and 400 levels only (14-18 credits)

B. Course work, under Huxley faculty advisement, in one only of the following departments — 26 credits

- Anthropology, art, English, geography, history, liberal studies, political science, psychology, sociology (26 credits)

C. One of the three options below, under Huxley faculty advisement — 10-15 credits

- Electives selected from any academic unit except the one chosen for "B" above (10-12 credits)
- A senior thesis (10-15 credits)
- One quarter of study abroad (10-12 credits)*

Combined Major — Environmental Studies/Journalism

75-77 credits

A combined major is offered cooperatively by Huxley College and the Department of 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 to the public sound 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 heart of the program includes courses in news writing, reporting, copy editing, hands-on desktop publishing, and photo-journalism coupled with conservation history, physical science, biology and chemistry.

* Credits earned here may not count under (A) or (B).

Huxley Environmental Studies courses — 29-31 credits

- Core courses: Envr 301 or Biol 325, Envr 302, 303 (11 credits)
- One of the following courses: Envr 401, 402 or 436 (3-5 credits)
- Electives from among Huxley courses: highly recommended are Envr 418 and 439 (15 credits)

Journalism — 46 credits

- Journ 104 or 406 (3 credits)
- Journ 160, 204, 304, 340, 350, 404, 430, 470 and 480 (31 credits)
- Three staff courses from the following list "A": Journ 111, 112, 113, 114, 211, 212, 213, 214, 311, 312, 313, 314, 411, 412, 413, 414 (6 credits)
 - Three additional staff courses from the following list "B," or list "A": Journ 121, 122, 123, 221, 222, 223, 321, 322, 323, 421, 422, 423, 431, 432, 433 (6 credits)

Some of the 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

100 credits

A combined major in environmental studies and economics is available to students having a strong interest in the economic aspects of environmental studies and natural resources and who may contemplate graduate work or careers focused on these aspects.

- Envr 301, 302, 303, 401, 402, 436, 490; Envr 464 or 465; Envr 340 (or equivalent) or FMDS 205 (or equivalent); Envr/Econ 493 (or approved alternative) (39-40 credits)
- Econ 206, 207, 208, 303, 306, 307, 383, 483 (32 credits)
- 16-17 elective credits in upper-division environmental studies courses, and 12 elective credits in upper-division economics courses, to be selected under faculty advisement (28-29 credits)

BACHELOR OF ARTS IN EDUCATION

Major — Environmental Studies

44-47 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, Chem 115, Math 105
- Required courses (environmental studies core): Envr 301 or Biol 325, Envr 302, 303 and one of the following courses: Envr 401, 402 or 436 (14-16 credits)

- Required courses (environmental education): Envr 371 (4 credits)
- Environmental studies electives under advisement (26-27 credits)
- Elementary Education Professional Program. See Department of Education Curriculum and Instruction section.

MINORS

Minor — Environmental Education

27-28 credits

- Two courses from Envr 301 or 302 and 303 or 401 (6-8 credits)
- Envr 371 or 372
- Electives under advisement in environmental studies

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 301, 302 or 303 (7-8 credits)
- Environmental studies electives under advisement (11-12 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 301 and 302 (7 credits)
- Envr 321 (4 credits) or 430a (3 credits)
- Envr 358 (3 credits)
- Envr 361 (4 credits)
- Upper-division environmental science electives under advisement (7-8 credits)

GRADUATE STUDY

The Huxley College graduate program draws upon graduate course work in Huxley College and the College of Arts and Sciences' science departments and leads to the Master of Science in environmental science degree. Three major areas of program emphasis are recognized: environmental toxicology and chemistry, aquatic ecology, and regional and global environmental systems. Within the aquatic ecology emphasis, students may design programs emphasizing physical, chemical and biological processes in freshwater and marine systems. A fourth area, environmental chemistry, is a cooperative program with the Department of Chemistry.

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.

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 pay in-state tuition when enrolling in the environmental toxicology option of Huxley's M.S. program in environmental science.

Program options and requirements are described in the Graduate School section of this catalog.

INSTITUTE FOR ENVIRONMENTAL TOXICOLOGY AND CHEMISTRY

Director: Wayne G. Landis

The Institute for 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 Laboratory (ERL) is currently under development to augment laboratory and field facilities for research 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 students to participate in ongoing research projects and undertake thesis research through Huxley's programs in environmental science.

INSTITUTE FOR WATERSHED STUDIES

Director: Thomas A. Storch

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 is available to students and faculty for research and instructional purposes. Recent research activities of the institute have centered on the chemistry of North Cascades lakes, watershed management, and lake and stream water quality monitoring.

THE CENTER FOR APPLIED HUMAN ECOLOGY/APPROPRIATE TECHNOLOGY

This center serves faculty and students interested in the technologies appropriate to applied human ecology.

Appropriate technologies meet human needs for basic goods and services with minimal environmental disruption. They include use of sun, wind, water and biomass for energy; use of greenhouses and organic farming for food; use of cooperatives for production and distribution; and development of settlement patterns appropriate for these uses.

Applied human ecology is the interdisciplinary effort of refitting human activities into an environment of finite resources and of returning government and economy to human scale.

The center exists to encourage faculty members to share their research, ideas, information and points of view; and to help students design interdisciplinary programs of study. For more information contact Professor E. L. Gayden.

COURSE DESCRIPTIONS

Courses numbered X37, X97, 300, 400, 417, 445 are described on page 26 of this catalog.

Huxley courses and seminars are open to any students at Western. Students enrolled in other colleges at Western may apply credits earned at Huxley to their elective programs.

110 ENVIRONMENTAL STUDIES: A SCIENTIFIC APPROACH (3)

Prereq: one CUR 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. 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 macroproblem 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/minor status or written permission of instructor. General systems theory; principles of natural systems; eco-systems structure, function and management. An environmental studies core course.

302 ENVIRONMENTAL POLLUTION (4)

Prereq: Huxley major/minor status or written permission of instructor. An introduction to the problems of air and water pollution, pesticides, radiation, hazardous substances and noise. An environmental studies core course.

303 HUMAN ECOLOGY (4)

Prereq: Soc 101 or Anth 201 and Huxley major/minor status or written permission of instructor. Study of human interactions with the natural system as mediated by the social group with its shared norms, values, knowledge and technology; the evolution of cultural systems and the increasing human-environmental relations and problems; possible institutional solutions to pressing human ecological problems. An environmental studies core course.

304 ENVIRONMENTAL POLLUTION AND CONTROL (4)

Prereq: differential/integral calculus or Chem 121/122, or passing grade on a qualifying exam. Principles of air and water pollution and pollution control, noise pollution control, hazardous and radioactive waste control. May fulfill requirement for Envr 302.

309 ENVIRONMENTAL STUDIES: COMPUTER APPLICATIONS (3)

Prereq: upper-division status; admission to Huxley College. Application of microcomputer programs with the objective of integrating data management, data analysis and reporting into a technical report. Also introduces other microcomputer programs used in environmental studies.

321 OCEANOGRAPHY (4)

Prereq: introductory biology and chemistry courses or permission of instructor. Principles of oceanography, with emphasis on a description of the marine environment as an entity. Physics, chemistry and biology of the ocean.

340 BIOSTATISTICAL ANALYSIS (5)

Prereq: Envr 301 or Biol 325 or written permission of instructor. The design of biological experiments and appropriate statistical analysis of experimental data. Calculator required.

352 PRINCIPLES OF NUTRITION (5)

Prereq: general biology course and Chem 251 or permission of instructor. Introduction to the discipline of food and nutrition and health. Includes dietary survey and application of nutrition principles to evaluation of individual diet.

353 FOOD, NUTRITION AND SOCIETY (3)

Prereq: Envr 352 or permission of instructor. A survey of human-food relationship. The world food problems, the nature of hunger and malnutrition and their effects on health, strategies to improve food supply and human nutrition.

358 INTRODUCTION TO ENVIRONMENTAL TOXICOLOGY (3)

Prereq: general biology course, general chemistry course; Envr 302; or permission of instructor. Introduction to principles and methods of evaluating chemicals in the environment. Includes discussions on methods for identifying toxic substances, testing effects of these substances in non-human and human systems, and studies of transport of chemicals in ecosystems. Not for students concentrating in toxicology.

361 WATER QUALITY(4)

Prereq: general chemistry course, Envr 301 and 302 (Envr 301 and 302 may be co-requisite). Basic theory and techniques of water-quality analysis in the marine and freshwater environments, including nutrient analysis, dissolved oxygen and BOD, heavy metals, total and fecal coliforms. Techniques include spectroscopic analysis, titration, bacteriological assay, bioassay and others.

365 ENERGY AND ENERGY RESOURCES (4)

Prereq: general physics course or general chemistry course; Envr 302; or permission of instructor. The study of the energy concept as it applies to the environment. Concepts of thermodynamics, entropy, chemical rates. Thermodynamics of evolution, energy flow in biological systems. Energy flow in primitive and industrial societies, energy legislation, rate structures; methods of power generation.

371 ENVIRONMENTAL EDUCATION (4)

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 history of conservation in America from the colonial period to the present. Emphasis on 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 (4)

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: Phil 112; Eng 201 or 301; 300-level environmental studies core courses. An examination of philosophical dimensions of man-environment relations with emphasis on 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. An environmental studies core course.

402 ENVIRONMENTAL DECISION-MAKING (4)

Prereq: completion of social sciences GUR, to include Econ 206 and one of the following: Mgmt 271; Fair 211; Pol Sci 101, 250, or 311; 300-level environmental studies core courses. An interdisciplinary investigation of the political, economic and technical forces that shape decisions on environmental issues; development of a topology of decision making and its application through case studies; strategies for effecting improved environmental decision making. An environmental studies core course.

410 ENVIRONMENTAL PROBLEMS IN AGRICULTURE (3)

Prereq: senior status. Environmental problems in U.S. agriculture have their roots in the technologies and governmental policies applied to agriculture as an economic enterprise. Impacts of these problems may prove serious for future U.S. and world food supplies. Consideration given to alternative techniques and policies to promote energy, soil and water conservation for a sustainable agriculture. Offered alternate years.

411 ALTERNATIVE ENERGY SOURCES AND SYSTEMS (3)

Prereq: senior status. Recommended preparation: general physics, general chemistry, Hux 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 APPLIED HUMAN ECOLOGY: SETTLEMENT DESIGN I (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 in alternate years.

413 APPLIED HUMAN ECOLOGY: SETTLEMENT DESIGN II (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 in 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 in 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, geographical areas with particular population pressure.

418 SOCIAL IMPACT ASSESSMENT (4)

Prereq: Soc 210; Soc 215 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 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 FISHERIES ECOLOGY AND MANAGEMENT (3)

Prereq: one year of biology; course in oceanography or limnology; course in ecology recommended. Introduction to the management of fisheries with a view toward maximum sustained yield. Review of external dimensions of aquatic ecology, fisheries biology and the

processes of human constraint relative to these resources. Examines commercial fisheries, sport fisheries, freshwater fisheries and aquaculture.

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.

422 ESTUARIES (5)

Prereq: Biol 325, introductory chemistry course, upper-division status. Ecology and analysis of estuaries with emphasis on the physical, chemical and biological factors that affect productivity and function. Human utilization, impact and management. Laboratory and field studies of estuary structure and function. Offered at Sundquist Laboratory, Shannon Point.

429 STREAM ECOLOGY (5)

Prereq: Envr 301 or Biol 325; Envr 361 and Geol 472 recommended. Ecology and analysis of streams with emphasis on physical and chemical properties in relation to biotic communities. Processing of organic matter by stream invertebrates and fish communities. Perturbation by high organic loading or chemical pollutants and recovery processes. Reservoirs as hybrid systems. Field and laboratory exercises in sampling and analysis of stream ecosystems.

430a LIMNOLOGY (3)

Prereq: Envr 301 or Biol 325. Ecology and analysis of lakes and standing water bodies, with emphasis on the physical, chemical and biological factors that determine biological productivity. Human impacts on lakes. Lecture may be taken without laboratory (Envr 430b).

430b LIMNOLOGY LABORATORY (3)

Prereq: Envr 361; concurrent with Envr 430a. Laboratory and field studies of the physical, chemical and biological processes in lakes.

431a POPULATION BIOLOGY (3)

Prereq: Biol 321, 325; Math 105. Introduction to theory and application of population genetics and population biology.

431b POPULATION BIOLOGY LABORATORY (2)

Prereq: Envr 431a concurrently. Companion laboratory for 431a.

435 LANDSCAPE ECOLOGY (4)

Prereq: Biol 325. The 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.

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 301; Envr 422 recommended. 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: Biol 321; Envr 431a or equivalent. 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.

446 AQUATIC CHEMISTRY (3)

Prereq: Chem 122. The study of aquatic systems: precipitation, surface and groundwaters, chemical equilibria, free energy considerations, oxidation-reduction reactions, aquatic complexes, trace contaminants in water.

453 PLANT TOXICOLOGY LABORATORY (4)

Prereq: Envr 302 and Chem 251 or equivalent. Basic laboratory techniques used in the analysis of plant tissues exposed to various environmental pollutants.

454 NUTRITION AND HEALTH (4)

Prereq: Envr 352 or equivalent. 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 (3)

Prereq: Envr 456 or permission of instructor. Laboratory methodology in toxicology. Protocols and procedures for evaluating the toxicity of chemicals and environmental samples using a variety of organisms and end points. Experimental design and treatment of toxicological data.

458 BIOCHEMICAL TOXICOLOGY LABORATORY (2)

Prereq: Chem 371, Envr 450 or equivalents. Experimental techniques involved in the analysis of various pollutants in tissues; study of biochemical effects of selected pollutants on living systems under laboratory conditions.

459 AQUATIC TOXICOLOGY (3)

Prereq: Envr 302, 340 and 456, or permission of instructor; Envr 321 or 430 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. Offered in the same quarter as advanced Aquatic Toxicology Laboratory (Envr 560); seniors may enroll in the laboratory with permission of the Graduate School and instructor.

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 permission of instructor. Introduces students to United States national institutions, legislation, administrative procedures and regulations, with emphasis on explanations of processes that shape environmental policies. Some tools of policy analysis are also introduced.

465 COMPARATIVE AND INTERNATIONAL ENVIRONMENTAL POLICIES (4)

Prereq: Envr 303 or 464 or permission of instructor. A systematic comparison of the environmental policies of a sample of developed and lesser-developed nations such as Canada, Germany, Japan, Brazil and Mexico. The formations, applications, strengths and weaknesses of the policies are analyzed and discussed.

466 DEVELOPING ALTERNATIVE FUTURES (3)

Prereq: Envr 377 or permission of instructor. Introduction to methods used to develop descriptions of alternative futures, including trend analysis, scenarios, forecasting, the Delphi method, and modeling and simulation. The application of these techniques to strategic planning is also discussed. Offered in alternate years.

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.

470 THE HISTORY OF THE CONCEPT OF NATURE: PREHISTORY-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, 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 THE 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. Overview of the field of environmental interpretation and how it relates to environmental education. Focus 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 or permission of instructor; concurrent enrollment in Envr 475, 476 and 477. Classroom and field study of outdoor education, an 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 or permission of instructor; concurrent enrollment in Envr 474, 475 and 477. 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. Fieldwork required.

477 THE WRITINGS OF AMERICAN NATURALISTS (3)

Prereq: Envr 371 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 (variable credit)

Environmental problems of northwest Washington and related topics. A survey course that may include impact assessment, local and regional planning, pollution problems, problems of the environmental classroom. Available only off campus under the aegis of Continuing Education. Not available to Huxley majors. Repeatable for credit.

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 products as audio-visual presentations, displays and brochures.

480 WRITING AND EDITING THE PLANET (2)

Prereq: Journ 104 or permission of the 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.

482 ADVANCED ENVIRONMENTAL WRITING (4)

Prereq: at least two courses in journalism and/or writing, or permission of instructor. Emphasis on writing for popular publications, with extensive exercise in outlines, query letters, leads and complete drafts, with critiques and rewrite.

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.

491 MULTINATIONAL CORPORATIONS AND GLOBAL ECOLOGY (4)

Prereq: Econ 206 or 207. The character, functions and values of multinational corporations. Assessment of the impacts of such companies on Third World economics and environments and the economy of the United States (labor force, capital flows, resource allocation). Analysis of existing and proposed systems of corporate regulation in the international marketplace.

492 EFFECTS OF GLOBAL CLIMATE CHANGE (3)

Prereq: Envr 301 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.

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 (10-15)

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 of laboratory, library or community research.

498b INTERNSHIP (10-15)

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.

498c SENIOR PROJECT (10-15)

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.

499a-d SEMINAR (1)

Prereq: senior status or permission of instructor. Student-faculty interaction on topics of general interest. Repeatable for credit. S/U grading.

499f-m SEMINAR (2)

Prereq: senior status or permission of instructor. Student-faculty interaction. Repeatable for credit. 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.

499s-z SEMINAR (2)

Prereq: senior status or permission of instructor. Student-faculty interaction. Repeatable for credit.

Graduate Courses

Courses numbered 500; 517; 545; 597 are described on page 26 of this catalog.

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

The following courses are offered for graduate credit for persons enrolled in the Huxley College M.S. in environmental science program (all options); the M.A. in political science (environmental studies) program; or the M.Ed. program in natural science/science education (environmental education).

501 RESEARCH IN ENVIRONMENTAL STUDIES (2)

Prereq: graduate status. Research methodologies and scientific ethics. Bibliographic databases and other resources available for environmental research. Scientific writing. Funding experimental research. Experimental design and basic statistical approaches to environmental problems.

502 FUNCTIONING OF ENVIRONMENTAL SYSTEMS (3)

Prereq: graduate status; one year of general biology; one year of general chemistry; ecology. Major topics include the historical development of environmental studies and conservation in the U.S.; population dynamics, major types of aquatic and terrestrial ecosystems and biogeochemical cycles; large-scale regional and global systems and resources; politics and policy regarding environmental systems.

503 PERTURBATIONS OF ENVIRONMENTAL SYSTEMS (3)

Prereq: graduate status; Envr 502; one year of general biology; one year of general chemistry; ecology. Sources, impacts and mitigation of human-induced disturbances at the biochemical, organismal, population and ecosystem levels. Case studies of impacts. Introduction to policies regarding environmental perturbations.

504 ENVIRONMENTAL THEORY AND SOCIAL ANALYSIS (3)

Prereq: graduate status; Pol Sci 501. Cultural and economic origins of environmental problems. Psychological, philosophical and political changes needed for their solution.

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.

510 QUANTITATIVE RISK ASSESSMENT (4)

Prereq: Envr 302; 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 of 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 is 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: Envr 430 or equivalent, or permission of instructor. 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;

concurrent enrollment with Envr 530b. 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: Math 341, 342 or Envr 340; at least 10 credits of ecology. Theory and principles of experimental design, quantitative sampling and data analysis. Includes random and systematic sampling, stratified random sampling, sample unit size, estimation of sample number, proportional allocation and transformation. Also includes application of ANOVA to experimental design and data analysis, and application of multivariate statistics including clustering and ordination.

532 MARINE SAMPLING TECHNIQUES (2)

Prereq: Biol 325; Envr/Biol 340; graduate-level statistical methods course. Limnology or oceanography course recommended. Field methods in marine ecosystems sampling and surveying. Emphasis on methods used in population and community studies. Applicable to freshwater and estuarine systems.

533 COASTAL OCEANOGRAPHY PRACTICUM (4)

Prereq: one year of oceanography, limnology or estuarine course work; Envr 422 or 438 recommended. Practicum in the evaluation of documentation of a coastal project proposal in the manner of an agency study or oceanographic consultant report.

534 PELAGIC ECOLOGY (4)

Prereq: upper-division oceanography (lecture and lab course work); Biol 325; graduate-level statistical methods; Envr 421 a,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.

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.

537 TOPICS IN ECOSYSTEM MANAGEMENT (3)

Prereq: graduate status. Classification and evaluation of procedures used for management of non-monetary ecosystem services including single and multiple species models. Mitigation of habitat degradation. Habitat restoration.

538 COASTAL ECOSYSTEMS MANAGEMENT (4)

Prereq: graduate status. Human-induced impacts threaten the survival of coastal ecosystems in many areas of the world. This course 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.

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.

546 ADVANCED WATER CHEMISTRY (2)

Prereq: Chem 123; Chem 251 or 351; Envr 446; or permission of instructor. Study and discussion of research papers drawn from contemporary environmental chemistry literature.

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 ENVIRONMENTAL TOXICOLOGY I (4)

Prereq: Envr 302, 352, 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 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 (3)

Prereq: Envr 556 or permission of instructor. Laboratory methodology in toxicology. Protocols and procedures for evaluating the toxicity of chemicals and environmental samples using a variety of organisms and end points. Experimental design and treatment of toxicological data.

558 BIOCHEMICAL TOXICOLOGY LABORATORY (2)

Prereq: Chem 371 or equivalent. Experimental techniques involved in the analysis of various pollutants in tissues, study of biochemical effects of several pollutants on living systems under laboratory conditions.

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).

560 AQUATIC TOXICOLOGY LABORATORY (3)

Prereq: Envr 555 or 556 or equivalent. Concurrent enrollment with Envr 559. Evaluation of the effects of toxic compounds through the use of aquatic bioassays. Use of bioassays in biological monitoring, bioassay systems design, species selection and interpretation of bioassay results.

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: admission to M.Ed. in natural science/science education (environmental education). 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 for environmental 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 (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.). 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.

CENTER FOR GEOGRAPHY AND REGIONAL PLANNING

THE SCIENCE OF GEOGRAPHY

Defined by some as a physical science, by others as a social science, geography is pre-eminently a science of spatial relationships. It focuses attention on many aspects of humans and their use of the environment.

THE TWO FIELDS

Geography and regional planning are compatible fields that in many countries have enjoyed a long and fruitful association. The frequently quoted statement that "planning is the art of which geography is the science," although not universally accepted, indicates nonetheless the close proximity of these two branches of learning.

Geography focuses attention on man and his use of the physical environment. Hence, geographers study such topics as population patterns; transportation and settlement; land use and natural resources; and such aspects of the environment as landforms, climate, soils and vegetation.

Planners likewise are concerned with these same topics, but generally within the confines of a specific region, usually a municipality, a county or other small region. As the American experience increasingly reflects urbanization and growing pressure of space, resources and environmental quality, the challenge to understand the forces that determine urban patterns and require societal responses becomes the specific concern of the planner.

THE CENTER

Faculty

The members of the Center are scholars whose special interests and training span most of the sub-fields of the two disciplines. Most have had first-hand experience in foreign countries of Europe, Africa, South and East Asia, Australasia and Latin America. Individual faculty members

participate in such University programs as the Center for Pacific Northwest Studies, the Canadian-American Studies Program and the East Asian Studies Program.

Programs and Degrees

In keeping with Western's primary mission of excellence in undergraduate education, the general objectives of the center are (1) to provide a broad understanding of the world's environments, resources and peoples as an essential part of a liberal education, and (2) to prepare students for professional careers in the public and private sectors including industry, planning, services and teaching, and for graduate studies. The Center offers undergraduate major programs in geography and in planning, as well as a minor in cartography/GIS and a minor in geography. A certificate or letter for satisfactory completion of the minor is available upon request. B.A. and B.A. in Education degrees are granted. At the graduate level, an M.S. degree in geography is granted.

Facilities and Equipment

A major facility of the Center is its well-stocked map library, which contains more than 198,000 sheet maps, 878 atlases and a large number of air photos, as well as many reference works for cartographic and geographic research. The library is an official depository for maps issued by the United States Geological Survey, the United States Defense Mapping Agency, Washington State Department of Natural Resources, the Canadian Department of Energy, Mines and Resources, and other governmental agencies. A well-equipped cartographic laboratory and computing facilities provide for manual and computer-assisted cartographic production and reproduction, and for programs in remote sensing and geographic information systems. Two technical staff members — a program manager in the Map Library and a staff cartographer — are present to assist in the instructional and research activities of the Center.

EMPLOYMENT OPPORTUNITIES

Although many of Western's graduates in geography have become teachers either at the elementary or secondary level, opportunities in other fields have increased in recent years. Urban and regional planning, business and industry, government service, insurance and transportation have provided excellent openings for many recent graduates. For those graduates who demonstrate ability in such techniques of geographic research as statistical and cartographic/Geographic Information Systems analysis, the employment options are much increased. Particularly useful for the acquisition of such skills is the extended minor in GIS/cartography.

In the field of urban and regional planning, employment opportunities occur mainly in a wide range of federal, state and local government agencies. Private consulting agencies and industrial firms also require the services of trained planners in such projects as real estate development or the location of commercial and industrial



enterprises. Rising concern for the natural environment has greatly increased the demand for qualified planners.

GRADUATE STUDY

Although holders of the bachelor's degree in geography and planning may find challenging positions in the field of planning, graduate study and completion of the master's degree are becoming common requirements for professional advancement. Students in both programs are urged to consider the possibility of graduate training no later than the beginning of their senior year.

GEOGRAPHY FACULTY

DEBNATH MOOKHERJEE (1961) Director. Professor. BSc, MSc, University of Calcutta; PhD, University of Florida.

PATRICK H. BUCKLEY (1987) Assistant Professor. BS, Notre Dame; MA, University of Washington; PhD, Boston University.

EDWARD J. DELANEY (1992) Lecturer. BA, MA, PhD, University of Washington.

ROBERT L. MONAHAN (1955) Professor and Interim Director of International Studies Program. BA, University of Washington; MA, University of Michigan; PhD, McGill University.

JAMES W. SCOTT (1966) Professor. BA, MA, Cambridge University; PhD, Indiana University.

LALLIE F. SCOTT (1992) Lecturer. BA, University of Texas; MS, PhD, University of Utah.

THOMAS A. TERICH (1973) Professor. BA, MA, California State University; PhD, Oregon State University.

BACHELOR OF ARTS

The Center offers a broad base of course work which includes a variety of systematic and regional fields. 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 major, including electives, totals 70 credits. 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. Those contemplating work toward a graduate degree are advised to acquire a reading knowledge in a foreign language and competence in statistics and/or computer science during their undergraduate years.

Major — Geography

Adviser: T. Terich

70 credits

Core Required Courses

- Geog 201, 301, 310 or 311, 351, 354, 486
- Two courses from Geog 356, 358, 359, 452, 453, 475
- Two courses from Geog 313, 315, 319, 321, 322

Concentrations

Natural Resources/Physical Geography

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 203

- Four courses from Geog 330, 331, 362, 363, 431, 432, 461

Regional Development/Urban and Economic Geography

This option prepares students for business and industry-related occupations, and also for community and regional planning. An understanding of the spatial aspects of the economy and the development of skills toward analyzing urban-economic phenomena are major objectives of this option.

- Geog 205
- Four courses from Geog 340, 341, 345, 432, 460, 462, 464

Supporting Courses and Electives for both concentrations

- Math 240 or Soc 215 or equivalent; CS 101 or 120
- Electives under advisement

Minor — Geography

25 credits

- Geog 201, 203, 205
- Electives under advisement

Minor — Cartography/Geographic Information Systems

35 credits

Adviser: P. Buckley

- Geog 201 or 251; Geog 351, 354, 358, 359, 452; CS 101 or 120; Tech 340
- Electives under advisement: Geog 356, 456; Art 270, 371, 373; CS 480; Tech 341, 346

Major — Urban and Regional Planning

105 credits

Adviser: D. Mookherjee

An interdisciplinary approach, based on the strengths of various departments and programs of the colleges of the University (College of Arts and Sciences, Business and Economics, and Huxley College of Environmental Studies).

The Center for Geography and Regional Planning administers the program with support from other University departments and programs. The multi-disciplinary character of the program — which draws upon specialized resources of the various departments, particularly economics, political science and sociology — offers unique opportunities for students to view the interrelationships of various components of the environmental problems and to analyze, identify and evaluate them. The academic program has been primarily designed to prepare students for employment in planning agencies as well as to provide a foundation for graduate study.

Core Required Courses

- Econ 206 or 207, 480
- Geog 201, 205, 270, 341, 351, 354, 370, 470
- Envr 436
- Math 240 or Soc 215
- Pol Sci 250, 353
- Soc 101 and 321 or 323
- CS 101 or 120

Electives

- A minor under advisement, or
- An internship (6-12 credits) plus 13-19 credits under advisement

BACHELOR OF ARTS IN EDUCATION

This program is designed to provide necessary depth as well as breadth to the teaching majors who wish to specialize in geography in the public school system.

Adviser: J. Scott

Major — Geography — Secondary

55 credits

- Geog 201, 203, 205, 209, 251, 301, 310, 311, 406
- Approved electives to total 55 credits

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

45 credits

- Geog 201, 203, 205, 209, 251, 301, 310, 311, 406
- Approved electives to total 45 credits

Minor — Geography

24 credits

- Geog 201, 203, 251, 311
- Approved electives to total 24 credits

GRADUATE STUDY

For a concentration leading to the Master of Science degree, see the Graduate School section of this catalog.

COURSES IN GEOGRAPHY

Courses numbered X37; X97; 300, 400; 417, 445 are described on page 26 of this catalog.

201 HUMAN GEOGRAPHY (5)

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; land forms, water, climate, soils, vegetation.

205 ECONOMIC GEOGRAPHY (5)

Location analysis of economic activities; interrelationships of resources, industry, trade and transportation.

209 GEOGRAPHY AND WORLD AFFAIRS (2)

Geographical analysis of selected demographic, economic, political and social problems of the contemporary world.

251 MAP READING AND ANALYSIS (2)

Interpretation of map symbols and content at different scales; analysis of different types of maps and charts.

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 (5)

Prereq: Geog 201, 203, 205. Source materials, research and writing techniques; emphasis on the nature and development of geography and planning.

310 THE PACIFIC NORTHWEST (3)

Prereq: Geog 201 or 203 or 205. Examination of distribution and character of economic activity, population plus settlement and role of climate, landforms and resources in distributions.

311 THE UNITED STATES (5)

Prereq: Geog 201. Typical and regional approaches to selected elements of the physical, cultural and economic characteristics of the nation.

313 CANADA (3)

Prereq: Geog 201. 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 a appreciation of Canada.

315 EAST AND SOUTH ASIA (5)

Prereq: Geog 201. Survey of peoples, regions and resources of East and South Asia in their physical and cultural environments; problems and prospects.

319 AFRICA (5)

Prereq: Geog 201. Resources, peoples, regions; economic, social and political development; of Africa. Emphasis on area south of Sahara.

321 INDIA, PAKISTAN AND BANGLADESH (3)

Prereq: Geog 201. Systematic analysis of the physical and human environments of India, Pakistan and Bangladesh; emphasis on developmental problems.

322 THE MIDDLE EAST (3)

Prereq: Geog 201. Environments, economies and societies of Southwest Asia and North Africa; emphasis on current problems.

330 GEOGRAPHY OF LANDFORMS (5)

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 (5)

Prereq: Geog 203; Physics 101 or 114 recommended. Physical basis of climate; macro-scale patterns of world climates; meso- and micro-scale climatology; applied climatology; paleoclimatology and modeling future climate.

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.

341 URBAN GEOGRAPHY (5)

Prereq: Geog 201. Geographic relations of the modern city with emphasis upon the development, functions and problems of American cities.

345 REGIONAL HISTORICAL GEOGRAPHY (3)

Prereq: Geog 201. Analysis of geographical change through time of selected regions of the United States or Canada.

351 CARTOGRAPHY (5)

Prereq: Geog 201 or 203 or 205 or 251. Map and chart use, design, construction and reproduction. Foundation for GIS.

354 ANALYSIS OF AREAL DATA (4)

Prereq: Math 240 or Soc 215; Geog 201 or 270 and 203 or 205. Statistical and cartographic techniques in solving geographic problems.

356 REMOTE SENSING OF EARTH SURFACE FEATURES (3)

Prereq: Geog 203 or 251. An introduction to the spectral characteristics of earth surface features. The collection and processing of reflected energy in to digital images and subsequent image analysis. Special attention is devoted to the Landsat MSS and TM systems.

358 GEOGRAPHIC INFORMATION SYSTEMS (4)

Prereq: Geog 351 (or concurrent), Geog 354 (or concurrent) and CS 101 or written permission of instructor. 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/CARTOGRAPHIC 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 205 or 270. The physical, biological, economic and institutional factors affecting, conditioning and controlling man's use of land.

363 NATURAL HAZARDS (3)

Prereq: Geog 203 and 270. Identification and analysis of natural hazards; their distribution and geographic patterns; cause and effects; risk assessment methods and disaster planning. Offered in alternate years.

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.

431 WATER RESOURCES (5)

Prereq: Geog 330 or 331; CS 101 or equivalent; Geog 354. The role of water in the environment. The nature of water use and resulting problems; measures of control; data analysis and presentation.

432 GEOGRAPHY OF SOILS (3)

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.

452 ADVANCED CARTOGRAPHY/GIS (4)

Prereq: Geog 359. Analysis and application of cartographic techniques and geographic information systems to practical mapping and resource management projects.

453 FIELD METHODS IN GEOGRAPHY (3)

Prereq: Geog 351. Recording, mapping and analysis of physical and cultural features.

456 DIGITAL IMAGE PROCESSING (4)

Prereq: Geog 356. The use of microcomputers in converting satellite-obtained digital data into enhanced color images of the earth's surface; algorithms include signature training, unsupervised classification, filtering, convolution and eigen pictures.

460 THE URBAN ENVIRONMENT (3)

Prereq: Geog 201 and 203; Geog 341 recommended. Comparative patterns and processes of urban-economic change in the industrial and non-industrial world. Emphasis on urban environmental development issues and conflict.

461 NATURAL RESOURCES MANAGEMENT (3)

Prereq: Geog 354; Geog 209 recommended. Optimal use of natural resources, methods of balancing benefits versus the costs incurred; 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 201 or 205. Local and network analysis of local, regional and national systems; transportation and planning.

464 THE DEVELOPING WORLD: SPATIAL PROBLEMS, STRATEGIES AND SOLUTIONS (3)

Prereq: Geog 201 or 205 and Geog 315 or 319. 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.

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.

471 PLANNING PRACTICUM (6-12)

Prereq: completion of two-thirds of major requirements and permission of instructor. Participation in aspects of community development and planning under professional and academic supervision.

475 FIELD CAMP (3)

Prereq: Geog 201, 203 and permission of instructor. Methods of geographical field investigation.

486 SEMINAR IN SYSTEMATIC GEOGRAPHY (3)

Prereq: Geog 301. Selected topics in cultural, economic or physical geography. May be repeated for credit.

Graduate Courses

Courses numbered 500; 517; 545; 597 are described on page 26 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 354 or equivalent. Methods of gathering and analyzing data for the solution of geographic, regional planning and landscape problems.

521 SEMINAR IN SYSTEMATIC GEOGRAPHY: HUMAN (5)

Prereq: Geog 501 and 510. Investigation and research in sub-field of human geography including an evaluation of the methods and techniques employed in that sub-field.

522 SEMINAR IN SYSTEMATIC GEOGRAPHY: PHYSICAL (5)

Prereq: Geog 501 and 510. Investigation and research in the sub-field of physical geography including an evaluation of the methods and techniques employed in that sub-field.

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 PROBLEM (5)

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.

590 GRADUATE COLLOQUIUM (1)

Current trends and issues in geographic research. To be repeated each year of enrollment in program.

690 THESIS (6)

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 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 School Administration, Foundations of Education, Instructional Technology and Human Resources Development.

Professional education programs are developed and reviewed with the assistance of the Professional Education Advisory Board 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.

Department Chairs

Dr. Violet M. Malone
 Educational Administration and Foundations
 Dr. Suzanne L. Krogh
 Educational Curriculum and Instruction

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
 - Advancement-Alumni/Development
- Center for Interactive Multimedia for Education and Training

Educational Administration and Foundations

Chair: Dr. Violet M. Malone

Programs Offered

- Educational Foundations
- School Administration
- Human Resources Development
 - Adult Education
 - Human Services
 - Student Personnel Administration
- Instructional Technology
 - Instructional Technology in Schools
 - Instructional Design and Multimedia Development
 - Learning Resources
- Community and Technical College Faculty Preparation Programs

Educational Curriculum and Instruction

Chair: Dr. Suzanne L. Krogh

Programs Offered

- Secondary Education Professional Program
- Elementary Education Professional Program
- K-12 Education Professional Program
- Special Education Professional Program
 - Special Education (K-12)
 - Special Education (K-12) with Secondary Education
 - Special Education (K-12) with Elementary Education

Administrative Services

- Admissions and Advisement
- 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.

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.



EDUCATIONAL ADMINISTRATION AND FOUNDATIONS

EDUCATIONAL ADMINISTRATION AND FOUNDATIONS FACULTY

VIOLET M. MALONE (1991) Chair. Professor. BEd, Northeastern Illinois State University; MEd, Chicago State University; Advanced Master's, University of Chicago; PhD, Florida State University.

THOMAS BILLINGS (1964) Professor. BS, PhD, University of Oregon.

LESLIE BLACKWELL (1968) Associate Professor. BA, Washington State University; MEd, EdD, University of Washington.

LYNN DAY (1988) Associate Professor. BS, MA, University of Minnesota; PhD, Michigan State University.

FLORA FENNIMORE (1969) Professor. BS, Mt. Angel College; MA, EdD, Washington State University.

PAUL FORD (1970) Professor. AB, Dartmouth College; MEd, EdD, Harvard University.

BURTON L. GROVER (1969) Associate Professor. BS, MA, PhD, University of Minnesota.

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, Hanguk University for Foreign Studies; BA, MA, EdD, George Peabody College.

ROBERT LAWSON (1985) Lecturer. BA, MEd, Western Washington University.

LAWRENCE W. MARRS (1984) Professor and Dean, Woodring College of Education. BS, MS, University of Utah; PhD, University of Texas.

R. HUNTER NICKELL (1985) Lecturer. BA, MEd, Western Washington University.

JANE ANN PULLEN (1986) Lecturer. BA, University of California; MA, Goddard College.

FRANK 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.

WILMA SMITH (1990) Visiting Professor. BA/Ed, Central Washington University; MEd, Seattle Pacific University; EdD, University of Washington.

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.

LINDA ZURFLUH (1984) Professor. BA, MA, Pacific Lutheran University; EdD, University of Washington.

OVERVIEW

The Department of Educational Administration and Foundations consists of four 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 Administration
 - Specialization I, Management/Leadership
 - Specialization II, Instructional Design and Multimedia Development
 - Specialization III, Human Services Administration
 - Specialization IV, Vocational Rehabilitation Counseling

- 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)
 - Community College Faculty Preparation Program (certificate program)

Competency in Instructional Technology: Students admitted to programs in the Department of Educational Administration and Foundations are required to possess minimum instructional technology in education competence prior to completion of their program and, when applicable, prior to being recommended for certification. Procedures for demonstrating or developing competence are available from the main departmental office (Miller Hall 204).

EDUCATIONAL FOUNDATIONS

Program Area Head: Dr. Philip Vander Velde, Miller Hall 324A, (206) 650-3348

The Foundations program provides a sequence of transition courses between a student's general education at Western and the areas of professional specialization in the Woodring College of Education. Major purposes are: (1) to enhance a student's general education; (2) to synthesize and consolidate a student's general knowledge and focus it on the problems and challenges of the teaching profession; (3) to provide the necessary depth and breadth prerequisite to teaching in any of the several areas of specialization; and (4) to acquaint the student with the moral, ethical and political challenges faced by the profession. The program area office is located in Miller Hall 324.

SCHOOL ADMINISTRATION

Program Area Head: Dr. Paul Ford, Miller Hall 204C, (206) 650-4883

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.

HUMAN RESOURCES DEVELOPMENT

Program Area Head: Dr. John Utendale, Miller Hall 314A, (206) 650-2977

This area consists of three programs: Human Services, Adult Education Administration, 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.

The Human Resources Development Program offers undergraduate and graduate degrees. The undergraduate degree emphasizes a study of basic skill areas and the beginning of some specialization. The graduate degrees represent five areas of specialized professional study. All programs include strong segments of field studies. For additional information, refer to the Human Services Program description for the undergraduate level and the Adult Education and Student Personnel Administration programs at the graduate level; the program area office is located in Miller Hall 311.

INSTRUCTIONAL TECHNOLOGY

Program Area Head: Dr. Tony Jongejan, Miller Hall 204B, (206) 650-3381

The Instructional Technology Program offers instruction and research opportunities in the areas of learning resources, instructional television and computer 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
 - CS 120 or 221
 - Music 233, 432
 - Additional electives under advisement

COURSES IN EDUCATIONAL ADMINISTRATION AND FOUNDATIONS

Courses numbered X37; X97; 300, 400; 417, 445 are described on page 26 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. S/U grading. 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.

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. S/U grading. 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.

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.

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. S/U grading. 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.

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) Institute for English Language



Programs (IELP); (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 INSTRUCTIONAL TECHNOLOGY COMPETENCIES (1)
Prereq: written permission of instructor. Prepares the student to take the Woodring College of Education's instructional technology competency examination. Previous experience with computers is assumed. 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.

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.

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 computer competency requirement.

444 CLASSROOM USE OF INSTRUCTIONAL TECHNOLOGY (3)
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. May be repeated 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.

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 26 of this catalog.

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

501 INTRODUCTION TO EDUCATIONAL RESEARCH (4)

Prereq: graduate status. 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. 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. 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.

521 INSTRUCTIONAL SYSTEMS DESIGN: AN OVERVIEW (3)

Introduction to the process of Instructional Systems Design (ISD), including task analysis, competency specification, instructional strategy specification, media selection, instructional development, and formative evaluation.

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)

Prereq: EdAF 524 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.

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. 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. 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. 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 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 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. 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: 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 competency requirement.

544c PLANNING FOR CURRICULUM ADMINISTRATION (4)

Prereq: graduate status. 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. 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.

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.

559 RESEARCH IN COLLEGE STUDENT PERSONNEL ADMINISTRATION (1-6)

Prereq: admission to M.Ed. program in student personnel administration and EdAF 501. An in-depth research project in the area of higher education administration or related areas of inquiry.

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 and 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 COLLEGE TEACHING AND LEARNING (4)

Prereq: admission to Community College Faculty Preparation Program or permission of instructor. Study of the vision, theory and practice of college teaching, with particular emphasis on instructional strategies and techniques to promote student learning.

581a-d READINGS IN HUMAN SERVICES (2-5)

Prereq: permission of instructor. Supervised study focusing on one or more selected topics. Repeatable to a maximum of 6 credits.

592a-c FIELD EXPERIENCE IN ADMINISTRATION FOR THE PRINCIPAL (2-6)

Prereq: written permission of instructor. Applicants for the Washington State Administrative Certificate. S/U grading.

592e FIELD EXPERIENCE IN HUMAN SERVICES (2-6; total 12)

Prereq: permission of instructor. Supervised field experience in some facet of human services such as programming, advising, counseling, service provision. Repeatable to 12 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 14 credits. S/U grading.

592g,h,i,j,k FIELD EXPERIENCE IN ADULT EDUCATION (2-6; total 12)

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 12 credits under advisement. S/U grading.

594j,k,m PRACTICE 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. S/U grading. May be repeated with different content.

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. 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.

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 8 credits.

643 ADMINISTERING THE IMPROVEMENT OF CURRICULA (3)

Prereq: MA or MEd and EdCI 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.

690a THESIS (1-9)

Prereq: approval of the student's graduate committee. Research study under the direction of a faculty committee. S/U grading.

690b FIELD PROJECT (1-9)

Prereq: approval of the student's graduate committee. Field project under the direction of a faculty committee. 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. S/U grading.

HUMAN SERVICES

This program is offered at four sites: Bellingham, Everett, Port Angeles and Seattle. Not all courses are taught at all sites.

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 Department of Educational Administration and Foundations of the Woodring College of Education and leads to a B.A. degree. Admission to Seattle, Everett or Port Angeles sites requires a transferrable associate degree or the General University Requirements (sciences,

mathematics, communications, social sciences, humanities, non-Western and minority cultural studies).

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.

Admissions information is available in Miller Hall 311 or at off-campus program sites.

Competency in Instructional Technology

Students admitted to programs in the Department of Educational Administration and Foundations are required to possess minimum instructional technology in education competence. Procedures for demonstrating or developing competence are available from the program offices.

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.
- Twenty-nine credits are required with advisement.
- Independent study — limit 6 credits.
- For scholarship standards refer to the University Academic Policies section of this catalog.

PROFESSIONAL CONCENTRATIONS

Program for Social Service Research, Demonstration and Training (PSSRDT)

The Program for Social Service Research, Demonstration and Training (PSSRDT) provides selected professional development course work for individuals actively employed with the Department of Social and Health Services. These courses focus on professional social service delivery competencies and are presented in intensive seminar formats of several consecutive days at various locations throughout the state. Taught by regular faculty and professional trainers, the courses may be applied as electives toward the human services major.

PSSRDT courses are numbered HS 417a-t as follows: 417a Effective Interviewing [Core Series I] (1); 417b How to Interview the Emotionally Charged Client [Core Series II] (1); 417c The Difficult Interview Situation: An Advanced Workshop [Core Series III] (1); 417d Principles of Supervision Training I (2); 417e Principles of Supervision Training II (2); 417f Principles of Supervision Training III (2); 417g Fair Hearing Coordinator Training I (1); 417h Fair Hearing Coordinator Training II (1); 417i Fair Hearing Coordinator Training III (1); 417j The Role of Leadworker (2); 417k Team Effectiveness Training (2); 417l You in the 1990s (The Summer Institute) (2); 417m Dual Diagnosis (1); 417n Personality Disorders (1); 417o Domestic Violence (1); 417p Physical Capacity Determination: Body Systems (2); 417q Grief and Loss (1); 417r Family Social Work Intervention (1); 417s Institute for Social Welfare (6); 417t The DCFS Academy (The Children's Academy) (6).

COURSES IN HUMAN SERVICES

Courses numbered X37; X97; 300, 400; 417, 445 are described on page 26 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.

330 PROFESSIONAL TRAINING AND DEVELOPMENT WORKSHOPS (1-3)

Recognizes short course training and development opportunities provided by professional human services workers and other professionals at professional seminars, meetings and conferences. Requires pre-course preparation and post-course written and oral synthesis. Repeatable to a maximum of 3 credits. S/U grading.

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.

420a-c INTERNSHIP SEMINAR — SECOND-YEAR

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.

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.

440 CHEMICAL DEPENDENCY AND ADDICTIONS: ETIOLOGY AND TREATMENT (3)

Examination of the labeling and behavior process in substance abuse (drug, alcohol, food), and exposure to theories and treatment modalities.

441 CHEMICAL DEPENDENCY AND ADDICTIONS: THE HELPING RELATIONSHIP (4)

Prereq: HS 440, 446 and written permission. Development and application of basic skills, analysis of alternative interventions, referral resources and professional ethics relating to the alcohol or substance abuser.

442 CHEMICAL DEPENDENCY AND ADDICTIONS: RECOVERY AND REHABILITATION (2)

Prereq: HS 440 and written permission. Analysis of the physiological, psychological and sociological aspects of recovery and rehabilitation. Development of understandings and skills for the implementation of aftercare programs.

443 CHEMICAL DEPENDENCY AND ADDICTIONS: PHYSIOLOGY AND PHARMACOLOGY (3)

Examines the effect and mechanism of action of alcohol, hallucinogenic and other commonly abused drugs. Studies the physiological effects and responses to such phenomena.

444 CHEMICAL DEPENDENCY AND ADDICTIONS: ADVANCED COUNSELING (3)

Prereq: HS 440, 441 or permission. Advanced alcoholism counseling techniques and a survey of topics of special value to alcoholism counselors, i.e., sexual/child abuse, sexual dysfunctions, eating disorders. Includes development of appropriate treatment plans.

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 COUNSELING (4)

Prereq: HS 446 or permission of instructor. Theory and practice of basic skills used in fostering and maintaining helping relationships in group settings. Includes lab for skills acquisition and development.

448 COUNSELING IN CASELOAD MANAGEMENT (4)

Prereq: HS 446 and 447 or permission of instructor. Introduction to a number of major theories of counseling. Review of a variety of approaches to caseload management in individual and group counseling settings. Additional work with skills acquisition and development.

449 CHEMICAL DEPENDENCY AND ADDICTIONS: FAMILY DISEASE (3)

Prereq: HS 440 or permission of instructor. Recognition and impact of alcoholism on the family, friends and significant others. Therapeutic strategies to facilitate changes in those persons who are affected. Individual and group counseling.

450 CHEMICAL DEPENDENCY AND ADDICTIONS: LEGAL AND ETHICAL ISSUES (3)

Examines relevant laws, judicial decisions, administrative regulations, policy and procedures that impact alcohol and drug abuse and detoxification and treatment.

451 PHILOSOPHY OF HELPING (3)

A philosophical exploration of various concepts of the helping relationship and the ethical issues inherent in that process.

452 CHEMICAL DEPENDENCY AND ADDICTIONS: OVERVIEW OF MENTAL ILLNESS (3)

Prereq: HS 440 or permission of instructor. Focuses on issues related to chemical dependency and other psychiatric disorders, historically disparate views and new interface between mental health and chemical dependency fields, varieties of other psychiatric disorders, dual diagnosis assessment strategies, CD treatment planning for dually disordered persons and understanding/coordinating with mental health systems.

453 CHEMICAL DEPENDENCY AND ADDICTIONS: STRATEGIES OF INTERVENTION (3)

Prereq: HS 440. Analysis of strategic intervention forms and types for chemical dependency: individual, family, organizational and

community intervention. Develops knowledge and action skills for each intervention type.

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.

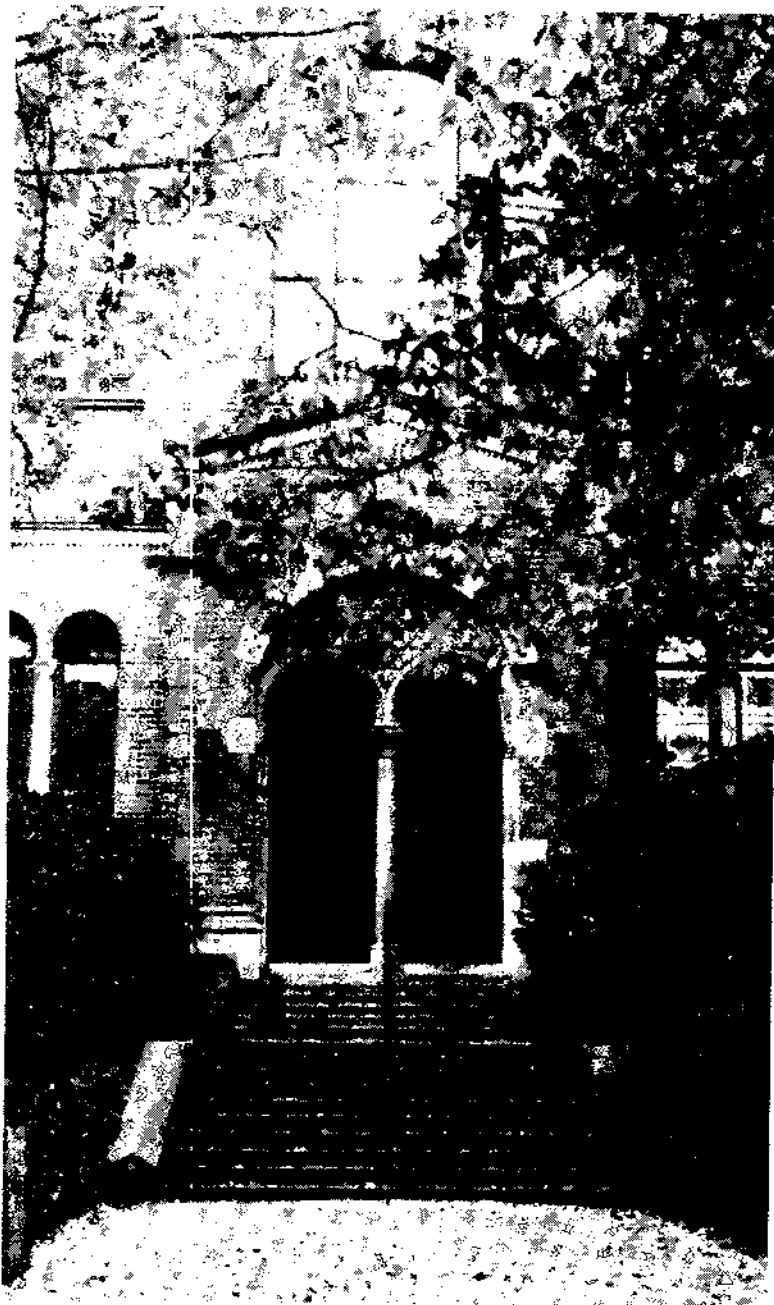
499 GRADUATION SEMINAR (4)

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

“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 26 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.

309 STORYTELLING (3)

Selection, adaptation and presentation of stories for elementary school children.

401 THE LIBRARY IN THE SCHOOL (3)

The organization and maintenance of effective materials-centered libraries in elementary and secondary schools.

402 ORGANIZATION OF MATERIALS (3)

Principles of classification and cataloging; making unit cards, adapting printed cards, and organizing a shelf list and dictionary catalog.

403 BASIC INFORMATION SOURCES (3)

Evaluation of basic information sources and practice in their use.

404 THE LIBRARY IN THE SOCIAL ORDER (3)

Social, educational and cultural implications of the role of the library in society.

405 BOOKS AND MATERIALS FOR ELEMENTARY SCHOOLS (4)

Reading and evaluation of books and materials for elementary children; emphasizes wide reading, book selection, literary analysis, correlation with the curriculum, current content trends and innovative uses.

407 BOOKS AND MATERIALS FOR YOUNG ADULTS (4)

Reading and uses of books for adolescents and their curriculum; multicultural and self-concept literature; realistic and mystical fiction and poetry; literary analysis.

410 WRITING AND ILLUSTRATING CHILDREN'S BOOKS (4)

Prereq: Lib Sci 405 or permission of instructor. Analysis of illustrations and writing of children's and adolescents' literature; techniques of composition and illustrations fundamental in writing; illustrating and binding.

Graduate Courses

Courses numbered 500; 517; 545; 597 are described on page 26 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

SUZANNE L. KROGH (1990) Chair. Professor. BA, Florida State University; MEd, University of Maryland; PhD, University of Oregon.

CHARLES M. ATKINSON (1976) Associate Professor. BA/Ed, MEd, Central Washington State College; EdD, Utah State University.

HORACE O. BELDIN (1965) Professor. BS, MS, University of Oregon; PhD, Syracuse University.

LEE A. DALLAS (1968) Associate Professor. AB, Gettysburg College; MEd, EdD, Temple University.

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. BA, Western Washington State College; MEd, PhD, University of Washington.

MICHAEL L. HENNIGER (1991) Associate Professor. BA, Whitman College; PhD, University of Texas.

KAREN J. HOELSCHER (1992) Assistant Professor. BS, Bemidji State University; MS, Mankato State University; EdD, Harvard University.

PETER J. HOVENIER (1970) Associate Professor. BA, University of California, Santa Barbara; MA, Brigham Young University; MA, PhD, Stanford University.

KENNETH W. HOWELL (1988) Professor. BA, MA, Arizona State University; PhD, University of Oregon.

ROBERT KEIPER (1990) Assistant Professor. BA, Kearney State College; MA, EdD, University of Northern Colorado.

MARVIN L. KLEIN (1978) Professor. BS, MS, Southern Illinois University; PhD, University of Wisconsin, Madison.

LAWRENCE W. MARRS (1984) Professor and Dean, School 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.

SAMUEL A. PEREZ (1989) Associate Professor. BS, Delta State University; MEd, Memphis State University; EdD, Utah State University.

ROBERT H. PINNEY (1971) Associate Professor. BA, University of Washington; EdD, Stanford University.

KAY PRICE (1984) Lecturer. BA, MA, Western Washington University.

KRISTINE L. SLENTZ (1989) Assistant Professor. BA, State University of New York; MA, PhD, University of Oregon.

MARIAN J. TONJES (1975) Professor. BA, MA, University of New Mexico; EdD, University of Miami.

JOHN C. TOWNER (1972) Professor. BS, MSE, Wisconsin State University; PhD, University of Minnesota.

OVERVIEW

Students who wish to become teachers or to expand their knowledge of teaching can choose from programs in early childhood, elementary, secondary, reading 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 was provided through adding course work to the Elementary program; a program in

Early Childhood Education was under development and may be available before the next catalog revision.

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 Admissions and Advisement Office, Miller Hall 206, 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.

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.

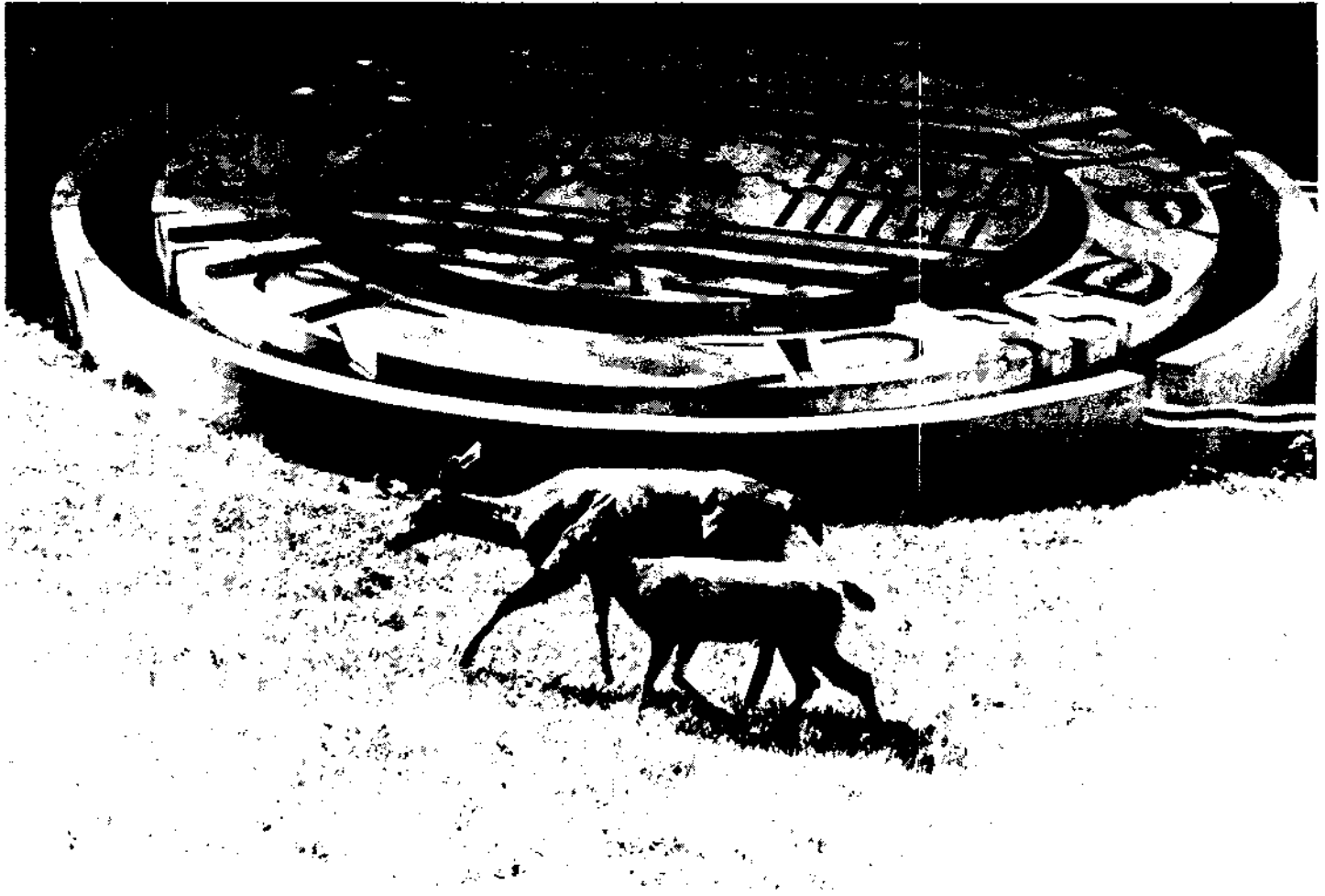
PROGRAM LENGTH

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 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 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 endorserable 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 and Advisement 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

* **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 in 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.

(Human Development), Social Studies, Sociology, Special Education, Student/Faculty-Designed Major.

Some of these majors for elementary candidates do not 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 four areas listed below as well as the K-12 professional education program: 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 and does not meet the State of Washington's requirement for endorsements in two areas. 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. 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. Students receiving their teaching certificate after July 1, 1988, are required to obtain a second endorsement prior to the completion of the continuing certificate program. Contact the Certification Office in Miller Hall 317, phone (206) 650-3388, for more information on the requirements for these supporting endorsements.

ADMISSION TO TEACHER EDUCATION

Pre-Admission Work

Western 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, Math 281 and Comm 101 are such courses. There may be other GUR courses that will apply to a student's major area. Students should check with an adviser in their academic department for suggestions on specific GURs.

Students should pay particular attention to those courses which, although not required until after admission to teacher education, can provide valuable preparation for the teacher education program. These courses include Math 281 (a prerequisite for the required Math 481) and

those courses meeting the general speech and computer competency requirements. Students also will benefit by beginning work toward the chosen major as soon as possible, especially those majors which require careful sequencing of courses.

Speech competency requirement: Speech competency is required of all students in the teacher education programs. See speech competency section on following page.

Before admission to any teacher education program, elementary and special education students are required to complete an in-school series of observations. For further information see the Woodring College of Education Admissions Advisement Office, Miller Hall 206E, (206) 650-3378.

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 in Miller Hall 206c prior to admission to the College of Education.

Students are encouraged to apply for admission to the College of Education as soon as possible after they have completed 45 quarter hours. The Admissions and Advisement Office, Miller Hall 206E, will assist students in receiving the proper information to meet all of the admission standards.

Students will not be admitted and may not begin taking courses in the education sequence until all admission standards are met.

Admission Standards

Requirements for admission are:

Credits

Completion of at least 45 credits.

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. The College of

* The above numbers represent scores and are not percentiles. A student who does not have these scores may arrange to take the WPCT through the Testing Center at WWU.

Education requirements are separated according to verbal and quantitative scores and are as follows:

Test	Total Score	Verbal Comp. (Eng.)	Quant. Comp. (Quant.)
WPCT	103*	50	40
SAT	910	440	340
ACT	23	20	9

In-School Observation

Five full days of classroom observation in an accredited school are required for admission to the Elementary and Special Education Programs. No pre-admission five-day observation is required for Secondary or K-12 Education programs. This observation may be completed in one or two classrooms. Students must request a Five-Day Observation Packet from the Office of Admissions and Advisement in Miller Hall 206E prior to doing their observation. Forms included in this packet will be required for admission. When requesting this packet, students need to designate their area of interest as Elementary or Special Education.

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.

Mathematics Competency

Students applying for admission to the Elementary (K-8) or Special Education (K-12) programs must meet a mathematics competency requirement which includes one of the following:

- Suitable score on the Intermediate Algebra Placement Exam for enrollment in Math 281.
- A grade of C- or better in Math 102.
- A grade of C- or better in any course named Intermediate Algebra or Pre-Calculus Mathematics or College Algebra at any two-year or four-year college.

Speech Competency

Prior to admission to an education program, a student must complete one of the following speech courses or its equivalent with a grade of B- or better:

- Comm 101, Fundamentals of Speech (4)
- Comm 312, Speech for the Teacher (3)
- Comm 235, Exposition and Argumentation (5) [secondary candidates only]
- Comm 454, Speech for the Elementary Teacher (3) [elementary candidates only]
- Comm 331 Advanced public speaking (3) [by permission of instructor only]
- Challenge of the competency (contact certification officer, Miller Hall 206)

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 number of students applying and the faculty resources available.

* 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.

Please phone (206) 650-3378 for application deadlines for the teacher education program.

ADDITIONAL REQUIRED COMPETENCIES

Computer competency is required of all teacher education students before they begin their fourth quarter of the professional program. Students should select one of the following three options to demonstrate this competency:

- Completion of EdAF 444 (Computers in the Classroom) with a grade of C or higher
- Completion of EdAF 344 (Computer Competencies) with a grade of C or higher
- Challenge of the competency (contact the Instructional Technology program in EdAF, Miller Hall 204)

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 oral communications should expect to seek remediation before beginning their internship.

Multicultural competency is required of all teacher education students. Within two academic quarters of admission to the College of Education, students must complete a set of readings and activities in the Center for Educational Pluralism, located in Miller Hall 250. Students also are required to maintain records documenting their ability to work effectively with students from racial and ethnic populations other than their own. The form to be used for this purpose is attached to the Five Day Observation form (elementary and special education) or distributed in an early course (secondary).

Mathematics prerequisites: Math 481 is required of all students pursuing elementary or special education certification as part of their professional program. Math 281 is the prerequisite to Math 481, and students are advised to complete Math 281 before beginning the education sequence.

NOTE: Math 281 satisfies the General University Requirement in math only for those who complete the BA in Education for Elementary.

PROGRAM AND SEQUENCE

Advisement

Each student is assigned an adviser when admitted to the College of Education. Students schedule an appointment to meet with an adviser before beginning the education sequence. Appointments may be arranged by contacting the following offices:

Elementary Education, Miller Hall 251, (206) 650-3336

Secondary Education, Miller Hall 306, (206) 650-3327

Special Education, Miller Hall 318, (206) 650-3330

K-12 Programs, Miller Hall 306, (206) 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 courses taken at Western. 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.

PROGRAM AREAS IN CURRICULUM AND INSTRUCTION

Secondary Program

Miller Hall 306, (206) 650-3327

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.

Program Standards

After a student is admitted, an overall 2.75 GPA must be maintained. (The GPA is calculated from the quarter in which the student is accepted into the program.)

Secondary Education Professional Program

60 credits

The courses listed below are not in the sequential order students will follow.

Professional Studies Core

20 credits

- Psychological Foundations
 - Psych 351
 - Psych 353
- Philosophical Foundations
 - EdAF 310
 - EdAF 411
- Instructional Foundations
 - EdCI 363
 - HEd 456

Secondary Studies

16 credits

- EdCI 471, 471a
- EdCI 472, 472a
- EdCI 484 or 481

Secondary Program Internship

24 credits

- EdCI 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 to support their application and acceptance as a student intern. *This portfolio will be turned in with the application for student internship.* 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

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

77-79 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

25 credits

- Psychological Foundations
 - Psych 351
 - Psych 352
- Philosophical Foundations
 - EdAF 310
 - EdAF 411
- Instructional Foundations
 - EdCI 363
 - EdCI 320
 - EdCI 469 or 429

Elementary Program — Methods and Curriculum Content

30-32 credits

- Art 380
- Music 361
- Math 481 (Note: Math 281 is a prerequisite)
- 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 394
- 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 481
- 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 certification.

Early Childhood Core

16-21 credits

- EdCI 390 or 592d
- EdCI 430 or 530
- EdCI 431 or 531
- EdCI 432 or 433
- EdCI 438

* Required for art, music.

** Required for art, foreign language, music.

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 460 or 560
- 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.

K-12 PROGRAM

Miller Hall 306, (206) 650-3327

This program leads to a K-12 specialist certificate and must be accompanied by an approved K-12 major in a specialty area. Approved majors are art, foreign languages, music and physical education. (See appropriate catalog section for description.)

K-12 Professional Program

60 credits

Professional Studies Core

19 credits

- Psychological Foundations
 - Psych 351
 - Psych 352 or 353
- Philosophical Foundations
 - EdAF 310
 - EdAF 411
- Instructional Foundations
 - EdCI 363

K-12 Studies

20-21 credits

- EdCI 471, 471a*
- EdCI 472, 472a**
- EdCI 484 or 481 or 485 or 488
- EdCI 422
- HEd 455 or 456

K-12 Internship

24 credits

- EdCI 494 or 495

SPECIAL EDUCATION PROGRAM

Miller Hall 318, (206) 650-3330

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

45-48 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, 461a, 461b, 462, 463, 465, 466, 469, 470
- Seven credits of electives selected from EdCI 361, 468, 435, or 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.

Professional Studies Core

16 credits

- Psychological Foundations
 - Psych 351, 316
- Philosophical Foundations
 - EdAF 310
- Instructional Foundations
 - EdCI 320

General Methods

19 credits

- Math 481
- EdCI 472, 422, 485
- EdCI 424 or English 440

Special Education Internship

16 credits

- EdCI 498b or 498c

Special Education with Elementary Certificate

63-64 credits

Students wishing to complete the Elementary certificate with a Special Education major and endorsement also must complete the following professional course work:

Professional Studies Core

15-16 credits

- Psychological Foundations
 - Psych 351
 - Psych 316 or 352
- Philosophical Foundations
 - EdAF 310
- Instructional Foundations
 - EdCI 320

Elementary Program

32 credits

- HEd 455
- Sci Ed 390, 391
- Math 481 (Note: Math 281 is prerequisite to 481)
- Soc St 425
- Eng 440 or EdCI 424
- EdCI 485
- Music 361, Art 380, PE 306

Internship

16 credits

A combined Elementary and Special Education internship of one quarter.

Special Education with Secondary Certificate

75 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.

Professional Studies Core

19 credits

- Psychological Foundations
 - Psych 316, 351
- Philosophical Foundations
 - EdAF 310
- Instructional Foundations
 - EdCI 360, 320

Secondary Program

12 credits

- EdCI 485
- EdCI 481 or 484
- EdCI 472

Special Education

20 credits

- EdCI 361, 461a, 461b, 462, 466, 469

Combined Internship

24 credits

- EdCI 495, 498c

Supporting Endorsement — Special Education K-12

Admission Requirements

- Valid Washington State teaching certificate

Course Requirements

- Special Education Core
 - EdCI 360, 361, 462, 461a, 461b, 466

- One Special Education elective course, under advisement
- Reading Requirements
 - Two courses selected from EdCI 485, 481, 484
- Internship
 - EdCI 498 (4-16 credits, by advisement)

INTERNSHIP

Office of Field Experiences, Miller Hall 322, (206) 650-3310

An important experience for teaching certification candidates is the internship. Depending on program area, internships last either one quarter or one semester. Students in semester internships will register for credits in two consecutive quarters.

Students must sign up for their internship experience at least two quarters prior to the internship. *An adviser's signature is required for application for the internship for students in elementary or special education.* Students are required to interview with the public school teacher to whom they have been assigned for final approval.

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 and practica and faculty recommendation)
- Availability of placements in specific grade/subject areas
- Acceptance by K-12 school personnel

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 involvement of interns is considered full-time and normally requires seven clock hours plus class preparation time, seminars and evaluation time spent outside of school. Students may not register for other course work during their internship. Outside work or other time-demanding commitments must be approved by the program area head and Office of Field Experiences.

Placement locations are listed on the student intern application 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.

CERTIFICATION

Initial Teacher Certification

The Initial Certificate is awarded to candidates who hold a baccalaureate degree from an accredited college or university and who receive a recommendation for

certification from a college 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.
- Current U.S. citizenship or declaration of intent to become a U.S. citizen.
- Washington State Patrol clearance.

Initial Certification legislation will be defined during the 1993 legislative session. Currently, the Initial Certificate is endorsed for both grade level and subject matter area. Initial Certificates will be valid for four years and may be renewed once for a three-year period provided state criteria are met. Initial Certificates will be valid for two years and may be renewed for three years if the candidate has been admitted to a master's degree program and may be renewed for an additional two years if half of the master's degree program has been completed. These last regulations may be different by the time this catalog is completed.

For further information, contact the Woodring College of Education Admissions and Advisement Office, phone (206) 650-3378, Miller Hall 206E.

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.

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 (206) 650-3388, Miller Hall 319.

The following criteria must be met to receive a recommendation for continuing certification from Western:

- A plan of study must be filed with the College of Education. Approval of the plan of study by the candidate's supervisory principal or administrator is required. 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 (206) 650-3388, or Miller Hall 301, phone (206) 650-3416.

INTERDISCIPLINARY PROGRAMS

For information on advisement, inquire at Miller Hall 206.

Major — Child Development

45 credits

The Child Development major is an academic major offered through the Woodring College of Education. All other academic majors are housed in their respective departments.

This major must be taken with either the Elementary or Special Education 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
- Child in the Family
 - Psych 355
- 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

45 credits

- 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
- Advanced Topics
 - Psych 456a or 456b or 456c or 456d

Major — Early Childhood Special Education

80 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

24 credits

- Psychological Foundations
 - Psych 351, 316
- Philosophical Foundations
 - EdAF 310
- Instructional Foundations
 - EdCI 320, 485
 - Math 481

Early Childhood Studies

28-30 credits

- EdCI 390, 430, 431, 432, 433, 467a
- Soc 360 or HS 355
- PE 485b or 496
- SPA 351 or 354

Special Education Studies

24 credits

- EdCI 360, 461a, 461b, 462, 466, 467b, 469

Electives

- Electives under advisement from psychology, sociology, anthropology, speech pathology/audiology, educational curriculum and instruction to equal 80 credits

Teacher Certification

Internship

22-24 credits

- EdCI 465, 498

COURSES IN EDUCATIONAL CURRICULUM AND INSTRUCTION

Courses numbered X37; X97; 300, 400; 417 445 are described on page 26 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. S/U grading.

360 INTRODUCTION TO EXCEPTIONAL CHILDREN (3)

An introduction to the special instructional needs of handicapped 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.

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 (2-4)

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)

Functions and programs of language arts in the curriculum including reading, writing, speaking, listening.

426a,b SOCIAL STUDIES IN THE ELEMENTARY CURRICULUM (4)

Functions, programs and materials in the social studies. Letters indicate grade level of emphasis in various sections of the course: (a) Primary; (b) Intermediate.

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 LEARNING DISABILITIES (4)

Prereq: EdCI 360. Theoretical background assessment and instructional procedures for the learning-disabled student.

461a ASSESSMENT AND EVALUATION I (3)

Prereq: EdCI 462 or permission of instructor; concurrent enrollment with EdCI 465. Assessment of pupil performance, selection of teaching strategies and evaluation using fluency as one of the parameters.

461b ASSESSMENT AND EVALUATION II (3)

Prereq: EdCI 461a; concurrent enrollment with EdCI 465. Use of individualized teaching strategies and evaluation using curriculum-based assessment and precision teaching.

462 CURRICULUM AND METHODS IN SPECIAL EDUCATION (5)

Prereq: EdCI 360 or permission; concurrent with EdCI 465. 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, task analysis and classroom management.

463 EDUCATION OF BEHAVIOR-DISORDERED CHILDREN (4)

Prereq: EdCI 360. Assessment, methods and curriculum for behavior disordered children. Emphasis on social skills training.

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.

465 PUBLIC SCHOOL PRACTICUM (2)

Prereq: concurrent with EdCI 461a or 461b or 462 or other education methods course with practicum requirements. Practicum experience in

a school setting. Designed to provide students with a continuing quarter-to-quarter placement in a school where the requirements of courses with practicum assignments can be met while students obtain in-depth experience in a single school environment. Repeatable to 8 credits.

466 FAMILIES, PROFESSIONALS AND EXCEPTIONAL CHILDREN (3)

Prereq: EdCI 360, 462. Techniques for communicating with and counseling handicapped and gifted children and their parents, and working with interdisciplinary teams.

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 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.

469 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.

470 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.

471 INSTRUCTION IN SECONDARY SCHOOLS (4)

Prereq: Psych 351, 353, EDAF 310; concurrent with EdCI 471a. Secondary curricula, lesson planning, instructional theory into practice and peer teaching.

471a PRACTICUM (2)

Prereq: concurrent with EdCI 471. Assisting with classrooms at the middle school level; observing at the elementary school level. S/U grading.

472 SECONDARY SCHOOL MANAGEMENT, INSTRUCTION AND EVALUATION (4)

Prereq: EdCI 471; concurrent with EdCI 472a; application for Secondary internship on file in Office of Field Experiences. Instructional skills, measurement, discipline, management and peer teaching.

472a SECONDARY SCHOOL PRACTICUM (2)

Prereq: concurrent with EdCI 472. 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 (4)

For pre-service and experienced classroom teachers, grades 6-12. Developmental reading, writing and learning skills and strategies specific to English, social studies and science. Not a course in remedial reading. Counts as instructional methods in reading course for K-12 reading endorsement.

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)

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 OBSERVATION AND PARTICIPATION (2-3)

Prereq: permission of department. Guided observation of experienced teachers and limited participation in teaching situations. S/U grading.

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. Develop and demonstrate teaching competence at the junior high/middle school or senior high school level. Repeatable to 24 credits. S/U grading.

496 PRACTICUM IN DIAGNOSIS AND PRESCRIPTION IN TEACHING (2-3)

Prereq: teaching experience. Defining objectives behaviorally; developing sequential learning activities; analyzing pupil readiness; prescribing appropriate strategies for continuous individual progress; applications with students in classrooms. Repeatable with varied content to 9 credits.

498a,b,c INTERNSHIP — EXCEPTIONAL CHILDREN (2-18 ea)

Prereq: recommendation for supervised teaching. Supervised teaching experience. 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 26 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 BRITISH SCHOOLS: K-12 (3)
Practicum of education in Oxfordshire, England, schools. Preparation includes reading, test questions, research paper assignment spring quarter. Practicum requires supervised team teaching and/or administering in an Oxfordshire school for one week.

518g SUMMER STUDY IN ENGLAND (6)
Lectures and experiences in philosophy, administration, culture, history and curriculum integration at Oriol College, Oxford. Seminars on how principles and practices in the U.K. can be adapted to the context of U.S. schools. Culminating project is required.

521 SEMINAR IN ELEMENTARY CURRICULUM (4)
Prereq: teaching experience or permission of instructor. 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.

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: graduate status and EdAF 501. Examination and analysis of research underlying current issues and problems in elementary education.

539 MASTER'S SEMINAR (4)
Prereq: 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.

560 SEMINAR IN SPECIAL EDUCATION (2-5)
Prereq: graduate status or permission of instructor. Specific problems and methods for serving exceptional children. Content varies from summer to summer; hence the course may be repeated for credit.

561 ETIOLOGY AND LEGAL FOUNDATIONS OF SPECIAL EDUCATION (3)
Prereq: admission to graduate program or permission. Etiology of handicapping conditions, 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.

562 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.

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.

565a PRACTICUM IN CONSULTATIVE TEACHING (3)
Prereq: concurrent enrollment in EdCI 565. Participation in a practicum with a master teacher or consultant who is operating in the specialist 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 PROGRAM DEVELOPMENT IN EARLY CHILDHOOD SPECIAL EDUCATION (3)
Prereq: admission to graduate school or permission of instructor. Current issues and best practices in Early Childhood Special Education (ECSE) program design and implementation. Includes historical, legal and procedural foundations, populations of children served, alternative service models, environmental design, program content, fiscal and personnel trends, family-centered approaches and interagency/interdisciplinary collaboration. Emphasis on model programs, trends, and applied research in the field.

569b ASSESSMENT AND EVALUATION IN EARLY CHILDHOOD SPECIAL EDUCATION (4)
Prereq: admission to graduate school or permission of instructor. Issues and resources for accurate and appropriate assessment of young children with special needs. 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 and utilization with young special needs children.

569c CURRICULUM DEVELOPMENT IN EARLY CHILDHOOD SPECIAL EDUCATION (3)
Prereq: admission to graduate school or permission of instructor. Curriculum development and adaptation for the youngest children with special needs. Includes available resources, best practices with the

developmentally young and activity-based interventions. Focus on model program curricular approaches, the use of daily routines and parent-child interaction as a context and content for intervention, 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. 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. 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.

579 MASTER'S SEMINAR — SECONDARY (4)

Prereq: EdAF 501, 512; EdCI 571, 572, 573, advancement to candidacy. Preparation and presentation of a seminar paper on a current problem or issue in secondary education.

583 READING 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 reading, 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 READING EDUCATION (3-4)

Prereq: permission of instructor. Reading 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.

587 IMPROVEMENT OF INSTRUCTION IN READING (4)

Prereq: at least one previous course in the teaching of reading or teaching experience. Teaching developmental reading; methods, materials, theory.

589 SEMINAR IN LANGUAGE ACQUISITION AND READING 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 reading 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.

598a PRACTICUM IN SPECIAL EDUCATION (4)

Individualized leadership experience in programs for exceptional children; for students with teaching experience.

598b RESIDENCY IN SPECIAL EDUCATION (16)

Full-time residency placement in a special education environment in the public schools. Designed for those with no prior teaching experience. Students complete an applied research project.

599 FIELD STUDY OF ELEMENTARY EDUCATION IN ENGLAND (2-5)

Prereq: EdCI 499e,f. An in-depth study of the British 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.

690a THESIS (1-9)

Prereq: approval of the student's graduate committee. Research study under the direction of a faculty committee. S/U grading.

690b FIELD PROJECT (1-9)

Prereq: approval of the student's graduate committee. Field project under the direction of a faculty committee. S/U grading.

OFF-CAMPUS EDUCATION CENTERS

In cooperation with the Center for Regional Services and University Extended Programs, the Western Washington University Woodring College of Education offers a variety of services and programs at its three education centers. Each center is served by directors, advisers and support staff. These services are self-supporting and offered year-round. The Seattle Urban Center and the Everett Education Center are graduate resident centers, offering complete graduate programs.

EVERETT EDUCATION CENTER

The WWU Everett Education Center is located on the campus of Everett Community College. The Woodring College of Education offers the following programs at the Everett site:

Human Services

This program leads to a baccalaureate degree. Courses are offered in the afternoons and evenings. Curricular goals stress the continual interaction between theory and practice through purposeful integration of classroom concepts and internship placement experiences.

For more information about this academic program, course descriptions and admission, refer to the Department of Educational Administration and Foundations section of this catalog.

Teacher Education and Certification

The Everett Education Center offers a sequence of upper-division courses leading to an Initial Teaching Certificate (Elementary) for transfer students. Courses are offered in the afternoons and evening, allowing candidates to work toward the degree on a part-time basis.

For detailed information about this program, course descriptions and admissions, refer to the Department of Educational Curriculum and Instruction section of the catalog.

Information regarding programs, courses and class schedules is available at the WWU Everett Education Center, 801 Wetmore, Everett, WA 98201, phone (206) 388-9438.

PORT ANGELES CENTER

The WWU Port Angeles Center is located on the campus of Peninsula College. The human services major is available to students who have completed Western's General University Requirements, either by transferable Associate of Arts degree or on a course-by-course basis. Courses are offered in the afternoons and evenings. Curricular goals stress the continual interaction between theory and practice through purposeful integration of classroom concepts and field placement experiences. For detailed information about this academic program, course descriptions and admission, refer to the Department of Educational Administration and Foundations section of this catalog.

Information regarding programs, courses and class schedules is available at the WWU Port Angeles Center, 1502 Lauridsen, Port Angeles, 98362, phone (206) 452-9277, extension 307.

SEATTLE URBAN CENTER

The Seattle Urban Center of Western Washington University is located in the North Annex of Seattle Central Community College.

Western's campus-based academic units use the Seattle Urban Center as a service facility through which they offer selected undergraduate and graduate degree and professional preparation programs plus other educational opportunities to Puget Sound area students bound to the Seattle area by work, family or other obligations.

Information regarding programs, courses and class schedules is available at the Seattle Urban Center, 1801 Broadway, Room NP-101, Seattle, WA 98122, phone (206) 464-6103 or SCAN 576-6103.

The College of Education offers programs at the Center on a regular basis. These programs are outlined below.

Department of Educational Curriculum and Instruction

Teacher Education and Certification — The Seattle Urban Center offers a sequence of upper-division and graduate courses leading to an Initial Teaching Certificate (Elementary and Secondary) and the M.Ed. in secondary education. Most of the courses are offered in the evening, allowing candidates to work toward the certificate or degree on a part-time basis.

For detailed information about this program, course descriptions and admissions, refer to the Graduate School and Department of Educational Curriculum and Instruction sections of this catalog.

Supervised Teaching Internships — Local and main campus-based students are able to complete the internship requirement for the initial teaching certificate through the Seattle Urban Center. Careful advance planning is essential to avoid delays in internship placement, and candidates should contact the Office of Field Experiences, Department of Educational Curriculum and Instruction, as early as possible.

Continuing Certification — A wide array of courses that satisfy the Continuing Certification requirements — including the master's degree — are offered through the Center. In addition to evening courses offered during the academic year, the Center also offers a variety of daytime summer courses.

Department of Educational Administration and Foundations

Human Services Program — This major is an upper-division program within the Department of Educational Administration and Foundations 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.

For detailed information about this academic program, course descriptions and admission, refer to the Department of Educational Administration and Foundations section of this catalog.

School Administration (Elementary, Secondary, Learning Resources) (M.Ed.) — The School of Education offers an M.Ed. in School Administration plus course work leading to principal certification (initial or continuing) or the Certificate of Advanced Study (CAS). The School Administration program is designed to prepare elementary and secondary school personnel to assume the leadership roles of the principal or vice principal.

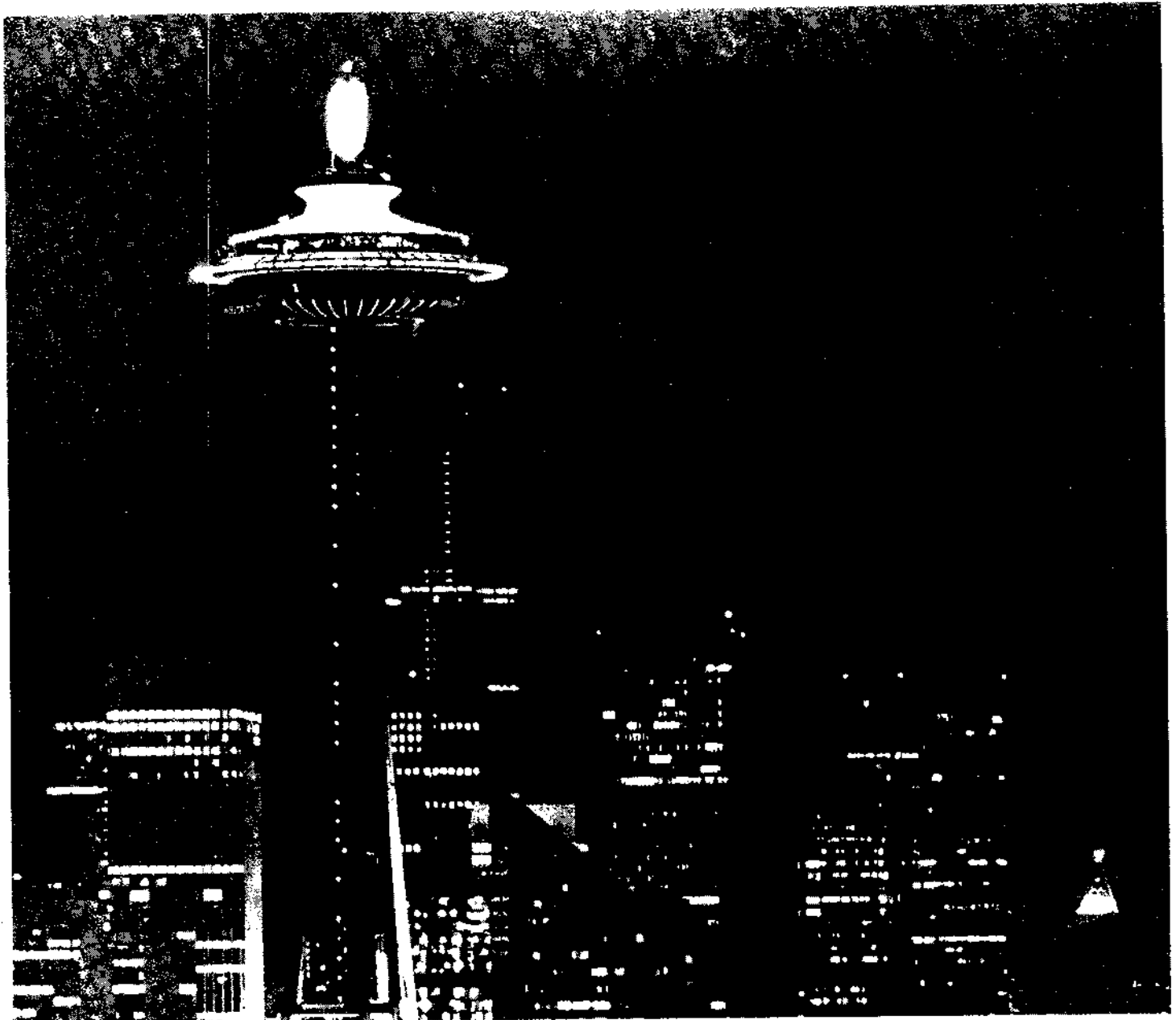
For detailed information about these programs, course descriptions and admissions, refer to the Graduate School section of this catalog.

Center for Continuing Education in Rehabilitation

Another activity located in the Seattle area is the Center for Continuing Education in Rehabilitation (CCER), a grant-funded human resource development center for individuals employed in public and private rehabilitation organizations in the states of Washington, Alaska, Idaho and Oregon. Information regarding this program is available from CCER, 14110 NE 21st St., Bellevue, WA 98007, phone (206) 957-4522.

PROGRAM SUPPORT SERVICES

Administrative functions for all off-campus Woodring College of Education programs are handled by Program Support Services. This includes admissions, registration, billing and financial aid distribution.



UNIVERSITY PERSONNEL

BOARD OF TRUSTEES

Mary Kay Becker, BEd, JD Bellingham
 Charlotte N. Chalker, BS, JD Tacoma
 Martha C. Choe, BA, MBA Seattle
 Craig W. Cole, BA Bellingham
 James C. Walde, BS, JD Seattle
 Warren J. Gilbert, BS, JD Mount Vernon
 Wayne H. Ehlers, BA, MA Seattle
 Secretary to the Board of Trustees Penny Glover

ADMINISTRATIVE OFFICERS

President
 Karen W. Morse, BS, MS, PhD
 Vice President for Academic Affairs and Provost
 Roland L. De Lorme, BA, MA, PhD
 Vice President for External Affairs
 Albert J. Froderberg, BS, MS, PhD
 Vice President for Business and Financial Affairs
 George A. Pierce, BA, MA, PhD
 Interim Vice President for Student Affairs
 Marie Eaton, BA, MEd, PhD

Office of the President and Provost

Assistant to the President
 Penny Glover
 Office Manager
 Judith A. McCoy
 Vice Provost for Diversity
 Lawrence J. Estrada, BA, MA, PhD
 Vice Provost for Information and Communication Services
 Jerry Boles, BS, MBA
 Vice Provost for University Extended Programs
 Ken M. Symes, BA, MA, PhD
 Assistant to the President/Provost
 John Havlanc, BS, MBA
 Assistant to the Provost
 Beverly A. Jones
 Administrative Assistant to the Provost
 Penny A. Page

Academic Affairs

Arts and Sciences, College of
 Dean, Peter J. Elich, BA, MEd, PhD
 Business and Economics, College of
 Dean, Dennis R. Murphy, BA, MA, PhD
 Center for Equal Opportunity
 Director, Maurice Bryan, Jr., BA
 Center for International Studies
 Director, Robert L. Monahan, BA, MA, PhD
 Education, Woodring College of
 Dean, Lawrence W. Marrs, BS, MS, PhD
 Fairhaven College
 Dean, Marie D. Eaton, BA, MA, PhD
 Fine and Performing Arts, College of
 Dean, Robert Sylvester, BM, MS
 Vice Provost for Research and Graduate Dean
 Moheb Ghali, BCom, MA, PhD

Huxley College of Environmental Studies
 Interim Dean, Thomas A. Storch, BA, MS, PhD
 Libraries
 Director, Diane C. Parker, BA, MLS
 Office of Institutional Assessment and Testing
 Director, Joseph E. Trimble, BA, MA, PhD
 University Extended Programs/Summer Session
 Writing Center
 Director, Barbara Sylvester, BA, MA

External Affairs

Administrative Assistant to the Vice President
 Lorie McNeill
 Development Office
 Director, Jean Rahn, BA, MS
 The Western Foundation
 Executive Director, Jean Rahn, BA, MS
 Alumni Relations
 Director, Chris Goldsmith, BA
 Public Information Office
 Director, Lynne Masland, BA, MA

Business and Financial Affairs

Administrative Assistant to the Vice President
 Nancy L. Phillips
 Budget Office
 Assistant Vice President for Business and Financial
 Affairs/Budget Director, Jack F. Cooley, BA, MPA
 University Police
 Director, Doug Gill, AA, Law Enforcement Graduate, FBI
 National Academy
 Fiscal Services
 Director, Mary Carlson, BA
 Human Resources
 Director, Michael Shea, BA, JD
 Physical Plant
 Director, Peter R. Harris, PE, BS, MSSM
 Environmental Health and Safety
 Director, Gayle Shipley, BS, MS

Student Affairs/Academic Support Services

Academic Advising/Tutorial Centers
 Director, Ronald W. Johnson, BA, MA, DA, PhD
 Administrative Assistant to the Vice President
 Bobbie J. Coleman
 Admissions and College Relations
 Director, Karen Copetas, BA, MS
 Associate to the Vice President/Student Life
 Connie L. Copeland, BS, MEd
 Athletics
 Lynda M. Goodrich, BA, MA
 Career Services Center
 Director, Christine L. Brinson, BEd, MEd
 Counseling/Health Services
 Director, Nathan Church, BS, MS, PhD

Student Financial Resources

Director, Kathleen A. Sahlhoff, BA, MEd

Registrar

Acting Registrar, Joseph St. Hilaire, BA, MA

University Residences

Director, Kathleen F. Rich, BA, MEd

Viking Union/Student Activities

Director, John J. Smith, BA, MA

EMERITUS FACULTY

HENRY L. ADAMS

Professor Emeritus of Psychology. BA, MA, University of Kentucky; PhD, University of Illinois.

PHILLIP R. AGER

Associate Professor Emeritus of Music. BAEd, Western Washington State College; MA, University of Washington.

MARGARET H. AITKEN

Professor Emeritus of Physical Education. BA, University of Washington; MA, EdD, Teachers College, Columbia University.

ANGELO ANASTASIO

Professor Emeritus of Anthropology. Diploma, The Juilliard School; AA, Boston University; MA, PhD, University of Chicago.

M. CHAPPELLE ARNETT

Professor Emeritus of Physical Education. BS, Centenary College; MS, Purdue University; EdD, University of Missouri.

HERBERT L. BAIRD, JR.

Associate Professor Emeritus of Foreign Languages and Literatures. AA, Santa Ana Junior College; AB, Pomona College; AM, PhD, University of Chicago.

LUCILLE E. BARRON

Associate Professor Emeritus of Home Economics. BA, Washington State University; MA, University of Washington.

MARION BESSERMAN

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; BD, 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.

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 CARROLL

Associate Professor Emeritus of Education. BS, Salem State College; EdM, EdD, Boston University.

KATHERINE M. CASANOVA

Associate Professor Emeritus of Education. BS, MA, Teachers College, Columbia University.

EDNA E. CHANNER

Associate Professor Emeritus of Technology. BA, University of Washington; MA, University of Iowa.

DAVID E. CLARKE

Associate Professor Emeritus of Political Science and Huxley. BA, MA, Trinity, Cambridge; PhD, Stanford 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. DAUGERT

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.

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.

EUNICE D. FABER

Associate Professor Emeritus of Foreign Languages and Literatures. AB, Howard University; MA, PhD, Catholic University of America.

RICHARD F. FERINGER

Professor Emeritus of Educational Administration and Foundations. BS, University of Minnesota; EdD, University of California at Los Angeles.

UNIVERSITY PERSONNEL

- 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.
- IGONE 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.
- THOMAS FRAZIER**
Associate Professor Emeritus of Library Sciences. BA, MA, MLS, University of Washington.
- 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.
- HOWARD L. HARRIS**
Professor Emeritus of Anthropology. BA, University of Iowa; MA, University of Missouri; M.Div., Hartford Theological Seminary.
- HERBERT R. HEARSEY**
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.
- ARTHUR C. HICKS**
Professor Emeritus of English. BA, MS, University of Oregon; PhD, Stanford University.
- 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.
- 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.
- HERBERT HITE**
Professor Emeritus of Education. BA, MA, College of Puget Sound; EdD, Washington State University.
- ROBERT E. HUFF**
Professor Emeritus of English. AB, AM, Wayne State University.
- HARRY D. JACKSON**
Associate Professor Emeritus of History. BEd, Wisconsin State University at Whitewater; MA, PhD, University of Iowa.
- ELI WOOD 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.
- 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.
- EDWIN M. LABOUNTY**
Associate Professor Emeritus of Music. AB, Yankton College; BM, MM, MusD, Indiana 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.
- 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.
- 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.

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.

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. OLSGAMP

Distinguished Service Professor Emeritus of the University. Philosophy. BA, MA, University of Western Ontario; PhD, University of Rochester.

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.

NICOLE B. RAPOZA

Associate Professor Emeritus of Foreign Languages and Literatures. BA, Long Beach State College; MA, PhD, University of California, Berkeley.

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.

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 SAVITCHI

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.

UNIVERSITY PERSONNEL

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.

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.

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.

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.

PAUL H. STONER

Associate Professor Emeritus of Music. BM, University of Kansas; MA, University of Iowa, DMA, University of Southern California.

RONALD J. TAYLOR

Professor Emeritus of Biology. BS, Idaho State University; MS, University of Wyoming; PhD, Washington State University.

ROBERT W. TESHERA

Associate Professor Emeritus of Geography and Regional Planning. BA, BAEd, Western Washington State College; PhD, University of Washington.

LESUE J. THOMAS

Professor Emeritus of History. BA, St. Olaf College; MS, PhD, University of Wisconsin at Madison.

HUBERT N. THORESON

Associate Professor Emeritus of Management. BS, Valley City State College; MEd, EdD, University of North Dakota.

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.

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.

PAUL WOODRING

Distinguished Service Professor Emeritus of the University. Education/Psychology. ESEd, Bowling Green State University; MA, PhD, Ohio State University. Honorary degrees: LHD, Kalamazoo College; PhD, Coe College; LittD, Ripon College; LHD, Bowling Green State University; LL.D. University of Portland.

JOHN J. WUEST

Professor Emeritus of Political Science. BS, MS, University of Southern California; PhD, University of California, Los Angeles.

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

Akathaporn, Parporn / Accounting

Aibers, James R. / Huxley

Alexander, Marian L. / Library

Alper, Donald / Political Science

Ames, Evelyn E. / Physical Education, Health and Recreation

Amiran, Edoh Y. / Mathematics

Amundsen, Darrel W. / Foreign Languages and Literatures

Anderson, Kathryn L. / Fairhaven

Apel, Kenn / Speech Pathology and Audiology

Atkinson, Charles M. / Educational Curriculum and Instruction

Atneosen, Richard A. / Physics and Astronomy

Auer, David J. / Finance, Marketing and Decision Sciences

Babcock, Randall S. / Geology

Balas, Robert S. / Foreign Languages and Literatures

Barrett, W. Louis / Physics and Astronomy

Barthold, Bonnie J. / English

Beasley, Bruce H. / English

Beck, Myrl E., Jr. / Geology

Beldin, Horace O. / Educational Curriculum and Instruction

Bellegarde, Françoise / Computer Science

Benson, Earl D. / Finance, Marketing and Decision Sciences

Bereal, Ed / Art

Berg, Richard H. / Arts and Sciences

Billings, Thomas / Educational Administration and Foundations

Blackwell, Leslie / Educational Administration and Foundations

Bode, Robert A. / Communication

Bornzin, Gary / Fairhaven College

Bouchard, Louise Marie / Foreign Languages and Literatures

Boxberger, Daniel L. / Anthropology

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

Brunton, Rosanne D. / English

Bryant, William H. / Foreign Languages and Literatures

- Bryce, Wendy J. / Finance, Marketing and Decision Sciences
 Buckley, Patrick H. / Geography and Regional Planning
 Bulcroft, Kris / Sociology
 Burnett, Michael J. / Fairhaven
 Bussell, Mark E. / Chemistry
 Caine, Dennis J. / Physical Education, Health and Recreation
 Campbell, Robert E. / Foreign Languages and Literatures
 Campbell, Sarah K. / Anthropology
 Carnean, Stephen L. / Psychology
 Carmody, Dianne C. / Sociology
 Cary, Meredith B. / English
 Castañeda, Omar S. / English
 Catrell, Dennis E. / Theatre Arts
 Chalice, Donald R. / Mathematics
 Christman, Robert A. / Geology
 Clumpner, Roy A. / Physical Education, Health and Recreation
 Cobb, Mary / English
 Conton, Leslie / Fairhaven
 Costanzo, Susan / History
 Crain-Thoreson, Catherine D. / Psychology
 Crary-Ortega, Laura / Art
 Craswell, Keith / Mathematics
 Crook, Joseph R. / Chemistry
 Crow, Lowell T. / Psychology
 Curgus, Branko / Mathematics
 Cvetkovich, George T. / Psychology
 Dale, Carolyn / Journalism
 Dallas, Lee A. / Educational Curriculum and Instruction
 Davidson, Melvin G. / Physics and Astronomy
 Day, Lynn / Educational Administration and Foundations
 De Lorme, Roland L. / History
 Delaney, Edward J. / Geography and Regional Planning
 Dennett, Nolan A. / Theatre Arts
 Diehl, Peter D. / History
 Dietrich, Dawn Y. / English
 Dinnel, Dale L. / Psychology
 Donker, Marjorie J. / English
 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
 Emerson, Richard K. / English
 Engebretson, David C. / Geology
 Eurich, Susan Amanda / History
 Evans, Howard M. / Educational Curriculum and Instruction
 Faulkner, Constance P. / Fairhaven
 Feinberg, Richard / Physics and Astronomy
 Fennimore, Flora / Educational Administration and Foundations;
 Educational Curriculum and Instruction
 Fewings, David R. / Finance, Marketing and Decision Sciences
 Foisy, Maurice H. / Political Science
 Fonda, Richard W. / Biology
 Ford, Paul / Educational Administration and Foundations
 Forste, Renata T. / Sociology
 Fox, Sheila / Educational Curriculum and Instruction
 Friday, Christopher C. / History
 Froderberg, Albert J. / Mathematics
 Frome, Michael / Huxley
 Gallay, Alan / History
 Garcia, Joseph E. / Management
 Gardner, Richard J. / Mathematics
 Gayden, Ernst L. / Huxley
 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
 Grady, Thomas / Engineering Technology
 Gray, Neil R. / Mathematics
 Grote, Frederick W., Jr. / Psychology
 Grover, Burton L. / Educational Administration and Foundations
 Gutchow, Monica C. / Theatre Arts
 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
 Hardy, John T. / Huxley
 Harris, F. David / Engineering Technology
 Harris, Lyle F. / Journalism
 Hartsfield, Nora A. / Mathematics
 Haug, Peter / Management
 Hayden, Davis C. / Psychology
 Hayes, Susanna A. / Psychology
 Hearne, James W. / Computer Science
 Heid, William H. / Fairhaven
 Helfgott, Leonard M. / History
 Hendryson, Mary Ann / Economics
 Henniger, Michael L. / Educational Curriculum and Instruction
 Henson, Steven / Economics
 Hildebrand, Francis H. / Mathematics
 Hill, Ford D. / Music
 Hill, Ingrid / English
 Hinsley, Tanis M. / Fairhaven
 Hitchman, James H. / History
 Hoelscher, Karen J. / Educational Curriculum and Instruction
 Hogan, Eugene J. / Political Science
 Hoover, Kenneth R. / Political Science
 Horn, Thomas C. R. / History
 Hovenier, Peter J. / Educational Curriculum and Instruction
 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
 Johnson, James L. / Computer Science
 Johnson, Jerry L. / Mathematics
 Johnson, Mildred / Mathematics
 Johnson, Vernon D. / Political Science
 Johnston, Thomas A. / Art
 Jongejan, Anthony / Educational Administration and Foundations
 Jusak, Debra S. / Computer Science
 Kaplan, Edward H. / History
 Kasprisin, Lorraine / Educational Administration and Foundations
 Keep, William C. / English
 Keiper, Robert / Educational Curriculum and Instruction
 Keleman, Kenneth / Management
 Keller, Robert H. / Fairhaven
 Kelley, Patricia C. / Management
 Kikuchi, Louise S. / Foreign Languages and Literatures
 Kim, Robert H. / Educational Administration and Foundations
 Kimball, Linda A. / Anthropology
 Kimmell, Arthur / Foreign Languages and Literatures

UNIVERSITY PERSONNEL

- King, Donald M. / Chemistry
 King, Rosalie Rosso / Home Economics
 Kintz, B. L. / Psychology
 Kitto, Kathleen L. / Engineering Technology
 Klein, Marvin L. / Educational Curriculum and Instruction
 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. / Huxley
 Larner, 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
 Lewis, Merrill E. / English
 Lindquist, Norman F. / Mathematics
 Lindsay, Richard H. / Physics and Astronomy
 Lippman, Louis G. / Psychology
 Lippman, Marcia Z. / Psychology
 Lobeck, Anne / English
 Lockhart, Julie A. / Accounting
 Long, Boyde / Physical Education, Health and Recreation
 Lonner, Walter J. / Psychology
 Lopresti, Robert / Library
 Lortz, James E. / Theatre Arts
 Loucky, James / Anthropology
 Lundeen, Kathleen / 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
 Maguire, Christine C. / Huxley
 Malone, Violet M. / Educational Administrations and Foundations
 Mahoney, Eldon R. / Sociology
 Mancke, Elizabeth / History
 Mariz, George E. / History
 Marrs, Lawrence W. / Educational Administration and Foundations;
 Educational Curriculum and Instruction
 Marsh, Peter / Music
 Marshall, Robert C. / Anthropology
 Mason, David T. / Fairhaven
 Mason, John B. / English
 Mathers-Schmidt, Barbara / Speech Pathology and Audiology
 Matthews, Geoffrey B. / Computer Science
 Matthews, Robin A. / Huxley
 Mayer, J. Richard / Huxley
 Meier, Robert C. / Finance, Marketing and Decision Sciences
 Menninga, Larry D. / Computer Science
 Merrifield, David E. / Economics
 Miles, John C. / Huxley
 Milicic, Vladimir / Foreign Languages and Literatures
 Miller, John A. / Chemistry
 Miller, Laurence P. / Psychology
 Mills, Perry / Theatre Arts
 Miner, Ralph E. / Political Science
 Monahan, Robert L. / Geography and Regional Planning
 Montague, Phillip / Philosophy
 Mookherjee, Debnath / Geography and Regional Planning
 Moore, James E. / Physical Education, Health and Recreation
 Moore, John S. / Finance, Marketing and Decision Sciences
 Mork, Theodore A. / Educational Curriculum and Instruction
 Morris, Jack / Music

 Morton, Todd / Engineering Technology
 Moskowitz, Steven M. / Engineering Technology
 Muller-Parker, Gisèle / Biology
 Murphy, Dennis R. / Economics

 Nelson, David M. / Economics
 Nelson, Karna L. / Educational Curriculum and Instruction
 Nelson, Philip A. / Computer Science
 Nickell, R. Hunter / Educational Administration and Foundations

 Olney, Thomas J. / Finance, Marketing and Decision Sciences
 O'Reilly, Maureen E. / Theatre Arts
 Osborne, Martin L. / Computer Science
 Oslapas, Arunas P. / Engineering Technology
 Owens, Eugene / Management

 Packer, Donna / Library
 Panek, David M. / Psychology
 Parakh, Jal S. / Biology
 Park, Douglas / English
 Parker, Diane C. / Library
 Parris, Kristen D. / Political Science
 Paskin, Steven / Accounting
 Pavia, Donald L. / Chemistry
 Payton, Rodney J. / Liberal Studies
 Pearce, Scott / Liberal Studies
 Peele, Emily R. / Biology
 Perez, Samuel A. / Educational Curriculum and Instruction
 Petersen, Lois E. / Management
 Pilgrim, Tim A. / Journalism
 Pinney, Robert H. / Educational Curriculum and Instruction
 Plumlee, E. Leroy / Management
 Price, Kay / Educational Curriculum and Instruction
 Prim, Merle M. / Psychology
 Prody, Gerry A. / Chemistry
 Pullan, C. Bruce / Music
 Pullen, Jane Ann / Educational Administrations and Foundations
 Purdy, John / English
 Purtil, Richard L. / Philosophy

 Quigley, Robert J. / Physics and Astronomy

 Rangel-Guerrero, Daniel / Foreign Languages and Literatures
 Raudebaugh, Robert A. / Engineering Technology
 Read, Thomas T. / Mathematics
 Reay, John R. / Mathematics
 Reed, Michael L. / Art
 Rhoads, James B. / History
 Rice, Karen B. / Library
 Richardson, John G. / Sociology
 Richardson, Larry S. / Communication
 Riggins, Ronald D. / Physical Education, Health and Recreation
 Ritter, Harry R., Jr. / History
 Ritter, Marian B. / Library
 Robbins, Lynn A. / Huxley
 Roberts, Frank / Educational Administration and Foundations
 Roberts, Jane E. / Home Economics
 Robinson, Walter L. / Foreign Languages and Literatures
 Ross, June R. P. / Biology
 Ross, Steven C. / Finance Marketing and Decision Sciences
 Ruble, 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
 Savey, Ronald N. / Accounting
 Schermer, Elizabeth R. / Geology
 Schneider, David E. / Biology
 Schwartz, Sy / Educational Administration and Foundations;
 Educational Curriculum and Instruction
 Schwarz, Henry G. / History/East Asian Studies

Scott, Lallie F. / Geography and Regional Planning
 Seal, Michael R. / Engineering Technology
 Seilo, Michael T. / Speech Pathology and Audiology
 Senge, Steven V. / Accounting
 Shaffer, Ronald W. / Psychology
 Shaw, Albert C. / Music
 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 L. / Biology
 Smeins, Linda E. / Art
 Smith, Alden C. / Communication
 Smith, Allison D. / English
 Smith, Peter / Library
 Smith, William E. / English
 Spanel, Leslie E. / Physics and Astronomy
 Spich, Robert S. / Finance, Marketing and Decision Sciences
 Sprague, Donald L. / Physics and Astronomy
 Springer, Mark C. / Management
 Steffens, Pete S. / Journalism
 Stephan, G. Edward / Sociology
 Stevenson, Joan C. / Anthropology
 Stewart, James E. / Physics and Astronomy
 Stewart, Marta / History
 Stoeber, William K. B. / Liberal Studies
 Stoops, Robert F., Jr. / Liberal Studies
 Storch, Thomas A. / Huxley
 Sucek, Christopher A. / Geology
 Sue, David / Psychology
 Suess, Walter F. / Foreign Languages and Literatures
 Summers, William C. / Huxley
 Sylvester, Charles D. / Physical Education, Health and Recreation
 Sylvester, Robert / Music
 Symes, Dal S. / Library
 Symes, Ken M. / English
 Talbot, James L. / Geology
 Taylor, Christopher J. / Psychology
 Taylor, Lee H. / Theatre Arts
 Templeton, David E. / Art
 Terey-Smith, Mary / Music
 Terich, Thomas A. / Geography and Regional Planning
 Thompson, Richard W. / Psychology
 Thorndike, Robert M. / Psychology
 Tomlonovic, Kathleen / Foreign Languages and Literatures
 Tonjes, Marian J. / Educational Curriculum and Instruction
 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
 Vander Velde, Philip B. / Educational Administration and Foundations
 Vander Yacht, Douglas R. / Theatre Arts
 Vassdal-Ellis, Elsi M. / Art
 Vawter, Richard D. / Physics and Astronomy
 Veit, J. Joseph / Physics and Astronomy
 Vernacchia, Ralph A. / Physical Education, Health and Recreation
 Verosky, John M. / Mathematics
 Vogel, Richard F. / Engineering Technology
 Wallace, David / Music
 Wallace, William L. / Liberal Studies
 Wang, Jianglong / Communication

Ward, Ronald A. / Mathematics
 Ward, Thomas F. / Theatre Arts
 Warner, Daniel M. / Accounting and Management
 Waterman, C. Fred / Library
 Webb, Loren L. / Speech Pathology and Audiology
 Webber, Herbert H. / Huxley
 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
 Wiedmeyer, Robert / Engineering Technology
 Williams, Don C. / Biology
 Williams, Terrell G. / Finance, Marketing and Decision Sciences
 Wilson, H. William / Chemistry
 Wodzicki, Antoni / Geology
 Woil, John W. / Mathematics
 Wonder, Bruce D. / Management
 Wright, Evelyn C. / English
 Ypma, Tjalling J. / Mathematics
 Yu, Ming-Ho / Huxley
 Yn, Ning / English
 Yungans, Charles E. / Engineering Technology
 Yusa, Michiko / East Asian Studies
 Zeine, Lina / Speech Pathology and Audiology
 Ziegler, David W. / Political Science
 Zoro, Eugene S. / Music
 Zurfluh, Linda / Educational Administration and Foundations

LIBRARIES

DIANE C. PARKER (1984) Director of Libraries. BA, University of California, Berkeley; MLS, University of Washington.

Librarians

MARIAN L. ALEXANDER (1970) Associate Professor and Head Technical Services Librarian. AB, Occidental College; MLS, University of California, Los Angeles.
 ENID HAAG (1975) Professor and Education Librarian. BS, University of Nebraska; MA/Ed, MS/Librarianship, University of Denver.
 ROBERT LOPRESTI (1987) Associate Professor and Government Documents Librarian. 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. BA, BLS, University of British Columbia; MBA, Western Washington University.
 KAREN B. RICE (1989) Assistant 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) Assistant Professor and Science/Technology Librarian. BA, MA, MLS, Wayne State University.
 DAL S. SYMES (1987) Associate Professor and Humanities Librarian. Head of General Reference and Coordinator of Reference and Instruction Services. 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.

UNIVERSITY PERSONNEL

DISTINGUISHED SERVICE PROFESSOR OF WESTERN WASHINGTON UNIVERSITY

PAUL J. OLSGAMP

Distinguished Service Professor of Western Washington University.
BA, MA, University of Western Ontario; PhD, University of
Rochester.

DEGREES AND CERTIFICATES

Degrees granted from August, 1990, to June, 1991, inclusive:

Master of Education 163
Master of Arts 61

Master of Science 63
Master of Music 11
Master of Business Administration 19
Bachelor of Arts in Education 204
Bachelor of Arts 1,347
Bachelor of Science 254
Bachelor of Fine Arts 1
Bachelor of Music 17
Total 2,097

Recommended for certification to the State Superintendent for Public

Instruction — August 1991, to June, 1992, inclusive:

Initial Teacher Certificate 279
Continuing Teacher Certificate 86

APPENDICES

Appendix A AFFIRMATIVE ACTION/EQUAL OPPORTUNITY GUIDELINES

Equal Opportunity

It is the policy of the Board of Trustees of Western Washington University to provide equal employment opportunity for all employees and qualified applicants for employment, and equal access to programs and services for all students and members of the community regardless of race, color, religion, national origin, sex, age, disability, marital status, sexual orientation, Vietnam era or disabled veteran status. The Board of Trustees pledges that every effort will be made to provide the resources necessary for implementation of this policy.

It is the responsibility of each and every member of the University community to ensure that this policy becomes a functional part of the daily activities of Western Washington University.

The University will continue to cooperate with agencies of the federal and state governments in fulfilling its obligations under the laws of the United States and the State of Washington.

Affirmative Action

The objectives of the Western Washington University Affirmative Action Program are to eliminate discrimination and, in conformance with state and federal law, to develop a work force and student body which reflect an equitable distribution of minority group members, women, veterans and disabled individuals at all levels of employment and throughout all departments of the University.

Applications for employment and student admission will be solicited from groups protected under federal regulations, and where such persons are under-represented in the work force and/or the student body.

It is the responsibility of each employment official to adhere to affirmative action procedures and to take positive steps to fulfill the affirmative action goals of the University.

Personnel Policies

The University recruits on the basis of qualifications without regard to race, color, religion, national origin, sex, age, disability, marital status, sexual orientation, Vietnam era or disabled veteran status, except where such is a bona fide occupational qualification.

Recruitment for graduate assistants and student employees shall be publicized so all eligible interested individuals have an opportunity to apply.

Program and Activity Policies

No qualified person shall, on the basis of race, color, religion, national origin, sex, age, disability, marital status, sexual orientation, Vietnam era or disabled veteran status, be excluded from participation in, be denied the benefits of or be subject to discrimination in any program or activity provided by the University, including the Associated Students. In addition, the University will not utilize off-campus facilities nor participate in activities or services which are operated in a discriminatory manner.

Counseling and guidance in making educational and career choices will be free of stereotyping. It is the policy of the University to encourage the elimination of stereotyping and bias in testing and other curricular material.

With limited exceptions, which shall be reviewed by the director of the Center for Equal Opportunity, all classes, courses of study and other educational programs and activities offered by the University will be open to all persons.

The University will modify its academic requirements and procedures for evaluating student academic achievement as necessary to ensure that such requirements or evaluation methods do not discriminate or have the effect of discriminating on the basis of disability against a qualified applicant or student. All University programs are accessible to mobility impaired students. The University assists in providing auxiliary aids for students with impaired sensory, manual, or speaking skills. It is the responsibility of the student

needing these modifications or aids to request them. Informal requests for modifications or aids should be made with the Disabled Student Services Office. If further assistance is needed in obtaining these modifications or aids, the Center for Equal Opportunity should be contacted.

A person who believes s/he has been discriminated against by the University because of race, color, religion, national origin, sex, age, disability, marital status, sexual orientation, Vietnam era or disabled veteran status is urged to utilize the internal grievance procedure provided by the University through the Center for Equal Opportunity as soon as possible after the alleged act of discrimination giving rise to the grievance. (See Appendix H.)

The Center for Equal Opportunity is located in Old Main 375, phone (206) 676-3306. The director is responsible for 504, Title IX, Title VII and all other affirmative action/equal opportunity laws.

These policies are currently under revision. Please see the Center for Equal Opportunity for possible modifications.

Appendix B WWU POLICY ON SEXUAL HARASSMENT OF STUDENTS

It is the policy of Western Washington University to provide an environment in which students can work and study free from sexual harassment or sexual intimidation and exploitation. All students, staff and faculty should be aware that the University is concerned and prepared to take action to prevent and to eliminate such behavior and that the individuals who engage in such behavior will be subject to sanctions, including dismissal.

Sexual harassment occurs in a context of unequal power and is a form of sexual discrimination, and, as such, is a violation of Title VII of the 1964 Civil Rights Act and Title IX of the 1972 Education Amendments.

Sexual harassment of a student will be judged to occur at Western Washington University when an individual in an institutional position of power or authority over a student uses such power either implicitly or explicitly to promise, grant or withhold grades, evaluations or other academic or supervisory rewards in order to coerce that student into a sexual relationship or to subject the student to unwanted sexual attention or to verbal or physical conduct of a sexual nature, when such conduct creates an intimidating, hostile or offensive educational or work environment.

Students who believe they may be experiencing sexual harassment may be uncertain that specific actions constitute sexual harassment so University policy allows for two procedural stages. The first stage provides students with advice and counsel and is strictly confidential (Procedures, steps 1-4). The second stage involves a formal investigation, which proceeds only if the student is willing to allow the signed complaint to be given to the accused (Procedures, steps 5-9). The University will protect students from retaliation.

The procedures for dealing with sexual harassment are as follows:

1. Students may bring questions about procedure or seek informal advice relating to sexual harassment to the Office of Student Affairs. If an individual desires to discuss personal thoughts and feelings, wishes to consider ways to deal individually with the incident(s), or explore procedural options, the Office of Student Affairs offers counseling and appropriate referral.
2. Specific complaints of sexual harassment should be made to the Assistant to the Vice President for Student Affairs or designee. In some cases, the Assistant to the Vice President for Student Affairs may discuss concerns with the person complained against without formal charges being filed.
3. If a student requests a formal investigation of the incident(s), a written complaint signed by the student identifying the accused individual(s) and the unwanted behavior should be submitted to the Affirmative Action Officer. The Affirmative Action Officer will determine if the complaint falls under the provisions of the Sexual Harassment Policy and if the facts presented in the case warrant investigation.
4. If the Affirmative Action Officer determines that the alleged facts presented in the complaint do not warrant investigation, the student will be so informed in writing within five class days. The student may provide additional evidence within ten class days. If the complaint is concluded at that stage, no copy of the complaint is retained.
5. If the Affirmative Action Officer determines that the facts presented in the complaint warrant investigation, the Affirmative Action Officer will, with the student's consent, forward a copy of the signed complaint to the appropriate Vice President within 15 class days of the filing of the complaint. If the student declines, the investigation will not proceed and no copy of the complaint will be retained. If the student consents, the Vice President will

forward a copy of the complaint to the accused and will investigate the complaint to determine whether reasonable grounds exist to conclude that sexual harassment has taken place. The investigation shall be concluded within 15 class days.

The University will protect students from retaliation and will provide for third-party evaluation of course performance when appropriate.

6. If the Vice President determines there is not reasonable cause to believe that sexual harassment did occur, the student and the accused shall be so informed within five class days of the end of the investigation. No further action shall be taken on the complaint, and no record of the complaint shall appear in the accused individual's file unless the accused requests it. However, the student may appeal the decision within five class days and the matter would then proceed as provided in Section 8.

7. If the Vice President determines there is reasonable cause to believe that sexual harassment has occurred the Vice President shall so inform the person against whom the complaint was made in writing within five class days. The communication will specify any recommended action and will inform the accused of his or her right to appeal (Section 8). If the accused does not request a hearing, a written statement shall become part of his or her file and the recommended action will be implemented.

8. The decision of the Vice President may be appealed within five class days to the Student Academic Grievance Board. (The Student Academic Grievance Board is described in Appendix F, Section B of the General Catalog. For the purpose of sexual harassment cases, there shall be in addition to the established pool of Board members, six classified staff appointed by the Staff Employees Council and six administrators appointed by the Administrators Association. In cases which involve administrators or classified staff, the three members from the appropriate pool will be used in lieu of the faculty members on the Board.)

9. If, after completion of the appeal process, action recommended by the Vice President is dismissal, then appropriate dismissal-for-cause proceedings in the Faculty Handbook, Administrators Handbook, Higher Education Personnel Board Rules or Student Employment Regulations will be initiated.

This policy is currently under revision. Please see the Center for Equal Opportunity for possible modifications of procedures.

Appendix C 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 respect University rules and federal, state and local laws. Those who are charged with a violation are assured of a fair judicial process and when found in violation assured of appropriate discipline. This chapter advises students of their rights and responsibilities while enrolled at Western Washington University.

WAC 516-22-010 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, research or administrative functions.

Sanctions available to the University through its judicial structure are Disciplinary Probation, Disciplinary Suspension or Disciplinary Expulsion.

WAC 516-22-015 Repeated Incidents of Academic Dishonesty. Maintaining academic honesty is the joint responsibility of students and the faculty. Two or more incidents of academic dishonesty reported to the Office of the Provost (ref. "Academic Dishonesty Policy") shall make the student subject to disciplinary action.

Sanctions for repeated incidents of academic dishonesty are Disciplinary Probation, Disciplinary Suspension or Disciplinary Expulsion.

WAC 516-22-020 Forgery, Alteration or Destruction of Documents. 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 who alters, forges or destroys any official University document or record shall be subject to disciplinary action.

Sanctions available to the University through its judicial structure are Disciplinary Probation, Disciplinary Suspension or Disciplinary Expulsion.

WAC 516-22-025 Fraudulent Admissions Credentials. The integrity of Western Washington University's admissions process requires receipt of full, honest documents as requested by the Admissions Office. Submission of fraudulent admissions or residency credentials shall subject a student to disciplinary action at any time such act is discovered.

A student violating this section may not be granted transfer credits earned at a former institution if at the time of application to Western Washington University he/she did not provide official transcripts of all work at such institutions. Additional sanctions available through the University judicial structure are Disciplinary Probation, Disciplinary Suspension or Disciplinary Expulsion.

WAC 516-22-030 Interference with Freedom of Expression. The rights of freedom of speech, petition and assembly are fundamental to the democratic process. The United States Constitution guarantees these freedoms to all members of the Western Washington University community.

The University recognizes its obligation to protect students' freedom of expression while at the same time minimizing the impact of visual pollution and physical damage to University property. The University shall provide sufficient bulletin boards and shall permit other methods for disseminating information such as leaflets, handbills, posters and banners according to guidelines available through the Viking Union administrative office. All printed material may be subject to removal if the content is defamatory.

Any person may speak on the Western Washington University campus when invited to do so by a member of the University community. Use of University building spaces is subject to space and scheduling policies and procedures. The appearance of an invited speaker does not constitute an endorsement of the speaker's views by the University's faculty, administration, students or Board of Trustees. Public address or audio amplification equipment normally may be used only in the Viking Union Plaza and athletic fields subject to space and scheduling policies and procedures. Use of such equipment in other areas of the campus must be authorized by the Vice President for Student Affairs or the Vice President's designee. The essence of the right to speak is the freedom of the speaker to make his/her statement. Both the speaker and the audience are entitled to proceed without being subjected to physical interference or violence.

Students deliberately engaging in acts of violence, threats of violence or in other conduct which interferes with the rights of others or which materially or substantially disrupts the exchange of ideas on campus are subject to disciplinary action or prosecution under law. Sanctions available through the University judicial structure are Disciplinary Probation, Disciplinary Suspension or Disciplinary Expulsion.

WAC 516-22-035 Alcohol/Drug Policy Violations. Substance abuse by members of the University community impacts the quality of the educational experience of all students. Two or more violations of alcohol/drug policies or a single substantive violation including, but not limited to, the sale of illegal substances or violence to others while under the influence of alcohol/drugs shall make the student subject to disciplinary action.

Sanctions available to the University through its judicial structure are Disciplinary Probation, Disciplinary Suspension or Disciplinary Expulsion.

WAC 516-22-040 Harassment of Peers. A quality educational experience can only occur in an environment free of harassment and exploitation. A student shall be subject to disciplinary action if he/she engages in harassing behaviors including any act that creates an intimidating or hostile environment for another member of the University community including, but not limited to, those of a physically threatening, religious, sexual or racial nature.

Sanctions available to the University through its judicial structure are Disciplinary Probation, Disciplinary Suspension or Disciplinary Expulsion.

WAC 516-22-100 Judicial Structure. The Vice President for Student Affairs is responsible for administration of this Code. The Vice President shall assure that the University Judicial Board appointment process is initiated annually and shall assure that allegations of Code violations and appeals are properly referred.

A Conduct Officer, who shall have authority to adjudicate and administer sanctions for violations of this Code, shall be appointed from the Student Affairs division by the Vice President for Student Affairs.

A six-member University Judicial Board shall be appointed prior to 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 staff (appointed by the Vice President for Student Affairs). An alternate for each position shall be appointed at the same time by the same authority. All appointments shall be for one academic year. The Judicial Board shall have authority to adjudicate and administer sanctions for violations of this Code.

Should the need arise during Summer Session, an ad hoc Judicial Board shall be appointed subject to the same make-up and procedures as the academic year Judicial Board.

WAC 516-22-120 Initiation of Informal Proceedings. 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 a written statement of the charges against the student. The Vice President shall ask the Conduct Officer to investigate the probity of the charge.

If in the Conduct Officer's judgment there is sufficient basis to consider the

charge, the Conduct Officer shall meet with the student and those bringing the charges and shall weigh appropriate evidence. Within ten (10) business days, the Conduct Officer shall notify the student in writing of his/her decision, including the sanction if a violation is judged to have occurred. Written notification shall include a statement of the student's right to appeal to the University Judicial Board.

WAC 516-22-124 Appeal to the Judicial Board. An accused student may appeal an adverse decision of the Conduct Officer to the University Judicial Board. The appeal must be made in writing to the Vice President for Student Affairs within ten (10) business days of receiving the Conduct Officer's written decision. An extension of an additional ten (10) business days will automatically be granted upon the student's request. The appeal letter must state the basis for the appeal. The Vice President shall notify the Judicial Board Chairman of the appeal. No sanction may be invoked while an appeal is pending, except as provided in "Interim Suspension Permitted," WAC 516-22-150.

WAC 516-22-130 Appeal Hearing Procedures. The Judicial Board Chairman shall establish a hearing date and shall request the student making the appeal to appear.

- (1) Notification of the hearing shall include:
 - (a) Time, date and location of hearing.
 - (b) Provision 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 and name(s) of University source(s) whose procedural advice can be sought.
 - (e) Statement of the student's right to be accompanied by a non-lawyer advocate of his/her choice, to call witnesses and to speak on his/her own behalf.
 - (f) Statement of the student's right to review written evidence prior to the hearing.
- (2) Hearings shall be conducted in a manner which is informal and at the same time assures fundamental fairness of procedure. Hearings shall be open to the public unless the accused student requests a closed hearing.
 - (a) No student who is charged with an offense 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 be represented by a non-lawyer advocate of his/her own choice.
 - (c) An accused student has the right to know who has alleged the violation of this Code, to review the written evidence, and to ask questions directly of the person(s) making the allegation and those who present testimony.
 - (d) The Judicial Board Chairman and the accused student may call any person to speak concerning the alleged violation. The Board Chairman may limit or exclude evidence which is irrelevant, immaterial or repetitious.
 - (e) Five members shall constitute a quorum of the Judicial 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 Board's approval if the testimony is preserved by tape recording and the absence is due to extenuating circumstances. Any member of the Board who considers himself/herself unable to render an impartial decision in a particular case shall excuse himself/herself from the Board's deliberations in advance and may be replaced by an alternate.
- (3) The Judicial Board Chairman shall notify the accused student in writing of the disposition of the case and of his/her right to appeal.

WAC 516-22-134 Disruption 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 before the Conduct Officer after receiving notice of a hearing shall make the student 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.

WAC 516-22-138 Certain Sanctions Defined. Among those sanctions which the Conduct Officer or Judicial Board may invoke are:

- (1) *Disciplinary Probation* — An official warning which is maintained in the student's conduct file for seven years. Should the student be found in violation of the Code again, the Disciplinary Probation status may result in a more serious sanction for the second violation.

(2) *Disciplinary Suspension* — Termination of a student's enrollment for a period of time or until certain specified conditions have been met.

(3) *Disciplinary Expulsion* — Permanent termination of a student's enrollment with no option for later re-enrollment.

Conditions congruent with the nature of the charge can be added to these sanctions, included but not limited to: restitution for damages, attendance at educational programs, University community service, restriction of access to designated areas of campus. Failure to comply with sanctioned conditions can result in further action under the provisions of the Code.

WAC 516-22-142 Record of Proceedings. Records prepared by the Conduct Officer or Judicial Board shall be maintained in a conduct file in the Office of the Vice President for Student Affairs for six (6) years. All 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 written consent of the student involved. Certain exceptions are authorized under the "Student Records Policy," WAC 516-26.

WAC 516-22-146 Right to Formal Hearing. Included with the notification of the Judicial Board's decision shall be a statement that the student has a right to a formal hearing pursuant to RCW 28B.19.110 and WAC 516-08.

WAC 516-22-150 Interim Suspension Permitted. 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 or his/her designee may temporarily suspend a student for stated cause subject to such limitation as the Vice President shall deem appropriate.

In all cases, the student is entitled to a hearing before the appropriate Conduct Officer or Board as soon as such hearing can be held, but not to exceed five (5) school days after the beginning date of interim suspension unless the student should request an extension. 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.

Appendix D 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 E
STUDENT RECORDS POLICY

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 F
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 H, Affirmative Action Student Grievance Procedures).

3. Procedures

A. Informal Resolution

A student with an academic grievance against an individual instructor shall first thoroughly discuss the matter with the instructor involved. The student must meet with the instructor within ten (10) days of receiving written notification of the action or decision which gives rise to the grievance. In the case of absence from the campus of either of the parties, the student shall inform the academic unit head, in writing, of the existence of the grievance and the unit head shall arrange for consultation between the parties concerned at the earliest possible opportunity. Should the faculty member be on extended leave, or have resigned from the University, the unit head shall act for the instructor.

The instructor and the student should make a good faith effort to resolve the grievance. Grievances resolved at this stage do not require a written record unless the resolution involves a grade change. Grade changes require the approval of the department chairperson (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 G CODE OF ETHICS FOR THE FACULTY OF WWU

This Code of Ethics was adopted by vote of the faculty of Western Washington University on April 15, 1983, and was endorsed for inclusion in the Faculty Handbook by the Board of Trustees on May 5, 1983.

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

APPENDICES

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.

Section 8

The expression of dissent and the attempt to produce change on campus and in the larger society are legitimate, but they must be carried out in ways which do not violate academic freedom, injure individuals, disrupt the classes of colleagues, intrude on the individual rights of others, or damage institutional facilities or private or public property. All members of the academic community and visitors to the University must be assured of the right to be heard in an atmosphere of free inquiry and in a situation devoid of violence.

Section 9

It is presumed that members of the Western faculty will find this Code of Ethics an adequate guide for the choices they must make in the fulfillment of their academic functions. If rules are needed to implement the principles inherent in this Code, they shall be developed by the faculty within the spirit of the Code, shall be in accordance with the 1940 AAUP Statement on Academic Freedom, and shall carry full provision for due process.

Appendix H AFFIRMATIVE ACTION STUDENT GRIEVANCE PROCEDURE

Persons who have questions or need assistance in processing a grievance should contact the Center for Equal Opportunity, Old Main 375, phone (206) 676-3306.

A person who believes he/she has been discriminated against by the University because of race, color, religion, national origin, sex, age, disability, marital status, sexual orientation, Vietnam era or disabled veteran status is urged to utilize the internal grievance procedure provided by the University through the Center for Equal Opportunity as soon as possible after the alleged act of discrimination giving rise to the grievance. The grievant must indicate under what federal or state regulation or University equal opportunity policy he/she is alleging discrimination.

A. Informal Resolution

1. Any person may contact the Center for Equal Opportunity for informal discussion, advice and assistance. These contacts are kept confidential. The director of the Center for Equal Opportunity or designee shall act as facilitator upon request.
2. Affirmative action advocates are also available to assist the individual in understanding her/his options in seeking corrective or compensatory measures.
3. The grievant may choose to be assisted by an affirmative action advocate during informal procedures and throughout all steps of the formal grievance procedure. The names of the advocates are available through the Center for Equal Opportunity.
4. The director of the Center for Equal Opportunity or designee shall attempt to resolve the complaint informally by talking with concerned parties and suggesting an appropriate resolution. If the grievant is not satisfied with the resolution, he/she may proceed to the Formal Investigative Resolution or utilize complaint procedures with outside agencies.

B. Formal Investigative Resolution

1. Any person may file a formal grievance against any employee, department or unit of the University if he/she believes illegal discrimination has taken place by filing a written description of the alleged act of discrimination with the Center for Equal Opportunity on a form provided by the Center. Statements should be as detailed and accurate as possible and must specify under what federal or state regulation or University Equal Opportunity policy he/she is alleging discrimination.
2. The grievant shall receive acknowledgement of the filing of the grievance, and the respondent and the Vice President in charge of the employee, department or unit of the University shall be notified of the grievance within three working days.
3. Within 10 working days the director of the Center for Equal Opportunity shall meet with the grievant and her/his advocate/observers and the respondent and her/his observer (if any) for further information gathering. The director shall again attempt to resolve the grievance with both parties. If within 10 working days of the meeting with both parties the resolution is not satisfactory to the grievant, the grievant may ask that her/his appeal rights be invoked.
4. If the individual appealing has appeal rights under WAC Chapter 516-08,

the hearing procedure contained shall be utilized. Other appeals shall be heard by the five-member Adjudication Committee.

The Adjudication Committee shall receive the director's report and case file.

The committee shall operate under hearing procedures filed with the Center for Equal Opportunity.

The Adjudication Committee shall hold its initial meeting within five working days and shall forward its written recommendations to the President with a copy to the grievant and the respondent within 15 working days from the initial meeting.

5. Within 15 working days of receipt of the recommendations the President shall indicate her/his intentions. The President may accept the recommendations of the Adjudication Committee, may reject the recommendations, or may modify the recommendations. If the recommendations are rejected, the President shall state in writing the reasons for such rejection. If the recommendations are modified, the President shall state in writing the reasons for such modification. The President may make a final decision for the University for payments of \$2,000 or less to the grievant or group of grievants; however, the Board of Trustees has reserved the authority to approve affirmative action awards for amounts in excess of \$2,000, and the President shall notify the Board of Trustees whenever the resolution of a complaint involves promotion, tenure, back pay or the initial appointment of an employee in order that the Board may take appropriate action consistent with the Board of Trustees Handbook.

6. Deadlines may be extended provided that the length of such extensions is agreed to in writing by both the complainant and the respondent.

Deadlines shall be extended by the director of the Center for Equal Opportunity when individuals who are required to participate at certain steps in the procedure are unavailable due to absence from campus during summer or periods between academic sessions.

C. Alternative Formal Resolution

The grievant may choose to utilize the formal grievance procedure of her/his group such as the faculty, student or labor agreement procedure. A grievant choosing an alternative grievance procedure and not finding the satisfaction sought may not then turn to the formal affirmative action grievance procedures outlined in this document. It is the prerogative of the body creating the alternative grievance procedure whether it will entertain a grievance which has previously been heard under the affirmative action grievance procedures.

D. Disability Grievance

A person denied access to a program or activity or employment because of a determination that that individual's disability disqualifies her/him may appeal the decision to an ad hoc disability grievance tribunal consisting of a student and an employee (faculty if the dispute concerns an academic program), one of whom is disabled, and an expert in disability rehabilitation to be appointed by the President.

A person who has been refused admission to Western Washington University and who believes his/her disability has affected his/her grade point, test scores or other criteria for admission in a way not reflective of true ability may appeal the admission decision to the University Admissions Committee. When a person appeals an admission decision on the basis of disability, a person, usually a member of the faculty, with expertise in the rehabilitation of the disability manifest by the appellant will sit as a voting member of the University Admissions Committee to hear the appeal.

The decision of the tribunal is final unless overturned by the President.

These policies are currently under revision. Please see the Center for Equal Opportunity for possible modifications of procedures.

E. Outside Agencies

A person who believes that s/he has been the subject of discrimination may choose to see a lawyer regarding civil redress or may choose to file a discrimination grievance with the following agencies. These agencies require grievances to be filed within 180 days of the alleged act of discrimination.

Washington State Human Rights Commission
1516 Second Avenue, Suite 400
Seattle, WA 98101
Phone: (206) 464-6500

Department of Education,
Office of Civil Rights
915 Second Avenue
Mail Code 10-9010

Seattle, WA 98174-1099
Phone: (206) 442-1635

Office of Federal Contract Compliance
Room 3048 Regional Office or
Room 1079 Area Office
909 First Avenue
Seattle, WA 98174
Phone: (206) 442-4508

Equal Employment Opportunity Commission
1321 Second Avenue
7th Floor, Arcade Plaza
Seattle, WA 98101
Phone: (206) 442-0968

U.S. Department of Labor, Wage and Hour Division ESA
909 First Avenue, Room 1060
Seattle, WA 98174
Phone: (206) 442-4482

Appendix I PARKING AND TRAFFIC

It is recommended that vehicles not be brought to the campus unless absolutely necessary. The geographical location of the campus and the limited space available make the parking currently available on and around the campus inadequate to cover the desires of the University community.

Use of alternative means of transportation is recommended. Whatcom Transit Authority provides an excellent transit system which has convenient runs through campus. Hours of operation (subject to change) are 7 a.m. to 7 p.m. Monday through Friday and Saturday 9 a.m. to 6 p.m. In addition, a shuttle service, operated by the Office of University Residences, runs seven nights a week from 7 to 11 p.m. For commuters, carpool ride matching is available through the Washington State Department of Transportation. Applications are available at the University Parking Office.

Western Washington University has established rules and regulations governing parking under Washington State Administrative Code 516-12. Violators of parking regulations are towed away. All students who utilize parking facilities on campus are required to purchase a parking permit and register their car (or cars), motorbike or motorcycle at or before the time of official registration. Early application is recommended. Forms are available beginning late May for an assignment for the subsequent school year. For further information, contact the Parking Services Office on campus.

Appendix J SATISFACTORY ACADEMIC PROGRESS POLICY FOR FINANCIAL AID

Introduction

Section 484 of the Higher Education Act (HEA), as amended, requires that a student be maintaining satisfactory progress in the course of study that s/he is pursuing, according to the standards and practices of the institution in which s/he is enrolled, to receive financial aid under the financial assistance programs authorized by Title IV by the HEA. The state of Washington also requires satisfactory progress for receipt of Washington state student aid funds.

Statement of Policy

Students have a responsibility to progress at a standard rate toward a degree objective. To be eligible to receive aid a student must be making satisfactory progress toward a degree or certificate regardless of whether s/he has previously received financial assistance. The standard of academic progress must include a student's total academic history at Western. Each student is also required to maintain a grade point average which meets the University requirements to allow continuation at WWU. The grade point requirements of the University are listed in the University catalog.

The Department of Student Financial Resources is responsible for establishing and monitoring the minimum level of progress acceptable for this policy.

Monitoring of Satisfactory Progress

Normal Academic Progress is defined as satisfactory completion of 15 credit

APPENDICES

hours per academic quarter for undergraduate and 12 credit hours per quarter for master's degree candidates.

First time financial aid applicants will have their previous academic record measured for satisfactory completion of 80 percent of the credit hours attempted at Western. Students averaging 80 percent satisfactory completion of credits attempted will be eligible to be considered for financial aid.

Minimum credit requirements for current students. Full-time students must satisfactorily complete a minimum of 80 percent of normal academic progress to be considered in good standing and eligible for financial assistance. Progress will be monitored quarterly and annually. Full-time undergraduate students must complete a minimum of 12 credit hours per quarter in order to be considered in good standing. For master's degree candidates the requirement is 10 hours quarterly.

In an attempt to allow flexibility during the academic year, Student Financial Resources will allow for dropping hours on a quarterly basis and making them up over the course of the academic year. As long as the student does not drop below 6 credit hours of satisfactorily completed course work in any one quarter (5 hours for master's degree candidates), s/he may continue to be considered for student financial aid. At the close of spring quarter, students will be monitored against the minimum credit requirements.

Maximum time frame. Undergraduates and students pursuing a certificate may attempt up to 125 percent of the minimum credit hour requirement for the degree or certificate program in which the student is enrolled. Master's degree students may attempt up to 90 credits. Postbaccalaureate students may attempt up to 75 credits for completion of a second major. No additional eligibility is available for pursuit of a third undergraduate major. Once the student has attempted the maximum amount of credits, s/he is no longer eligible to receive assistance for this degree or certificate granting program.

Part-time students. Satisfactory academic progress of part-time students will be based on a minimum credit requirement and a maximum time frame requirement as with full-time students. Part-time students must satisfactorily complete a minimum of 6 credit hours each term (5 credits for master's degree students) in order to continue to be eligible for assistance. Once the part-time student has attempted the maximum credits allowed for his or her degree program, the student will have exhausted eligibility for assistance.

Consequences of Unsatisfactory Progress

Probation

Probationary students may continue to receive financial aid. Students not completing 80 percent of normal academic progress on a quarterly basis may be continued on aid if at least 6 (5 for graduate students) credit hours were completed satisfactorily. These students are considered to be on financial aid probation although there will be no formal notification.

Suspension

Students not meeting the appropriate standard will be placed on financial aid suspension. These students are not eligible to receive financial assistance by or through Western Washington University. Students who have been awarded financial aid will have all financial assistance canceled immediately.

Repayment of Aid

Due to time constraints, it is not always possible to cancel financial aid checks (for students who have lost eligibility) before a student is able to secure the proceeds. It is the responsibility of each University student to be aware of the academic progress standard which must be maintained for continued eligibility for receipt of financial aid. It is each student's responsibility to determine whether s/he has met or not met the standard established. Any student not meeting the required standard, who subsequently secures the proceeds of financial assistance for which s/he is not eligible, will be immediately required to repay such funds to the financial aid accounts. Students owing a repayment are no longer eligible to receive financial assistance.

Reinstatement of Eligibility

By Petition

All students have the right to appeal, by petition, their suspension from eligibility for financial assistance. Appeals of probation status will not be considered. Petition forms are available from the Department of Student Financial Resources, Old Main 240.

Essentially, the suspended student explains on the petition form why s/he was not able to complete the minimum number of credit hours required to retain financial aid eligibility. It is the student's responsibility to provide any documentation that will verify or support the claims made in the petition. For example, if a student received incomplete grades due to medical problems, s/he should submit a letter from a physician or the Health Center

to verify the medical condition. It would also be appropriate to submit a statement from the instructor(s) regarding arrangements which have been made to complete the course work. The completed petition should be returned to the Department of Student Financial Resources. An Appeals Committee will review each petition and make recommendations to the director or his designee regarding disposition of the petition. Students will be notified of the decision in writing.

Any student whose financial aid suspension has been removed, following a petition, may be considered for financial assistance. However, any financial aid awarded to that student upon reinstatement will be based solely upon the student's eligibility and funds available at that time.

By Additional Academic Progress

Any full-time student whose petition for reinstatement is denied may return to good standing by satisfactorily completing 15 credit hours in one quarter (12 credit hours if a master's candidate). The student would have then demonstrated the ability to perform at the normal full-time course load, would have met the minimum requirement for the additional quarter of attendance (12 credit hours) and would have made some progress toward the deficit which initially caused termination of eligibility. Upon completion of the 15 credit hours, the student should submit an additional petition for reinstatement to good standing.

A part-time student whose petition for reinstatement is denied may return to good standing by completion of 6 credit hours in one quarter.

By Summer Quarter Attendance

It is possible for a student to use the summer quarter to make up the credit deficit from the preceding academic year. All credits completed during the summer can be applied toward the deficit.

Definitions

Hours Attempted

Total hours attempted are defined as:

1. Registered credit hours as of the add/drop deadline of each quarter, or
2. If the student received financial aid, the total hours attempted are defined as the minimum hours required for financial aid disbursement, or actual hours enrolled, whichever is higher.

In no case will the student be penalized for enrolling in more than the normal full-time course load. The normal full-time course load is 12 credit hours for master's degree candidates and 15 credit hours for all others.

To be included in hours attempted and hours completed, a course must be recorded on the WWU official transcript or transferred to Western through the International Student Exchange Program (ISEP). A repeated course will be counted as an attempted course each time the course is taken; however, college credit for the course will be counted only once.

Academic Year

The academic year established at WWU for the purpose of monitoring satisfactory progress will be fall quarter through spring quarter of each year.

Satisfactory Completion of a Course

The grades A, B, C, D, S and P identify successful completion of a course. An incomplete grade (K) will not count as completed course work until a final grade is awarded and posted by the Registrar.

Undergraduate Student

For purposes of this policy, an undergraduate student is one who has not received a baccalaureate degree or is pursuing a second undergraduate major.

Postbaccalaureate Student in a Certification Program

A postbaccalaureate student in a certificate program is one who has received a baccalaureate degree and has been admitted to a program leading to certification.

Master's Degree Candidate

A master's degree candidate is a student who has received a baccalaureate degree and is admitted to a master's degree program at Western.

Appendix K POLICY CONCERNING ALCOHOL AND OTHER DRUGS

The Federal Drug-Free Workplace Act of 1988 and the Federal Drug-Free Schools and Communities Act amendments of 1989 require that universities promote a drug-free environment through adoption and implementation of a policy and program designed to educate the university community about the dangers of substance abuse and to prevent the unlawful possession, use or distribution of illicit

drugs and alcohol by students and employees on university property or while involved in university business or activities.

Western Washington University values a substance abuse-free lifestyle for students, faculty and staff. It holds this value in support of academic excellence, work performance and quality of life as well as for the future well-being of all members of this community.

Ninety percent of adult Americans, including college students, use drugs (including alcohol). A significant number (32-40%) of adults have drug (including alcohol) abuse or dependency problems. Improper use of drugs affects academic ability, work performance, health and personal safety. Additionally, the safety of others may be placed at risk by an individual under the influence of substances and both personal and professional relationships can suffer.

Differences of opinion and freedom of choice are concepts which are essential parts of the university educational tradition. This freedom requires the exercise of personal responsibility, including the obligation to make informed decisions regarding the use of drugs (including alcohol). It also requires personal responsibility for dealing with one's own abuse when it is identified.

Western Washington University acknowledges its responsibility to guarantee that appropriate information and support are easily accessible to all members

of the university community. Western Washington University accepts its obligation to foster awareness about the use and misuse of these substances, to provide appropriate intervention when alcohol or other drugs are misused by members of the community and to support members of this community in managing the consequences of drug (including alcohol) misuse.

At the same time, the University will uphold those state and federal laws which prohibit the unlawful manufacture, distribution, dispensing, possession, sale or use of controlled substances (which include but are not limited to marijuana, LSD, psilocybin mushrooms, cocaine, heroin and other opiates and steroids) and the misuse of alcohol and prescription drugs. It is required that all students and employees comply with these laws. Action will be taken on any violation of State and Federal law or University regulations which occurs in or on property controlled or owned by Western Washington University or while involved in University business or activities.

In meeting these responsibilities, Western Washington University has established this policy regarding the use of alcohol and other drugs and will annually distribute this information to all students, staff and faculty.

A complete set of University guidelines regarding implementation of this policy may be obtained from the Office of the Vice President for Student Affairs.

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 University policies relating to these laws should contact the Center for Equal Opportunity, Old Main 375, (206) 650-3306.

INDEX

- Academic Advising Center 18
- Academic Dishonesty Policy 293
- Academic Facilities 4
- Academic Grievance Policy 31, 296
- Academic Policies 25
- Academic Probation 31
- Academic Programs 4, 76, 193, 211, 219, 240, 252, 256
- Academic Progress, Satisfactory 299
- Accounting 195
- Accreditation of University 4
- Administrative Officers 282
- Admission, Freshman 7
- Admission, Graduate 42
- Admission to Teacher Education 269
- Admission, Transfers 8
- Admission, Undergraduate 7
- Advanced Placement 25
- Affirmative Action — Equal Opportunity Policy
- Against Discrimination 291, 296, 298
- Student Grievance Policies 291, 296, 298
- Alcohol and Drug Counseling 21
- Alcohol and Other Drugs Policy 300
- Alumni Services 20
- American Cultural Studies 78
- Anthropology 46, 80
- Apartments, On-campus 17
- Appendices 291
- Application Procedures 7
- Architecture (professional) 41
- Archives/Records Management 61
- Art 46, 220
- Art History 225
- Arts and Sciences, College of 76
- Assessment 4
- Assistantships, Graduate 42
- Astronomy 162
- Athletics 23
- Attendance Requirements 27
- Auditors 9, 11, 27
- Bachelor Degree Requirements 32
- Biology 47, 84
- Blue Book 32
- Botany (see Biology)
- Business and Economics, College of 48, 193
- Business Administration 48, 202, 206
- Calendar, Official 6
- Campus Map 302
- Campus Recreation 23
- Canadian-American Studies 90
- Career Services Center 19
- Center for Equal Opportunity 291, 298, 301
- Certificates Issued, 1991-92 290
- Certification 44, 256, 268, 274
- Challenge, Course 25
- Changes in Registration 10, 27
- Chemistry 49, 91
- Chinese 122
- Classical Studies 122
- Code of Ethics for the Faculty of WWU 297
- Communication 96
- Computer Science 50, 100
- Computing Facilities 4
- Conference Services 38
- Continuing Certification 268, 274
- Continuing Education 38
- Counseling Center 21
- Course Numbering System 26
- Courses (see Individual subjects)
- Creative Writing 57, 115
- Credits and Credit Loads 26
- Credits, Transfer Policy 9
- Dance 157, 235
- Daycare Facilities 22
- Degrees Granted, 1990-91 290
- Degrees Offered 4, 76, 193, 211, 219, 240, 252, 256
- Dental Hygiene (professional) 41
- Dentistry (professional) 40
- Deposit, Housing 17
- Disabled Student Services 19
- Early Childhood 272
- Earth Science 127
- East Asian Studies 104
- Economics 197
- Educational Administration and Foundations 51, 158
- Educational Curriculum and Instruction 54, 267
- Education, Woodring College of 50, 256
- Electronic Engineering Technology 107
- Elementary Education 271
- Employment, Student 14
- Engineering (professional) 41
- Engineering Technology 106
- English 56, 114
- Environmental Science 61, 243
- Environmental Studies 61, 240
- Environmental Toxicology and Chemistry 246
- Equal Opportunity, Center for 291, 298, 301
- Ethnic Minority Services 18
- Examinations, Final 29
- Faculty 286
- Faculty Emeritus 283
- Faculty Ethics Code 297
- Faculty/Student-Designed Major
- (self-designed majors) 75, 77, 140, 190, 211, 244
- Fairhaven College 211
- Fees 11
- Field Experience 38
- Finals Preparation Week 28
- Finance, Marketing and Decision Sciences 201
- Finances 11
- Financial Aid 14
- Satisfactory Academic Progress 299
- Summer 15
- Fine and Performing Arts, College of 219
- Fisheries (professional) 41
- Food Services 16
- Foreign Languages and Literatures 57, 120
- Foreign Study 38
- Forensics 24
- Forestry (professional) 41
- Former Students Returning 9
- French 122
- Freshman Seminar 40
- Full-time Status 27
- General Science 178
- General University Requirements 34
- Geography and Regional Planning 58, 252
- Geology 58, 126
- German 123
- Grading System 29
- Graduate School 42
- Graduation Fees 12
- Graduation Requirements 32
- Grants 14
- Greek 124
- Grievance Policies, Student 291, 296, 298
- Health Center 21
- Health Education 160
- High School Students 8

INDEX

History	60, 131	Probation, Academic	31
Home Economics	137	Professional Transfer Programs	41
Honors Program	39	Psychology	70, 172
Housing	16	Reading	272
Housing, Off-Campus	17	Re-admission	9
Humanities	140	Recreation	157
Human Services	264	Refund of Fees	12
Huxley College of Environmental Studies	61, 240	Regional Planning	253
Incomplete Grades	29	Registration	10
Independent Learning	38	Reinstatement	31
Industrial Design	107	Repeating Courses	30
Industrial Technology	107	Research	4
International Programs and Exchanges	38	Reservations, Room	16
International Students	7	Residence Halls	16
Internship	19	Residence Life	22
Internship, Teaching	274	Residence Status	11
Intramurals and Athletics	23	Running Start (High School Students)	8
Japanese	124	Russian	125
Job Search Services	20	Scholarships	14
Journalism	138	Scholarship Standards	30
Late Registration/Course Adds	10, 12	Science Education	178
Latin	125	Sculpture Collection	4, 220
Latin American Studies	133	Secondary Education	271
Law (professional)	40	Sexual Harassment of Students, Policy	291
Learning Disabled	19	Shannon Point Marine Center	5
Leaves of Absence	27	Social Studies Education	180
Liberal Studies	140	Sociology	72, 181
Librarians	289	Spanish	125
Libraries	4	Special Education	273
Library Instruction	40	Special Students	9
Library Science	265	Speech Pathology and Audiology	73, 186
Linguistics	143	Stress Management and Biofeedback Center	20
Living Costs	17	Student Activities	22
Loans, Student	14, 15	Student Affairs	18
Major, Self-Designed	75, 77, 140, 190, 211, 244	Student/Faculty-Designed Major (self-designed majors)	75, 77, 140, 190, 211, 244
Management	205	Student Financial Resources	14
Manufacturing Engineering Technology	108	Student Health Assessment and Information Center	20
Marine Biology	48, 86	Student Health Center	21
Mathematics	63, 144	Student Life, Office of	18
Mathematics/Computer Science	149	Student Records Policy	294
MBA	48, 209	Student Rights and Responsibilities	18, 292
Medical Technology (professional)	41	Student Teaching	274
Medicine (professional)	40	Study Abroad	38, 121
Minority Services	18	Teacher Certification	274
Music	64, 226	Teaching English as a Second Language (TESL)	191
Natural Science/Science Education	66	Technology	74
Non-Discrimination Policy	291, 298, 301	Technology Education	109
Non-Resident Status	11	Technology, Engineering	106
Nursing (professional)	41, 150	Termination of Enrollment	27, 28
Occupational Therapy (professional)	41	Theatre Arts	74, 235
Off-Campus Education Centers	280	Transcripts	9, 12
Optometry (professional)	41	Transfer Admission	8
Orientation	18	Transfer Programs	41
Outdoor Activities	22	Trustees, Board of	282
Parking and Traffic	299	Tuition and Fees	11
Parking Fees	12	Tutorial Center	19
Part-Time Employment, Student	14	University Extended Programs	38
Pass/Fail Grading	29	University Personnel	282
Pharmacy (professional)	41	University Residences	16
Philosophy	151	Veterans	15
Physical Education, Health and Recreation	67, 153	Veterinary Medicine (professional)	41
Physical Therapy (professional)	41	Western Gallery/Outdoor Sculpture Collection	4, 220
Physics and Astronomy	162	Withdrawal from Courses/University	27
Plastics Engineering Technology	108	Women Studies	192
Political Science	68, 167	Woodring College of Education	50, 256
Post-Baccalaureate Professional Schools	40	Writing Proficiency Requirements	33
Prerequisites	26	Zoology (see Biology)	
President Emeritus	286		



WESTERN
WASHINGTON UNIVERSITY

Bellingham, Washington 98225

Second Class
Permit