

WESTERN WASHINGTON UNIVERSITY BULLETIN

general
catalog
1985/87



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.



WESTERN WASHINGTON UNIVERSITY BULLETIN (USPS 679-900)

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Western Washington University emphasizes excellence in undergraduate education. 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, the Fine and 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, Bassetti and Klein. The University occupies a forested hill above Bellingham Bay and the city with views of the San Juan Islands, Mt. 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 inherit 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 Washington University reflects the high aspirations of Washington citizens for educational excellence. For students, faculty and staff Western thus embodies an opportunity and a challenge.

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 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 500,000 volumes of books and periodicals, 800,000 units of microforms, and large collections of curriculum materials, pamphlets and publications of the United States, Washington State and Canadian governments. The Library maintains subscriptions to more than 4,000 current periodicals and newspapers.

Wilson Library provides open stacks for its collections, together with reading and study areas, carrels and seminar rooms. The Music Library in the Performing Arts Center includes an extensive collection of scores, recordings and books about music.

Computing Facilities

The primary instructional computer systems of the Computer Center are two Digital Equipment Corporation VAX 11/780 computers for interactive time-sharing and an IBM 4341 batch system. The Computer Center also operates a smaller VAX 11/750 and three Perkin-Elmer 3200-based interactive computers. The combined main memory in the several computers is more than 26 million characters while the on-line disk storage totals over eight billion characters. This central facility supports more than 250 instructional timesharing terminals in clusters of up to 60 plus approximately 150 administrative terminals. There are also approximately 300 mini- and microcomputers altogether in large generally available clusters and in smaller groups within many academic departments. Most microcomputers are either Apple, IBM or CP/M-compatible.

There is no charge to students for most computer services.

Leona M. Sundquist Marine Laboratory

Located at the Shannon Point Marine Center adjacent to the Washington State Ferry terminal at Anacortes, the Sundquist Marine Laboratory provides opportunities for undergraduate and graduate students to study marine and estuarine environments. The facility includes laboratories, a lecture room, research spaces, 50 seawater

tanks, boats and scientific equipment. The Marine Center includes more than half a mile of beach on Guemes Channel, 71 wooded acres and a small fresh water pond. There are housing and dining facilities for 20 persons.

The Sundquist Marine Laboratory of Western Washington University provides a marine outlet for the Shannon Point Marine Center Consortium of Western, Eastern and Central Washington Universities. The Evergreen State College, Skagit Valley College, and Everett and Edmonds community colleges.

Institute for Watershed Studies (IWS)

A research and service unit called the Institute for Watershed Studies is located in Environmental Studies Building 508. IWS conducts and promotes research on watersheds and stream and lake systems, provides analytical services to students and faculty engaged in the study of watersheds, and coordinates activities having to do with these resources. 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 Cascade lakes, watershed management, lake monitoring and acidic deposition. For information about the program, contact the director, Dr. David F. Brakke, (206) 676-3510.



Steam sculpture

1985-86 ACADEMIC YEAR

Fall Quarter 1985

September 23-25
Registration
September 26 (Thursday), 8:00 a.m.
Classes begin
November 27, Noon — December 2,
8:00 a.m.
Thanksgiving Recess
December 9-13
Final examination week

Winter Quarter 1986

January 6 (Monday)
Registration
January 7 (Tuesday) 8:00 a.m.
Classes begin
January 20 (Monday)
Martin Luther King, Jr., Day
February 17 (Monday)
Presidents' Day Holiday
March 17-21
Final examination week

Spring Quarter 1986

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

Summer Quarter 1986

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

* These calendars are subject to change.
Dates appearing in Admissions or Registration or employee instructions take precedence over those in the University catalog.

1985

SEPTEMBER

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**1986-87
ACADEMIC YEAR**

Fall Quarter 1986

September 22-24
Registration
September 25 (Thursday), 8:00 a.m.
Classes begin
November 26, Noon — December 1,
8:00 a.m.
Thanksgiving recess
December 8-12
Final examination week

Winter Quarter 1987

January 5 (Monday)
Registration
January 6 (Tuesday), 8:00 a.m.
Classes begin
January 19 (Monday)
Martin Luther King, Jr., Day
February 16 (Monday)
President's Day Holiday
March 16-20
Final examination week

Spring Quarter 1987

March 30 (Monday)
Registration
March 31 (Tuesday), 8:00 a.m.
Classes begin
May 25 (Monday)
Memorial Day Holiday
June 8-12
Final examination week
June 13 (Saturday)
Commencement

Summer Quarter 1987

June 22 — July 31
Six-Week Session
June 22 — August 21
Nine-Week Session
June 22 (Monday)
Registration
June 23 (Tuesday)
Classes begin
July 3 (Friday)
Independence Day Holiday
August 21 (Friday)
Commencement

1986													
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* These calendars are subject to change. Dates appearing in Admissions or Registration or employee instructions take precedence over those in the University catalog.

Undergraduate Admission

GENERAL POLICY

Western Washington University makes every effort to provide educational opportunities to all qualified applicants. Candidates are accepted on the basis of criteria described below as applications are received. Should enrollment capacity be approached at any time before the closing dates for application, the University may defer an admissions decision or select the most highly qualified candidates from among remaining applicants.

Admission standards are stated below in terms of the traditional A-F grading system. Applicants whose records include either a high proportion of non-traditional grades, or a subject pattern which departs markedly from that normally associated with university study, may be asked to submit additional evidence in support of their applications (i.e., entrance examinations, interviews and letters of recommendation). Individuals may seek exceptions to any of the requirements below by petitioning the Admissions Committee.

APPLICATION PROCEDURES

The Uniform Undergraduate Application for Admission to Four-Year Colleges and Universities in the State of Washington and an application fee are required of freshman and transfer candidates. The application may be obtained from any Washington high school or college, or from the Office of Admissions at Western, Old Main 200. The application fee is not required of former Western students, who may obtain an Application for Registration as a returning student from the Office of Admissions.

Admission to Western's Colleges and Schools

Admission to the University does not imply admission to a particular academic program or

enrollment in specific courses. Certain programs or courses having limited space may have supplemental admission requirements or waiting lists. Applicants are asked to designate clearly their intended major area of study on the application form. Formal declaration of major occurs after enrollment. (See appropriate catalog sections under academic departments and Western's Schools and Colleges for further details regarding special admission criteria, etc.)

Application Closing Dates

To ensure consideration, applications must be received in the Office of Admissions by the following closing dates:

- Fall Quarter, September 1
- Winter Quarter, December 1
- Spring Quarter, March 1
- Summer Quarter, June 1

Applicants are encouraged to apply well in advance, since enrollment capacity may be reached before these closing dates.

Required Transcripts

It is the responsibility of each applicant for admission or re-enrollment to request official transcripts from each school or collegiate institution previously attended. (Transfer students who have earned 40 or more transferable quarter credits need not ordinarily submit a high school transcript.) To be considered official, these transcripts must be sent directly from the registrar's office of the previous school to the Office of Admissions at Western. All such documents must be received by the above closing dates to ensure consideration.

Accepting the Offer of Admission

Each admitted student must confirm his or her intention to enroll by submitting a \$50 non-refundable, non-transferable payment on tuition

and fees. This payment should not be made until requested by the University when the student is notified of his or her admission.

Required Tests

Freshman applicants who are graduates of Washington high schools must submit Washington Pre-College Test scores upon their admission, or complete this test during on-campus orientation. Graduates of high schools from other states must submit College Board Scholastic Aptitude Test scores or American College Test scores before an admissions determination can be made. The Washington Pre-College Test is not required for graduates of high schools from other states.

Transfer applicants are not normally required to submit test scores.

Note: Most entering students are required to complete a mathematics placement test before enrolling in a mathematics course.

Required Health History

Entering students are required to submit a personal medical history and verification of a negative tuberculin skin test or chest X-ray within the past 12 months, documented by a health department or physician. Forms for the health history are forwarded to each new student who accepts an offer of admission.

FRESHMAN REQUIREMENTS

Western Washington University offers admission to individuals who give evidence of adequate preparation for success in university studies. An assessment of an applicant's eligibility for admission is based on the following criteria:

Grade Point Average

Graduation from an accredited high school with a cumulative grade average of at least 2.50 based on a traditional "A" through "F" grading system, or a ranking in the upper half of the graduating class. Applicants whose records include a high proportion of non-traditional grades will be asked to submit additional evidence in support of their applications (e.g., written teacher evaluations, standardized test scores, letters of recommendation).

Pre-University High School Program

The following high school courses are currently *recommended* for admission. Beginning fall quarter, 1987, they will be *required* for admission.

English: Four years, selected from college preparatory composition and literature courses. Students should be able to read and to write

analytically and critically, seeing relationships between form and content. They should be able to gather information from primary and secondary sources; to write a report in correct standard written English using this research; to quote, paraphrase and summarize accurately; and to cite sources properly.

Mathematics*: Three years of college preparatory math, including two years of algebra (third year may be computer science). Students should understand the language, notation and deductive nature of mathematics and be able to express quantitative ideas with precision. They should be skilled in solving equations and inequalities, and simplifying algebraic expressions.

Science: Two years, including one year of chemistry or physics. Students should know enough about laboratory and field work to ask appropriate scientific questions and to recognize experimental approaches to the solution of such questions. They should understand in some depth scientific concepts (such as cell theory, geologic and organic evolution, atomic structure, chemical bonding and transformations of energy).

Social Studies: Three years (e.g., history, contemporary world problems, economics, psychology, sociology and geography). Students should have a basic factual knowledge of major political and economic institutions within their historical context as well as an introductory knowledge of the content and concepts of the social sciences.

Foreign Language: Two years in a single foreign language. Students should be able to read and understand information presented in a simple paragraph, be able to engage in a simple conversation and be able to write a short paragraph on a familiar topic.

Recommended Electives

The required core of courses listed above represents a minimal college preparatory program for admission to Western Washington University. To broaden their academic preparation and enhance their probability for success at the University level, prospective Western students are advised to select additional college preparatory electives from the following subject areas: art, computer science, debate, drama, English, foreign language, history, journalism, mathematics, music, science, speech.

Admissions Policy

Western's admissions policy permits the individual consideration of freshman applicants based on their high school academic record. While the cumulative high school grade average is the best single predictor of college grades, the Admissions Committee also considers factors such as

*Two years of mathematics will be required fall quarter, 1986.

Undergraduate Admissions

the academic nature of high school subjects completed, most recent performance in academic courses, standardized test scores and recommendations from those acquainted with the applicant's academic potential and motivation.

Students who are unable to satisfy the minimum requirements described above may seek special consideration from the Admissions Committee. An interview may be required.

Enrollment pressures may require that a higher minimum grade average be used in a given year. If the grade average is based on a high school subject pattern which departs markedly from the pre-university program described above, test scores may also be considered.



Graduates of high schools in other states are ordinarily admitted if they meet the minimum standards for resident students, provided they also submit satisfactory scores on either the Scholastic Aptitude Test of the College Board or the American College Test. Results of these tests should be sent to the Admissions Office by the College Board or ACT.

Provisional admission may be granted to a limited number of students. Students admitted under this program may be required to take a specific sequence of courses in their first year at the University and to participate in one or more of the developmental learning programs provided for students who demonstrate a need for the development of academic skills.

Graduates of non-accredited high schools will normally be expected to complete the GED (General Educational Development tests) before an admissions decision can be made.

The University may consider applications from individuals 18 years of age and older who are not enrolled in high school and who have not earned a high school diploma. Admission will be considered on an individual basis, and arrangements for tests and an interview may be made through the Admissions Office.

TRANSFER STUDENT REQUIREMENTS

Transfer applicants whose high school records meet the freshman criteria listed above, who have completed the last term prior to transfer with a grade point average of 2.00 or above, and whose overall academic record indicates satisfactory academic progress, are ordinarily admitted if they have attained a cumulative grade point average of 2.00 (C) in college-level study. (Enrollment pressures may require that a higher minimum grade average be used in a given year.) Students whose high school records do not satisfy freshman requirements may be considered for admission after earning at least 40 transferable quarter credits with at least a 2.00 grade average. (One semester credit equals one and one-half quarter credits.) The grade average used for determining admission is calculated by counting grades earned in all courses transferable to Western. Exceptions to these standards may be made when evidence (test scores, maturity, etc.) indicates that previous grades alone are inaccurate predictors of a student's chances for success at Western.

TRANSFER POLICIES AND PROCEDURES

Western Washington University endorses the *Policy on Inter-College Transfer and Articulation among Washington Public Colleges and Universities* published by the Council for Postsecondary Education in December, 1984. Copies of this document are available through all public postsecondary institutions in the State of Washington and in the Office of Admissions at Western. Detailed transfer information is listed in the *Transfer Advisers Handbook*, published annually by the Office of Admissions and distributed to public colleges and universities in the State of Washington. Transfer students encountering difficulties are encouraged to contact the designated transfer officer in the Office of Admissions.

Transfer of Credit

In general, Western Washington University routinely grants credit for baccalaureate oriented courses completed at accredited institutions of higher education. Transfer of credit policies are developed by the Committee on Admissions and Inter-College Relations. Authority to administer these policies is delegated to the Registrar, the Director of Admissions, and where applicability of transfer credit to a major or minor is concerned, to department chairpersons.

Several factors govern the acceptance of transfer credit. Chief among them is accreditation. For transfer purposes Western recognizes as fully accredited 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; that is, one half the number required for a baccalaureate degree at Western.

Regardless of the number of transfer credits awarded, the student must earn at least 45 resident credit hours through Western for graduation. (Note: Although the total transfer credit granted from two-year institutions is limited to 90, coursework that exceeds that number will be considered for its appropriateness in satisfying General University Requirements or particular subject area requirements at Western.)

Certain credits earned at previous institutions may not transfer regardless of that institution's accreditation. For example, technical and vocational courses in two-year institutions, sectarian religious courses, and credit for experiential learning, military service, or the general examinations of the College Level Examination Program (CLEP) do not generally transfer to Western. Up to 30 credits may be granted for appropriate military schooling, according to recommendations contained in "A Guide to the Evaluation of Educational Experiences in the Armed Services." Subject examinations of CLEP may be reviewed by specific academic departments for credit.

Exceptions to the transfer of credit policies described above may be made only upon petition to the Admissions Committee. Such petitions are to be filed with the Director of Admissions after enrollment.

Transfer of Associate of Arts Degrees

Transfer students who complete the appropriate two-year degree at a Washington community college prior to enrollment at Western will ordinarily satisfy all of Western's General University Requirements upon enrollment. To be accepted in lieu of Western's General University Requirements, the AA degree must include at least 90 credits, 75 of which must be directly transferable to Western. Transferable courses are listed in the WWU Transfer Advisers' Handbook. Since the community colleges offer several degree programs, students should consult advisers for more complete information.

READMISSION OF FORMER STUDENTS

Former Western students who have interrupted their studies for one or more quarters (except summer) must file an Application for Registration available from the Office of Admissions. Students who are academically eligible to reenroll and who submit this form at least two weeks before advance registration may advance regis-

ter. Those whose applications are received after advance registration but before closing dates may register one day before the beginning of classes.

SPECIAL STUDENTS, AUDITORS, AND OLDER RETURNING STUDENTS

The University welcomes mature students whose occupations preclude full-time attendance. Such students may be authorized to enroll with non-matriculated (non-degree) status or as formally admitted part-time or full-time students seeking a degree. Transcripts and test scores are not ordinarily required of non-matriculated students, although they are ordinarily expected to be able to satisfy regular admission requirements. Students who have not been enrolled in a school or college for four years prior to enrollment at Western are not ordinarily asked to submit test scores as part of the formal admission process.

Permission to enroll as a special student or auditor is granted for one term at a time and implies no commitment on the part of the University regarding later admission to a degree program.

INTERNATIONAL STUDENTS

Western welcomes qualified students from countries around the world. Because of limited support services for international students, however, admission is generally restricted to those most highly qualified for academic study at Western. Such students must have completed the University preparatory program in their own countries, give evidence of ability to succeed in university study at Western, and demonstrate competence in the use of the English language. In addition to the above, students transferring from U.S. colleges or universities must also give evidence of strong academic achievement in the United States.

The Test of English as a Foreign Language (TOEFL) is ordinarily required of candidates from other countries in which English is not the language in general use. Transfer students may also establish proficiency through completion of transferable English composition courses.

International students must also be able to pay the cost of each year they plan to study at the University. Letters from sponsors, family members, or banking officials are required to demonstrate sufficient finances, since the University has very limited financial assistance for foreign students.

Because of the wide variety of educational systems throughout the world, there are no standard admission requirements for international students. Applications are reviewed on an individual basis, and admission is determined after an evaluation of all credentials associated with the student's academic qualifications for university study.

Registration

Old Main 230, (206) 676-3430

Registration for fall quarter takes place at the beginning of the term. For winter and spring quarters, there is a period of "advance registration" for continuing students, while new students register on the first day of the quarter.

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.

REGISTRATION AT START OF QUARTER

Registration takes place during the first three days of the fall quarter and on the first day of other quarters. (See the calendar at the front of this General Catalog.) On registration day new students and continuing students who did not advance register sign up for their courses and pay their fees. 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.

ADVANCE REGISTRATION FOR WINTER AND SPRING QUARTERS

At mid-term during the fall and winter quarters, students at Western are given an opportunity to advance register for their next quarter's courses. This opportunity enables current students to select their courses early and provides Western's faculty and Registrar's Office with information important to planning.

Each student who advance registers receives a bill for fees, together with payment instructions. Because advance registration reserves a student's place in a course, payment must be made by the specified date prior to the beginning of the

next quarter's courses or the student's registration is cancelled.

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



chairperson 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 entitled "University Academic Policies."

Tuition and Fees

Old Main 320g, (206) 676-3066

At Western the various expenses of a student who is single and a resident of the State of Washington are about \$1,870 each quarter.

Approximate Quarterly Expenses, 1985-86

Tuition and Fees	\$400
Room and Board	933
Books and Supplies	133
Personal Expenses	400

Below are actual costs of various expenses for several student categories and brief descriptions of the financial assistance available at Western through the Student Financial Aid Office. (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.)

Quarterly Tuition and Fees — Full-time Students

(Students registering for ten or more credits pay full fees.)

1985-86/1986-87

Student Classification	Quarterly Total
Southeast Asian Veteran*	\$ 153
Resident ¹ , General	400
Non-Resident, General	1398
Resident ¹ , Graduate	
Degree	566
Non-Resident, Graduate	
Degree	1,694

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

Student Classification	Quarterly Total
Resident ¹ , General	\$ 33

Non-Resident, General	133
Resident ¹ , Graduate	
Degree	50
Non-Resident, Graduate	
Degree	163

Quarterly Tuition and Fees — Part-time Students

(Students enrolling for nine or fewer credits)

1985-86/1986-87

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

Southeast Asian Veteran*	\$ 15
Resident ¹ , General	40
Non-Resident, General	140
Resident ¹ , Graduate	57
Non-Resident, Graduate	170

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 Office of Admissions, Old Main 200. Individuals seeking a change in residency classification must obtain a residency questionnaire from the Office of Admissions, attach the required documentation, and submit it to the Office of Admissions 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.

*For Washington residents only

Tuition & Fees

Auditors

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

Continuing Education

Fees for courses offered through the Center for Continuing Education vary in accordance with the nature of the course. The Quarterly Continuing Education Bulletin describes charges in detail.

DESCRIPTION OF TUITION AND FEES

1985-86/1986-87

	Tuition	Service & Activities Fee	Operations Fee
Res., Gen.	\$26	\$67	\$307
Non-Res., Gen.	99	67	1232
Res., Grad.	26	67	473
Non-Res., Grad	99	67	1528
SE Asia Vet.*	25	54	74

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

Health Services

A fee of \$9 per quarter is charged to each student who registers for 6 or more credits of on-campus courses.

*For Washington residents only.

Parking

(For parking and traffic regulations, see Appendix I)

	Quarterly Total
On-campus parking	\$27
Peripheral parking	13
Motorcycle parking	6

Late Registration/Late Course Adds

A fee of \$10 is charged for deferring fee payment beyond the stated deadline.

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 chairperson and Registrar.

Fees for Required Tests

Freshmen who have not submitted appropriate examination results will complete the Washington Pre-College Test at a fee of \$12. Transfer students without appropriate test results will complete the School and College Abilities Test (SCAT) at a fee of \$5.

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 only	2
Provisional Teaching Certificate	20
Standard Teaching Certificate	20

(Fees for teaching certificates are set by the State of Washington and are in addition to the graduation fees.)

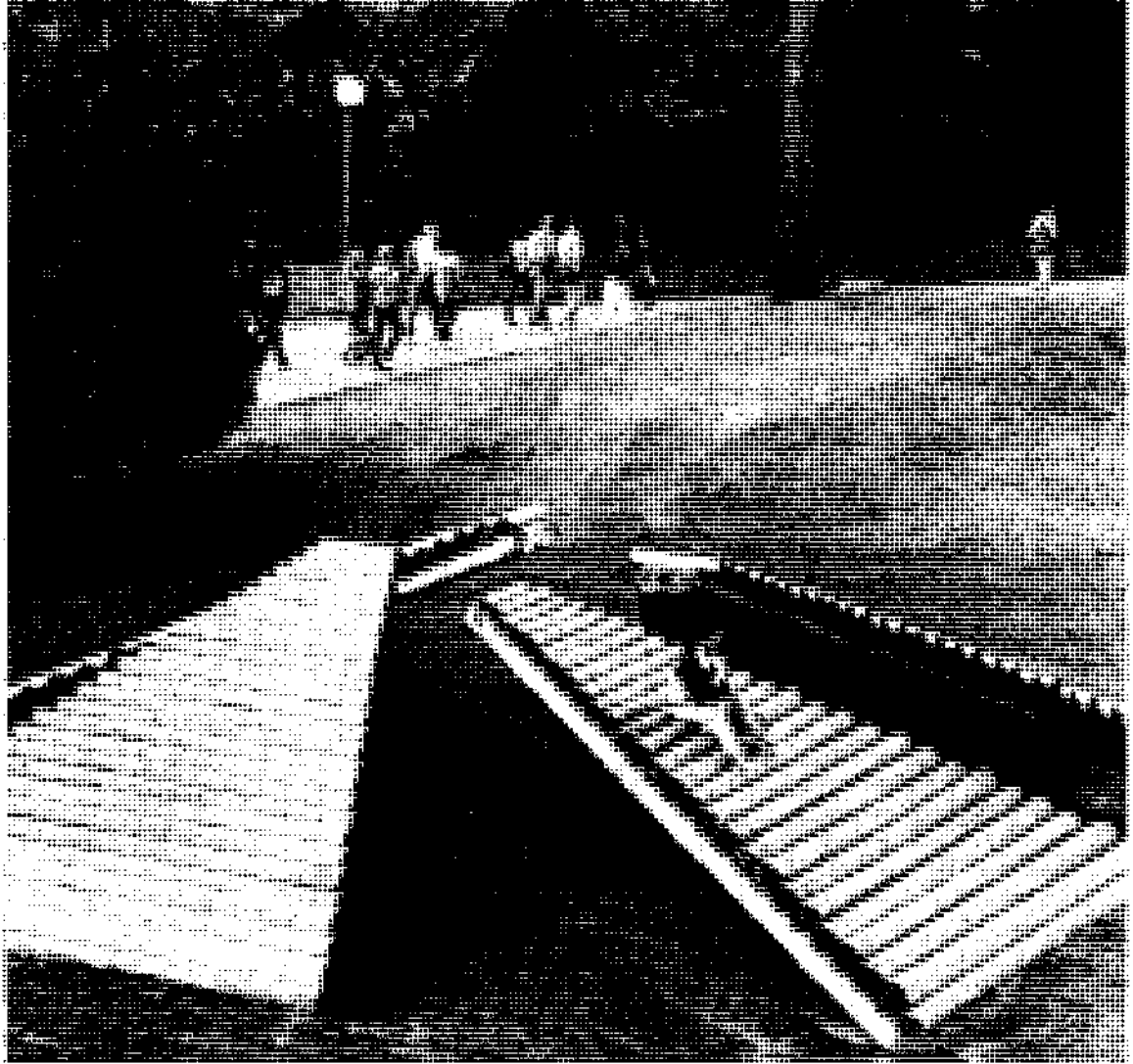
Transcripts

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

Transcript Fees:	
Unofficial Transcript	\$2
Official Transcript	3

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 Class Schedule.



Log Ramps, outdoor sculpture

REFUNDS OF FEES*

In ordinary circumstances, a student who 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.

A refund of one-half of tuition and 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. Failure to officially withdraw from the University will obligate the student to pay one-half of tuition and fees.

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.

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-time 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 thirtieth 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 National Direct Student 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.

*See the *Continuing Education Bulletin* and the *Summer Session Catalog* for the refund policy for Continuing Education and Subject-to-Enrollment courses.

Financial Aid

Old Main 240, (206) 676-3470

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

HOW TO APPLY FOR FINANCIAL AID

To be considered for financial aid, the following application materials must be submitted: College Scholarship Service Financial Aid Form (FAF), Pell Grant Student Aid Report (SAR) and WWU Financial Aid Application.

To ensure first consideration for available funds, application materials must be received by the Student Financial Aid Office by April 1. Application material received after April 1 will receive full consideration as financial aid funds are available.

TYPES OF FINANCIAL AID

A student who applies for financial aid at WWU is considered for a variety of federal, state and/or institutional programs. Applications are evaluated to determine each student's need, and awards are made with careful adherence to federal, state and institutional guidelines. Consideration can be given only to citizens of the United States or students residing in the U.S. on permanent visas.

GRANTS

Grants are available only to undergraduate students. They are offered as gift aid. Repayment is not required.

■ **Pell Grant.** All undergraduate students are eligible to apply for this federal grant. It is intended to be the foundation of a financial aid package and may be combined with other forms of aid in order to meet educational costs.

■ **Supplemental Educational Opportunity Grant (SEOG).** These federal grants range from \$200 to \$2,000 per academic year.

■ **State Need Grant.** The state of Washington offers State Need Grants to needy and disadvantaged students who are residents of this state. All eligible students will be nominated for confirmation by the State Council for Postsecondary Education. To be considered for nomination, students must provide parents' income information unless they can demonstrate that they have been self-supporting or financially independent for at least three years.

■ **Tuition and Fee Waivers.** These are generally available to needy students who are residents of the State of Washington.

EMPLOYMENT

■ **Work-Study Programs (state and federal).** Students who demonstrate financial need may be offered part-time employment under the work-study programs. On-campus jobs are available in nearly every academic area and administrative office and encompass a wide variety of skills and responsibilities. Off-campus work-study positions must be career related. Employment opportunities off-campus range from accounting firms to social services, recreation centers and educational settings.

■ **Non-Work-Study Employment.** The Student Employment Center provides information and assistance to students seeking part-time employment, either on or off campus, without regard to the student's financial need.

■ **On-Campus Employment.** Many University departments and offices offer opportunities for

students to demonstrate eligibility for financial aid. Although Western cannot guarantee it can find students employment, the Center does list all available on-campus positions and assists students with referrals.

■ **Off-Campus Employment.** The Student Employment Center works directly with the Bellingham business community in developing part-time and seasonal job opportunities for students at Western. Individual job search assistance also is available.

■ **Graduate or Teaching Assistantships.** A number of graduate assistantships in departments of the University are available to qualified students. Inquiries should be addressed to the dean of the Graduate School.

SCHOLARSHIPS

■ **WWU SCHOLARSHIPS.** Western Washington University offers merit scholarships to entering freshmen, transfer and returning students in recognition of outstanding academic ability. Entering students who are National Merit finalists are guaranteed \$1,000 in scholarship funding. University departments and colleges also offer scholarship and partial tuition and fee waivers to student majors.

A list of scholarships, with brief descriptions of eligibility requirements, is included in the Financial Aid and Scholarship Booklet, available from the Student Financial Aid Office.

LOANS

■ **National Direct Student Loans** are long-term, low-interest loans available to undergraduate students at WWU. The size of the loan granted depends upon the applicant's eligibility and the funds available at WWU.

Interest on the NDSL does not accrue and repayment does not begin until six consecutive months after a student is no longer enrolled on at least a half-time basis. The loans bear interest at the rate of five percent per year and repayment of the principal may be extended over a ten-year period (depending on the size of the loan) with a minimum payment of \$30 per month.

Repayment may be deferred up to a total of three years while the borrower serves in the Armed Forces, with the Peace Corps or as a VISTA volunteer. Loans are also deferred for graduate study. Loan recipients may receive partial or full cancellation of indebtedness through subsequent service in certain teaching areas.

■ **Guaranteed Student Loan (GSL).** Graduate and undergraduate students are eligible to borrow through this federal program provided that they are enrolled at Western, or have been accepted for enrollment, at least half time. Stu-

dents apply for GSLs from participating banks or credit unions. The application process takes approximately ten weeks, and application forms are available from Western's Student Financial Aid Office.

Repayment begins six months after the student leaves school and may be deferred while the borrower is in graduate school or in programs such as the Armed Forces, the Peace Corps and VISTA. Monthly payments are \$50 or more. Eight percent simple interest per year is charged beginning at the time the loan is granted; however, the federal government pays the interest while the student is in school and during the six month grace period and deferred payment period.

■ **The Math/Science Loan** is available to Washington residents who intend to pursue a teaching career in mathematics or science in Washington public schools. To be eligible for this program students must demonstrate financial need and academic competency. Undergraduates must also have attained junior status and be formally admitted to the teacher education program. Eligibility is limited to full-time students.

Students may borrow up to \$2,500 per academic year, with the actual amount depending on demonstrated need and funds available. Cumulative borrowing may not exceed \$10,000. Interest on the Math/Science Loan is at nine percent and does not accrue, and repayment does not begin until nine consecutive months after recipients cease to attend at least on a half-time basis. Repayment of the loan is extended to 10 years, with payment scheduled quarterly. The loan principal and interest may be canceled for any repayment quarter if the recipient is teaching math or science in a Washington public school (middle, junior or high school).

■ **PLUS Loans.** These loans are available to parents of dependent undergraduate students as well as self-supporting students and graduate students. Applications are made through participating banks and credit unions. The application process takes approximately ten weeks, and application forms are available from Western's Financial Aid Office.

Repayment begins no later than sixty days after the loan is disbursed, but the principal may be deferred for the student borrower. Current minimum monthly payments are \$50. Twelve percent interest is charged beginning at the time the loan is granted. (The rate of interest may increase to 14 percent, depending on the 91-day Treasury Bill rate.)

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 col-



lege 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 Western's Veterans Affairs 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.

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.

SUMMER SESSION AID

Financial aid for summer quarter is contingent upon funds available. An additional application is required which is available beginning spring quarter. Only students who have a completed application on file for the previous academic year will be considered for summer assistance.

University Housing and Food Service

High Street Hall #6, (206) 676-2950

Western Washington University maintains a wide variety of housing accommodations for its students. Most residence halls are co-educational; one women's hall is available. The University also has apartments for single and married students. Assignments to on-campus housing and listings of off-campus housing accommodations are made without reference to race, age, creed or national origin.

The University does not maintain regulations about where students must live. However, students are encouraged to investigate housing accommodations thoroughly to assure conditions which promote their academic welfare and personal development.

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, extra storage space for trunks, and bike racks are provided in each hall. In addition, some halls have pool tables and other recreational facilities.

Three dining halls are located close to the residence halls. Students living in residence halls must take their meals in the dining halls, all of which are coeducational and serve three meals each day plus special dinners and banquets. 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. An application will be accepted only if the student meets one of the following conditions:

1. The student has been admitted to the University as a new student and has paid the advance tuition prepayment.
2. The student is either currently enrolled or has been previously enrolled at Western Washington University.

Except when the reservation deposit is required earlier to guarantee a space in the housing system, 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 housing application. 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 director of University Residences in writing prior to acceptance of a residence hall assignment.

In accepting an assignment to a residence hall, each student agrees to the Room and Board Agreement and makes a security deposit of \$90. Deadlines for the payments are July 1 for fall quarter, or two weeks after the assignment is made. The \$90 security deposit will be retained by the University as a damage and/or reservation deposit as long as the student lives in the housing system.

Once the agreement is signed and the security deposit is made, cancellation of a reservation cannot be made without forfeiture of a part or all

of the deposit. The reservation deposit may be refunded by decision of 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 532 students on a wooded seven-acre site near the campus. Each apartment has a living room, dining room, kitchen, outside deck, divided bath, storage room, 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.

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 \$90 deposit is required from each person assigned to a particular apartment.

Buchanan Towers, located at the south end of the campus, is an eight-floor apartment building which houses 404 students in one- and two-bedroom apartments and efficiency units. Each standard unit has a living-dining-kitchen area,

two large bedrooms and a bathroom. The lower floor has a recreation area and central lobby. Furnishings, utilities, television cable and extra storage space are provided at no additional cost.

The Fairhaven Residences include one- and two-bedroom apartments in towers eleven and twelve. These have been converted from residence hall rooms but are fully equipped with kitchenette features.

COSTS

The following housing rates are in effect for the 1984-85 academic year:

Double room and 21 meals per week, academic year	\$2,275
Double room and 15 meals per week, academic year	\$2,238
Double room and 10 meals per week, academic year	\$2,171

Quarterly rates and single room rates (when available) are higher. Room and board rates for 1985-86 and 1986-87 should be calculated to increase by an allowance for the current rate of inflation.

Apartment rates for the 1984-85 academic year are as follows:

In *Birnam Wood* academic year rent for the unit is \$3,594.

In *Buchanan Towers* and *Fairhaven* apartments the *unit rent* is \$3,028 for the academic year.

As is the case with room and board rates, apartment rents are expected to increase each year by an amount equal to an allowance for the current rate of inflation.

For the actual annual or quarterly rental rate for a given apartment unit, contact the Office of University Residences, Western Washington University, Bellingham, Washington 98225.

OFF-CAMPUS HOUSING

The Off-Campus Housing Listing Service maintains lists of available off-campus rentals. Because of constant changes in housing availability, these lists are not printed for mailing. Off-campus rentals are in great demand, and it is to the student's advantage to arrive in Bellingham prior to the start of the quarter to make living arrangements. Although the listing service does not make individual rental agreements or assume responsibility for the condition or suitability of listings, it offers helpful information on renters' insurance and contracts with landlords, as well as a guide book for renters.

Information about off-campus listings is available by writing the Off-Campus Housing Listing Service, High Street Hall, Western Washington University, Bellingham, Washington 98225.

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.

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

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, financial aid, student activities, counseling, intramurals, career planning and placement, health services and intercollegiate athletics. Committed to the success of ethnic minority, disabled and international students, the Division of Student Affairs has programs designed to address the special needs of these students. 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.

ORIENTATION

Orientation provides a wide variety of programs to assist new students in the transition to the university environment. Occurring during the summer and immediately prior to each quarter,

new students are invited to participate in activities designed to acquaint them with the programs and resources available at Western.

Orientation programs provide students and their parents the opportunity:

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

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.

ACADEMIC ADVISING CENTER

The Academic Advising Center (AAC) is a place where students can get help with their questions about academic policies and curricular choices. Peer advisers are used extensively to clarify academic requirements and regulations or to assist students with course selection and scheduling.

Student Affairs

For students with more serious academic concerns, professional advisers staff the office daily and are available for pre-scheduled appointments.

One of the main emphases of the AAC is to help students who have not yet chosen a major to explore Western's curriculum and resources so that their eventual choice is well-planned, practical and rewarding. However, the AAC staff is also involved in other student services such as:

- Orientation advising for new students.
- Assisting students with the registration process.
- Clarifying requirements for students who return after an extended absence.
- Referring students to faculty advisers when they need specific information about a department or major.
- Advising students who are planning to pursue a professional program at another institution.
- Helping students who have decided to withdraw from Western before the end of the quarter.
- Working with students who have been dropped from Western because of a low grade point average and who wish to petition for reinstatement.

The Academic Advising Center's professional staff also works with students who are having difficulty clarifying their academic goals. Referrals are frequently made to other resources like the Writing Center and Tutorial Center for work on specific learning and study skills.

Because the various colleges, schools and programs at Western also offer academic advising, students are encouraged to read the pertinent sections of this catalog and talk with advisers from their areas of interest.

The Academic Advising Center is located in Old Main 275 and is open daily from 9 a.m. to 4 p.m. Appointments can be made by calling 676-3850, and drop-ins are welcome.

TUTORIAL CENTER

Student tutors are the primary resource of the Tutorial Center. Top students, recommended by faculty, tutor students taking General University Requirement courses. Tutors also lead review sessions in a variety of subject areas. Students can discuss, practice and sharpen learning skills in the Center. Care is taken to provide tutoring consistent with classroom methods and approaches.

The services of the Center include:

- Individual and small group tutoring.
- Review sessions for many GUR courses.
- Drop-in tutoring.
- Study skills workshops.
- Assistance for students who have learning disabilities.
- Computer tutorials.

— Referral to other University resources.

The Tutorial Center is located in Old Main 380 and is open daily from 9 a.m. to 4 p.m. Appointments can be made by calling 676-3855.

Students seeking extra help with such study skills as time management, textbook comprehension, test preparation, and note-taking can find qualified peer and professional assistance at the Tutorial Center.

CAREER PLANNING AND PLACEMENT CENTER

Western's Career Planning and Placement Center focuses on the full continuum from career planning to placement. Major services include self-assessment, analysis of job market information, how to make career choices, how to translate these choices into educational goals, how to obtain appointments with employers and how to become employed.

All Western students — regardless of degree, school, or college — are urged to seek and use the services of the Center *early* in their university programs.

Career Planning Programs Available to All Students

Students are encouraged to learn more about their interests, values, skills, personal assets, and life goals as a basis for choosing and preparing for careers. Counseling is also offered to assist students to understand the realities of the work world and realistically to relate their own career interests, goals and needs to the opportunities available.

Placement Services for Graduating Seniors

Graduating seniors are encouraged to register formally with the Placement Center and to establish a file of "placement credentials" during the first quarter of the senior year. The Center provides special workshops and seminars on job search skills and techniques necessary to become competitive in a competitive job market. These include programs in resume preparation, letter-writing skills and interviewing techniques.

When current placement credentials are on file in the Center, students are eligible to participate in on-campus interviews, to review job notifications, and to use special aids in contacting potential employers. (Placement credentials may also be used to facilitate entry into graduate schools.)

Careers Information Library

The Center maintains a comprehensive library of career and job trend information, including general career planning information, relationships of academic majors to occupational areas, and

labor market trends and needs. The library is an integral part of both the career planning and the placement processes. Students are encouraged to begin using the Center's library as a resource center no later than the sophomore year.

Service to Alumni of Western and Graduates of Other Institutions

Alumni may obtain placement services if they update and activate their placement credentials. Graduates of other institutions working toward advanced degrees and/or certificates at Western who have completed 30 or more credits may establish, upon request, placement credential service during the placement in which they complete the advanced degree or certificate program.

Western's Career Planning and Placement Center subscribes to an open-door recruitment policy and operates under federal and state non-discrimination statutes. The Center is located in Old Main 280.

COUNSELING CENTER

The Counseling Center (Miller Hall 262, 676-3164) offers educational, vocational and personal counseling.

Personal counseling may be helpful in gaining self-understanding, increasing social and personal effectiveness and learning to manage stress associated with being a university student. Counseling is offered to couples for improving communication, resolving conflicts and enhancing relationships.

Educational and vocational counseling can be helpful in assessing interests, abilities and aptitudes, selecting an appropriate major, overcoming learning problems, managing exam anxieties, developing study skills and exploring long range vocational goals. Carefully selected standardized tests of interests, aptitude and personality characteristics are usually included as part of the counseling process. The Center's Occupational Library houses a collection of occupational and educational materials offering information useful to students in making educational, vocational and career decisions (the library is open to all students, not just those using counseling services).

Depending upon student needs and requests, the Counseling Center also offers groups and special programs on interpersonal communication and skills, assertiveness training, study skills, stress management and weight control. Consultation services are provided for individuals and campus groups on how and when to refer to the Counseling Center, training in basic counseling skills, and student adjustment and development.

Counseling Center services are for currently enrolled students. However, transitional plan-

ning is available to students who have been dropped for low scholarship or are recently withdrawn or graduated. Courtesy consultation and referral service are offered to faculty and staff who may be seeking information about psychological services.

Counselors at the Center are professionally trained and experienced in counseling/clinical psychology and social work. All information gathered during the course of counseling is confidential and released only with student consent.

The Counseling Center is open from 8 a.m. to 5 p.m., Monday through Friday.

HEALTH SERVICES

Good health is recognized as essential for students to derive the maximum benefit from their time at Western. Health care provided by the Health Service includes treatment of acute problems, preventive health measures, and general medical and health education.

Health Service is available *without charge* (there is a fee for some tests and supplies) to all students currently enrolled for six or more credits per quarter. Students may reside on or off campus. **It is not necessary to be a member of any health care or health insurance plan to use this service.**

The office of Health Service, located at High Street Hall 25, consists of registered nurses, office assistants and student employees. The University also contracts for on-campus physician time. The Health Service is open weekdays when classes are in session from 8:30 to 11 a.m. and from 1 to 3:30 p.m. At other times between 8 a.m. and 5 p.m., urgent problems will be appropriately cared for. Any student needing medical care should go directly to the Health Service. Appointments with the doctor are made by the nurse when the student arrives at the Health Service office. **No appointments are made by phone.**

Care provided at the Health Service includes those problems generally treated in a physician's office. Students with more complicated conditions are evaluated and referred to appropriate care in Bellingham or in the student's home community. Services offered on campus include medical evaluation by nurses and physicians; treatment, medication and prescription as indicated; referral for laboratory, X-ray and consultation as necessary; preventive medicine or wellness conferences; antigen injections; diet/weight/nutrition appointments; sexually transmitted disease screening and treatment; pregnancy testing with prenatal, adoption and abortion referral.

When the Health Service is closed, the 24-hour Whatcom Emergency Service at St. Luke's Hospital is available for urgent care needs. **Note: the University assumes no financial responsibility**

Student Affairs

for care dispensed at the hospital emergency room. Students who engage this service must plan to use private or health insurance funds to cover expenses.

An Emergency/Illness (life threatening) and Accidental Injury (insurance) policy through the Whatcom Medical Bureau is available to students enrolled for six or more credits per quarter, through the Whatcom Medical Bureau. The cost is low. Sign-up time is during the first three weeks of each quarter. Brochures are available at the Registration Center, Cashier's Office and Student Health Service. Payment is made at the Cashier's Office, Old Main.

All new or transfer students, including graduate students, must submit a medical inventory health form which includes:

- (a) A health history completed and signed by the student;
- (b) A negative tuberculin skin test or chest X-ray documented by a physician or public health department.

Both of these must be on file at the Health Service **before** the student receives registration privileges. While it is *not* mandatory, the Health service strongly encourages a complete physical examination by a physician. This confidential physical examination is required of all entering foreign students.

RESIDENCE LIFE

The staff of the Office of Residence Life provides a broad variety of educational programs for students who live in campus housing facilities. Professional staff and student staff members assist students through personal counseling, activity planning and improvement of the on-campus living experience. They also work directly with student leaders and other university personnel to provide out-of-class learning experiences in leadership, program planning and evaluation, career and life planning, and general university community involvement.

Resident students may become directly involved with the implementation of hall programs through three primary avenues: Students may serve on residence hall governing boards, campus committees, or special activity task forces. Student leadership experience through membership on the Inter-Hall Council is another avenue for contributing to a healthy on-campus living environment. Residence Life staff positions are available each year to students who demonstrate an ability to work effectively with others in activity planning and paraprofessional advising. All of these opportunities provide practical leadership experiences, as well as student involvement in the shaping of a total program of residence education.

STUDENT ASSISTANCE CENTER

The Student Assistance Center is the University's

office responsible for services and programs for ethnic minorities, students with disabilities and international students.

Ethnic minority students are counseled and assisted in such areas as academic programming, financial aid, housing, tutoring, personal and social problems — or any other problem area where there is need for support. These services are also available for educationally disadvantaged students.

Students with disabilities may obtain readers; note-takers and interpreters for the deaf; resource information; advisement and counseling; information regarding parking and transportation; and liaison with such state agencies as Vocational Rehabilitation and State Services for the Blind through the Student Assistance Center. The study room of Western's library contains tape recorders, record players, braille materials, and special devices for magnifying print. The Student Assistance Center coordinates a reading service for the visually impaired and learning disabled which provides textbook taping, reader referral and testing assistance.

International students may obtain academic and personal advisement as well as immigration information from the Student Assistance Center. To enable international students to become acquainted with people in the community, the Student Assistance Center arranges for host families through Friendship International.

STUDENT ACTIVITIES

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 para-professional capacity are available in a wide variety of student-provided services. These include drug, legal, sex, and environmental information services; a volunteer center; the A.S. Community Recycling Center;

Men's and Women's Centers, the Sexual Minorities Center, the Peace Resource Center, and a Cooperative Day Care Center.

Club Sports

Competition and/or involvement is offered through the Club Sports program in rugby, sailing, lacrosse, ice hockey, skiing, volleyball and tennis. Many of these clubs offer instruction.

Day Care Facilities

The Associated Students Co-Op Day Care 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 after joining depend 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 Co-op Day Care Center.

More information about day-care facilities on campus and in Bellingham may be obtained from the Student Assistance Center.

FM Radio

KUGS, at 89.3 on the FM dial, is Western's student-managed radio station. 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 Program functions as a catalyst and resource center for hiking, ski touring, mountaineering, snowshoeing, rock-climbing, bicycling, backpacking, river rafting, camping, sailing, canoeing, kayaking and many other activities. Included in the Outdoor Program 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 Valhalla Equipment Rental Shop.

Program Commission

From socializing to social issues, the Associated Students Program Commission coordinates and presents a large part of Western's entertainment, educational, and social activities. Weekly films, art exhibits, coffee houses, dances, symposiums, festivals, and cultural events are regularly pro-

vided by the Program Commission. In addition, it presents concerts and speakers such as the Arts Ensemble of Chicago, Gordon Bok, the Go Go's, McCoy Tyner, the Manhattan Transfer, David Grisman, Dick Gregory, Ralph Nader and Ram Dass — all of whom have appeared at Western recently.

Recreational Opportunities

Recreational facilities available to the University community include Lakewood, a ten-acre site on Lake Whatcom, which is operated by the Associated Students, and offers sailing, canoeing, swimming, boating and picnicking. Conference and meeting facilities are also available. The Associated Students also operate Kulshan Cabin, located at timberline on Mt. Baker, under a permit from the U.S. Forest Service. The cabin serves as a base camp for climbing in the area, as well as a destination for day hikes in the Cascades. 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.

Special Interest Groups

Special interest 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 Unified Society, Political Science Association, International Folk Dancers, International Club, Science Fiction and Fantasy Club, Society of Automotive Engineers, Computer Club, Sexual Minorities Center, and various departmental clubs. Many religious groups also function at Western.

Viking Union

As the community center of the campus, the Viking Union plays an integral role in the co-curricular program. The Union houses offices for the Associated Students' government, services and activities; and the Viking Union/Student Activities administrative offices. Also located in the Union are meeting rooms, lounges, a music listening room, printshop, outdoor equipment rental shop, several food service areas, an information center/smoke-shop, a delicatessen, Plaza Pizza, art gallery, games room, typing room and program areas.

Associated Students Cooperative Bookstore

Operated by the Associated Students on a cooperative basis, the Bookstore provides textbooks, class supplies and materials, computers and convenience and sundry items for the university community. All merchandise is discounted at 15 percent, while specials afford even greater savings. Also housed in the store is a post office. Gift

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items and specialty services, such as film processing, are available.

Departmentally Related Activities

Intramurals, athletics, forensics, theater/dance, music, performances and publications are important University programs. Faculty from appropriate departments work closely with these student activities, but students need not be affiliated with the departments to participate. Students may receive credit for participation in most of these activities. The comprehensive Intramural Program includes many individual and group sports, through which students enjoy physical exercise and develop skills for leisure-time activities.

Athletics

Intercollegiate athletics involve many students as participants and spectators. Men's sports include basketball, crew, cross-country, football, soccer and track and field; women's sports include basketball, cross-country, track and field, and volleyball. The University Men's Program is a member of, and governed by, the Evergreen Conference and the National Association of Intercollegiate Athletics. The University Women's Program is a member of the National Association for Intercollegiate Athletics.

Forensics

The Forensics Program offers opportunities for developing new interests and skills through tournaments ranging from local, low-key competitions to the National Debate Tournament. Competition is offered in individual events, national topic debate, and CEDA debate. A chapter of Pi Kappa Delta, the national forensics honorary, provides student recognition and several service projects.

Intramurals

A comprehensive intramural sports program offers students an opportunity to participate in structured and unstructured activities on campus. League play is organized for men and women, and co-recreational teams in volleyball, basketball, softball and flickerball. Tournaments for such sports as racquetball, handball and badminton are held quarterly, while special events are offered throughout the year. The pool, weight room, gymnasiums and playing fields are scheduled for recreational use daily for the individual who prefers to participate without a competitive atmosphere.

Music Activities

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; and Jeopardy, the annual literary 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.

Television

A student-produced weekly color TV news show carried on the cable system serving Bellingham provides experience in newsgathering, editing, scriptwriting, videotaping, studio production and on-camera performance. Credit is available through the Speech and Broadcast Department and Technology Department.

Theatre and Dance

The Theatre and Dance program offers a rich variety of opportunities to work both on and off stage — to write, choreograph, act, dance, direct, design, costume and tech — in faculty- and student-directed productions. These include the major bill of plays and dance concerts, the touring theatre and dance productions, the New Playwrights Theatre, informal dance concerts, graduate thesis productions, and student directing class projects. Casting for productions is normally open to the entire community.

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.

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), and 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:

College Board Advanced Placement Examinations in certain subjects. The department concerned determines the minimum acceptable score.

College Board Advanced Placement Examinations may be taken for the following:

<i>Department</i>	<i>Subject Examination</i>	<i>WWU Courses/Credit</i>
Art	Art History	Art History 220, 230, 240 (15 credits)
	Studio Art	Art 101 (3 credits) by portfolio
Biology	Biology	Biology 122, 123 (6 credits)
English	English composition and literature, English composition and language	English 101 (4 credits) plus general elective English (4 credits) (8 credits) placement by departmental advisement
Foreign Languages	German Language	German 201 (5 credits)
	Spanish Language	Spanish 201 (5 credits)
	French Language	French 201 (5 credits)
	Russian Language	Russian 201 (5 credits)
History	American History	History 103, 104 (American History 10 credits)
	European History	History 113 (European History 5 credits)
Mathematics & Computer Science	Mathematics Calculus AB	Math 124 (5 credits)
	Mathematics Calculus BC	
Music	Music Listening and Literature	Music 140 (3 credits)
		Music 190 (3 credits)

Academic Policies

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.

Challenge examination or procedures prepared by the department concerned.

The following regulations govern course challenges:

1. 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 "Finances").
2. 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.
3. The challenge application will normally be denied:
 - (a) if the student is currently enrolled in the course;
 - (b) if the student has previously established credit for a similar course at this or another university;
 - (c) if the student has previously failed the course;
 - (d) if the student has previously challenged the course and failed;
 - (e) if the student has previously audited the course;
 - (f) if, in the judgment of the director of the Testing Center, in consultation with the department concerned, the challenge procedure is inappropriate;
 - (g) if the student is in his/her final quarter prior to graduating and the course is part of the General University Requirements.
 - (h) 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* (2-15). These courses are offered through the WWU Study Abroad program or through colleges. Contact the Foreign Study Office, OM 400, 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 Class Schedule, Summer Catalog or Continuing Education 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 Class Schedule, the Summer Catalog and bulletins of the Center for Continuing Education.

INDEPENDENT ELECTIVES

In addition to courses specified in the various major programs of the University and courses specified under the General University Requirements, students also have available independent electives. Independent electives give students the opportunity to investigate those special and personal interests that engage the curious and inquiring mind. It is the academic policy of the University to encourage such (independent) exploration.

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 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 outside preparation implied); 2) laboratory or studio course — at least two contact hours for each one hour credit (one hour outside preparation implied); 3) independent study — at least three hours 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 Catalog 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.

FULL-TIME STATUS

Students who have paid full-time tuition and fees (10 credits or more) are considered "full-time"

students for purposes of on-campus employment, student office and membership on University committees.

Certain programs have different definitions of full-time undergraduate status (i.e., athletic eligibility, financial aid programs, Social Security benefits, Veterans Administration, etc.). *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 "Finances").

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 of Student Affairs and medical leaves through Health Services.

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

WITHDRAWAL FROM A COURSE

To withdraw from (drop) a course, a student must file a Change-of-Program form, in the Registrar's Office. Discontinued attendance without official withdrawal results in a failing grade (Z).

Academic Policies

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 Class Schedule.)

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:

Total Credits Earned*

	Late "W" Permitted
0-44	3 during this 45-credit period
45-89	1 during this 45-credit period
90-134	1 during this 45-credit period
135-179	1 during this 45-credit period
etc.	

*Includes credits transferred to Western.

Note: "Late withdrawal" during the summer quarter is allowed during weeks three and four of the six-week session and during weeks five through eight of the nine-week session.

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.

FINAL EXAMINATIONS

Final examinations, given in most courses at Western, are administered according to a schedule published in the *Class Schedule*. 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:

Grade	Points per Credit
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 S/U 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 Class Schedule.

PASS/FAIL GRADING

Students may choose the Pass/Fail grading option in certain elective courses. Regulations pertaining to Pass/Fail grading are as follows:

1. Courses required for the major and minor, supporting courses, undergraduate professional requirements, and General University Requirements may not be taken pass/fail. Courses graded P/NP may not be applied to master's degree programs.
2. 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 fifth day of instruction.
3. Prerequisites, work required, and credit allowed are not affected by election of the pass/fail option.
4. In computing grade averages, neither the P nor NP grade in pass/fail courses is counted.
5. 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.
6. 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 "Fifth Year" courses.



Bellingham Bay from Marine Park

REPEATING A COURSE

A few courses are approved to be repeated for credit. Such approval is included with the course descriptions in this catalog. If other courses are repeated, the following will apply:

- 1) Credit will be awarded only once.
- 2) Only the last grade earned will be considered in calculation of the student's grade average (unless the last grade is "K," "W," NP or "U").

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.

If a transfer student is required to register for a course that may be a repeat of a course completed elsewhere, the student may receive credit for both courses.

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:

- 1) 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.
- 2) The Registrar may be instructed to change a grade as the result of the academic grievance procedure.

- 3) The Registrar may be instructed to change a grade if it is determined that the grade resulted from academic dishonesty.

FRESH START GRADE AVERAGE

Under unusual circumstance, a former Western student who returns to the University after an absence of *five years or more* may be given permission to start a new cumulative grade average. Complete information regarding this policy, and the procedure for petitioning, are 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 Honors

Graduation *cum laude* or *magna cum laude* is possible from those divisions of Western Washington University which employ the A-F grading system: College of Arts and Sciences, College of Business and Economics, College of Fine and Performing Arts, School of Education and Huxley College. 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.

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 proba-

tion. 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 by the end of 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, regardless of quarterly GPA, fails to raise his or her cumulative grade average to at least 2.00 at the end of the quarter.

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. This must be done within two quarters after being placed on probation or academic dismissal will result (see "Continuing Probation").

REINSTATEMENT

Students who have received notice of academic dismissal may petition for reinstatement. Responsibility for reinstatement to the University (except Fairhaven College) rests with the Scholastic Standing Committee. Petitions for reinstatement and appointments with the Scholastic Standing Committee 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.

Students are encouraged to petition well in advance of the quarter for which they wish to be reinstated.

Certain restrictions govern students on academic probation. They may not hold an elective or appointive office in any student organization or participate in intercollegiate athletics.

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, School of Education, College of Fine and Performing Arts, Fairhaven College and Huxley College.

- 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

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., B.S.N.). 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 senior evaluation should be scheduled in the Registrar's Office before the program is undertaken or immediately thereafter.*

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 School 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

*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.

beginning in the freshman year and extending to upper-level writing-intensive courses (across the curriculum) offered throughout the University.

The following requirements apply to all freshmen entering in the fall of 1983 and thereafter; all transfer students entering in the fall of 1984 and thereafter; all students returning to the University in the fall of 1984 after more than two consecutive quarters' absence:

- 1) Students whose Washington Pre-College Test 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.
- 2) 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 118 during their freshman year.
- 3) All students who have completed 90 credits toward graduation must take a proficiency test in language and writing skills. (Students may take the examination as soon as they have completed 60 credits.) This examination, given several times each quarter by the Testing Center, will advise students of the level of proficiency they have acquired at this point in their academic careers. According to the results of the examination, students will be advised to a) enroll in a writing-intensive course (see #4 below); b) enroll in a writing-intensive course and participate in auxiliary support programs; c) not enroll in a writing-intensive course until they complete further coursework or auxiliary programs under advisement.
- 4) All students who have completed 90 credits toward graduation and have taken the writing proficiency test will take an upper-level course designated as "writing-intensive." This course will usually but not necessarily be in the student's major.

A complete description of the writing proficiency requirements is printed in the Class Schedule or may be obtained from the Academic Advising Center.

GENERAL UNIVERSITY REQUIREMENTS

General University Requirements are required by the College of Arts and Sciences, College of Business and Economics, College of Fine and Performing Arts, Huxley College and School of Education. Fairhaven College students see appropriate 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

Graduation Requirements

(see "Advanced Placement and Course Challenge" in the Academic Regulations section of the catalog). Some requirements may be satisfied with high school work as indicated below.

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.

Aims of the General University Requirements:

- (a) To broaden and intensify the student's understanding of significant aspects of man's cultural heritage.
- (b) To introduce the student to the methods and tools of thought and expression.
- (c) To assist the student in integrating his or her knowledge.
- (d) To assist the student in developing his or her powers of aesthetic enjoyment and creativity.
- (e) To stimulate the student in formulating a philosophy of life based upon knowledge and reflection.

Twelve-Credit Limit Per Department

Twelve (12) 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" through "F" grading scale. They may not be taken with Pass/No Pass grading.

Associate Degrees to Satisfy GUR

Approved Associate of Arts degrees from community colleges in Washington will 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 Associate degree must normally be earned prior to initial enrollment at Western as a transfer student.

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

COMMUNICATIONS

Complete Both A and B

All students must satisfy Block A of the Communications section of the General University Requirements prior to completion of 45 credits.

- A. ENGLISH 101, Language and Exposition (4) (Waived for students demonstrating high English competency on Washington Pre-College Test or SAT.) English 101 must be completed with a "C-" or better.
- B. One course from the following:
ENGLISH 201, Expository Writing (4); 202, Introduction to Fiction with Composition (4); 203, Introduction to Drama with Composition (4); 204, Introduction to Poetry with Composition (4); 301, Reading and Exposition (4); 302, Reading and Argumentation (4).
PHILOSOPHY 107, Logical Thinking (3).
SPEECH 101, Fundamentals of Speech (3); 205, Exposition and Argumentation (4).

HUMANITIES

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:

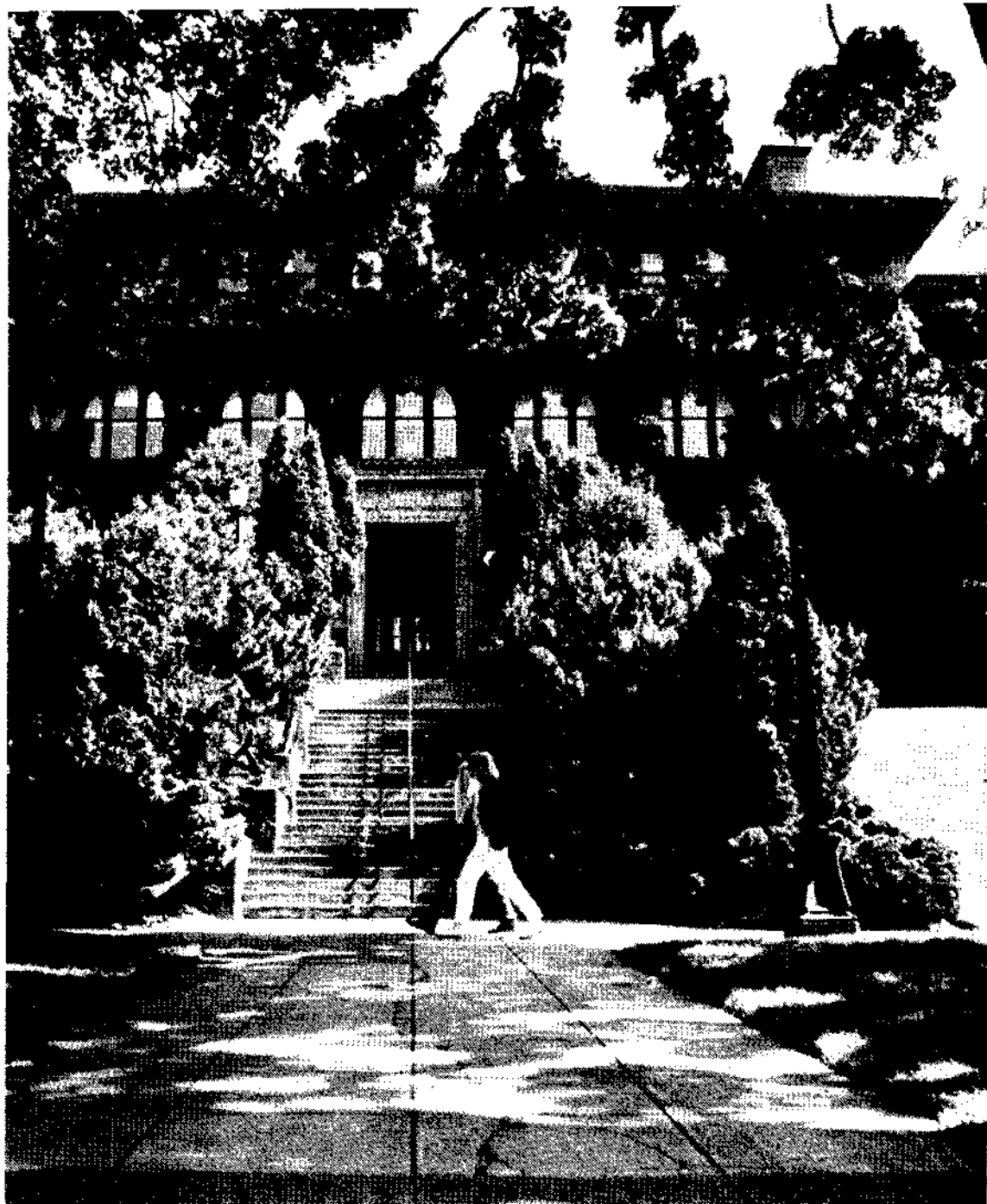
ART HISTORY 190, Art Appreciation (3); 220, Survey of Art History I (5); 230, Survey of Art History II (5); 240, Survey of Art History III (5).

CLASSICAL STUDIES 350, Greek and Roman Mythology (3).

ENGLISH 214, Introduction to Shakespeare (5); 215, Survey of British Literature (5); 216, Survey of American Literature (5); 238, Society Through its Fiction/Drama/Poetry (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, The Bible as Literature (5) (English 336 and Liberal Studies 235 may not both be taken for GUR credit).

FOREIGN LANGUAGES, any foreign language 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, Intro-



Entrance to Old Main

duction to Western Civilization (1713 to Present) (5); 267, Christianity in History (5); 347, European Intellectual History (5); 348, European Intellectual History (5).

LIBERAL STUDIES 121, The Western Tradition I: Ancient (5); 122, The Western Tradition II: Medieval (5); 123, The Western Tradition III: Modern (5); 231, Introduction to the Study of Religion (4); 232, Myth and Folklore (4); 235, The Biblical Tradition (4) (Liberal Studies 235 and

English 336 may not both be taken for GUR credit); 242, Music and the Ideas of Western Man (4) (Liberal Studies 242 and Music 105 may not both be taken for GUR credit); 243, Arts and Ideas (4); 332, Universal Religions: Founders and Disciples (4).

MUSIC 104, The Art of Listening to Music (3); Music 105, Music in the Western World (3) (Music 105 and Liberal Studies 242 may not both be taken for GUR credit); Music 205, Survey of Non-Western Musical Cultures (3).

Graduation Requirements

PHILOSOPHY 112, Introduction to Philosophy: Moral Issues (3); 113, Philosophy of Religion: Understanding Religion (3); 201, Introduction to Philosophy; Knowledge and Reality (3); 215, Introduction to Existentialism (3); 330, Society, Law and Morality (3).

POLITICAL SCIENCE 360, Introduction to Political Theory (5).

THEATRE/DANCE 101, Introduction to the Art of the Theatre (3); 201, Introduction to the Cinema (3); 231, Dance and Culture (3).

SOCIAL SCIENCES

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 201, Introduction to Cultural Anthropology (5); 210, Introduction to Archaeology (5).

ECONOMICS 203, Introduction to Micro-Economics (5); 204, Introduction to Macro-Economics (4)

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

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); 207, Economic Geography (5); 210, Geography and World Affairs (2).

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

JOURNALISM 340, The Press and Society (3).

LIBERAL STUDIES 105, Behavioral Science (5).

LINGUISTICS 201, Introduction to Linguistic Science (5).

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); 270, Introduction to International Politics (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); 318, Psychology and Culture (3).

SOCIOLOGY 202, Introduction to Sociology (5); 251, Sociology of Social Problems (5); 302, History of Social Thought (5).

NON-WESTERN AND MINORITY CULTURAL STUDIES

This area focuses upon a study of East Asia, South East Asia and India, the Middle East, Sub-Saharan Africa, Latin America, the Minority Experience in America, and Cross-Cultural Studies.

Select a minimum of 8 credits from the following:

ANTHROPOLOGY 353, Sex Roles in Culture (4) (Anthropology 353 and Psychology 219 may not both be taken for GUR credit); 361, Indians of North America (5); 362, Peoples of Asia (5); 363, Peoples of Africa (5); 364, Peoples of the Pacific (5).

ART HISTORY 270, Survey of Asian Art: India, China, Japan (5)

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)

ENGLISH 234, Introduction to Afro-American Literature (5); 335, Literature of the Third World (4); 338, Women and Literature (4).

ETHNIC STUDIES 201, The Afro-American Experience (3); 205, Introduction to Asian American Studies (3).

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); 271, Introduction to Latin American Civilization (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 in Africa (4); 370, Major Non-Western Traditions: The Traditional Order (4); 371, Major Non-Western Traditions: Their Modern Fate (4); 372, Individual and Society in Contemporary Non-Western Literature (4); 373, Ideology and Experience in the Contemporary Non-Western World: Conservatives, Reformers, Revolutionaries (4).

POLITICAL SCIENCE 346, Poverty, Minorities, and Government (5)

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

WOMEN STUDIES 111, Introduction to Women Studies (4)

MATHEMATICS

Students should check the mathematics requirement for their majors before selecting a mathematics or computer science course. Some majors require mathematics or computer science courses that will apply also to the General University Requirements. See "Academic Placement" in the Department of Mathematics section (College of Arts and Sciences).

Students with four years of high school college-preparatory mathematics may have the requirement waived.

To satisfy this requirement, successfully complete any one mathematics course numbered 103 or higher or any one computer science course except Computer Science 101,

or

Students with three years of high school college-preparatory mathematics may substitute Philosophy 102, Introduction to Logic (3),

or

Students with two years of high school college-preparatory mathematics may take Mathematics 102, Algebra (5), and *then* substitute Philosophy 102.

SCIENCE

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.

- A. One course from three of the four following areas (students with one year high school preparation at the level of grade 11 or 12 in Chemistry, Geology, Physics or *advanced* Biology may substitute this work for the 101 course in the corresponding area in up to a maximum of two areas):

BIOLOGY 101, Principles of General Biology (4); 121, Introduction to Plant and Animal Biology (5).

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); 131, Principles of Physics I (5); 132, Principles of Physics II (5); 133, Principles of Physics III (5); 241, 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 122, Introduction to Cellular Biology (3); 123, Introduction to Genetics (3); 202, Field Biology of the Northwest: Flowering Plants, Conifers and Ferns (3); 205, Field Biology of the Northwest: Marine Biology (3).

CHEMISTRY 122, General Chemistry II (5); 123, General Chemistry III (5); 251, Elementary Organic Chemistry (5).

GEOGRAPHY 203, Physical Geography (5).

GEOLOGY 102, Continental Drift (4); 212, Historical Geology (4); 214, Environmental Geology (3).

HOME ECONOMICS 250, Human Nutrition (3).

HUXLEY 110, Environmental Studies: A Scientific Approach (3).

PHYSICS 242, Physics with Calculus II (5).

- II. Complete one of the following sequences:

BIOLOGY 121, 122, 123.

CHEMISTRY 121, 122, 123.

GEOLOGY 211, 212 and one of 310, 316, or 351.

PHYSICS 131, 132, 133 or 241, 242, 341 and 351.

PROCEDURES FOR APPLYING FOR BACHELOR'S DEGREE AND/OR PROVISIONAL 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 third week of the final quarter, and it is strongly recommended that the student appear for the evaluation and application at least two quarters in advance of completion. Complete instructions are available in the Registrar's Office.

Commencement activities are held in the spring and summer. All students who have graduated the fall and winter quarters immediately preceding and those who have applied for graduation for spring quarter are invited to participate in the spring commencement. All candidates for summer graduation will be invited to the ceremony in August. An informal mailing is forwarded to all eligible students.

All-University Programs

Western Washington University is organized into five colleges, a School of Education 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 schools:

- Center for Continuing Education
- University Conference Center
- Field Experience
- Foreign Study
- Honors Program
- Professional Transfer Programs

Academic opportunities available through Western's All-University Programs are described briefly as follows.

CENTER FOR CONTINUING EDUCATION

The Center for Continuing Education extends Western's resources and services to the state of Washington. The Center offers credit and non-credit courses and degree programs during the evenings and weekends, on and off campus.

Special workshops, conferences, seminars and institutes are designed to meet the needs of communities, business and industrial organizations, and public, private and government agencies.

The Independent Study office affords an opportunity for study by correspondence as well as special project contract study.

Adults participate in the learning opportunities to upgrade their occupational skills, to acquire new skills, and to pursue a variety of special interests.

For further information or to receive the quarterly listing of courses, contact the Center for Continuing Education (206) 676-3320.

UNIVERSITY CONFERENCE CENTER

The University Conference Center provides complete convention, workshop and conference services for University academic and administrative departments, as well as for professional associations and community groups with University sponsorship. The Center coordinates all facilities, housing and food arrangements, and can assist with programming, brochure development, financial record keeping and registration. Continuing Education Units (CEUs) or University credit may be available for short courses through the Center for Continuing Education. Guest lecturers and special events provide student access to additional expertise and current trends in many disciplines. Additional information may be obtained by telephone, (206) 676-3323, or by writing to the University Conference Center, Western Washington University, Old Main 400, Bellingham, Washington 98225.

FIELD EXPERIENCE PROGRAMS

Western Washington University recognizes the value of work experience outside the classroom as a supplement to the student's general education and major area studies. Thus the University offers opportunities for field experiences, including practica, internships and cooperative education in a variety of community businesses, organizations and governmental agencies. Students who wish to apply their theoretical classroom learning to on-the-job situations can spend several quarters (maximum of 15 credits) in one of these positions. Credit will be awarded upon a satisfactory employer/faculty evaluation and ful-

fillment of contractual agreements. These work experience situations are arranged beforehand to accomplish specific goals agreed upon by the student, sponsoring faculty member and employer. Students should contact the Career Planning and Placement Center for additional information.

FOREIGN STUDY

WWU offers a wide variety of study abroad opportunities. The most popular are quarter and year-round liberal arts programs in England, France, Germany, 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. The Foreign Study office co-sponsors semester and academic year programs at universities in France, Spain, Japan and the People's Republic of China, which feature intensive language study, international business, civilization and culture. Through its membership in ISEP, WWU can provide year-long exchanges with 60 universities in 23 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 Foreign Study Office, Old Main 400, 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 Foreign Study Office and Continuing Education. WWU offers a minor in foreign studies consisting of courses taken abroad, cross cultural study, and related academic work in a variety of disciplines. Contact the Foreign Study Office, Old Main 400, (206) 676-3298, for further information on study, travel and work abroad.

THE HONORS PROGRAM

Western's undergraduate Honors Program provides a challenging opportunity for students of high academic attainment to realize their potential more fully. Freshmen and transfer students are invited into the Honors Program on the bases of entrance exams, high school grade averages, recommendations and interviews. Students already enrolled at Western enter the program on the

above bases and on the recommendation of a University instructor.

In addition to pursuing a normal course of study, students in the Honors Program are eligible for special honor courses and seminars in a wide variety of subjects, and also have the opportunity to undertake extended Honors independent study projects in their major fields.

Students interested in this program are invited to consult with the director of the Honors Program, Dr. Phillip Montague, for more details.

Admission to the Program

Students admitted to Western are considered for admission to the Honors Program by any one of the following ways:

1. Scholastic aptitude test scores in the top five per cent.
2. A grade point of 3.6 or above.
3. Faculty recommendation.

Quarterly Courses of Study

Honors courses are offered at the freshmen and sophomore levels, and satisfy both Honors and General University Requirements. They are typically offered in sequences of two or three courses in particular subject areas (e.g., English, history, the social sciences) or combinations of subject areas.

Honors seminars are offered at the upper-division level, and may satisfy two kinds of requirements for those who complete the program: coursework needed to graduate with University Honors; and coursework all students need to complete the General University Requirements.

Requirements for Graduation with Honors

The requirements for graduation through the Honors Program vary according to the point at which the student enters the program. Students entering as freshmen or sophomores must take one sequence of two (or perhaps three) Honors courses plus one Honors seminar; students who enter the program as juniors are not required to take any Honors courses, but must take at least 12 credits in Honors seminars. In addition, all Honors students must complete a senior project, maintain a cumulative 3.5 grade point average for their last 90 graded credits of college-level work, and must satisfy any honors requirements stipulated by their major departments.

Honors Courses (Non-departmental)

Specific descriptions of current offerings are available in the Honors Office.

150 - 159

FIRST YEAR HONORS

250 - 259

SECOND YEAR HONORS

300

INDEPENDENT STUDY

(variable credit)

350 - 359

SEMINAR (2-4 ea)

400

INDEPENDENT STUDY

(variable credit)

450 - 459

SEMINAR (2-4 ea)

490

THESIS (2 credits per quarter up to a maximum of 6) S/U grading

PROFESSIONAL TRANSFER PROGRAMS

The following suggestions will assist students planning to complete a professional program at another institution. Students should seek advice from a pre-professional adviser as soon as possible. Completion of the suggested courses does not guarantee admission to a professional degree program. 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, and, as changes occur, the following program recommendations may become outdated. The student, therefore, must bear responsibility for continued contact with the transfer institution and the on-campus adviser.

Architecture

Western offers two years of undergraduate study which may be transferred to the University of Washington as the liberal arts component of a baccalaureate degree program in architecture. Pre-majors are required to complete a balanced distribution of courses during the first two years based on recommendations found in the University of Washington General Catalog.

Washington State University offers baccalaureate level architectural studies. Pre-major requirements include completion of the General University Requirements and specifically recommended courses listed in the Washington State University Bulletin.

Program Adviser: Dr. Fred A. Olsen, Department of Technology

Dental Hygiene

Associate and baccalaureate programs in dental hygiene are available in several Washington institutions of higher education. Graduates of two- or three-year certificate or associate degree programs are generally limited to dental office practice and some public health positions. Hygienists with baccalaureate degrees may work in private practice, and with office experience are eligible for beginning dental hygiene teaching or administrative public health positions.

A list of dental hygiene programs in the State of Washington and prerequisite courses for admission to these programs is available from the program adviser.

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

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:

- Biology 121, 122, 123, 312, 469
- Chemistry 121, 122, 351, 352
- Physics 131, 132, 133 (or 241, 242, 341)
- 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.

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

Engineering

Western provides two curricular paths to a career in engineering. The Two-Plus-Two program requires two years of study at Western followed by two years of study in electrical, mechanical, civil, chemical and aeronautical engineering at an engineering college.

The second path is a dual degree program, the Three-Two program, that requires three years at Western Washington University followed by two years of study at the College of Engineering at the University of Washington. At the conclusion of this five-year program students will receive

two degrees: the Bachelor of Arts from Western and the Bachelor of Science in Engineering from the University of Washington.

The primary purpose of both pre-engineering programs is to provide a strong fundamental education in mathematics, physical science, computer science and liberal arts to develop skills necessary for success at an engineering college. In addition to courses in science and mathematics, engineering schools and colleges also require additional courses distributed in social sciences and humanities, which can be selected from Western's offerings, to meet the requirements of the specific engineering school to which the student intends to transfer. Note that some engineering schools specify a minimum number of credits completed and a minimum grade point average for admission to a given engineering program.

Two-Plus-Two Program

While at Western students may complete two years of courses in physics, mathematics, chemistry, computer science and English. The choice of courses should be tailored to meet the requirements of the engineering school to which the student plans to transfer. Transfer generally occurs after two years of study.

Three-Two Dual Degree Program

Western cooperates with the College of Engineering of the University of Washington in a program of engineering education based upon a broad foundation of liberal arts. The program consists of three years at Western Washington University followed by two years in the College of Engineering at the University of Washington.

While at Western students may complete the pre-engineering courses listed below and take General University Requirements in communications, humanities, social sciences, non-western and minority cultural studies, math, and science for the Bachelor of Arts degree. Upon successful completion of the program the student will receive the Bachelor of Arts from Western Washington University and the Bachelor of Science in Engineering from the University of Washington. This two-degree program provides an excellent liberal arts, mathematics and science background prior to specialization in engineering. The combined program is competitive and designed specifically for students who have strong preparation in communication skills, mathematics and science.

Although the curriculum offers considerable freedom of choice, it does *not* guarantee admission to the College of Engineering at the University of Washington. If, at the end of two years, students find their interest developing in a field outside science or technology, they can readily change to several non-science majors and graduate in two additional years. Similar options exist through the junior year for programs in science and technology. This flexibility is particularly advantageous to capable students whose abilities and interests span many fields.

Introductory core courses

- Chemistry 121, 122
- English 101, 301 or 302 or 401
- Mathematics 124, 125, 126, 205, 331
- Physics 241, 242, 271, 272, 341 and 351 (the entire sequence 241, 242, 341 should be completed to minimize transfer problems)



Wilson Library reading room

All University Programs

Computer Science 210

Chemical engineers should complete Chemistry 123, 351, 352, 353, 354, 355 in lieu of Physics 271, 272.

Check with your pre-engineering adviser for additional courses.

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

Program Advisers: Dr. Leslie E. Spanel and Dr. L. Barrett (Physics/Astronomy), Dr. R. Levin (Mathematics), Dr. H. William Wilson (Chemistry)

Fisheries

The College of Fisheries at the University of Washington provides two baccalaureate programs in fishery biology. Students may complete the first two of the four-year program at Western, concentrating on courses in the sciences and fulfillment of the UW distribution and proficiency requirements. Students may also complete a four-year degree program at Western in preparation for graduate work in fisheries at the University of Washington. Close consultation with the program adviser is essential.

Recommended freshman year curriculum:

- Biology 121, 122, 123
- Chemistry 121, 122, 123
- English 101, 301 or 302
- Mathematics 105 or higher
- General University Requirements

Program Adviser: Dr. G. F. Kraft, Department of Biology

Forestry

Washington State University offers degrees in forest management and range management. The University of Washington offers degrees in forest management, forest engineering, outdoor recreation, pulp and paper technology, wood and fiber science, forest science and wildlife sciences. Because of the differences in the various forestry curricula, students are urged to attend the pre-forestry advisement session prior to fall quarter registration or to consult with the program adviser as soon as possible. For some curricula, specific courses should be included among the electives.

Program Adviser: Dr. Hubertus E. Kohn, Department of Biology

Law

Most law schools require completion of a baccalaureate degree before the student begins professional legal education. They normally do not specify preferred undergraduate majors, but do seek students who are broadly educated. Law schools want students who have proficiency in

oral and written communications, an understanding of economic, political and social institutions, and 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.

Program Advisers: Dr. John Moore, Department of Finance, Marketing and Decision Sciences (College of Business and Economics)

Medical Technology

At the University of Washington, the four-year medical technology program leads to a Bachelor of Science degree in medical technology. Students at Western may complete 90 quarter credits of study, concentrating on courses which parallel the University of Washington's medical technology program, prerequisites and distribution requirements. It is important to consult with the program adviser early in the first year of the transfer program.

Washington State University also offers a baccalaureate program in medical technology. Students planning to transfer to WSU may complete two years at Western, including courses which parallel WSU's general university requirements in addition to those courses recommended by the program adviser.

Recommended freshman year curriculum:

- Biology 121, 122, 123
- Chemistry 121, 122, 123
- English 101, 301 or 302
- Mathematics 105 or higher
- General University Requirements

Program Adviser: Dr. G. F. Kraft, Department of Biology

Medicine

The faculty of the School of Medicine at the University of Washington believes 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 any

field sufficiently demanding of scholastic discipline. No particular major is given preferential attention in selection. The major should be considered as the basis for a future career or for graduate study in the event the student is not admitted to a medical school.

In recognition of the diverse opportunities afforded the graduate in medicine, specified requirements are purposely kept to a minimum. This enables each student to pursue, as a major field of study, any area of special interest — the physical sciences, biological sciences, or humanities — and still acquire the intellectual skills necessary to the regular medical curriculum. It should be noted that well over half of those admitted to the University of Washington medical school in the past several years have been biology majors.

Admission to a medical program is highly competitive. Early consultation with the program adviser is strongly recommended. Students must contact the program adviser for discussion of graduation requirements, selection of an academic major, course sequences, AMCAS applications, scheduling of the MCAT, and other pertinent information. Students must contact the pre-professional advisement office (Old Main 270) during the first quarter of their premedical program.

Typical freshman year curriculum:

- Biology 121, 122, 123
- Chemistry 121, 122, 123
- English 101, 301 or 302
- Mathematics 105 or higher
- General University Requirements

Pre-med students choosing majors other than biology or chemistry should also seek advising in their major department.

Information regarding chiropractic and naturopathic education is also available from the program adviser.

Program Adviser: Contact Dr. G. F. Kraft, chief premedical adviser, Department of Biology, for a referral to the appropriate program adviser.

Nursing

See the Department of Nursing section of this catalog.

Occupational Therapy

Admission to a school of occupational therapy is highly selective. Students wishing to earn a Bachelor of Science degree in occupational therapy may complete their prerequisite courses at Western. The Western curriculum includes courses which will prepare students for transfer into the occupational therapy programs at the University of Washington and the University of Puget Sound. Since graduation requirements vary among institutions, students should obtain

specific information concerning the programs prior to their first term of enrollment.

Required courses for transfer into occupational therapy programs:

- Biology 101, 348, 349
- Chemistry 101
- Physics 131
- Psychology 201, 314, 316
- Sociology 202

Additional courses recommended or required (determined by the individual occupational therapy school):

- Sociology 324, 333, 351
- Speech 204
- Educational Curriculum and Instruction 361, 465

Program Adviser: Dr. Evelyn E. Ames, Department of Physical Education

Optometry

Schools of optometry generally offer baccalaureate, master's and doctoral degree programs. Western is able to provide one year of liberal arts studies as a background for more specialized training in optometry. Students are advised to transfer after their first year. Early consultation with the program adviser is recommended.

Recommended freshman year curriculum:

- Biology 101
- Chemistry 121, 122, 123
- English 101, 301 or 302
- Mathematics 124, 125, 126
- Physics 131, 132, 133, or 241, 242
- General University Requirements

Program Adviser: Dr. J. J. Veit, Department of Physics

Pharmacy

The five-year program at Washington State University and the University of Washington leads to a Bachelor of Science degree in pharmacy. Western provides a two-year series of courses which prepare students for admission to the College of Pharmacy at either WSU or UW. Detailed information is available from each. Admission is highly selective, and students are encouraged to contact the school of their choice early in the first year and to consult with the program adviser at Western prior to registration.

Recommended freshman year curriculum:

- Biology 122, 123, 311, 312, 345
- Chemistry 121, 122, 123, 351, 352, 353, 354, 355
- English 101, 301
- Mathematics 155, 156
- General University Requirements from the Humanities and/or Social Sciences (psychology, sociology, anthropology, economics) to total ten quarter credits

All University Programs

The University of Washington School of Pharmacy recommends elective coursework in interpersonal communications (Speech 207), computer sciences (CS 117), business (Accounting 241), typing, nutrition and first aid.

Students who have not completed one year of high school physics will be required to complete two quarters of physics (Physics 131, 132).

Program Adviser: Dr. Lowell Eddy, Department of Chemistry

Physical Therapy

Admission to a school of physical therapy is highly selective. Depending upon the institution, students are admitted to the professional program at the sophomore, junior, senior or post-baccalaureate level. Students who elect to complete a baccalaureate degree prior to transfer should give serious consideration to the Bachelor of Science degree in Community Health or Bachelor of Arts degree in Physical Education (see the Department of Physical Education, Health and Recreation).

Western's curriculum includes courses which will prepare students for transfer into the physical therapy programs at the University of Washington and the University of Puget Sound.

Required courses for transfer into physical therapy programs:

- Biology 345, 348, 349
- Chemistry 115 (or 121, 122), 251
- Physics 131, 132, 133
- Psychology 201 plus an additional course

Additional courses which are recommended:

- Physical Education 301, 302, 485
- Mathematics 240

Program Advisers: Dr. Evelyn Ames (General Physical Therapy and Community Health); Dr. Kathleen Knutzen (Physical Education)

Social Work

Students preparing for admission to a professional school of social work and students interested in securing social work positions that do not require professional education may satisfy their interests by completing the Bachelor of Arts degree in Sociology, including the following elective courses in the major:

- Sociology 251 and 261
- Sociology 372, 373, 375, 473, 477
- Sociology 311 (in lieu of 310)
- Sociology 333, 340, 341, 351, 360, 380

Other courses strongly recommended include Sociology 353, 354, 367 and 369. For further recommendations of specific courses in sociology or cognate areas which may strengthen the student's preparation, consult with the program adviser.

Program Adviser: Dr. Charles Gossman, Department of Sociology

Theology

Students who are considering enrollment in a theological seminary or in other special training for religious work should seek advisement early in their academic careers. They should determine as soon as possible which graduate institution they wish to enter and what is required for admission. Broad study in the liberal arts (literature, history, philosophy, language) is generally regarded as appropriate undergraduate preparation for seminary work, but expectations of particular institutions vary. In some cases the minor in the Study of Religion, offered through the Department of Liberal Studies, may form an appropriate part of an undergraduate pre-theology program.

Program Advisers: Dr. Joseph Bettis and Dr. William Stoeber. Contact the Department of Liberal Studies

Veterinary Medicine

The College of Veterinary Medicine at Washington State University requires at least seven years of study leading to completion of the Doctor of Veterinary Medicine degree. Western can provide a student with either four years of pre-veterinary training through a degree in Biology or a three-year transfer program. It is not absolutely necessary to complete a baccalaureate degree; however, it is advisable to aim toward a degree in the event that a student is not admitted to a veterinary school. Admission is extremely competitive and students are strongly encouraged to consult early with the program adviser and to review the admissions requirements in the WSU catalog.

Academic requirements for WSU's professional program leading to a Bachelor of Science in Veterinary Science include 68 quarter hours in the physical and biological sciences and 45 quarter hours in electives and general university requirements. (113 total quarter hours required.)

Recommended freshman year curriculum:

- Biology 121, 122, 123
- Chemistry 121, 122, 123
- English 101, 301 or 302
- Mathematics 105
- Physics 131, 132, 133

Other Western courses which are required for admission include Chemistry 351, 352, 354, 355, and 371. Applied animal nutrition is also required. The WSU correspondence course AS 307X (or equivalent) will currently satisfy this requirement.

Program Adviser: Dr. Herb Brown, Department of Biology

The Graduate School

Dr. Sam P. Kelly, Dean

Old Main 430 Phone: (206) 676-3170

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

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

More than two dozen programs — from Anthropology to Theatre/Dance — offer graduate study leading to one of the above degrees.

In 1978, WWU's graduate programs were given continuing accreditation 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.

The purpose of graduate study at WWU is to provide students with quality graduate offerings, accompanied by opportunities for research and professional development. Graduate programs are intended to prepare able students for career advancement and further study. The programs provide service to the state and its major divisions, to the business and commercial sector, and to a number of professions.

Several of WWU's graduate programs offer courses or program elements at locations outside Bellingham, 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 Catalog lists these special arrangements. At present, there is no out-of-state tuition for summer quarter enrollment.

Graduate Assistantships are available in limited number in nearly all graduate programs for the academic year — fall, winter and spring terms.

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. 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 Aid.

Persons who plan to enter graduate study at WWU should read the graduate section of this catalog closely before enrolling in any course intended to count toward a master's degree or advanced certificate of study (students working toward a fifth-year teaching certificate should contact the Fifth Year Office in the School 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.

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 is charged for each set of admission materials submitted by applicants, whether initial application or request to transfer into a different WWU graduate program.

General Requirements

— Full Admission

- A baccalaureate degree from an accredited U.S. college or university, or an equivalent

Graduate School

degree from a foreign university. The degree must be appropriate to the master's study intended.

- A 3.00 undergraduate grade point average (on a 4.00 scale). (See later section on provisional admission for certain exceptions.)
- Three 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.)

GRE test scores: see program descriptions for exact requirements. These scores should be received by the Graduate School along with other application materials; under certain circumstances they can be provided not later than the end of the student's first quarter of graduate study. MBA applicants must provide the GMAT score at the time of application (but not the GRE).

- Favorable review and recommendation of applications by the graduate faculty in the program to which application is made.

NOTE: The above requirements and procedures 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.

Special Requirements

Certain programs have additional requirements or procedures; see the program descriptions. Most M.Ed. programs require at least a year's successful K-12 teaching; see the M.Ed. program requirements. Students who are not native speakers of English must demonstrate competence in written and spoken English. This can be done by a satisfactory score on the TOEFL examination or by other means of validation. (Write the Graduate Office for details.)

Foreign 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 at minimum \$8-10,000 (may be higher pending an increase in tuition). Complete application materials should be received from foreign students at least three months before the term in which graduate study is expected to begin.

Provisional Admission

At times, students who do not meet all the requirements for full admission can be granted provisional admission; for example, marginal grade point average, certain undergraduate course deficiencies. For provisional admission to be granted, there must be strong reasons for

waiving general admission requirements. And there must be a statement of support for provisional admission from the faculty of the applicant's intended graduate program. 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.

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 coursework 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.

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 later discussion of "Plan of Study.")

RESIDENCE

To earn a master's degree at WWU (except for one option under the MBA), the student must complete at least one quarter of residence on campus during which at least 10 credits are earned. WWU does not offer an off-campus or external master's degree.

TIME LIMITS

Course work taken more than five years before the awarding of the degree does not count toward the degree. All program requirements, including the thesis or comprehensive examinations, must be completed within this seven-year limitation.

ACADEMIC LOAD

For graduate students the maximum academic load is 16 credits during a single term. The typical load is considerably less. Students working full time are restricted to a maximum of 8 credits during any single term. Graduate Assistants are limited to a maximum of 14 credits in any single term.

A full-time graduate assistantship requires 20 hours of service per week to the department or program and can limit the number of credits the assistant can take in one academic quarter. A full-time assistantship does not allow for additional salary or employment from the University.

TRANSFER, EXTENSION, CORRESPONDENCE, WORKSHOPS

Transfer credit is limited to 9 quarter hours. Such credits must meet the requirements of the student's particular program and be approved by the program adviser and the Graduate School (special form available). The courses can be taken before or after enrollment at WWU.

Only certain Continuing Education (extension) courses taken through WWU can be applied toward a master's degree. Such courses must meet the requirements that apply to courses offered on campus by regular WWU faculty. The student's graduate adviser must approve such courses before the student enrolls in them, to prevent later misunderstanding about including the courses in the degree program.

Graduate credit is not allowed for correspondence courses.

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 or a comprehensive examination; some programs require both. (Check the program descriptions that appear later in this catalog.) The Graduate Office certifies thesis committees upon request of the particular graduate program or program adviser. Guidelines for writing the thesis are available from the Graduate Office. Departments that require the thesis customarily have information sheets available.

Comprehensive examinations vary among programs. The Graduate Office and the programs have information available about these examinations.

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.

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" 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.

To remain a candidate for the degree, a student must maintain at least a 3.00 GPA in the core program (45 or 48 credit hours).

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 Office 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 or thesis chairperson. 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 who was not enrolled for at least one course in

Graduate School

the quarter preceding the quarter in which the degree is earned must enroll for at least three

credits during the final quarter. Commencement is held each June and August.

Summary of Procedures for the Master's Degree

<i>Procedure</i>	<i>Responsibility of</i>	<i>Where Initiated</i>	<i>When</i>
Application Materials	Student	Graduate Office	At least one month before term begins; preferably earlier.
Registration	Student, Adviser, Graduate Office	Graduate Office	See the calendar in the front of this catalog.
Plan of Study	Student, Adviser, Graduate Office	Department	See preceding discussion of "Plan of Study."
Advancement to Candidacy	Adviser, Student	Department, then Graduate Office	See preceding discussion of "Degree Candidacy."
Thesis Committee	Student, Adviser, Department, Graduate Dean	Department	When thesis is required and following advancement to candidacy.
Submission of Thesis	Student	Department, then Graduate Office	At least four weeks before graduation. Obtain instructions from Graduate Office.
Comprehensive Exams	Student	Department, Graduate Office	Apply at beginning of quarter in which comps will be taken.
Application for Degree	Student	Graduate Office	See preceding discussion of "Awarding of the Master's Degree."

CREDENTIALS AND CERTIFICATES

The School of Education offers a fifth year of study (post-baccalaureate) for teachers who are working for the continuing certificate (details available from the Department of Educational Curriculum and Instruction) and an advanced certificate for school administrators (details available from the Department of Educational Administration and Foundations).

Certain other certificates of advanced study are available from departments or programs other than Education. Later sections of this catalog describe these certificates.

UNDERGRADUATE ENROLLMENT IN 500-LEVEL COURSES

Undergraduates at WWU who are in their senior year and have at least a 3.00 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 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 under certain conditions count one such graduate course toward a master's program.

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.

Anthropology

College of Arts and Sciences

GRADUATE FACULTY

Grabert, G. F., PhD, new and old world archaeology, theory.
 Hammond, Joyce, PhD, sex roles, ethnic arts, symbol systems, social and cultural change; Oceania, Polynesian populations in North America.
 Kimball, Linda A., PhD, Southeast and Island Asia, anthropological linguistics, Pacific.
 Stevenson, Joan, PhD, anthropological genetics, human osteology, medical anthropology.
 Taylor, Herbert C., Jr., PhD, new world ethno-history, pre-history meso-America and the American Southwest, social change.

M.A. — ANTHROPOLOGY, THESIS ONLY

Program Adviser: Dr. Garland Grabert

Prerequisites

Undergraduate major in anthropology or equivalent in social sciences, or departmental permission; candidates with insufficient backgrounds in anthropological history, theory and methods will be expected to take undergraduate courses as deemed necessary by the departmental graduate committee.

Basic Requirements

Anth 503	[1:5]
Anth 504	[1:5]
Anth 532	[1:3]

At least one upper-division or graduate course in each of the four major fields of anthropology

Anth 691	[1:12-20]
	[1:3-6]

NOTE: Not more than 12 credits allowable in any combination of Anth 690 and 691.

Specific Test Requirements

Graduate Record Examination, General (Aptitude) Test.

Electives in Specialization

Courses selected under advisement from 400- or 500-level courses in anthropology; at least 35 credits from courses open only to graduate students.

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. [1:0-15]

Language Requirement

A reading or speaking knowledge in an appropriate foreign language. Foreign students for whom English is not the native tongue may be exempted. Subject to the approval of the department and the Graduate School, the candidate may substitute one of the following:

1. Computer science options.
2. A series of courses in linguistics to be determined in consultation with the graduate committee.
3. Statistics option.

Advancement to candidacy is granted upon successful completion of:

- (a) Anth 503
- (b) Anth 504
- (c) Anth 532
- (d) One course in each of the subfields of anthropology, which in the area of physical anthropology shall be chosen from either anthropology 417 (Primate Behavior), 420, 423, or 511 or their equivalents.
- (e) The language requirement.
- (f) The Graduate Record Examination, General (Aptitude) Test
- (g) 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

GRADUATE FACULTY

Lawrence Hanson
 R. Allen Jensen
 Thomas Johnston
 David Marsh
 Patrick McCormick
 Mary McIntyre
 Thomas Schlotterback
 David Templeton
 Robert Urso
 Gene Vike
 Homer Weiner

Prerequisites

An undergraduate major or a balanced program of at least 45 hours in art.

Graduate School

The Applicant is Requested to Submit:

- a. 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.
- b. A selected portfolio of art works (and/or color transparencies and color photos of his works). 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, he or she should be sure the size will be within the limits prescribed by the postal department.

Basic Requirements

EdAF 501, 512, 513	{I and II}
Art 690a Thesis	{I:5}
Art 690b Field Project	{I:6}

Specific Test Requirements

Graduate Record Examination — General (Aptitude) Test

Requirements in Specialization

Art 582, three graduate-level studio courses, each in a different medium. {I and II:16}

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.

Biology

College of Arts and Sciences

GRADUATE FACULTY

Brakke, David F., PhD, limnology
Broad, A. Carter, PhD, invertebrate zoology.
Brown, Herbert A., PhD, vertebrate zoology
Dubs, Maurice A., PhD, marine algae.
Erickson, John E., PhD, genetics.
Flora, Charles J., EdD, marine invertebrate zoology.
Fonda, Richard W., PhD, plant ecology.
Kendall, Ronald J., PhD, environmental toxicology
Kohn, Hubertus, PhD, plant physiology.
Kraft, Gerald F., PhD, aquatic entomology.
Mason, David T., PhD, limnology.
Nickelson, Alden L., PhD, science education.
Parakh, Jal S., PhD, science education.
Riffey, Meribeth M., PhD, ornithology.
Ross, June R. P., PhD, DSc, evolution and ecology of marine organisms.
Schneider, David E., PhD, physiological marine ecology.
Schwemmin, Donald J., PhD, micro-biology.
Senger, Clyde M., PhD, mammalogy.
Slesnick, Irwin L., PhD, science education.
Summers, William C., PhD, marine ecology
Taylor, Ronald J., PhD, systematic botany.
Webber, Herbert H., PhD, applied marine invertebrate ecology
Williams, Don C., PhD, cellular and molecular biology.
Yu, Ming-Ho, PhD, environmental biochemistry

APPLICATIONS

Applications for summer or fall quarter will be acted upon during the first week of the spring

quarter by the Biology Department. It would be advisable to have applications in the Graduate Office by March 15. Students applying after the first week of spring quarter may jeopardize their chances of an opening. Applications made during summer usually do not allow sufficient review time to meet fall admission deadlines.

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:

1. A reading knowledge of an appropriate foreign language.
2. Passing Biol 340 with a grade of "A" or "B" and Computer Science 110 or 210 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.Ed. — NATURAL SCIENCE

Biology Specialization, Thesis and Non-Thesis

Program Adviser: Dr. Richard W. Fonda

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 Science 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" section.

M.S. — BIOLOGY, THESIS ONLY

Program Adviser: Dr. Richard W. Fonda

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 (Aptitude) and Subject (Advanced) in Biology

Requirements in Specialization

Thesis research [I:12]

Graduate courses in biology, selected under advisement and approved by Advisory Committee [I:11]

Electives

Courses selected under advisement and approved by Advisory Committee from 500-level courses in biology and supporting disciplines. At least 12 hours must come from 500-level courses; the remaining hours must come from 400- and 500-level courses. [I:22]

Cooperative Environmental Biology Offering

The Department of Biology and Huxley College of Environmental Studies administer a cooperative graduate program offering in environmental biology leading to an M.S. degree in biology. This option focuses on the understanding and potential solution of environmental problems.

**Business & Economics**

College of Business and Economics

GRADUATE FACULTY

Benson, Earl D., PhD, finance.
 Brown, Bruce E., MA/CPA, managerial accounting.
 Harder, K. Peter, PhD, international trade.
 Jurinski, James J., JD/CPA, business law, taxation.
 Keleman, Kenneth S., PhD, behavioral science.
 Lewis, L. Floyd, PhD, management information systems.
 Lockhart, Julie A., MS/CPA, managerial accounting.
 Mayer, Erwin S., PhD, labor economics, public policy.
 Meier, Robert C., PhD, decision sciences.
 Merrifield, David E., PhD, microeconomics, managerial economics.
 Mischaikow, Michael K., PhD, regional economics, comparative systems.
 Moore, John, PhD, business policy.
 Murphy, Dennis R., PhD, managerial economics/international finance.
 Nelson, David M., PhD, macro-economic theory, money markets.
 Owens, Eugene, PhD, behavioral science.
 Park, Tongkyu, PhD, production management.
 Peterson, Lois, EdD, business education.
 Plumlee, E. Leroy, DBA, business environment.
 Rieck, Robin, PhD, business, government and society.
 Rude, John A., ABD/CPA, financial accounting.
 Rystrom, David S., PhD, finance.
 Safavi, Farokh, DBA, marketing/international business.
 Sailors, William, MS/CPA, auditing theory.
 Savey, Ronald, MBA/CPA, financial accounting, accounting theory.
 Singleton, Ron, PhD/CPA, taxation.
 Sleeman, Allan G., PhD, quantitative methods.
 Thoreson, Hubert N., EdD, business education.
 Wonder, Bruce D., PhD, personnel administration.

MASTER OF BUSINESS ADMINISTRATION, NON-THESIS

Program Director: Dr. Earl D. Benson

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.

Graduate School

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.

M.Ed. — BUSINESS EDUCATION, THESIS AND NON-THESIS

Graduate Faculty

Peterson, Lois, EdD, business education.
Thoreson, Hubert N., EdD, business education.

Program Adviser: Dr. Hubert N. Thoreson

Two Master of Education degree options are available to business education majors. Option I (thesis option) requires a minimum of 45 credit hours of course work and a thesis. A comprehensive examination may be required. Option II (non-thesis option) requires a minimum of 48 credit hours of course work and successful completion of comprehensive examinations in the areas of business education and education.

Prerequisites

Completion of the undergraduate major or its equivalent. Any deficiencies will be determined by the program adviser.

Basic Requirements

EdAF 501, 512, 513 [I and II:12]

Specific Test Requirements

Graduate Record Examination — General (Aptitude) and Subject (Advanced) in Education.

Requirements in Specialization

*Bus Ed 503, 504, 571, 572,
574, 595 [I and II:15]
Bus Ed 690 [I:6]

Electives in Specialization

Bus Ed 500, 551, 573
Selected under departmental advisement

Electives in Related Areas

Selected under departmental advisement

Chemistry

College of Arts and Sciences

GRADUATE FACULTY

Briggs, W. Scott, PhD, organic chemistry.
Crook, Joseph R., PhD, inorganic chemistry.
Eddy, Lowell P., PhD, inorganic chemistry.
Gerhold, George A., PhD, physical chemistry.
King, Donald M., PhD, analytical chemistry.
Kriz, George S., PhD, organic chemistry.
Lampman, Gary M., PhD, organic chemistry.
Miller, John A., PhD, science education/organic chemistry.

*Select a minimum of five courses

Neuzil, Edward F., PhD, physical chemistry/nuclear chemistry.
Pavia, Donald L., PhD, organic chemistry.
Prody, Geraldine A., PhD, biochemistry.
Russo, Salvatore F., PhD, biochemistry.
Weyh, John A., PhD, analytical chemistry.
Whitmer, John C., PhD, physical chemistry.
Wicholas, Mark, PhD, inorganic chemistry.
Wilson, H. William, PhD, physical chemistry.

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

Program Adviser: Dr. Joseph R. Crook

Prerequisites

A bachelor's degree and departmental approval. Deficiencies revealed by area competency examinations must be removed.

Specific Test Requirements

Graduate Record Examination, General (Aptitude) and Subject (Advanced) in Chemistry.

Requirements in Specialization

- Thesis option: Chem 595 (2 credits), 690 (12 credits).
- Non-thesis option: Chem 595 (2 credits), 694 (6-12 credits), 501 (6 credits).
- Courses selected under advisement and approved by the Chemistry Graduate Committee from chemistry and supporting disciplines, when appropriate, to total at least 31 credits (thesis option) or 34 credits (non-thesis option).

Electives in Related Areas

Selected under advisement from related fields.

Community College Internship Option for Master of Science Chemistry Students

Students interested in pursuing a career as an educator in a community college can obtain practical experience and training in their desired vocation 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. Two years should be allotted for the completion of degree including intern option.

A student will normally spend one quarter as an intern (in residence) in a selected community college. This will usually occur in the second year of study. It is the purpose of the internship to provide not only an experience in instruction but also an exposure to the community college philosophy.

In addition to the credit requirements for the M.S. degree the following courses are required or recommended:

- 1) Chem 696 (9-12) Internship in Chemistry in the Community College (required)

- 2) Psych 371 (3) Evaluation in the Secondary School (required)
- 3) Sci Ed 500 (2-5) Special Projects in Science (recommended)

Candidates for the M.S. degree plus intern option should notify the Internship Program adviser as early as possible during the first year of graduate study.

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 program as part of their M.S. curriculum. Normally, students choosing this option will 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.

A student will normally 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 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 describing the work will also be expected. 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.

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 "Natural Science" section.

Communication

See Speech and Broadcast.

Computer Science

College of Arts and Sciences

MS. — COMPUTER SCIENCE, THESIS AND NON-THESIS

The Department of Computer Science expects to begin an M.S. program in computer science during the 1985-86 academic year (after the publication date of this catalog).

Students entering the program should have an undergraduate degree in computer science or a closely related field. In particular, the entering student should have completed the equivalent of Math 124, 125, 126, 205, 241, CS 210, 310, 331 and 332. 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. In such cases, a maximum of 10 credit hours of 400-level undergraduate work may be applied toward the M.S. degree.

Specific Test Requirements

Graduate Record Examination, General (Aptitude) Test.

Thesis option: A minimum of 45 credit hours of approved coursework, at least 35 credits of which must be at the 500 level or higher. Coursework will meet certain distribution requirements: at minimum these are two courses in computer languages, two courses in operating systems and architectures, one course in theoretical computer science, one course in database/file structures. A thesis is required.

Non-thesis option: A minimum of 48 credit hours of coursework, at least 38 of which must be at the 500 level or higher. Coursework will include at least the following (minimum) distribution: two courses in computer languages, two courses in operating systems and architectures, one course in theoretical computer science, one course in database/file structures. The student will complete a project in conjunction with a faculty adviser. The student also will present a one-hour colloquium on the results of the project.

Advisers and students will tailor each M.S. pro-

Graduate School

gram according to general requirements and individual student backgrounds 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 Computer Science Department. Admission to the M.S. is through the WWU Graduate School.

Education

School of Education

Courses in the School of Education's graduate program 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 program from which each originates.

Curriculum and Instruction courses are designated EdCI.

Administration and Foundations courses are designated EdAF.

Please note: Due to a review and revision process which may affect School of Education programs and courses, the information contained in the Education section of this 1985-87 General Catalog is subject to change.

THESIS AND NON-THESIS, ALL PROGRAMS

All M.Ed. programs include three core courses: EdAF 501, 512, 513. EdAF 501 must be taken before either 512 or 513 and within the first 15 credits of the master's program. A grade of "B" or "A" must be earned in EdAF 501 for a student to continue in the master's program and be advanced to degree candidacy. Students receiving a "K" (incomplete) grade in EdAF 501 will not be allowed to proceed in the master's program until the incomplete is removed. If a grade of "C" or lower is earned, the course can be repeated once but only with the permission of the chairperson of the appropriate School of Education Department and upon the advice of departmental faculty. No further credits can be counted toward the M.Ed. until the course has been repeated and a "B" or "A" has been earned.

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).

Educational Administration & Foundations

Computer Competency

Students admitted to programs in the Department of Educational Administration and Foundations are required to possess minimum computer 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 206).

M.Ed. — ADULT EDUCATION ADMINISTRATION

Program Adviser: Dr. F. Richard Feringer

Program Goals

The adult education program is organized to prepare professionals for advanced levels of competency or to work in Human Services institutions which provide services both directly and indirectly to clientele. Such agencies would include, but not be limited to, continuing education departments of colleges and universities, YM/YWCAs, libraries, museums, churches and public and private service agencies which offer direct aid to clients, welfare, rehabilitation, half-way houses and the like. In addition, adult educators also work as inservice training directors in both private and public organizations.

Students have a choice of two areas of specialization, one as an administrator/planner and the other as a teacher/educator.

The curriculum is designed to examine theory within the context of field experiences. Program design allows for part-time study when students are working professionals. All students must complete a term of field internships. For working adults in human service agencies, however, their jobs may provide the field experience.

Eligibility

Applicants in the Adult Education Administration Program may be:

- Salaried employees of Human Services agencies as described above; or
- Persons who have, or can obtain, a volunteer or fellowship placement (paid by the agency) with institutions which fit the human service category and for which the specific work is relevant to the course of study; and
- A bachelor's degree.

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

Specific Test Requirements

Graduate Record Examination, General (Apti-

tude) [prior to completion of first quarter of graduate courses]; Miller Analogies Test [prior to admission decision].

Graduation Requirements

- 1) Thesis — 48 credit hours minimum of course work.
- 2) Non-Thesis — 52 credit hours minimum of course work.

Basic Requirements

EdAF 501, 512, 513, 518a, 578, 592h,j or 592k, 690a or b

Additional Requirements in Administration/Planning Specialization

EdAF 576, Soc 540

Additional Requirements in Teacher/Education Specialization

EdAF 577 (plus 5-10 credits in advanced work in content area of teaching)

Electives

Electives will depend upon the students' academic backgrounds, and their needs as related to professional goals.

Electives may be drawn from any relevant department.

M.Ed. — STUDENT PERSONNEL ADMINISTRATION IN HIGHER EDUCATION

Program Adviser: Dr. John F. Utendale

Program Goals

This program is designed to prepare professionals for the field of Student Personnel in Higher Education Administration. 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 could be applied to a broad array of human services functions.

The program requires an in-depth internship and a non-thesis research project. Considerable flexibility for program completion exists.

Prerequisites

A bachelor's degree and experience in student personnel or related human services work are required. Admission is by committee action, and a personal interview is 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.

Specific Test Requirements

Graduate Record Examination, General (Apti-

tude) Test (prior to completion of first quarter of graduate courses); Miller Analogies Test (prior to admission decision).

Basic Requirements

EdAF 501, 512, 513 (12 credits)

Requirements in Specialization

Core courses — EdAF 556a, 556b, 557a, 557b, 557c, 558 (22 credits)

Research project — EdAF 559 (6 credits)

Internship — EdAF 592f (13 credits)

Electives (variable credit) to be selected under advisement.

These credits are supplemental to the student's SPA program and may or may not be counted toward Graduate School minimums.

M.Ed. — SCHOOL ADMINISTRATION

Elementary, Secondary, Learning Resources

For on-campus advisement: Check with Judy Gramm, Miller Hall 206E.

Program Adviser (off-campus): (Elementary/Secondary) Dr. Linda Zurfluh

Program Adviser (Learning Resources): Dr. Les Blackwell.

Prerequisites and Specific Test Requirements

Course background appropriate to level of specialization.

Applicants must provide the following information prior to consideration for admission:

- (a) Application for admission to Graduate School.
- (b) Letters of recommendation from sponsoring district.
- (c) Miller Analogies Test Score.
- (d) Official transcript(s) showing all previous course work.
- (e) Writing sample.

NOTES: (1) An interview with a program adviser may be required. (2) Requests for transferring credits taken prior to admission are submitted following the candidate's advancement to candidacy.

Basic Requirements

EdAF 501, 512, 513 [I and II:12]
EdAF 690a or b [I:6]

Specific Test Requirements

Miller Analogies Test (prior to admission decision); Graduate Record Examination, General (Aptitude) and Subject (Advanced) in Education (prior to completion of first quarter of graduate courses).

Requirements in Specialization

EdAF 541a, 543a, 544a, [I and II:12]
EdAF 542a,b,c,d [II:6]

Graduate School

Electives in Specialization

Emphasis in specialized field(s): law, negotiations, finance, personnel, systems management, administration of learning resources and educational computers. [II:10]

Electives in Related Areas

Selections under advisement from supporting disciplines, e.g., political science, economics. [I and II:10]

Program Options

Option I involves 45 credits of course work, including six credits of thesis. Option II involves 50 to 56 credits of course work and a comprehensive examination in School Administration. Option III involves 50 to 56 credits of course work, including six credits of field study. Both Options II and III require the General Comprehensive Examination be written.

Principal's Initial Certificate

Candidates for the Washington State Initial Principal's Certificate must have a total of three years certificated experience, to include one year of successful teaching experience; a valid Washington State teaching certificate and a master's degree in school administration (program to include approved certification coursework). A 9-credit internship is required in addition to the master's degree.



Individuals who have completed a total of three years certificated experience, to include one year of successful teaching experience, have a valid Washington State teaching certificate, and have a master's degree in a field other than school administration may become eligible for the initial principal's certificate by completing 32 credits of coursework under advisement and a 9-credit internship.

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 coursework beyond the requirements for the Provisional/Initial Certificate are required. Transfer credits are not allowed. Coursework 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.

Education Curriculum & Instruction

M.Ed. — ELEMENTARY

Program Head:

Dr. Roberta Bouverat

Program Options Advisers

Early Childhood Education

Dr. Roberta Bouverat

Curriculum & Instruction

Dr. Marvin Klein

Consultant/Supervisor

Dr. George Lamb

Prerequisites

Undergraduate preparation in elementary education and teaching experience.

Basic Requirements

EdAF 501, 512, 513 [I and II:12]

EdCI 690a or b [I: 6-9]

EdCI 521, 533b [I and II:8]

Two courses from:

EdCI 531, 532 & 533 [I and II:8]

Specific Test Requirements

Graduate Record Examination, General (Aptitude) and Subject (Advanced) in Education; Miller Analogies Test.

Areas of Specialization

The program consists of the systematic, scho-

larly study of research, theories and practices related to the education of children. This degree program is intended for individuals who plan to teach elementary and pre-school children or work in a consultant, supervisory or administrative capacity with adults interested in the education of children.

Advisement is provided to develop specializations in curriculum and instruction, consultant/supervisor and early childhood.

M.Ed. — SECONDARY EDUCATION

Candidates for the M.Ed. —Secondary Education degree will select either the High School-Middle School or the Curriculum Consultant specialization.

Common Requirements for Both Specializations Graduate Record Examination, General (Aptitude) and Subject (Advanced) Test in Education; Miller Analogies Test.

Courses

EdAF 501, 512, 513 [I and II:12]
EdCI 690a or b [I:6]

M.Ed. — SECONDARY EDUCATION

Candidates for the M.Ed. —Secondary Education degree will select either the High School-Middle School or the Curriculum Consultant specialization.

Common Requirements for Both Specializations Graduate Record Examination, General (Aptitude) and Subject (Advanced) Test in Education; Miller Analogies Test.

Courses

EdAF 501, 512, 513 [I and II:12]
EdCI 690a or b [I:6]

High School- Middle School Specialization

Program Adviser: Dr. Alden Nickelson

Prerequisites

Approval of application by program adviser based on academic record and recommendations. Successful teaching experience in grades 7-12 is desirable but not essential to admission. *Students with a degree in a subject matter field commonly taught in secondary schools may combine M.Ed. requirements with certification requirements.* For this special option, contact adviser.

Requirements

EdCI 481 or 484, 500, 522a and/or b,
523 [I and II: 12-18]

Electives in Related Areas

To be selected under advisement [I:6, II:15]

Curriculum Consultant Specialization

Program Adviser: Dr. Alden Nickelson

Prerequisites

A minimum of two years of successful teaching at the secondary level.

Requirements

EdCI 522a,b, 523, EdAF 543a [I and II:15-20]

EdCI 500 (to be used for research background)
Concentration of content electives under advisement [I and II:10]

Electives

Under advisement [II:6]

Computer Applications Option

Prerequisite: CS 210 or equivalent.

Requirements

EdCI 522a,b, 523, EdAF 543a, 544b [II:19]
CS 310, 330, 391 [II:12]
EdCI 690b (Field Project) [II:9]

M.Ed. — READING

Program Head: Dr. H. O. Beldin

Basic Requirements

EdAF 501, 512, 513 [I and II:12]
EdCI 690a or b [I:6]

Specific Test Requirements

Graduate Record Examination, General (Aptitude) and Subject (Advanced) in Education; Miller Analogies Test score of 40 required for full admission.

Requirements in Specialization

EdCI 564, 586, 587, 594e,f,g or e,f,h,
[I and II:24]

Advisement is available for developing specializations in Reading Consultant and Remedial Reading Teacher options. (Admission to Reading Consultant option requires three years' teaching experience.)

Electives

Electives must be approved in advance by adviser. Recommended electives: EdCI 481, 484, 583, 585, 589, 686

M.Ed. — EXCEPTIONAL CHILDREN

Program Head: Dr. C. Max Higbee

Prerequisites

Undergraduate preparation in education; EdCI 360, 361, 461, 462, or equivalent (concurrent enrollment allowed under advisement).

Basic Requirements

EdAF 501, 512, 513 [I and II:12]
EdCI 690a or b [I:6]

Graduate School

Specific Test Requirements

Graduate Record Examination, General (Aptitude) and Subject (Advanced) in Education; Miller Analogies Test

Requirements in Specialization

EdCI 560a, 561, 562, 563, 564, 565, 565a, 566, 598, in area of concentration [I and II:32-34]

Electives in Specialization and Related Fields

[I:6, II:15]

The student and adviser may select elective courses from the specialization or other related courses to supplement the requirements listed above.

This program requires a minimum of one quarter of full time study. This requirement may be met either during a summer session on campus or during any quarter of the regular school year.

The student is permitted to select either Option I, a minimum of 45 credits including EdCI 690a or b in which a field project or thesis is developed and presented or Option II which includes a minimum of 48 credits followed by comprehensive tests in the basic requirements and in the specialization.

M.Ed. — EXCEPTIONAL CHILDREN

Consultative Teaching Specialization

Program Head: Dr. C. Max Higbee

This option is an alternative specialization in exceptional children. It reflects and responds to current practices in special education programs in public schools.

Basic Requirements

EdAF 501, 512, 513 [I and II:12]
EdCI 690a or b [I:6]

Specific Test Requirements

Graduate Record Examination, General (Aptitude) and Subject (Advanced) in Education; Miller Analogies Test

Requirements in Specialization

EdCI 560a, 561, 562, 563, 564, 565, 565a, 566, 598 [I and II:32-34]

Electives in Specialization and Related Fields

The student and adviser may select elective courses from the specialization or other related courses to supplement the requirements listed above. Suggested electives include: Speech 507, EdAF 544b.

Option I

45-credit minimum
Thesis or Field Project

Option II

48-credit minimum
Comprehensive tests in basic requirements and in specialization

English

College of Arts and Sciences

GRADUATE FACULTY

Barthold, B.J., PhD, literature and rhetoric.
Brown, R.D., PhD, literature and creative writing.
Cary, Meredith, PhD, literature and rhetoric.
Donker, Marjorie, PhD, literature.
Greenstein, Susan M., PhC, literature.
Innis, Kenneth, PhD, literature and rhetoric.
Huff, Robert, MA, creative writing.
Johnson, Ellwood, PhD, literature and criticism.
Keep, W. C., PhD, literature and creative writing.
Larsen, Golden, PhD, literature.
Muldrow, George E., PhD, literature.
Park, Douglas, PhD, literature and rhetoric.
Peters, Robert A., PhD, literature and linguistics.
Skinner, Knute, PhD, literature and creative writing.
Symes, Ken M., PhD, literature and rhetoric.
Wright, Evelyn C., PhD, English education.

M.A. — ENGLISH, THESIS AND NON-THESIS

Director of Graduate Studies:

Dr. Knute Skinner

The M.A. program in English offers three options of concentration: (1) literature, (2) creative writing, (3) rhetoric/composition.

1. Literature (Thesis and Non-Thesis)

Core Requirements

Eng 501 and 25 credits in literature, criticism, rhetoric or Eng 513. Twenty of these 25 credits must be taken in scheduled courses. 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.

2. 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. Ten of these 15 credits must be in scheduled courses.

3. Rhetoric/Composition (Non-Thesis)

Core Requirements

24 credits, including Eng 442, 471, 501, 510, 595 and 513 or 594. Electives: 15 credits in courses selected in consultation with the graduate adviser. Ten of the credits in literature and criticism must be taken in scheduled courses.

Specific Test Requirements

Graduate Record Examination, General (Aptitude) and writing sample (consult the director of graduate studies).

Credits

Routinely courses are 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.

Language Requirement

Students must demonstrate reading competence in a foreign language acceptable to the Graduate Committee except as follows: Students in rhetoric/composition may substitute a 400-level course in linguistics. Students in creative writing may substitute an additional five credits at the 500 level in literature, criticism or rhetoric. Students choosing to fulfill the requirements for the fifth-year program leading to standard certification while completing the M.A. may substitute one year of college study of a foreign language.

Comprehensive Examination

Students must pass a written comprehensive final examination in their concentration. For details, see the Graduate Program Guidelines, a copy of which may be obtained from the director of graduate studies.

Other

Requirements for admission to graduate status, advancement to candidacy, advisement and registration, course load and length of program, graduate assistantships and other financial aid, thesis areas and requirements, comprehensive examination reading lists, graduate plan of study, procedural and administrative matters pertaining to the language requirement, the comprehensive examination and graduation may be found in the Graduate Program Guidelines.

Foreign Languages

College of Arts and Sciences

Program Adviser:

Dr. Herbert L. Baird, Jr.

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

Specializations**German****Prerequisites**

In addition to standard requirements for admission to graduate studies, the candidate must have an undergraduate major in German or departmental permission.

Basic Requirements

EdAF 501 (4), 512 (4), 513 (4)

[II:12]

Specific Test Requirements

Graduate Record Examination, General (Aptitude) and Subject (Advanced) in Education or German; German Comprehensive Examination.

Requirements in Specialization German 501, 502, 503, 504a, 504b or 505, 510a, 510b, 510c, 532

Electives in Specialization

German 450, 500

Spanish

(Limited Enrollment)

Prerequisites

In addition to the standard requirements for admission to graduate studies, the candidate must have an undergraduate major in Spanish or departmental permission.

Basic Requirements

EdAF 501 (4), 512 (4), 513 (4) [II:12]

Specific Test Requirements

Graduate Record Examination, General (Aptitude) and Subject (Advanced) in Education or Spanish; Spanish Comprehensive Examination.

Requirements in Specialization

Spanish 501, 502, 503, 504, 505, 510, 532

Electives in Specialization

Spanish 450, 500

Geography & Regional Planning

College of Arts and Sciences

GRADUATE FACULTY

Critchfield, Howard J., PhD, applied climatology, Southwest Pacific (state climatologist).

Downing, Jeanne, PhD, quantitative methods, regional planning.

Monahan, Robert L., PhD, resource geography, Canadian-American studies (Director, Canadian-American Studies Center).

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

Raney, Franklin, PhD, biogeography of the Pacific Northwest, water resource aspects of planning.

Scott, James W., PhD, historical geography of the North American West, history and bibliography of geography (Director, Center for Pacific Northwest Studies).

Smith, Richard G., PhD, high latitudes resources, landform geography.

Terich, Thomas A., PhD, shoreline processes, urban and regional planning.

Adjunct Faculty

Berg, Richard H., PhD, P.E., remote sensing, quantitative methods.

Vernon, Manfred C., JD/PhD, environmental law, law of the sea.

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

Program Adviser: Dr. James W. Scott

Basic Requirements

- Geog 501, 510, 521, 531 or 535, 551, 590 [1:23]
- Geog 600 (Non-Thesis) [1:6]
- or
- Geog 690 (Thesis) [1:6]

Specific Test Requirements

Graduate Record Examination — General (Aptitude) Test — must be taken before admission or in first quarter of residence. A comprehensive oral examination is to be taken in the third quarter of residence and prior to advancement to candidacy.

Electives in Specialization

To be chosen under advisement [1:11-14]

Supporting Courses

Under advisement, normally from either the social sciences or the physical sciences. A minimum of nine credits to be taken. [1:9]

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 (normally French, German, Spanish or Russian).

It should be noted that the specialization in Urban and Regional Planning will generally require more than the minimum credits required for the master's degree, and that a number of additional 400-level courses are required for completion of the degree.

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.
- Ellis, R. C., PhD, mineralogy, structural geology.
- Engebretson, D. C., PhD, tectonics, paleomagnetism.
- Kelsey, H. M., PhD, hydrology, geomorphology.
- Schwartz, M. L., PhD, coastal processes, science education.
- Suczek, C. A., PhD, stratigraphy, sedimentary petrology, tectonics.
- Talbot, J. L., PhD, structural geology, geotectonics.
- Wodzicki, A., PhD, economic geology, geochemistry.

M.S. — GEOLOGY, THESIS ONLY

Program Adviser: Dr. E. H. Brown

Prerequisites

Applicants are expected to have completed (1) an undergraduate major in geology or earth science, or equivalent course work, including one year each of mathematics through calculus, chemistry and physics and an approved geology field course; or (2) an undergraduate major in chemistry, physics or biology plus a minimum of 26 credits from Geol 211 (5), 212 (4), 305 (3), 306 (5), 310 (5), 316 (5), 318 (5), 352 (4), 399 (1), 416 (4), 418 (4) and 420 (5); and an approved geology field course. For concentration in geophysics, applicants are expected to have completed the equivalent of the requirements for a B.S. degree in geophysics.

Basic Requirements of Specialization

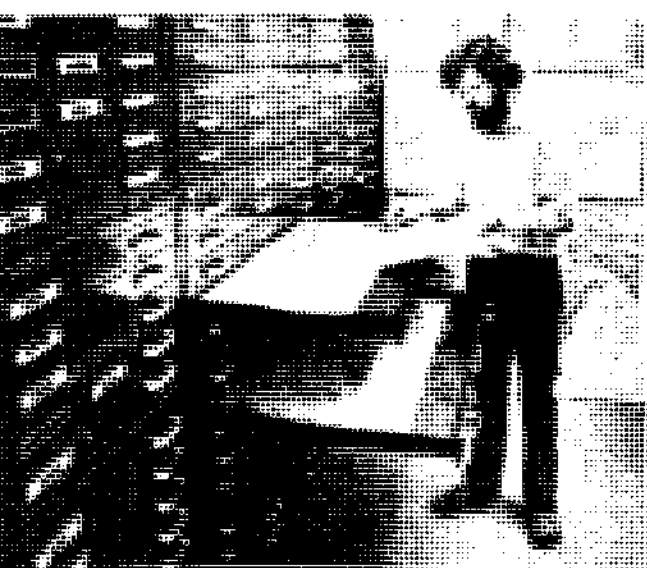
Forty-five (45) credits; 35 or more credits from Geology graduate (500- and 600-level) courses (no more than 10 credits may apply from 400-level courses.) The 600-level credits shall include Geol 690 (12). The 500-level courses shall include Geol 580 (2) and Geol 595 (total of 3). Also included in the requirements is at least one of the following: Geol 523 (5), 524 (5), 525 (5), 526 (5) or 527a,b (3).

Specific Test Requirements

Graduate Record Examination, General (Aptitude) and Subject (Advanced) in Geology; Department Comprehensive Examination.

Electives in Specialization

Courses are selected under advisement and must



Specialization in Urban and Regional Planning

Core Requirements

- Geog 503, 510, 511, 535, 541, 551, 590 [1:27]
- Geog 600 (Non-Thesis) [1:6]
- or
- Geog 690 (Thesis) [1:6]

The following additional courses:

- Geog 432, 454, Huxley 436 [1:16-22]

total at least 33 credits. Specialization within the Geology graduate program is by advisement through the program adviser and thesis committee chairperson. Areas of specialization include, but are not limited to, coastal geology, economic geology, environmental geology, geochemistry, geomorphology, geophysics, glacial geology, hydrology, igneous petrology, metamorphic petrology, paleomagnetism, paleontology, sedimentary petrology, sedimentation, stratigraphy and tectonics. Specialization should be made as early as possible in the student's graduate career.

Supporting Courses

Selected under advisement from mathematics, chemistry, physics and biology.

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), 305 (3), 306 (5), 310 (5), 407 (4); Chem 121 (5) and 122 (5); Physics 131 (4) and Astron 315 (3) or 219 (5); Math 121 (5); 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" section.

History

College of Arts and Sciences

GRADUATE FACULTY

- Bultmann, William A., PhD, England and the British Empire.
- DeLorme, Roland L., PhD, 20th century American history, American West, Pacific Northwest
- Eklund, Don D., PhD, American social/intellectual and Native American history.
- Helfgott, Leonard M., PhD, modern Middle East.
- Hiller, Harley E., PhD, western hemisphere (Canada/Latin America)
- Hitchman, James H., PhD, 20th century American and diplomatic history, U.S. maritime history.
- Horn, Thomas C. R., PhD, early modern Europe, Renaissance and Reformation.

- Jackson, Harry D., PhD, middle period in American history, American economic history, women in American history.
- Kaplan, Edward H., PhD, Chinese history.
- Mariz, George E., PhD, intellectual history of 19th century Europe, history of Great Britain.
- Radke, August C., PhD, Civil War and Reconstruction, American diplomatic history.
- Rhoads, James B., PhD, Director, Graduate Program in Archives and Records Management.
- Ritter, Harry R., PhD, modern Europe, historiography.
- Roley, Paul L., PhD, Soviet history.
- Schwarz, Henry G., PhD, Chinese and Mongolian history.
- Thomas, Leslie J., PhD, American colonial and revolutionary period, early national period, American constitutional history.
- Truschel, Louis W., PhD, African history.

Fields of Study

- Ancient and Medieval History
- English History and British Commonwealth
- African History
- Western Hemisphere History (exclusive of the United States)
- United States History
- East Asia
- Middle Eastern
- Historical Preservation

M.A. — HISTORY, THESIS AND NON-THESIS

Program Adviser: Dr. Harry R. Ritter

Note: Special arrangements can be made for public school history teachers who wish to use the M.A. degree in their professional activity. Consult department program adviser for arranging program.

Prerequisites

Admission to graduate status and to graduate courses requires completion of an undergraduate major in history or the permission of the department; History 511, 512, 515, 533, 536, 537, 540, 550, 558, 563, 571, 573, 582, 583, 585 each require the appropriate upper-division course(s) as preparation, or the equivalent.

Basic Requirements, Thesis

Hist 501, 502	[8]
Hist 690a,b,c (Thesis)	[12]
Three reading seminars	[12]
Elective courses	[13]

Basic Requirements, Non-Thesis

Hist 501, 502	[8]
Three reading seminars	[12]
Two writing seminars	[8]
Elective courses	[20]

Electives

To complete a program in either option, electives may be chosen, in consultation with the Graduate Adviser, from other seminars, readings courses, upper-division courses (maximum of 10 credits) or Hist 500 (by special permission).

Graduate School

Preparation of fields shall be selected during consultation with the Graduate Adviser.

Specific Test Requirements

Graduate Record Examination, General (Aptitude) and Subject (Advanced) in History; Oral Comprehensive Examination, Thesis; Written Comprehensive Examination, Non-Thesis; Miller Analogies Test.

Language Requirement

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

GRADUATE PROGRAM IN ARCHIVES AND RECORDS MANAGEMENT

The Department of History, in conjunction with a number of cooperating agencies, offers a certificate program in archives and records management. Students are given a wide variety of lecture material and six months of practical experience in cooperating agencies, institutions, or companies to prepare them for professional or administrative positions in archives and records management. The program requires successful completion of Hist 598a, b, and c for a total of 28 credits. Hist 598a is offered on campus, while 598b and c are taken as internships at one of the cooperating institutions.

Basic requirements for admission to the program include a minimum of 20 graduate credits in history or an M.A. in an allied field with a minimum grade point average of 3.00 and approval of the Intern Selection Committee.

Hist 598a may be counted as an elective toward the M.A. in history.

GRADUATE PROGRAM IN HISTORICAL PRESERVATION (NON-THESIS OPTION)

The Department of History offers a graduate level program leading to a specialization in historical preservation. The following courses represent the minimum requirements for the degree program. For further information, write or consult the program director, Dr. R. L. DeLorme.

Hist 591a,b	[8]
Hist 592a,b,c	[18]
Hist 501, 502	[8]
Elective courses	[20]

Huxley College

Huxley College of Environmental Studies

GRADUATE FACULTY

Brakke, David F., PhD, limnology, watershed management.
Kendall, Ronald J., PhD, environmental toxicology.
Lacher, Thomas E., PhD, terrestrial ecology, behavioral ecology.
Summers, William C., PhD, marine ecology.
Webber, Herbert H., PhD, marine biology.
Weiner, Ruth F., PhD, air quality studies, science policy.
Yu, Ming-Ho, PhD, environmental nutrition and biochemistry.

Affiliate Graduate Faculty

Fitzner, Richard, PhD, wildlife ecology

M.S. — ENVIRONMENTAL SCIENCE, THESIS ONLY

Program Adviser: Chair, Huxley Graduate Program Committee

The M.S. in environmental science is a two-year curriculum which draws upon coursework 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 impact on those systems.

M.S. Options

Major program options are: *Applied Ecology*, focusing on natural systems; *Wildlife Toxicology*, focusing on the evaluation of toxic substances on wildlife; and *Environmental Chemistry*, which is concerned with the origin, transport and fate of chemicals in the environment. This last option may take the form of a cooperative offering with the Department of Chemistry.

Prerequisites

A bachelor's degree in the physical or life sciences, engineering, mathematics, interdisciplinary science program or equivalent area of study; one year of college-level general chemistry; background in organic chemistry and analytical chemistry; one year of college-level biology; background in ecology; background in calculus and analytic geometry; additional prerequisites depending on graduate program option.

Specific Test Requirements

Graduate Record Examination — General (Aptitude).

Program Requirements

Forty-five (45) credits minimum; 21 or more credits, including Hux 501, of Huxley graduate coursework; 12 or more credits of an approved distribution of graduate courses from other Colleges at WWU; 12 credits of Hux 690 (thesis). Ten credits or less of approved 400-level coursework

may be included in the program. A reading knowledge of an appropriate foreign language may be required.

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

M.S. — ENVIRONMENTAL SCIENCE, BIOLOGY OPTION, THESIS ONLY

Program Advisers: Chair, Huxley College Graduate Program Committee; Dr. Richard Fonda, Biology Department

Huxley College of Environmental Studies and the Department of Biology administer a cooperative graduate offering in environmental biology, leading to an M.S. degree in biology. This program focuses on the understanding and potential solution of environmental problems.

Program options and requirements are listed in the Biology section of this catalog.

M.S. — ENVIRONMENTAL SCIENCE, BEHAVIORAL TOXICOLOGY OPTION, THESIS ONLY

Curriculum Coordinators: Dr. Ronald J. Kendall, Huxley College; Dr. Richard W. Thompson, Psychology

The behavioral toxicology curriculum is a joint offering of Huxley College and the Department of Psychology. The curriculum provides knowledge about methods to assess the nature and impact of various toxic substances on the behavior of animals and humans. The curriculum requires a minimum of 45 credits of coursework and the completion of a thesis. Applicants will be reviewed by a committee of faculty from Huxley College and the Department of Psychology.

Prerequisite Courses

Biol 121, 122, 348, 349; Chem 121, 122, 251; Hux 358; Psych 201, 306, 321, 326.

Students enrolled in the behavioral toxicology curriculum in Huxley College must complete the following requirements for the M.S. in environmental science:

Hux 501, 538, 555, 556, 457/557, 690. Suggested electives: Hux 500, 517, 550; Biol 408, 577.

Psych 501a-501c, 502-504. Suggested electives: Psych 556 and 559.

Mathematics

College of Arts and Sciences

GRADUATE DEGREE STATUS (DEPARTMENTAL REQUIREMENTS)

An entering graduate student will be granted graduate status if he or she has completed the following courses or the equivalent with grades of "B" or better: Math 205, 224, 312, 331, CS 210 and two courses at the 400 level.

A student can be admitted on provisional status if he or she has not met all of the above requirements; however, nine hours of course work completed while on provisional status is the most that can be included in a graduate degree program.

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

Program Adviser: Dr. John R. Reay

Specific Test Requirements

Graduate Record Examination, General (Aptitude) Test.

Requirements — Thesis and Non-Thesis Options

The student's program must include at least 45 quarter hour credits and a thesis or 48 (without a thesis) credits of approved course work taken after receiving the baccalaureate degree. At most 18 credits at the 400 level can be applied toward the master's degree (this is an exception to the general 10-credit limit of 400 numbered courses). The following courses or their equivalents are required for graduation: Math 404, 423, 441-2, MCS 435 or 475, Math 505, 524, 525, and 431 or 532. A student who has had an equivalent course as an undergraduate may not have to take the course at Western; it depends upon the individual program of study.

Colloquium

Each student who does not write a thesis will give a one-hour talk to the mathematics graduate students and faculty. The talk is prepared under the direction of a faculty member and is usually an expository presentation of a topic chosen by the student. An announcement of the colloquium giving time, location and a one-paragraph description of the talk must appear one week in advance.

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.

FURTHER INFORMATION AND ADVICE

We urge the student 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

- Ager, Phillip R., M.A., music education, instrumental music, theory/conducting.
 Frank, Barton, M.Mus., cello, double bass, chamber music, music appreciation.
 Gorder, Wayne D., Ed.D., conducting, instrumental music, trumpet, bands, orchestra.
 Halgedahl, Frederick W., M.Mus., violin, viola, chamber music, string pedagogy.
 Hill, Ford D., M.Mus., piano, keyboard pedagogy, performance studies.
 LaBounty, Edwin M., D.Mus., composition, piano, music education, theory/analysis.
 Potter, Sydney H., M.Mus., jazz studies, ensembles, musicianship, trumpet.
 Pullan, C. Bruce, M.A., Chair., opera, conducting, voice, vocal pedagogy, musicianship.
 Rutschman, Carla J., Ph.D., music history and literature, musicology, music education, lower brass.
 Rutschman, Edward R., Ph.D., graduate program advisor, theory/analysis, counterpoint, music history.
 Scandrett, Robert L., Ph.D., choral conducting, music history and literature, pedagogy, choirs.

- Shaw, Albert C., D.Mus. Ed., music education, conducting, instrumental music, percussion.
 Terey-Smith, Mary, Ph.D., music history and literature, musicology, analysis, Collegium Musicum.
 Zoro, Eugene S., M.Mus., musicianship, woodwind pedagogy, clarinet, chamber music.

MASTER OF MUSIC, THESIS ONLY

Program Adviser: Dr. Edward Rutschman

Basic Requirements for All Concentrations

Music 541, 542, 543, 544 (select three)	[1:12]
Music 503	[1:4]
Music 532 and 533	[1:6]
Music 690 Thesis	[1:6]

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, 535, 536	[1:12]
Electives	[1:5]
Music 690 (Thesis-Composition)	[1:6]

History and Literature Concentration

Music 443 (select two)	[1:6]
Music 441	[1:3]
Music 540 (for three quarters)	[1:6]
Music 550	[1:3]
Music 690 (Thesis)	[1:6]

Performance Concentration

Elect one of the following courses in each of three quarters:

Music 474, 475, 478, 481, 483, 540	[1:6]
Music 511, 512, 513, 514 or 515	[1:9]
Music 690 (Thesis-Recital)	[1:6]

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

Conducting Studies [1:9-17]

Music 501, 502, 531 and approved 400-level and/or 500-level course(s)

Basic Musicianship [1:0-9]

Courses to be selected from the following (any not selected under Basic Requirements): Music 541, 542, 543, 544, 550, 531, 534, 535, 536 and approved 400-level and/or 500-level course(s)

Applied Music [1:0-9]

Music 511-515 and/or approved 411-418 course(s)

Ensemble [1:0-9]

Approved 400-level and/or 500-level ensemble course(s)

Music 690 [1:6]

Thesis-Conducting Practicum

Music Education Concentration (Instrumental Music Supervision, Choral Music Supervision,

Choral Conducting, Orchestral Conducting, Band Conducting)

Professional Understandings/

Techniques [I:6-9]

Music 501, 502, 521, 525 or any approved 400-level course(s)

Basic Musicianship [I:3-9]

Courses to be selected from the following: (any not elected under Basic Requirements) Music 531, 534, 535, 536, 541, 542, 543, 544, 550, or any approved 400-level course(s)

Applied Music [I:0-9]

Music 511-515, or approved 411-418

Ensemble [I:0-9]

Approved 400-level or 500-level ensemble course(s)

Guided Electives in Professional Education in Departments of Education or

Psychology [I:3-9]

Music 690 [I:6]

(Thesis), (Thesis-Composition), (Thesis-Recital), (Thesis-Conducting Practicum).

Prerequisites and Examinations

1. 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 two original compositions for evaluation and write a 24-hour composition examination.

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.

2. 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.
3. The Graduate Record Examination — Aptitude and Advanced in Music must be taken prior to the completion of the first quarter of study.

4. Students in history and literature concentration must pass a reading examination in French or German.
5. Candidates for the Master of Music degree must successfully complete a comprehensive oral examination covering all coursework taken for the degree, as well as material related to the thesis.

Natural Science/ Science Education

College of Arts and Sciences

M.Ed. — NATURAL SCIENCE/ SCIENCE EDUCATION

Adviser: Science Education Coordinator with advisement in specialized areas:

Biology: Dr. R. W. Fonda
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

Basic Requirements
 EdAF 501, 512, 513 [I and II:12]
 Sci Ed 501, 513 [I and II:7]

Specific Test Requirements
 Graduate Record Examination — General (Aptitude) and Subject (Advanced) in Biology, Chemistry, Geology or Education, according to specialization; Miller Analogies Test.

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

Graduate School

Geology field course

Geol 690 or Sci Ed 690 [I and II:5-10]

Sci Ed 598 [I:6-12]

Electives selected under advisement [II:6]

For prerequisites, see Geology Department listing [I:4-15, II:13-18]

General Science, Physical Science: Thesis and Non-Thesis

Requirements in specialization

Sci Ed 580 or 590 [I and II:2-5]

Sci Ed 690 [I:6]

Electives

Courses selected under advisement from Astronomy, Biology, Chemistry, Geology, Physics and Science Education. Specialization in Physical Science will include 5-15 credits in Chemistry and 5-15 credits in Physics.

[I:15-18, II:18-21]

Specialization — Elementary Program

Science Education, Non-Thesis Only

Option A is designed to prepare a science curriculum resource specialist, as well as increase a teacher's competence to teach science.

Option B is designed to increase a teacher's competence to teach science and includes more electives in Science Education, Education and Natural Sciences.

Requirements in Specialization

Courses selected under advisement from Sci Ed 430, 500, 582, 583, 584 [II:12-22]

Additional requirements for Option A

Sci Ed 511, 512 [II:6]

Electives

Courses selected under advisement from Science Education, Education, Biology, Chemistry, Geology or Physics and related fields [II:8-16]

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. Applicants will be required to submit letters of endorsement from their principal or superintendent indicating willingness to cooperate with the in-service phase of the 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. Applicants will be required to submit letters of endorsement from their principal or superintendent indicating willingness to cooperate with the in-service phase of the program.

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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. Applicants will be required to submit letters of endorsement from their principal or superintendent indicating willingness to cooperate with the in-service phase of the program.

Prerequisites

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

Knutzen, Kathleen, PhD, biomechanics/kinesiology

Moffatt, Robert J., PhD, MPH, exercise physiology/nutrition

Moore, James E., PhD, industrial recreation and fitness

Vernacchia, Ralph, PhD, sport psychology/socio-cultural aspects of physical education and sport

Adjunct Faculty

Brown, Daniel, MD, Cardiology/rehabilitation

M.Ed. — PHYSICAL EDUCATION, THESIS AND NON-THESIS

GRADUATE PROGRAM

Graduate study leading to a Master of Education degree is offered in two areas: Mastery of Teaching (Option A) and Exercise Science (Option B) with support areas in adult fitness/cardiac rehabilitation, exercise physiology and biomechanics.

Program Advisers: Dr. Roy Clumpner, Dr. Kathleen Knutzen, Dr. Robert J. Moffatt, Dr. Ralph Vernacchia

Prerequisites

Physical Education Major/Minor including courses in four of the following areas: Biomechanics, Kinesiology, Exercise Physiology, Motor Learning, History, Human Growth and Motor Development.

[I:45]

[II:48]

Mastery of Teaching Option A

[I and II:48]

Exercise Science Option B

[I:52]

Specific Test Requirements

Graduate Record Examination — General (Aptitude) Test

Requirements in Option A — Mastery of Teaching:

PE 504, 505, 506, 507, 508, 520, 690 (6 credits); EdAF 501, 512, 513 [I and II:26]

Electives in Option A — Select 10 credits under advisement, of which six must be from the following: PE 509, 531, 540, 541, 542, 543, 584

Requirements in Option B — Exercise Science:

PE 506, 520, 540, 543, 690 (6-9 credits); EdAF 501*, 512*, 513*

**Substitution of other courses for EdAF 501, 512, 513 is possible with agreement of graduate program adviser, graduate dean and School of Education dean.*

[I:30-33]

Electives in Support Area of Option B:

1. *Adult Fitness/Cardiac Rehabilitation:* PE 510, 511, 513, 592 (6 credits) and credits under advisement (3-6)

2. *Exercise Physiology:* PE 507, 510, 511, 513 and credits under advisement (6-9)

3. *Biomechanics:* PE 507, 544, 546 and credits under advisement (8-11)

Physical Education, Health & Recreation

College of Arts and Sciences

GRADUATE FACULTY

Arnett, Chappelle, EdD, human growth and motor development/curriculum/exercise physiology

Political Science

College of Arts and Sciences

GRADUATE FACULTY

- Alper, Donald K., PhD, American politics, political process.
- Foisy, Maurice H., PhD, public policy and administration, policy analysis, political theory.
- Fox, Charles J., PhD, political theory, public policy and administration, organization theory.
- Habal, John J., PhD, state and local government.
- Hogan, Eugene J., PhD, public law.
- Krauss, Ellis S., PhD, comparative politics, Japanese politics.
- Miner, Ralph E., PhD, public policy and administration, public finance, organization theory.
- Rutan, Gerard F., PhD, comparative politics, political theory, national intelligence and security studies.

M.A. — POLITICAL SCIENCE, THESIS AND NON-THESIS

Program Adviser: Dr. Donald Alper

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 research in a specialized area.

Students may also specialize in public policy and administration (PP&A). 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.

Prerequisites

Completion of the requirements for a bachelor's degree and departmental approval of admission to the graduate degree program. Any deficiencies must be made up before the candidate may enter the program.

Basic Requirements

- | | |
|------------------|---------------|
| Pol Sci 501, 502 | [I and II:10] |
| Pol Sci 690 | [I:6-9] |

Specific Test Requirements

Graduate Record Examination, General (Aptitude) Test.

Electives under Thesis

Courses 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:

<i>Fields</i>	<i>Basic Courses</i>
Public Policy & Administration	Pol Sci 503
Comparative Government	Pol Sci 505
Politics & Government	Pol Sci 540
Political Theory	Pol Sci 560

Electives under Non-Thesis

Note that public policy and administration non-thesis specialization is separate.

Courses 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:

<i>Fields</i>	<i>Basic Courses</i>
Public Policy & Administration	Pol Sci 503
Comparative Government	Pol Sci 505
Politics & Government	Pol Sci 540
Political Theory	Pol Sci 560

Requirements in Public Policy and Administration Non-Thesis Specialization

- | | |
|---|---------|
| Pol Sci 503, 510, 520, 521, 523, 540, 550 | [II:27] |
|---|---------|

Electives in Public Policy and Administration Non-Thesis Specialization

Courses selected under advisement from 400- to 500-level courses in Political Science, Economics, Psychology, Sociology, Education, Business Administration, Huxley College and Ethnic Studies Program. [II:11]

Other Requirements — Thesis and Non-Thesis

The student must meet one of the following requirements:

1. Demonstrate a reading knowledge of an appropriate foreign language by passing a test to be given by the Department of Foreign Languages. Foreign students for whom English is not the native tongue shall pass an English language competency exam.
2. Demonstrate competence in computer programming and statistics by successful completion of Computer Science 110 and Math 240.

Successful Comprehensive Examination

Written and Oral in Two Fields, Thesis and Non-Thesis except Public Policy and Administration Non-Thesis Specialization.

Written and Oral in Public Policy and Administration Non-Thesis Specialization.

Psychology

College of Arts and Sciences

GRADUATE FACULTY

- Blood, Don F., PhD, statistics, measurement.
- Carmean, Stephen, PhD, perception, thinking, communication.
- Crow, Lowell, PhD, physiological psychology, alcohol and behavior, psychophysiology.
- Cvetkovich, George, PhD, social psychology, population psychology.

Graduate School

Diers, Carol Jean, PhD, general, social, animal social.
Elich, Peter J., PhD, educational, human learning, developmental.
Grote, Frederick W., Jr., PhD, social development in children, early experience, child psychology and social issues.
Jones, Elvet G., PhD, counseling psychology, school counseling.
Kintz, B. L., PhD, general experimental, measurement and statistics.
Kleinknecht, Ronald A., PhD, behavior therapy, fear/anxiety, health psychology.
Lippman, Louis G., PhD, learning, verbal learning.
Lippman, Marcia Z., PhD, cognitive development, psycholinguistics, day care.
Lonner, Walter J., PhD, cross-cultural psychology, tests, counseling.
MacKay, William R., EdD, counseling psychology, personality, cross-cultural.
Meade, Robert D., PhD, human motivation, cross-cultural, human population problems.
Miller, Laurence, PhD, experimental psychology, free-operant conditioning.
Nugent, Frank A., PhD, counseling theory and practice, ethical consideration in practice and research, school psychological services.
Panek, David M., PhD, clinical, community, mental health, novelty and stimulus change.
Pielstick, N. L., PhD, school psychology, classroom learning, situational assessment.
Prim, Merle M., PhD, sub-human primate behavior, physiological psychology, sensory, comparative.
Rees, Rod, PhD, learning, decision and judgment, imagery, audition.
Shaffer, Ronald W., PhD, learning, perception, pattern recognition.
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, evaluation of teaching.
Trimble, Joseph E., PhD, social, cross-cultural.
Tyler, Vernon O., Jr., PhD, clinical psychology, adolescence.

M.Ed. — SCHOOL COUNSELOR, THESIS AND NON-THESIS

Students planning to apply for the state certificate in school counseling will take a minimum of five additional credits in 570 or 670 beyond the master's degree requirements and will pay additional fees for the state credential. State certification requires the review of the candidate by an approved State Certification Review Board before being recommended for certification.

Program Adviser: Dr. William MacKay

Prerequisites

Major or minor in psychology including a course in psychology of learning or background in professional education. The following specific courses or their equivalents are required: Psych 306 or EdAF 473, Psych 313, 314, 431, 471.

Admission to this program is by committee action. Since maximum enrollment for any one academic year is limited, applicants are advised to seek formal admission before making detailed plans. All prerequisites must be completed before fall quarter of year of residency. Docu-

mentation of personal suitability of applicants for counseling is required through statements of personal commitment, letters of reference, and interviews where possible.

Basic Requirements

EdAF 501, 512, 513 [I and II:12]
Psych 690 [I.6]

Specific Test Requirements

Graduate Record Examination — General (Aptitude) and Subject (Advanced) in either Psychology or Education.

Requirements in Specialization

Psych 553, 555, 557, 561, 564,
565, 570 [I and II:32]

Electives in Specialization

To be selected under advisement from psychology, education, or sociology/anthropology [I and II:4]

M.S. — PSYCHOLOGY, THESIS ONLY

Program Adviser: Dr. Robert M. Thorndike

Prerequisites

General psychology, statistics through inference, and a laboratory course in psychology. Students deficient in prerequisites must satisfy them by the end of their first quarter of study. There are additional prerequisites for the behavioral toxicology curriculum (see below).

Specific Test Requirements

Graduate Record Examination — General (Aptitude) and Subject (Advanced) 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, counseling psychology, school psychology or behavioral toxicology). In addition to the test requirements stated above, applicants for the M.S. counseling psychology or school psychology 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. Transfer from one curriculum to another may be possible in some instances as space becomes available. Such transfer is possible only by formal application to the Graduate Coordinating Committee and joint agreement of both involved curriculum committees. Ordinarily no change in curriculum will be possible after fall quarter.

Course Requirements

Each candidate is required to take the core, plus

degree requirements. The core consists of Psych 501a-c, 502-504, and 508. 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. 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 obtain at least a 3.00 ("B") grade point average for all graded coursework taken during the first year in order to be retained in the program. Retention in the counseling psychology or school psychology curriculum is also dependent upon the development of professional competence in interaction with clients, school district personnel and other professionals. Continuous evaluation by the appropriate curriculum committees will be the basis for retention of the student in the school psychology or counseling psychology curriculum.

Electives

Psych 500, 505-507, 511, 512, 520-531 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. Fred Grote

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 several required foundation courses, seminars, statistics and design, thesis work and elective courses in psychology and related areas.

Students in the general psychology curriculum must complete the course requirements for the M.S. psychology program (501a-c, 502-504, 508, and 690).

In addition to course requirements of M.S. Program (see above) students in the general psychology curriculum are required to take three seminars from 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 and 530. No more than two of these seminars may be from one group. Psych 505-507, 511 and 512 are also offered as electives.

A concentration offered within the general psychology curriculum is Measurement, Evaluation and Statistical Analysis (MESA). In addition to the core program (20 credits plus seminars) students will take the following psychology courses: 505, Multivariate Analysis (3); 506, Advanced Research and Evaluation Design and Data Analysis (3); 507, Topics in Quantitative Psychology (3-6); and 530, Seminar in Advanced Measurement Theory (3). A thesis on an appropriate topic is also required. Additionally, students will take other electives under advisement and appropriate coursework 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 — COUNSELING PSYCHOLOGY CURRICULUM

Curriculum Coordinator: Dr. Walter J. Lonner

This two-year curriculum is designed to prepare students for psychological counseling positions in colleges, community colleges and community agencies. The emphasis is upon normal developmental problems and conflicts of individuals at various stages of life. Attention to work with families and children is included. Ethnic and cultural factors are also included with respect to contemporary psychological problems. Internships in appropriate settings will be required. The program is consistent with basic minimum requirements leading to review by the State Board of Examiners for licensing appropriate to the level of training.

The specialized curriculum in counseling psychology 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 counseling psychology curriculum must complete the course requirements for the M.S. psychology program (501a-c, 502-504, 508, and 690). In addition, the following courses must be completed: Psych 553, 555, 557, 558, 561, 564, 565, 570, 670 and three seminars from 520-531.

M.S. IN PSYCHOLOGY — SCHOOL PSYCHOLOGY CURRICULUM

The M.S. in Psychology —School Psychology Curriculum will not be offered during the 1985-86 academic year. Please write to Dr. N. L. Pielstick for further information.

Curriculum Coordinator: Dr. N. L. Pielstick

The graduate curriculum in school psychology is designed to provide a foundation knowledge of human behavior, assessment skills, methods of behavior change and professional practices which will prepare its graduates to facilitate the work of the schools in promoting pupil learning. A two-year school psychology curriculum serves this purpose by providing, in addition to coursework, practicum experiences and research work.

Under advisement, selected education courses, including those in the area of special education and reading, are required. This curriculum is designed to meet the standards for certification in school psychology as specified by the Certificate on Office of the Superintendent of Public Instruction.

The specialized curriculum in school psychology 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 is required through statements of personal commitment, letters of reference and interviews where possible.

Students in the school psychology curriculum must complete the course requirements for the M.S. psychology program (501a-c, 502-504, 508, and 690). In addition, the following courses must be completed: Psych 531, 552, 556, 559, 561, 562, 564, 570, 670, EdCl 588, and at least 8 additional hours of courses in special and general education selected under advisement.

M.S. IN PSYCHOLOGY — BEHAVIORAL TOXICOLOGY OPTION

Curriculum Coordinators:

Dr. Richard W. Thompson, Psychology
Dr. Ronald J. Kendall, Huxley College of Environmental Studies

The behavioral toxicology curriculum is a joint offering of the Psychology Department and Huxley College of Environmental Studies. The curriculum provides knowledge about methods to assess the nature and impact of various toxic substances found in the environment on the behavior of animals and humans. The curriculum requires a minimum of 45 credits of coursework and the completion of a thesis. Applicants will be reviewed by a committee of faculty from the Psychology Department and Huxley College.

Prerequisite Courses

Biol 121, 122, 348, 349 Chem 121, 122, 251; Hux 358; Psych 201, 306, 321, 326.

Students enrolled in the behavioral toxicology curriculum in the Psychology Department must complete the following requirements for the M.S. in psychology:

Psych 501a-501c, 502-504, 538 and 690. Suggested electives: Psych 556 and 559.

Hux 501, 555, 556, 457/577. Suggested electives: Hux 500, 517, 550; Biol 408, 577.

Sociology

College of Arts and Sciences

GRADUATE FACULTY

Call, Donald J., PhD, deviance, adolescence, theory.

Drake, George F., PhD, sociology of organizations, human resource planning.

Gossman, Charles S., PhD, demography, statistics, advanced quantitative methods.

Mahoney, E. R. (Department Chair.), PhD, research methods, human sexuality.

Mazur, D. Peter, PhD, demography, statistics, public opinion.

Paulus, Ingeborg L. E., PhD, criminology/deviance, sociology of law, medical sociology.

Richardson, John G., PhD, family, education, contemporary theory.

Simpson, Carl, PhD, education, criminology, theory, applied sociology.

Stephan, G. Edward, PhD, theory, human ecology, social demography.

For further information:

Contact: Dr. E. R. Mahoney, Graduate Program Adviser, Department of Sociology, Western Washington University, Bellingham, WA 98225 (206-676-3611).

M.A. — SOCIOLOGY, THESIS ONLY

Program Adviser: Dr. E. R. Mahoney

Prerequisites

General sociology, research methods, statistics; a minimum of 20 quarter hours of upper-division sociology courses.

General Requirements

Normally students will complete requirements in the following order: (1) formal admission to the program; (2) completion of core and other graduate courses (at least 35 credit hours); (3) advancement to candidacy; (4) selection of thesis committee and problem; (5) submission of written thesis proposal; (6) oral defense of written thesis proposal; (7) submission of completed thesis.

Core Requirements

Soc 501, 502, 503, 505 510, 515, 521 and 530.

Electives

A maximum of 10 credits at the 400-level and any 500- or 600-level sociology courses. Courses

from other departments must be approved by the Sociology Graduate Committee.

Specific Test Requirements

Graduate Record Examination, General (Aptitude) portion.

Candidacy

For information concerning advancement to candidacy and specific program requirements, consult the "Sociology Graduate Students Manual," available through the department.

Speech and Broadcast

College of Arts and Sciences

M.A. — SPEECH, THESIS (I) AND NON-THESIS (II)

Program Adviser: Dr. J. Dan Rothwell

The Department of Speech and Broadcast offers two options leading to an M.A. degree. The thesis (I) (45 credit hour minimum) is offered for the student who wants to do research in a specialized area and who plans to enter a PhD program. The non-thesis (II) (48 credit hour minimum) is for the student who does not now plan further graduate study.

Prerequisites

An undergraduate major in speech or approval by committee action of other major. Additional data will be requested of those applying.

Basic Requirements

Speech 501	[I and II:4]
Speech 690b	[II:3]
Speech 585 or 593	[II:3]
Speech 690a	[I:6-9]

Specific Test Requirements

Graduate Record Examination General (Aptitude) Test; Diagnostic Examination (done under the supervision of the Department of Communication).

Requirements in Specialization Speech Communication: Speech 595; Speech 505 or 507 or 540; and additional departmentally approved 400- and 500-level speech courses for a total of 20 credits. Additional courses to fulfill this requirement to be selected under advisement.

Electives

Electives will be selected under departmental advisement. At least half of all elective credits must be in courses numbered at the 500- and 600-level. The remainder may include only those 400 numbered courses approved under advisement. No more than six credit hours of Speech 500 (Special Problems) may be applied to the

M.A. degree unless special approval is granted by the department.

Additional Requirements

Students must complete one of the following requirements:

1. Demonstrate a reading knowledge of an appropriate foreign language by passing a test to be given by the Department of Foreign Languages.
2. Where empirical research is being undertaken by the student, demonstrate competence in statistics by passing an approved course or competence examination.
3. Where knowledge of the subject matter and scholarly techniques of an allied academic discipline may prove a valuable research tool for the student, satisfactorily complete a minimum of 9-12 hours of additional class work (beyond the basic 45-48 credit hours required for the M.A. degree) in appropriate collateral courses. These courses must have approval of the student's advisory committee.

Upon demonstration of relevant specialized competence, the department may recommend waiver of the above "Additional Requirements."

Comprehensive Examination

Both written and oral examinations are required. During the final quarter of the completion of the graduate program, the student will take a written comprehensive examination covering the content of his or her graduate program. In the same quarter the student is required to take an oral examination based primarily on thesis or Option II papers and related items.



Speech Pathology & Audiology

College of Arts and Sciences

GRADUATE FACULTY

- McRandle, Carol C., PhD, audiology/aural rehabilitation/hearing science.
- Polen, Samuel B., PhD, speech/language pathology/speech science.
- Seiko, Michael T., PhD, audiology/aural rehabilitation/experimental phonetics.
- Speirs, James A., PhD, speech/language pathology.
- Webb, Loren L. PhD, audiology/aural rehabilitation.
- Zeine, Lina, PhD, speech/language pathology.

M.A. — SPEECH PATHOLOGY AND AUDIOLOGY

(51 credits)

Options: Thesis and Non-Thesis

Graduate Coordinator: Dr. Loren L. Webb

Prerequisites

The prerequisites for entrance into the graduate program include an undergraduate major in speech pathology and audiology or approval by committee action. Additional data will be requested of those applying. All students entering the program must purchase the "WWU Handbook for Speech/Language Pathology and Audiology Majors." The department has specific entrance requirements in addition to the general entrance requirements of the Graduate School. Students must consult the department graduate coordinator and department handbook for particulars. Those students classified as "other graduates" must complete a "core" curriculum prior to advancement as a graduate major. Consult the department graduate coordinator.

Other Grad Core Curriculum Requirements
 SPA 351, 352, 353, 354, 356, 373, 452, 457, 461, 462

Electives for Core Curriculum
 SPA 361, 454, 458

Graduate Entrance Requirements
 Graduate Record Examination, General (Aptitude) Test and the Miller Analogies Test; must be taken prior to admission to graduate program in SPA. The Diagnostic Examination in Speech/Language Pathology and Audiology must be taken during the student's first quarter of graduate enrollment.

- Basic Requirements*
- SPA 502 (4)
 - SPA 551 (3)
 - SPA 561 (3)
 - SPA 690 (Thesis) (6-9)

SPA 691 (Non-Thesis) (3)

Requirements in Specialization

1. *Speech/Language Pathology specialization:*
 In addition to basic requirements, students must complete SPA 550, 552, 553, 554, 556, 558, 559, 560, 568a, 599a,b,c*

Electives in Specialization

SPA 455, 465, 465a, 545, 555, 557, 563, 564, 567, 570, 571, 572, 574, 575, 575a, 576, 599c, 692, 696 and other 400, 500 and 600-level courses selected under departmental advisement.

Total — 51 credits

2. *Audiology and Aural Rehabilitation Specialization*

In addition to basic requirements, complete SPA 466, 558, 562, 563, 564, 565, 566, 568a,b,c, 570, 571, 574, 599a,b*

Electives in Specialization

SPA 455, 465, 465a, 545, 553, 557, 558, 559, 567, 572, 574, 575, 575a, 577, 599c*, 692, 696 and other 400, 500 and 600-level courses selected under departmental advisement.

Total — 51 credits

Clinical Competence

In addition to meeting academic requirements, students specializing in speech/language pathology must demonstrate satisfactory competence in diagnostic and clinical practicums by completing SPA 552, 558, 559 and 560 with grades of "C" or better in each course. Speech and language pathologists also must complete SPA 568a successfully with a grade of "C" or better.

Students specializing in audiology must complete SPA 558 with a grade of "C" or better. In addition, audiology specialists must complete SPA 568a,b,c and SPA 564 with a grade of "C" or better in each course. Students are permitted to retake a clinical practicum only once. If a satisfactory grade as specified in the preceding requirements is not achieved in the retake, students will not be permitted to continue in the practicum courses.

Comprehensive Examinations

A written comprehensive examination is required. During the quarter preceding the final quarter of the completion of the graduate program, the student will take a written comprehensive examination (six hours) covering the contents of his/her graduate program to date. A minimum of 36 graduate credits must be completed before the comprehensive may be taken.

Further, in the same quarter in which a student expects to graduate, an oral examination based on the thesis or non-thesis paper and related items is required. Details regarding the written

*Although SPA 599a, b and c are 8 credits each, only a total of 6 (3 + 3, 599a and b, respectively) can apply toward the M.A. degree.

examination and oral defense are included in the "WWU Handbook for Speech/Language Pathology and Audiology Majors" or students may consult the graduate coordinator for details.

Certification Requirements

All students seeking certification as a Communication Disorders Specialist (CDS) in the public schools in the State of Washington must successfully complete a minimum of two quarters of public school externship in order to satisfy Program Unit requirements.

The American Speech-Language Hearing Association requirements for Certification of Clinical Competence in Speech/ Language Pathology or Audiology stipulate the completion of 300 clock hours of practicum, 150 of which must be obtained at the graduate level. Also, the student must have a minimum of 9 hours of classwork and 35 clock hours in his/her minor area of study (Speech/Language Pathology or Audiology). Consult the "WWU Handbook for Speech/Language Pathology and Audiology Majors" for details.

Theatre/Dance

College of Fine and Performing Arts

M.A. — THEATRE

Program Adviser: Dr. Douglas R. VanderYacht

The prospective student is urged to contact the adviser and request the "Guide to Graduate Study in the Department of Theatre & Dance."

Two options lead to the M.A. degree. The thesis (Option I — 45 credit hour 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 credit hour minimum) is typical for the student pursuing a career as a professional performer, or as a teacher at the secondary level.

Prerequisites

An undergraduate major in theatre, or theatre and dance, or approval by committee. Evidence of qualifications will be requested of applicants.

Specific Test Requirements

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

Core Requirements

All candidates must take the following:

Theatre/Dance 501	{I and II:4}
Theatre/Dance 522	{I and II:4}
Two courses from Th/D 528a,b,c,d,e	
	{I and II:6} {I and II:4}
Theatre/Dance 570	{I and II:4}

Requirements in Specialty

Courses are offered in seven specialties. The first course in each specialty (*italicized*) is called the "Key Course" in that specialty.

Acting

560, 561, 690a (I) or 690b (II) and 595 (II), and one Key Course outside specialty.

Creative Education

550, 551, 690a (I) or 690b (II) and 595 and one Key Course outside specialty.

Dance

530, 531, 690a (I) or 690b (II) and 595 (II) and one Key Course outside specialty.

Design/Technical Theatre

511, 512, 690a (I) or 690b (II) and 595 (II), and one Key Course outside specialty.

Directing

571, 572, 690a (I) or 690b (II) and 595 (II), and one Key Course outside specialty.

Dramatic Literature and Criticism

522, three additional courses (beyond core) from 528a,b,c,d or e, 690a (I) or 690b (II) and 595 (II), and one Key Course outside specialty.

Playwriting

585, 586, 690a (I) or 690b (II) and 595 (II), and one Key Course outside specialty.

Key Courses outside specialty are selected under departmental advisement.

Electives

Electives will be selected under departmental 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/Dance 500 (Independent Studies) may be applied to the M.A. degree unless special departmental approval is granted in advance.

Language Requirement

Demonstrate a reading knowledge of an appropriate foreign language by passing a test to be given by the Department of Foreign Languages.

In special instances where knowledge of the subject matter and techniques of an allied discipline may prove a valuable research or performance tool for the student, the language requirement may be waived. Or 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 adviser, the student will take a comprehensive 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 graduate departments 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.

Only a limited number of such programs can be offered each year. Considerable lead time is required to develop each program; from the student's initial inquiry to final approval of a program usually takes several months. The nature of such programs — more than a single discipline, and special arrangements — generally calls for more credit hours than the minimum numbers for which a master's degree can be awarded by WWU. Only students eligible for unconditional admission to the Graduate School or WWU are admitted.

Detailed information can be obtained by writing the Graduate Office, WWU, Bellingham, WA 98225. Ask for "Fact Sheet: Faculty/Student-Designed Programs." Procedures for applying are contained in the "Fact Sheet."



Fisher Fountain

COLLEGE OF ARTS AND SCIENCES

Dr. Peter J. Elich, Dean

The College of Arts and Sciences, Western's largest academic division, contains 23 departments offering more than 60 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 liberal education in three parts: first, a program of education-in-breadth through *General University Requirements* (GUR) 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.

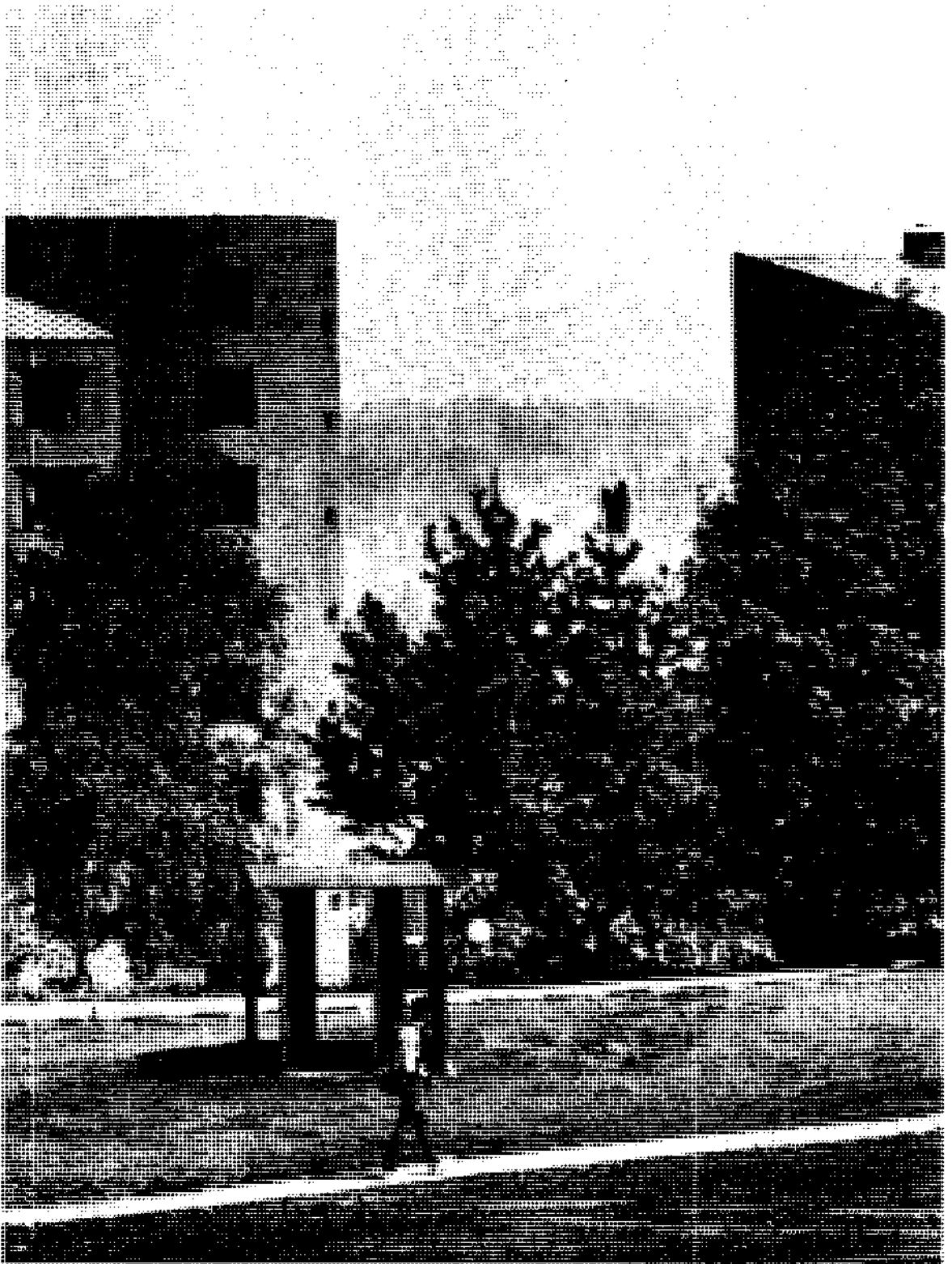
The aim of such a liberal education is not only to prepare students for the special roles they will take on as baccalaureate graduates but also to help students acquire characteristics of the sort that will mark them as educated persons. Thus, the faculty of the College, as a community of teachers and 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 some 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

Accounting/Computer Science	BA
American Culture	BA
Anthropology	BA, MA
Apparel Design	BA
Biology	BA, BS, MS
Biology/Chemistry	BS, BA/Ed
Biology/Huxley	BS
Biology/Math	BS
Biology/Physical Science	BA/Ed
Broadcast Communication	BA
Business Administration/ Computer Science	BA
Canadian American Studies	BA
Chemistry	BA, BS, MS, BA/Ed
Chemistry/Mathematics	BA/Ed
Chemistry/Physics	BA/Ed
Community Health	BS
Computer Science	BS
Earth Science	BA/Ed
Earth Science/Physical Science	BA/Ed
Economics/Mathematics	BA
Electronic Engineering Technology	BS
English	BA, MA, BA/Ed
Environmental Geology	BS
Ethnic Studies	BA
Fashion Marketing	BA
Foreign Languages French, German, Russian, Spanish	BA
French, German, Spanish	BA/Ed
Freshwater Studies	BS
General Science	BA/Ed
Geography	BA, MS, BA/Ed
Geology	BA, BS, MS
Geology/Math	BS
Geophysics	BS
History	BA, MA, BA/Ed
Home Economics	BA, BA/Ed
Humanities	BA
Industrial Arts Education	BS, M/Ed
Industrial Design	BS
Journalism	BA
Manufacturing Engineering Technology	BS
Mathematics	BS, MS, BA/Ed
Mathematics/Computer Science	BS

College of Arts & Sciences

Mathematics/Economics	BA	Physical Geochemistry	BS
Natural Science	M/Ed	Physical Science	BA/Ed
Nursing	BSN	Physics	BA, BS, BA/Ed
Nutrition	BS	Physics/Astronomy	BA
Philosophy	BA	Physics/Computer Science	BS
P.E., Health & Recreation	BA, BA/Ed, M/Ed	Physics/Math	BA, BA/Ed



Political Science	BA, MA, BA/Ed
Political Science/Economics	BA
Public Policy & Administration	BA
Psychology	BA, MS, BA/Ed, M/Ed
Recreation and Parks	BA
Science Education	M/Ed
Self-Designed Interdisciplinary Major	BA, BS
Social Studies	BA/Ed
Sociology	BA, BS, MA
Speech Communication	BA, MA, BA/Ed
Speech/English	BA/Ed
Speech Pathology & Audiology	BA, BA/Ed, MA
Technology/Industrial Technology	BS
Urban & Regional Planning	BA
Visual Communication (ViCOED)	BS
Vocational Industrial-Technical Teacher Education	BS

Admission

See the catalog section on University Admissions.

Requirements for Bachelor's Degrees

- 180 quarter hours of credit; no fewer than 60 credits in upper-division study
- Residence study: one full year (45 credits minimum) including the final quarter before issuance of a degree; Study Abroad programs are acceptable as resident credit to a maximum of 45 credits
- Scholarship standard: a cumulative grade average of 2.00 (C) or better, with no grades of less than C-acceptable in the major, minor, supporting courses for major or minor, professional education courses, or in English composition. Admission to, and continuation in, the teacher education curriculum requires a minimum average of 2.50. Some departments have minimum grade point requirements in the major for graduation. Please check the departmental major requirements for specific information.
- General University Requirements: approximately 50 to 70 credits, depending upon degree of overlap with major and exemptions based on test results and previous preparation
- Major area emphasis as specified in departmental sections under Bachelor of Arts, Bachelor of Science and Bachelor of Arts in Education
- Electives as needed for the 180 quarter hours total credit

Majors and Minors

In addition to the General University Requirements and other common degree requirements listed on the preceding pages, 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 chairman 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 chairman 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. Joan Stevenson	Anthropology
Dr. Ronald J. Taylor	Biology
Dr. Mark L. Wicholas	Chemistry
Dr. James L. Johnson	Computer Science
Dr. Douglas B. Park	English
Dr. Rudolf Weiss ..	Foreign Languages & Literatures
Dr. Debnath Mookerjee	Geography & Regional Planning
Dr. Edwin H. Brown	Geology
Dr. Roland L. DeLorme	History
Dr. Rosalie R. King	Home Economics
Mr. Gerson F. Miller	Journalism
Dr. William Stoever	Liberal Studies
Dr. Albert J. Froderberg	Mathematics
Dr. Ann Harley	Nursing
Dr. Hugh Fleetwood	Philosophy
Dr. M. Chappelle Arnett	P.E., Health & Recreation & Parks
Dr. Ajit S. Rupaal	Physics/Astronomy
Dr. Ralph E. Miner	Political Science
Dr. Richard W. Thompson	Psychology
Dr. E. R. Mahoney	Sociology
Dr. Larry S. Richardson	Speech and Broadcast
Dr. Michael Seilo	Speech Pathology/Audiology
Dr. Paul E. Rainey	Technology

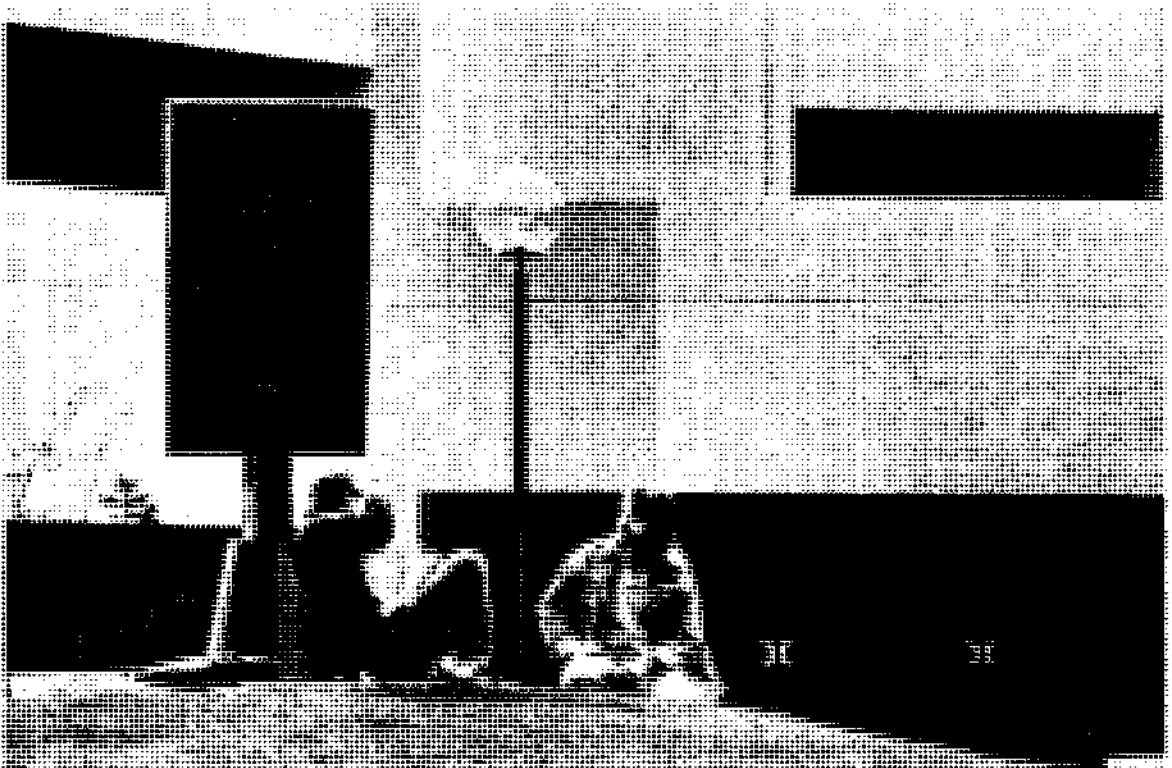
Departments, Courses & Programs

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 class schedule, the Summer Catalog and bulletins of the Center for Continuing Education.

The following programs are listed alphabetically in the "Interdisciplinary" section following the department listings:

American Culture
Canadian American Studies

East Asian Studies
Ethnic Studies
Freshwater Studies
General Science
Industrial Design
Latin American Studies
Linguistics
Science Education
Social Studies Education
Student/Faculty Designed
Interdepartmental Major
Terrestrial Ecology
VICOED
Women Studies



Anthropology

Anthropology is that discipline which studies humankind in the widest perspective, its physical development, development through time, and the diversity of ways of life 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 as well as 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.

1. The archaeologist attempts to reconstruct the past through a study of material remains of extinct peoples.
2. The physical anthropologist focuses on anatomical, physiological and genetic differences in past and contemporary human populations.
3. The anthropological linguist 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.
4. The cultural anthropologist 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, he or she does cross-cultural comparisons to test generalizations about human behavior.

Utilizing ethnographic, ethnological and ethno-historical tools as well as information supplied by these subdisciplines, the anthropologist does

comparative studies of living and dead 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 for those pursuing cross-cultural and culture-area research. Linguistic specializations available include languages of South Asia, East Asia and the Northwest Coast.

Degrees offered are the B.A. in Arts and Sciences and the B.A. in Education (as well as minors in both programs). 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

- JOAN C. STEVENSON (1979) Chair.
Associate Professor. BA, University of Washington; MA, PhD, University of Wisconsin-Milwaukee.
- GARLAND F. GRABERT (1967) Professor. BA, MA, PhD, University of Washington.
- JOYCE HAMMOND, (1984) Assistant Professor. BA, MA, Brown University; PhD, University of Illinois.
- HOWARD L. HARRIS (1966) Associate Professor. BA, University of Iowa; MA, University of Missouri; M.Div., Hartford Theological Seminary.
- LINDA AMY KIMBALL (1976) Associate Professor. BSEd, MA, PhD, Ohio State University.
- HERBERT C. TAYLOR, JR. (1951) Professor. BA, MA, University of Texas; PhD, University of Chicago.

BACHELOR OF ARTS

Major — Anthropology 60 credits

- Anth 201 and either 202, 210 or 215
- Anth 247 or 348
- Anth 301
- A course in statistics under departmental advisement
- Electives in anthropology under departmental advisement

Archaeology Concentration

72 credits with electives under advisement

- Anthropology major requirements as noted under Major requirements
- Elective credits in anthropology under advisement:
312 or equivalent field experience, 310, 311, 411, 414, 416
- 12 credits from the following areas (up to 10 credits in these courses may be substituted for anthropology electives): Geography 251 and either 351, 352 or 354; Geology 211 and 310 or other courses of comparable or more advanced content; Huxley 342 or 478; 1 course in computer science with course work in algebra, trigonometry and geometry strongly recommended

Minor 25 credits

- Anth 201 and either 202, 210 or 215
- Electives under departmental advisement

Combined Major — Anthropology/Biology

71 credits including 10 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 121, 122, 312, 348, 349, 370, 490
- Biol 340 or Anth 335
- Chem 115 (or 121, 122, 123) and 251 (or 351, 352, 353)
- Recommended elective courses: Biol 307, 308, 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 45 credits

- Anth 201, 210 and 215

- Anth 481 strongly recommended
- Electives under departmental advisement:
At least one course from each of the following groups:
— Cultural area courses: Anth 361, 362, 363, 364, 461, 462
— Topical cultural anthropology courses: Anth 247, 330, 341, 348, 353

Students in Elementary Education must also complete the Elementary Education minor.

Students in Secondary Education must also complete the specific program requirements for Social Studies Education, including the Social Studies minor, as outlined in the College of Arts and Sciences Interdisciplinary Program section.

Completion of this major/minor program leads to a teaching endorsement in anthropology/social studies at the secondary level.

Minor 25 credits

- Anth 201 and either 202, 210 or 215
- Electives under departmental advisement

DEPARTMENTAL HONORS

In addition to the general requirements for all honors students, an anthropology major who wishes to graduate "with honors" must demonstrate a reading knowledge of a foreign language and submit a senior thesis.

GRADUATE STUDY

For a concentration leading to a Master of Arts, see the Graduate section of the catalog.

COURSES IN ANTHROPOLOGY

Courses numbered X37, X97, 300, 400, 417, 445 are described on page 28 of this catalog.

- 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 will be placed upon understanding each culture from its own point of view rather than our own.
- 202 INTRODUCTION TO HUMAN ORIGINS (5)
Human origins drawn from the fossil and archaeological records. Problems of human physical diversity and prehistoric cultural diffusion explored.
- 210 INTRODUCTION TO ARCHAEOLOGY (5)
The nature of archaeology as seen by classicists, art historians, historians and anthropologists. Methods, techniques and theories used in the different conceptions of the discipline.

- 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 L.H. Morgan and E.B. Tylor.
- 309 **CURATORIAL METHODS IN ANTHROPOLOGY (5)**
Prereq: Anth 201 and 210 and permission. Practical experience in museum techniques of cataloging, preparation, storage, preservation and curatorial methods. Ethnographic, archaeological and historic materials and collections of the Whatcom Museum of History and Art will be studied under the guidance of the museum staff. Students will assist the museum staff in this and other museum work and prepare a report of their activities and research.
- 310 **THE RISE OF CIVILIZATIONS (5)**
Prereq: Anth 201, and 202 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.
- 311 **PREHISTORIC BASES OF EUROPEAN SOCIETY (5)**
Prereq: Anth 201. Archaeological evidence for the introduction of agriculture, metallurgy, trade routes and complex social systems into Europe; sites and settlements beginning in the terminal Pleistocene and ending in the historical Roman period.
- 312 **FIELD COURSE IN ARCHAEOLOGY (12)**
Prereq: Anth 201, 210 or equivalent and permission of instructor. On-site training in methods and techniques of archaeological survey and analysis.
- 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.
- 332 **SOCIAL CHANGE AND MODERNIZATION (3)**
Prereq: Anth 201. A survey of the mechanisms, modes and variability of socio-cultural change and anthropological theories about change, through descriptive studies.
- 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 (3)**
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 ROLES IN CULTURE (4)**
Prereq: Anth 201. Cross-cultural study of sex role differentiation, including background and current problems in our own culture.
- 361 **INDIANS 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.
- 363 **PEOPLES OF SUB-SAHARAN AFRICA (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.
- 371 **FIELDWORK METHODS IN CULTURAL ANTHROPOLOGY (5)**
Prereq: 15 credits in anthropology. The anthropologist as fieldworker; overview of the techniques and methods of ethnographic fieldwork. Students will gain fieldwork experience through small ethnographic projects.
- 396a,b,c **HONORS TUTORIAL (3-5 ea.)**
- 409 **ARCHAEOLOGICAL FIELD METHODS (3)**
Prereq: Anth 201, 202 or 210, and permission of instructor. Site surveys and evaluation; mapping methods and recording of data; field experience in excavation techniques, preservation of artifacts. Offered every other year.
- 410 **ARCHAEOLOGICAL ANALYSIS AND INTERPRETATION (3)**
Prereq: Anth 201, 202 or 210. Archaeological laboratory methods; artifact identification, classification, measurement; map reproduction, soil and feature profiles, use of photographs and other graphic methods. Offered every other year.
- 411 **ARCHAEOLOGY OF NORTHWESTERN NORTH AMERICA (3)**
Prereq: 10 credits in anthropology including 210 or equivalent. The prehistoric archaeology of the Northwest Coast and Plateaus; current explorations and interpretations in a context of paleoenvironmental and ethno-historical evidence.
- 414 **ARCHAEOLOGY OF NORTH AMERICA (3)**
Prereq: 10 credits in anthropology including 210 or equivalent. 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 are examined.
- 416 **ARCHAEOLOGY OF SOUTH AMERICA (3)**
Prereq: 10 credits in anthropology including 210 or equivalent. Origins of Paleoindians of South America and their paleoenvironments. Models for explaining the origin of the Andean civilizations and the peripheral societies as well as examination of the prehistoric cultural processes that operated in the lowlands and Amazonia.
- 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 202 or 215. Detailed exploration of the fossil record leading to modern humans.

424 MEDICAL ANTHROPOLOGY (3)

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.

426 AGING: A CROSS-CULTURAL STUDY (3)

Prereq: Anth 201. A study of the aging process as a cross-cultural comparison from the great apes through hunting and gathering societies to agricultural villages to the modern world. Emphasis is upon role changes and forecast of future change.



- 448 INTERMEDIATE ANTHROPOLOGICAL LINGUISTICS (3)
Prereq: Anth 348. Detailed examination of further topics in anthropological linguistics, including language universals, language acquisition, world language and script patterns, and ethnosemantics.
- 453 ROLES OF WOMEN IN CROSS-CULTURAL PERSPECTIVE (3)
Prereq: Anth 201. An ethnographic survey of women's economic, social, religious, political and domestic roles. Current theoretical perspectives and the significance of biological, technoenvironmental and symbolic factors in determining women's roles will be emphasized.
- 462 INDIANS OF THE NORTHWEST COAST (3)
Prereq: Anth 201. 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 sub-continent, 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.
- 467 PEOPLES OF MEXICO (3)
Prereq: Anth 201 and written permission of instructor. Survey of the Indians of Mexico, covering the prehistoric period with particular reference to the Aztec and Maya and continuing with an examination of the effects of the Spanish conquest and subsequent amalgamation of cultures.
- 481 CHILDHOOD AND CULTURE (3)
Prereq: 10 credits in anthropology. The process of socialization or enculturation viewed from a cross-cultural perspective.
- 484-489 READING AND CONFERENCE (3-5)
The specific study topic will be determined by the instructor in consultation with each student.
484 Cultural Anthropology
485 Physical Anthropology
488 Linguistics
489 Archaeology
- 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.
- 496a,b,c HONORS TUTORIAL (3-5 ea)

Graduate Courses

Courses numbered 500, 517, 545, 597 are described on page 28 of this catalog.

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

- 503 HISTORY OF ANTHROPOLOGY (5)
Prereq: graduate status and permission of department. Development of principal theoretical orientations and methods in the cultural and historical setting; development of anthropology as a discipline.
- 504 METHODS AND THEORY OF ANTHROPOLOGY (5)
Prereq: graduate status and permission of department. Analysis of major theoretical approaches; research methods and procedures; relationship of theory and method in formulating research problems.
- 511 HUMAN VARIATION (3)
Prereq: graduate status or permission of instructor. The biological adaptations of contemporary peoples to disease, altitude, cold, heat and nutritional stress are examined. The biological basis for populational differences in behavior is also explored.
- 522 SEMINAR: OLD WORLD PREHISTORY (3)
Prereq: Anth 503, 504 and permission of instructor. Seminar in selected topics of Old World prehistory, to cover topics from the Paleolithic to early historic civilizations. Assessments of methods, techniques and underlying theory behind the major Old World Archaeological Zones. Assumptions basic to the interpretations: economic-deterministic, cultural evolutionary and cultural ecological. Students to select their problem areas, study them and discuss in seminar sections.
- 523 SEMINAR: NEW WORLD PREHISTORY (3)
Prereq: Anth 503, 504 and permission of instructor. This seminar to be structured similarly to 522. New World prehistory; its problems and theoretical foundations. Problems of origins, distributions in the time-space of populations, the effects of changing environments, origins of agriculture, metallurgy. Problems of Old World diffusion, evidence for and against. Cultural-environmental relationships.
- 530 SEMINAR: VALUES (3)
Prereq: graduate status or permission of instructor. How scholars characterize cultures as wholes by references to value configurations, themes, world views or philosophies; difficulties in characterization of value systems in unself-conscious societies.
- 532 COMPARATIVE SOCIAL ORGANIZATION (3)
Prereq: minimum of 15 credits of anthropology undergraduate courses and permission of instructor. The study of the various ways in which people group themselves: the structure of roles, the recruitment and assignment of roles and status within groups, leadership and the legitimization of authority, and the relationships among groups. The sanctions governing relationships: gossip, ridicule, isolation and formal "legalistic."
- 540 ANTHROPOLOGICAL LINGUISTICS (3)
Prereq: 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.
- 584-589 SPECIAL PROBLEMS/INDEPENDENT STUDY IN ANTHROPOLOGY (1-3 ea.)
Prereq: admission to graduate status. Topics chosen under advisement of faculty.
584 Cultural Anthropology
585 Physical Anthropology
588 Linguistics
589 Archaeology
- 690 RESEARCH (3)
Prereq: formal advancement to candidacy for the M.A. in anthropology. S/U grading.
- 691 THESIS (3)
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, 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 selects 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

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 normally complete one of the major concentrations (basic biology, ecology, marine biology) leading to the Bachelor of Science degree.

In addition to a strong core of basic biology, the B.S. degree includes supporting courses in the physical sciences and mathematics and is therefore recommended for those who wish to continue post-baccalaureate studies in the biological sciences or to teach in secondary schools and community colleges.

For those who wish to become certified to teach biology, a Bachelor of Arts in Education may be the appropriate degree. Science students who wish to apply for admission to medical or dental schools should consider the Biology B.S. major and the Bachelor of Science combined Biology/Chemistry major.

The Biology/Mathematics combined major is offered for those students interested in quantitative biology, statistics, biometry, ecology and computer modeling of biological systems. The B.S. degree in Biology/Chemistry is designed for students who wish to pursue graduate study in molecular biology, biochemistry, or medicine. Finally a combined major (B.A.) is available in Biology/Anthropology for students whose interest spans these two disciplines.

Students who are interested in biology or one of its component specialties, but not directly interested in teaching or other specific professional careers 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 Bachelor of Arts degree in which the number of required courses has been kept low to permit the student to select areas of study and courses suited to his individual needs and interests. Programs one might design under this major include combinations of biology with another discipline such as art, economics, philosophy, physical education, psychology, political science or speech.

The Biology Department maintains a program of advisement; students interested in any of the major programs in biology must consult the undergraduate advisement coordinator, Dr. Jerry Flora, 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 the appropriate area adviser, not later than 12 months before the bluebook is approved for senior evaluation.

TEACHING CAREERS IN BIOLOGY

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 399 and 492 as well as the professional education sequence (see Education). 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 expect to teach in smaller secondary programs are advised to consider the B.A. in Education (Biology) or one of the combined major B.A. in Education programs (Biology/Physical Science or 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 College of Arts and Sciences Interdisciplinary Programs section). Note that Science Education 383 is Biological Science for the Elementary School.

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, electron microscope laboratories, 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 new 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 door-

step invite frequent class and individual projects focusing on the organismal and ecological aspects of biology, and the essential intricacy of our environment.

BIOLOGY FACULTY

- RONALD J. TAYLOR (1964) Chair. Professor. BS, Idaho State College; MS, University of Wyoming; PhD, Washington State University.
- A. CARTER BROAD (1964) Professor. BA, MA, University of North Carolina; PhD, Duke University.
- HERBERT A. BROWN (1967) Associate Professor. BA, University of California, Los Angeles; PhD, University of California, Riverside.
- MAURICE A. DUBE (1963) Associate Professor. BS, Washington State University; MS, PhD, Oregon State University.
- JOHN E. ERICKSON (1964) Associate Professor. BA, University of Omaha; MA, Indiana University; PhD, University of Oregon.
- CHARLES J. FLORA (1957) Professor. BS, Purdue University; MEd, EdD, University of Florida.
- RICHARD W. FONDA (1968) Professor. BA, Duke University; MS, PhD, University of Illinois.
- HUBERTUS E. KOHN (1966) Associate Professor. PhD, University of Innsbruck, Austria.
- GERALD F. KRAFT (1961) Associate Professor. BA, San Jose State College; MS, Washington State University; PhD, Oregon State University.
- JAL S. PARAKH (1966) Professor. BS, Osmania University, India; MS, University of Florida; PhD, Cornell University.
- MERIBETH M. RIFFEY (1957) Associate Professor. BS, MS, Northwestern University; PhD, Washington State University.
- JUNER P. ROSS (1967) Professor. BSc, PhD, DSc, University of Sydney, Sydney, Australia.
- DAVID E. SCHNEIDER (1966) Associate Professor. BS, Bates College; PhD, Duke University.
- DONALD J. SCHWENMIN (1960) Associate Professor. BS, MS, PhD, University of Michigan.
- CLYDE M. SENGER (1963) Professor. BA, Reed College; MS, Purdue University; PhD, Utah State University.
- IRWIN L. SLESNICK (1963) Professor. AB, BS, Bowling Green State University; MS, University of Michigan; PhD, Ohio State University.
- DON C. WILLIAMS (1966) Professor. BA, Chico State College; MA, PhD, University of California, Davis.

Research Associates

- Kenneth H. Dunton
BA, University of Maine, Orono; MS, Western Washington University.
- Carl F. Nyblade
AB, Oberlin College; PhD, University of Washington
- Frederick M. Rhoades
BA, Swarthmore; MS, Oregon State University; PhD, University of Oregon
- Bruce D. Ryan
BA, Washington State University; MS, Western Washington University
- Terence R. Wahl
BA, University of Washington.

BACHELOR OF ARTS

Major 50 credits plus Supporting Courses

Basic biology emphasis

- Biol 121, 122, 123, 323 or 325
- Electives to total 50 credits in biology selected with approval of major adviser

Biology

- Chem 115 and 251, or equivalent

(C. J. Flora, adviser)

Cooperative Major — Forest Biology

In 1984, a Cooperative WWU Baccalaureate in Biology/WSU Master of Science in Forest and Range Management Program was developed. In this program, a student can take the basic science, supporting science, mathematics and non-science, and general university requirements in the first three years at WWU. Students with appropriate grade point averages would then transfer to Washington State University in Pullman and enroll in forestry and range management courses for the fourth year of their baccalaureate program. On satisfactory completion of that year, they can transfer the credits back to WWU and be awarded a B.A. degree in Biology. Those students eligible for admission to the graduate program in forest and range management would, after applying and being admitted to the program, complete a second year at WSU. Ideally, students would be able to complete a non-thesis Master of Science in Forest and Range Management within a year of admission to the Graduate School of Washington State University. Students who elect not to transfer to WSU or whose grade point average is not appropriate for transfer will be able to apply courses taken in forest biology to other biology degree programs at WWU.

Course Requirements at WWU:

- Biology courses: Biol 121, 122, 123; 310, 311 (312 recommended); 325, 340, 379, 452
- Supporting courses: Chem 121, 122, 123, 251; Geol 211; Math 124; Comp Sci 107; Eng 101, 301, 302; Speech 205; Econ 203, 204; GUR requirements

Course Requirements at WSU:

- FRM 302, 304, 311, 312, 320, 330
- FRM 348 or 351 or 371
- FRM 411, 412
- Soils 201, 316

(H. Kohn, adviser)

Combined Major — Biology/ Anthropology: Major Concentration

71 credits including 10 in supporting courses

- Biol 121, 122, 312, 348, 349, 370, 490
- Biol 340 or Anth 335
- Anth 201, 210, 215
- 10 credits in anthropology under advisement
- Chem 115 (or 121, 122, 123) and 251 (or 351, 352, 353)
- Recommended elective courses: Biol 307, 308, 325, 465, 469, and 485; Anth 420, 423, 424, any "Peoples" courses relevant to the student interests.

(Advisers: J. Stevenson - Anthropology; J. Erickson - Biology)

BACHELOR OF ARTS IN EDUCATION

Major Concentration 88-90 credits

Biology emphasis

- Biol 121, 122, 123, 310, 311, 312, 325, 490
- One course from Biol 323, 379, or Chem 371
- One course from Biol 384, 485
- One course from Biol 345, 424, 450, 452, 454, 456, 458, 460, 461, 463, 465

Supporting Courses

- Chem 115 (or 121, 122, 123) and 251 (or 351, 352, 353)
- Math 105 and 124 (or 156)
- Physics 101 (or 131, 132, 133)
- Geol 211 and 212
- Sci Ed 399 and 492

(I. Slesnick, adviser)

Combined Major — Biology/Chemistry: Major Concentration 106-109 credits

- Chem 121, 122, 123, 333
- Option a: Chem 251, 461, 462, and Chem 371 or Biol 323
- Option b: Chem 351, 352, 353, 354, 471, 472, and 473 or 474
- Biol 121, 122, 123, 325
- One course from Biol 471, 480, 490
- 10 credits from Biol 310 or 345, 311, 312
- Biol 485 or General Science 405
- Sci Ed 399 and 492
- Math 124, 125 (for Option a) and Physics 131, 132, 133 (or 241, 242, 341, 351)

(I. Slesnick, adviser)

NOTE: This program is specifically designed for students who wish to receive teaching endorsements in both biology and chemistry. Students entering this curriculum are advised that this combination major contains more credits than the Bachelor of Arts in Education in either single discipline. Depending upon 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 2.50 or better in the chemistry and in the biology courses.

Combined Major — Biology/Physical Science: Major Concentration

95-97 credits

- Chem 121, 122, 123, 251

- Physics 131, 132, 133 (or 241, 242, 341, 351)
- Sci Ed 399 and 492
- Biol 121, 122, 123
- Biol 310 or 345, 311, 312, 325
- One course from Biol 471, 480, 490
- Biol 485 or General Science 405
- Chem 371 or Biol 323
- 5 credits in geology
- Math 124

(I. Slesnick, adviser)

NOTE: This program is specifically designed for students who wish to receive teaching endorsements in both biology and physical science. Students entering this curriculum are advised that this combination major contains more credits than the Bachelor of Arts in Education in biology. Depending upon options chosen, the overall student program may involve more than 180 credits.

BACHELOR OF SCIENCE

Pre-professional program for professional biologists, students pursuing graduate work, secondary teachers and related specialties.

Major Concentration 110 credits

Basic biology emphasis

- Biol 121, 122, 123, 310, 311, 312, 323 or 379 (or Chem 471, 472 and 473 or 474), 325, 340, 485, and one course from Biol 471, 480, 490
- Chem 121, 122, 123, 251 (or 351, 352 and 353)
- Math 124
- Physics 131, 132, 133 (or 241, 242, 341, 351)
- Sci Ed 399 and 492, Geol 211 (teacher preparation only)
- Electives to be taken from biology, chemistry, computer science, geography, geology, mathematics, physics and Huxley College selected with approval of departmental adviser.

(C. J. Flora, adviser)

Marine biology emphasis

- Biol 121, 122, 123, 310, 312, 325, 340, 403, 406, 407, 456, 490 and 460 or 461
- Chem 121, 122, 123, and 251 (or 351, 352, 353)
- Physics 131
- Math 124
- Electives selected with approval of adviser. Some of the courses from which electives should be selected: Biol 311, 323, 460, 461, 462, 463, 468, 480, 485; Chem 333, 471, 472, 473; Geol 211, 340; Huxley 338, 361, 417a, 438; Physics 132, 133; Comp Sci 210, 211
- Biol 462 (Ichthyology) is strongly recommended

(J. Ross and D. Schneider, advisers)

Combined Major — Biology/Chemistry Major Concentration 110 credits

- Biol 121, 122, 123, 345, 408, 471, plus 5 credits in biology under advisement.
- Chem 121, 122, 123, 333, 351, 352, 353, 354, 461, 462, 463, 471, 472, 473, 474
- Math 124, 125
- Physics 131, 132, 133 or 241, 242, 341, 351

This program is specifically designed for students who wish to undertake graduate study in either molecular biology or biochemistry.

(D. Schwemmin, adviser)

Combined Major — Biology/ Mathematics: Major Concentration

110 credits

- Biol 121, 122, 123, 310, 311, 312, 323, 325
- One course from Biol 471, 480, 490
- Math 124, 125, 126, 205, 241, 331, 341, 342; Math/Comp Sci 335 (or Physics 341, 351); Comp Sci 210, 439
- Chem 115, 251
- Physics 241, 242, 341, 351 (or Math/Comp Sci 335)

(C. Senger, adviser)

Major Concentration — Terrestrial Ecology: Biology/Huxley 110 credits

Students who choose to major in this cooperative program can fulfill the requirements of a Bachelor of Science degree through the Department of Biology (see below) or through Huxley College of Environmental Studies.

- Biol 121, 122, 123, 310, 311, 312, 452, 490
- Biol 340 or Huxley 363
- Biol 379 or 403
- Ecology Core: Biol 325, 404; Huxley 333, 431
- Chem 121, 122, 123, 251
- Chem 333 or Huxley 361
- Math 124
- Physics
- Electives selected with approval of adviser from appropriate courses in Biology and Huxley; Biol 407 and Biol 406 or Hux 321a,b are recommended for students who wish to get a background in marine ecology

(R. Fonda, adviser)

Minor 25 credits

- Biol 121, 122, 123 plus a minimum of 14 additional credits in biology under advisement.

Students are advised to consult their major departments for remainder of credits.

At least 10 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 section of the catalog.

COURSES IN BIOLOGY

Courses numbered X37; X97; 300, 400, 417; 445 are described on page 28 of this catalog.

101 PRINCIPLES OF GENERAL BIOLOGY (4)

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.

121 INTRODUCTION TO PLANT AND ANIMAL BIOLOGY (5)

Survey of plant and animal life, evolutionary and ecological relationships.

122 INTRODUCTION TO CELLULAR BIOLOGY (3)

Prereq: one quarter college chemistry. An introduction to the structure, function and development of cells.

123 INTRODUCTION TO GENETICS (3)

Prereq: Biol 122. Principles of inheritance. Analysis of examples from animals, plants and humans.

201-207 FIELD BIOLOGY OF THE NORTHWEST (3 ea)

Prereq: high school biology recommended. Recognition, life history, ecological relationships and distribution, evolutionary trends of representative groups of organisms. Field biology courses are not open to students who have credit for corresponding upper-division course.

201 Mushrooms, Molds and Mosses

202 Flowering Plants, Conifers and Ferns

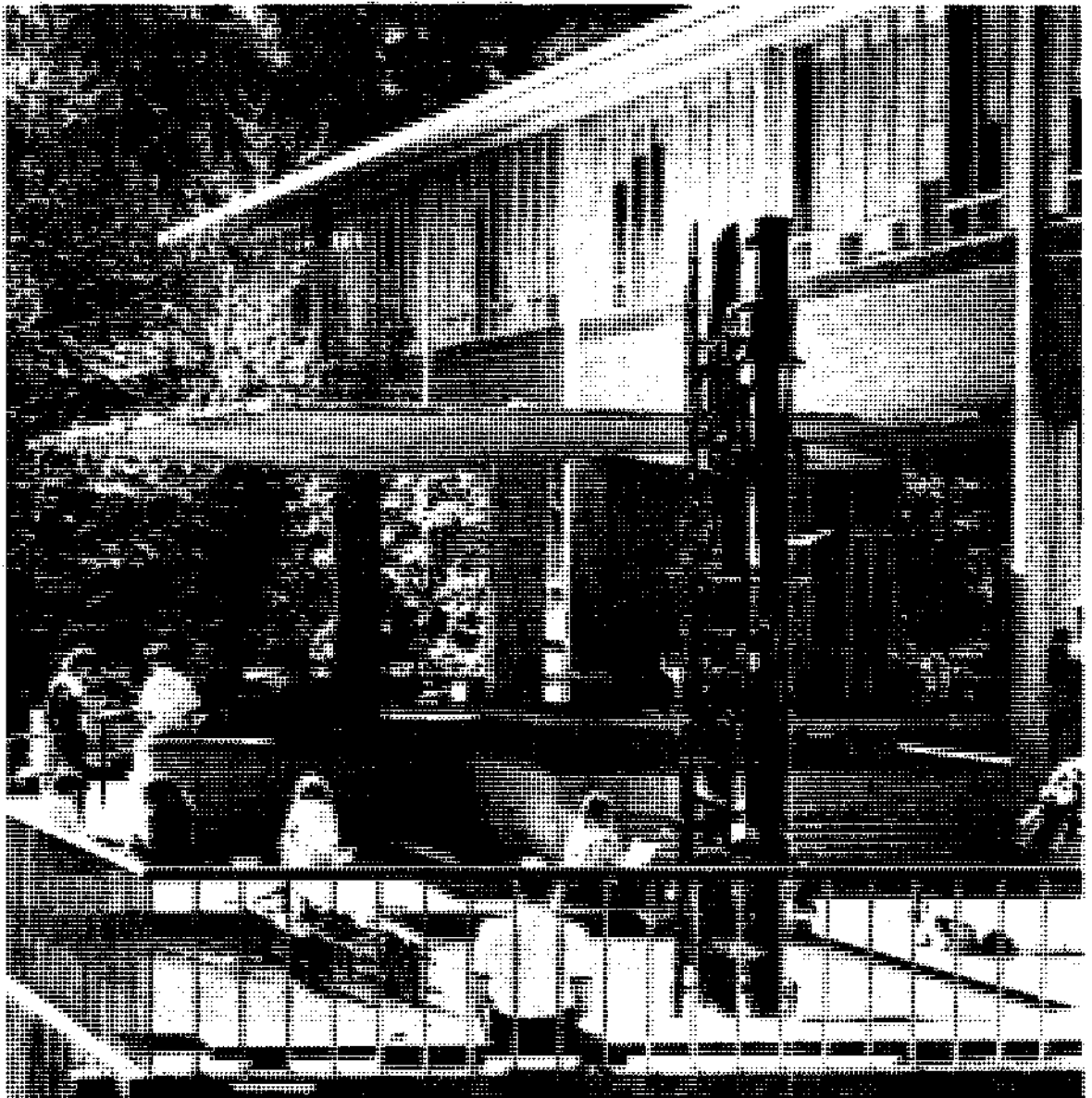
203 Insects and other Terrestrial Arthropods

204 Algae of the Northwest

205 Marine Biology

206 Birds of the Northwest

207 Mammals of the Northwest



- 223 **FOREIGN CHEMICALS AND NATURAL SYSTEMS (3)**
Prereq: Biol 101 and Chem 101. 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).
- 305 **NATURAL HISTORY OF THE NORTHWEST (5)**
Prereq: Biol 101. Kinds of plants and animals in the Northwest; their distribution and life histories; field trips to beaches, lakes and ponds, forests, mountains. Not applicable to a B.S. major in biology.
- 306 **CORAL REEF BIOLOGY (5)**
Prereq: Biol 205 or equivalent. A field study of the systematics and ecology of tropical coral reef organisms.
- 307 **HUMAN POPULATIONS AND NATURAL RESOURCES (3)**
Prereq: Biol 101. Growth of human populations; changes in natural resources resulting in growth; prospects and consequences of population increases and resource utilization.
- 310 **THE BIOLOGY OF LOWER ORGANISMS (5)**
Prereq: Biol 121, 122, 123. An introduction to the basic biology of bacteria, fungi, algae, lichens, protozoa and sponges with emphasis on ecological relationships of lower organisms to one another and to other organisms, their occurrence in nature, and the classification of organisms.
- 311 **PLANT BIOLOGY (5)**
Prereq: Biol 121, 122, 123. Basic physiological principles; evolutionary trends and adaptations in structural development and reproductive systems of higher plants—Bryophytes through Angiosperms.
- 312 **ANIMAL BIOLOGY (5)**
Prereq: Biol 121, 122, 123. A course that stresses the 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.
- 323 **CELLULAR, MOLECULAR AND DEVELOPMENTAL BIOLOGY (5)**
Prereq: 14 credits in biology; Chem 251 or 351 and 352. Students planning to take both Biol 345 and 323 should take 345 first. Cell organelle structure and function, membrane phenomena, energy utilization and production, cellular biosyntheses, control of cellular activities, developmental processes at the cellular level.
- 325 **ECOLOGY (5)**
Prereq: junior status; 14 credits in biological topics. Community energetics and organismal-environmental relationships in marine, fresh water and terrestrial habitats.
- 340 **BIOMETRICS (5)**
Prereq: junior status; 14 credits in biological topics; knowledge of college algebra. The design of biological experiments and appropriate statistical analysis of experimental data. Calculator required.
- 345 **FUNDAMENTALS OF MICROBIOLOGY (5)**
Prereq: Chem 122 and 251; 10 credits in biology. 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 101; not open to students with credit in Biol 123. Basic principles of heredity, human genetic problems; radiation and mutation, chromosomal errors, eugenics.
- 379 **PLANT PHYSIOLOGY (5)**
Prereq: Biol 311; 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.
- 384 **PERSONAL AND SOCIAL IMPLICATIONS OF MODERN BIOLOGY (4)**
Prereq: Biol 101 or 122 and 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 312 and 325. Field and laboratory studies of physiological responses of marine animals to environmental factors; methods for design and analysis of experiments.
- 404 **PLANT ECOLOGY (5)**
Prereq: Biol 325; Biol 311 recommended. Ecology of plant communities with special emphasis on analysis, description, succession, and distribution. Weekend field trips included.
- 405 **FIELD ECOLOGY (3)**
Prereq: Biol 325 and permission of instructor; Biol 452 and 404 recommended. Analysis and investigation of vegetation patterns in Arizona, California, or other regions. Field trip. May be repeated for credit.
- 406 **GENERAL OCEANOGRAPHY (5)**
Prereq: one quarter each of college physics, college chemistry and college biology. Biological, chemical, physical and geological oceanography. Limited laboratory study of oceanographic techniques.
- 407 **MARINE ECOLOGY (5)**
Prereq: Biol 325 (ecology). The interaction of physical, chemical, and biological processes in the functioning of marine ecosystems. Productivity, food webs, nutrient cycles and community ecology will be discussed. Investigative laboratory studies of local shallow-water marine and estuarine ecosystems.
- 408 **THE BIOCHEMISTRY OF DRUG ACTION (3)**
Prereq: Biol 323 (or Chem 471), Chem 251. 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.
- 411 **INTERNSHIP IN BIOLOGY (3-6)**
Prereq: senior standing in biology and permission of department. Full- or part-time work with a cooperating agency or firm. Oral and written report required. Elective in major. S/U grading.
- 423 **FIELD ENTOMOLOGY (1-2)**
Prereq: Biol 312. Insect collecting and field identification; preparation of insect collections; intersession course of one or two weeks duration.

Biology

- 424 **ENTOMOLOGY (5)**
Prereq: Biol 312. Insects: their morphology, physiology, metamorphoses, classification and economic importance.
- 425 **AQUATIC ENTOMOLOGY (3)**
Prereq: Biol 312; 424 recommended. Classification and ecological relationships of insects in streams and lakes.
- 430 **SCIENTIFIC WRITING FOR BIOLOGISTS (3)**
Prereq: 40 credits in biology and permission of instructor. The techniques of writing a biological journal article; elements of style; line drawings, lettering and reproduction of figures; reading and reviewing biological papers.
- 433 **WATERSHED AND LAKE MANAGEMENT (4)**
Prereq: Biol 402 or Hux 333; Hux 432 and Geol 472 recommended. Management of watershed units and interaction between land and water (stream and lake) environments. Lake management and lake restoration procedures and applications. Biomanipulation as a management strategy.
- 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 121 or previous course in botany. Taxonomy of higher plants with emphasis on the characteristics and phylogeny of flowering plant families; collection and identification of local species.
- 453 **ALPINE ENVIRONMENT AND VEGETATION (5)**
Prereq: background in ecology and plant taxonomy. Interaction of plant species and environmental factors and resulting vegetation of the Alpine Zone. Offered only during the summer.
- 454 **MYCOLOGY (5)**
Prereq: Biol 310. Taxonomy of the fungi with emphasis on morphology, phylogenetic trends, collection and identification of common species. Several weekend field trips are required.
- 460 **INVERTEBRATE ZOOLOGY (5)**
Prereq: Biol 312. Classification, anatomy, physiology, development and general biology of invertebrate animals.
- 461 **MARINE INVERTEBRATE ZOOLOGY (5)**
Prereq: Biol 312. Laboratory and field study of local marine invertebrates.
- 462 **ICHTHYOLOGY (5)**
Prereq: Biol 312. Form and function of fishes; life histories; behavioral adaptations; ecological relationships; distribution; evolution and classification; socio-economic value.
- 463 **ORNITHOLOGY (5)**
Prereq: Biol 121 or previous course in zoology. Evolution of morphological adaptations of birds, classification, distribution; annual cycle including migration, breeding and population dynamics; laboratory study, field trips. Normally offered spring quarter of alternate years.
- 465 **MAMMALOLOGY (5)**
Prereq: Biol 312. Structural and physiological adaptations, population dynamics, distribution and classification of mammals with laboratory emphasis on local species. Normally offered in alternate years.
- 468 **INVERTEBRATE EMBRYOLOGY (5)**
Prereq: Biol 460 or 461. Development of invertebrate animals; laboratory study of local, marine invertebrates. Taught only at the Shannon Point Marine Center during the spring or summer quarters. Normally offered in alternate years.
- 469 **COMPARATIVE VERTEBRATE ANATOMY AND EMBRYOLOGY (5)**
Prereq: Biol 312. Morphological adaptations, developmental anatomy and evolution of organ systems in vertebrate animals. Laboratory study of adults and embryos of shark, frog, chick, cat and pig.
- 471 **MOLECULAR GENETICS (5)**
Prereq: introductory genetics, Biol 345, and Biol 323 or Chem 471. A study of the structure, replication, expression and control of genetic information. Laboratory experiments on the biochemical genetics of molds, bacteria and viruses.
- 479 **CELL AND TISSUE CULTURE (3)**
Prereq: Chem 123 and 20 credits in Biology. Principles and basic techniques for in vitro culturing and manipulation of cells and tissues of plants and animals.
- 480 **ADVANCED GENETICS (5)**
Prereq: Biol 123. Genetic mechanisms and interactions; chromosome behavior; cytogenetics; mutation, crossing over, the gene.
- 481 **PHYSIOLOGICAL ECOLOGY OF PLANTS (5)**
Prereq: Biol 311 and Biol 325. Field and laboratory study of physiological responses of plants to environmental factors; methods of design and analysis of experiments. Normally offered in alternate years.
- 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 121, 122, and 123. Principles, patterns, processes, and mechanisms of evolution in the organic world.



- 456 **ALGAE (5)**
Prereq: Biol 310. Collection, culture, identification, classification, distribution and economic importance of marine and fresh-water algae.
- 458 **BRYOPHYTES (5)**
Prereq: Biol 311. Collection, identification, physiological ecology, distribution and evolution of mosses and liverworts. Normally offered in alternate years.

Graduate Courses

Courses numbered 500, 517, 545, 597 are described on page 28 of this catalog.

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

NOTE: Biol 503, 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: ecological methods; cave ecology; plant cell physiology; biosystematics of lichens; ecology of arctic shorelines; reproductive ecology of birds; chromosomal genetics.

503 ADVANCED TOPICS IN ECOLOGY (4)

Prereq: 25 hours of biology and permission of instructor. Analysis of current literature on fundamental properties of ecosystems, communities, populations, species and characteristic environments.

506 OCEANOGRAPHY (5)

Prereq: 20 credits in biology, one year of chemistry, and one quarter of both physics and geology. Specific studies in biological, physical, chemical and geological oceanography and their interrelationships.

514 VEGETATION OF WASHINGTON (4)

Prereq: 25 hours of biology and permission of instructor (Biol 404 recommended). Consideration and discussion of the literature on the vegetation of Washington; emphasis on the pattern of vegetation in the five physiographic provinces and environmental factors controlling distribution of species.

515 PLANT GEOGRAPHY OF NORTH AMERICA (4)

Prereq: 25 hours 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.

520 FIRE ECOLOGY (4)

Prereq: Biol 404, 515, and permission of instructor. Consideration and discussion of the literature of wildfire ecology; emphasis on the basic concepts of wildfire as a natural environmental factor, and on the role of wildfire in the vegetative formations in North America.

524 ADVANCED TOPICS IN AQUATIC ENTOMOLOGY (4)

Prereq: Biol 424, 425, and permission of instructor. Taxonomy and ecology of selected orders of aquatic insects.

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.

554 MYCOLOGY (5)

Prereq: 10 credits of upper-division botany and permission of instructor. Biology of fungi with emphasis on collection, culture, and laboratory identification of all major groups. Important interrelationships with other organism and phylogenetic trends will also be covered. Students will make a detailed collection and study of one group of fungi.

556 PHYCOLOGY (5)

Prereq: graduate status or permission of instructor. Identification, classification, and distribution of marine and freshwater algae, with emphasis on life history study through field and culture work.

559 PLANT SPECIATION (4)

Prereq: 25 hours 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.

560 EVOLUTIONARY RELATIONS OF INVERTEBRATES (5)

Prereq: graduate status or permission of instructor. Advanced analysis of phylogeny and classification of invertebrates including recent information on morphology, physiology, development and ecology.

568 TOPICS IN DEVELOPMENTAL AND COMPARATIVE MORPHOLOGY (4)

Prereq: 25 hours 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 GENETICS (4)

Prereq: 25 hours of biology and permission of instructor. Inheritance and gene action in plant, animal and microbial systems; illustrative experiments with *Drosophila*, *Aspergillus* or other organisms.

577 ADVANCED TOPICS IN PHYSIOLOGY (4)

Prereq: 25 hours of biology and permission of instructor. Topics in general, microbial or comparative physiology; laboratory work illustrating processes or experimental techniques.

578 PROTEIN STRUCTURE, FUNCTION AND EVOLUTION (4)

Prereq: upper-division course in biochemistry. Detailed investigation into the molecular structure and function of such proteins as enzymes, antibodies, histones, muscle proteins and hemoglobins. The use of proteins in establishing evolutionary relationships between organisms.

579 ENZYMOLOGY LABORATORY (3)

Prereq: upper-division course in biochemistry. Techniques in isolation and characterization of various enzymes; purification techniques and determination of various kinetic parameters.

583 ADVANCED TOPICS IN BIOSYSTEMATICS (4)

Prereq: 25 hours 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. May be repeated for a maximum of 6 hours total credit. S/U grading.

599 SEMINAR IN BIOLOGY (2)

Prereq: 40 credits in biology. Selected problems in biology, with emphasis on current literature. May be repeated for credit.

690 THESIS RESEARCH (1-12)

Prereq: permission of thesis adviser. Research contributing to a graduate degree program. Graded "K" until thesis completed. May be repeated for credit. S/U grading.

Chemistry

The Department of Chemistry at Western Washington University has long enjoyed an excellent reputation for the quality and breadth of its chemistry program. American Chemical Society accreditation is available to B.S. graduates, and major graduate and professional schools have readily and unconditionally accepted chemistry majors from Western.

However, the classical definitions and boundaries of most physical sciences are rapidly disappearing and traditional programs are being continually modernized. Typically, chemistry is becoming richly interdisciplinary often encompassing, for example, such widely diverse academic areas as geochemistry, environmental sciences, astrochemistry, molecular dynamics and molecular biology.

In keeping with new roles and advances, the Department of Chemistry has added to its core of fundamental studies in physical, inorganic, organic, analytical and biochemistry a variety of courses that offer diversity in training, study and research at both the undergraduate and graduate levels. Within the department, faculty members are active in research and teaching in coordination chemistry and the molecular structures of transition metal complexes, small ring compounds, photochemistry and natural products, atmospheric and glacier chemistry, nuclear dating, blood chemistry, and new areas of computer applications. A significant portion of research in the department is supported by outside agencies.

The Department of Chemistry has been active in assembling the latest equipment necessary for chemical research and teaching. A special effort has been made to acquire computer-controlled instruments. All of the instruments are available for use by students in laboratory work and in student research projects.

Every effort is made to update and modernize coursework and teaching methods. Several faculty members have authored successful texts

that have found wide usage at major universities, and many are involved in interdisciplinary teaching and specialized summer institutes. 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 postdoctoral experience before coming to Western. All are encouraged and supported in research. As a result, the department has an active undergraduate research program, and it offers as a unique feature an unusual degree of personal contact between faculty and students. Furthermore, 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.
- W. SCOTT BRIGGS (1984) Instructor. BS, University of Washington; PhD, Stanford University.
- JOSEPH R. CROOK (1970) Associate Professor. BS, University of Nevada; PhD, Illinois Institute of Technology.
- LOWELL P. EDDY (1957) Associate Professor. BS, MS, Oregon State University; PhD, Purdue University.
- 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.
- EDWARD F. NEUZIL (1959) Professor. BS, North Dakota State College; MS, Purdue University; PhD, University of Washington.
- DONALD L. PAVIA (1970) Professor. AB, Reed College; MS, PhD, Yale.

- GERALDINE A. PRODY (1984) Assistant Professor. BS, PhD, University of California, Davis.
 SALVATORE F. RUSSO (1968) Professor. BA, Wesleyan University; PhD, Northwestern University, Evanston.
 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.

Research Associate

Fred Foley (1983) BA, University of British Columbia

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 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

The Bachelor of Arts and Bachelor of Science programs are designed for students interested in industrial or governmental careers or graduate study. The two programs are similar except that the B.S. program provides greater depth and leads to a degree approved by the American Chemical Society. The B.A. Program, if combined with any of the following recommended minors, will prepare students for a variety of career opportunities with a science emphasis in:

- Business and Economics
- Computer Sciences
- Technical Writing (Journalism)
- Environmental Sciences

The Bachelor of Arts in Education provides several program emphases (chemistry-biology, chemistry-mathematics, and chemistry-physics) as well as normal preparation in chemistry. 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 DEGREE

The Bachelor of Arts degree (major or minor) can be combined with a variety of other programs on campus. Careful program planning and early advisement is strongly suggested.

Major 56 credits plus Supporting Courses

- Chem 121, 122, 123, 333, 351, 352, 353, 354, 355, 461, 462, 463, 464, 465, 434 or 441, plus elective
- Supporting courses: one year college physics and Math 105, 124, 125

Minor 24 credits

- Chem 121, 122, 123
- A minimum of 9 credits under approval of the Chemistry Department from Chem 251, 316, 333, 351, 352, 353, 354, 371, 461, 462, 463, 482, 483

Chemistry

To obtain minor approval a minimum of four credits of those required must be taken in chemistry at Western Washington University under Chemistry Department advisement.

BACHELOR OF ARTS IN EDUCATION

Chemistry Major — Secondary

53 credits plus Supporting Courses

- Chem 121, 122, 123, 333
- Chem 351, 352, 353, 354, 461, 462, 463
- Sci Ed 399, 492
- Supporting courses: one year college physics and Math 105, 124, 125

Combined Major — Chemistry/Mathematics — Secondary

88-90 credits plus Supporting Courses

This major leads to recommendation for teaching endorsement in both areas.

- Chem 121, 122, 123, 461, 462, 463
- 9-11 credits in chemistry to include a minimum of five credits in organic chemistry under departmental advisement
- Math 124, 125, 126, 224
- Math 205, 241, 305, 360, 483
- CS 210
- Sci Ed 399, 492
- Supporting courses: one year college physics

Combined Major — Chemistry/Physics: Major — Secondary

78-80 credits plus Supporting Courses

This major leads to recommendation for teaching endorsement in both areas.

- Chem 121, 122, 123
- Chem 461, 462, 463
- 9-11 credits in chemistry including five credits in organic chemistry under departmental advisement
- Physics 241, 242, 341, 342, 343, 351, 352, 353
- 9 credits in physics under departmental advisement
- Sci Ed 399, 492
- Supporting courses: Math 105, 124, 125, 126

Combined Major — Chemistry/Biology

See Biology Department section of catalog for details.

Teaching Endorsement

The BA Ed degrees above require completion of the Secondary Education Certification Program in the Department of 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.

BACHELOR OF SCIENCE DEGREE

Major Concentration 110 credits

- Chem 121, 122, 123, 333
- Chem 351, 352, 353, 354, 355
- Chem 434, 441, 461, 462, 463, 464, 465
- Supporting courses: Physics 241, 242, 341, 351, Math 124, 125, 126, 205; Comp Sci 110 or 210
- Advanced electives with prior departmental approval in chemistry, biology, geology, computer science, physics and mathematics to total 110 credits including above required courses. At least two credits must be in chemistry laboratory courses numbered 400 and above

NOTE: The Chemistry Department at Western Washington University is approved by the American Chemical Society and students who complete the Bachelor of Science in Chemistry program receive ACS certification of their degree.

A typical four-year program leading to a Bachelor of Science (ACS certified) is outlined below:

First Year

Chem 121, 122, 123; Math 124*, 125, 126

Second Year

Chem 333, 351, 352, 353, 354, 355; Comp Sci 110 or 210, Physics 241, 242, 341, 351

Third Year

Chem 461, 462, 463, 464, 465; Math 205

Fourth Year

Chem 434, 441 plus electives (see above).

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

Combined Major — Chemistry/Biology: Major Concentration 110 credits

- Biol 121, 122, 123, 345, 408, 471; Biol elective by approval 5 credits
- Chem 121, 122, 123, 333, 351, 352, 353, 354, 461, 462, 463, 471, 472, 473, 474
- Math 124, 125
- Physics 131, 132, 133 or 241, 242, 341, 351

This program is specifically designed for students who wish to undertake graduate study in either molecular biology or biochemistry.

DEPARTMENTAL HONORS

Students participating in the University Honors Program may also earn Departmental Honors by completing both the University Honors Program requirements and Chemistry 498.

GRADUATE STUDY

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

COURSES IN CHEMISTRY

Courses numbered X37; X97; 300, 400, 417; 445 are described on page 28 of this catalog.

- 101 CHEMICAL CONCEPTS (4)
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.
- 115 GENERAL CHEMISTRY (5)
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.
- 121, 122, 123 GENERAL CHEMISTRY I, II, III (5 ea)
Prereq: Math 102 or one and one-half years of high school algebra. Each course prerequisite to the next. Stoichiometry, atomic and molecular structure, states of matter, solutions, thermodynamics, chemical equilibrium, kinetics, electrochemistry. Laboratory.
- 208 INDUSTRIAL CHEMISTRY (3)
Prereq: Chem 115 or 121. Industrial chemistry and chemical technology in the contemporary world.
- 209 INDUSTRIAL CHEMISTRY LABORATORY (2)
Prereq: Chem 208 or concurrent. Small scale experiments of industrial processes; field trips to chemical industries.
- 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.
- 301 CONSUMER CHEMISTRY (4)
Prereq: one quarter of college chemistry; course not recommended for science majors. Topics of current interest selected from the general areas of agricultural and food chemistry, chemistry of common household and automotive products, chemistry in health care, chemistry of energy sources, the chemical industry, and the environment. Basic chemical principles reviewed as needed in developing course topics. Normally offered summer quarter.
- 302 CHEMICAL LITERATURE (1)
Prereq: Chem 352. Primary, secondary and tertiary sources of published chemical information. S/U grading.
- 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.
- 307 AUTOMOTIVE CHEMISTRY (3)
Prereq: Chem 115. Lectures and laboratory dealing with a variety of chemical subjects pertaining to the construction and operation of motor vehicles: fuels, lubricants, exhaust emissions and batteries.
- 308 INTRODUCTION TO POLYMER CHEMISTRY (3)
Prereq: Chem 115, Tech 333 or Chem 208. Types of polymers, methods of polymerization, and preparation of important commercial thermoplastic and thermosetting plastics. Addition and condensation polymers are prepared in the laboratory.
- 316 THE CHEMISTRY AND PHYSIOLOGY OF FOREIGN COMPOUNDS (4)
Prereq: Chem 251 (or 351) and Biol 101. Chemical and physiological effects of mutagens, carcinogens, food additives, antibiotics, vitamins, steroidal hormones, chemical contraceptives, and mechanism of drug action. Normally offered summer quarter.
- 333 INTRODUCTORY ANALYTICAL CHEMISTRY (5)
Prereq: one year of general chemistry. Theory and practice of gravimetric, volumetric, potentiometric and spectrophotometric methods of analysis. Selected analytical topics such as ion exchange resins, non-aqueous solvents, chelates, extractions, chromatography.
- 341 CHEMICAL PERIODICITY (3)
Prereq: Chem 333. Descriptive chemistry of the representative elements and transition elements. Laboratory emphasis on qualitative analysis and inorganic synthesis.
- 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.
- 375 PHARMACODYNAMICS (3)
Prereq: Chem 115, 251, 371, Biol 348, 349. Study of the variability of drug actions on biochemical/physiological adaptations of man.
- 399 SEMINAR IN CHEMISTRY (1)
Prereq: 25 credits in chemistry. Presentation and discussion of papers in chemistry. S/U



Chemistry

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. S/U grading.

425 ADVANCED TOPICS IN CHEMISTRY (3)

Prereq: Chem 461 (or concurrent) and permission, 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, Chem 463 or concurrent.

425d Quantum Chemistry.

Prereq: Chem 463.

425e Molecular Spectroscopy

Prereq: Chem 463.

425f Advanced Physical Chemistry

Prereq: Chem 463.

425g Theoretical Inorganic Chemistry

Prereq: Chem 441.

425h Enzyme Chemistry

Prereq: Chem 463, 471.

425j Physical Biochemistry

Prereq: Chem 463, 471.

425k Stereochemistry

Prereq: Chem 353

434 INSTRUMENTAL ANALYSIS (4)

Prereq: Chem 333; Chem 462 prerequisite or concurrent. Theory and experimental techniques of optical, electrical and other physical measurements applied to chemical analysis.

441 ADVANCED INORGANIC CHEMISTRY (4)

Prereq or concurrent: Chem 462. Chemical periodicity, bonding and structure of inorganic molecules, transition metal and coordination chemistry, and the 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.

461, 462, 463 PHYSICAL CHEMISTRY (4,4,3)

Prereq: one year of college physics, Math 125, 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 CHEMISTRY LABORATORY (2 ea)

Prereq: Chem 333 and 461, 462, 463; Chem 464 and 465 may be taken concurrently with Chem 462 and 463 respectively. Includes formal report writing.

471, 472, 473 INTRODUCTORY BIOCHEMISTRY (4,3,3)

Prereq: Chem 123, 353 or concurrent, and Biol 121; each course prerequisite to the next. Chemistry of carbohydrates, proteins, nucleic acids, and lipids; intermediary metabolism of these substances; reaction mechanisms leading to biosynthesis of various compounds of biological importance.

474 INTRODUCTORY BIOCHEMISTRY LABORATORY (2)

Prereq: Chem 123, 354 and Chem 472 or concurrent. Analysis of carbohydrates, amino acids, proteins, lipids, and nucleic acids by means of current techniques; isolation and purification of enzymes and measurement of enzyme kinetics.

482 NUCLEAR CHEMISTRY (3)

Prereq: Chem 123, Physics 133 or equivalent, and Math 125. Theoretical and applied nuclear and radiochemistry.

483 NUCLEONICS LABORATORY (2)

Prereq: Chem 123 or Physics 133 or 241. General experimental techniques in nuclear and radiochemistry for chemistry, biology, geology and physics majors.

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 28 of this catalog.

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

501 RESEARCH PROJECT IN CHEMISTRY (2-6)

Prereq: permission of instructor. Advanced individual laboratory projects under supervision. May be repeated for credit.

510 SPECIAL TOPICS (1-3)

Prereq: permission of instructor. Specialized lectures on a conference basis for a particular area of interest. May be repeated for credit.

511 ADVANCED LABORATORY METHODS (1-3)

Prereq: Chem 463. Specialized laboratory on a conference basis for a particular area of interest. May be repeated for credit.

531 SPECIAL TOPICS IN ANALYTICAL CHEMISTRY (3)

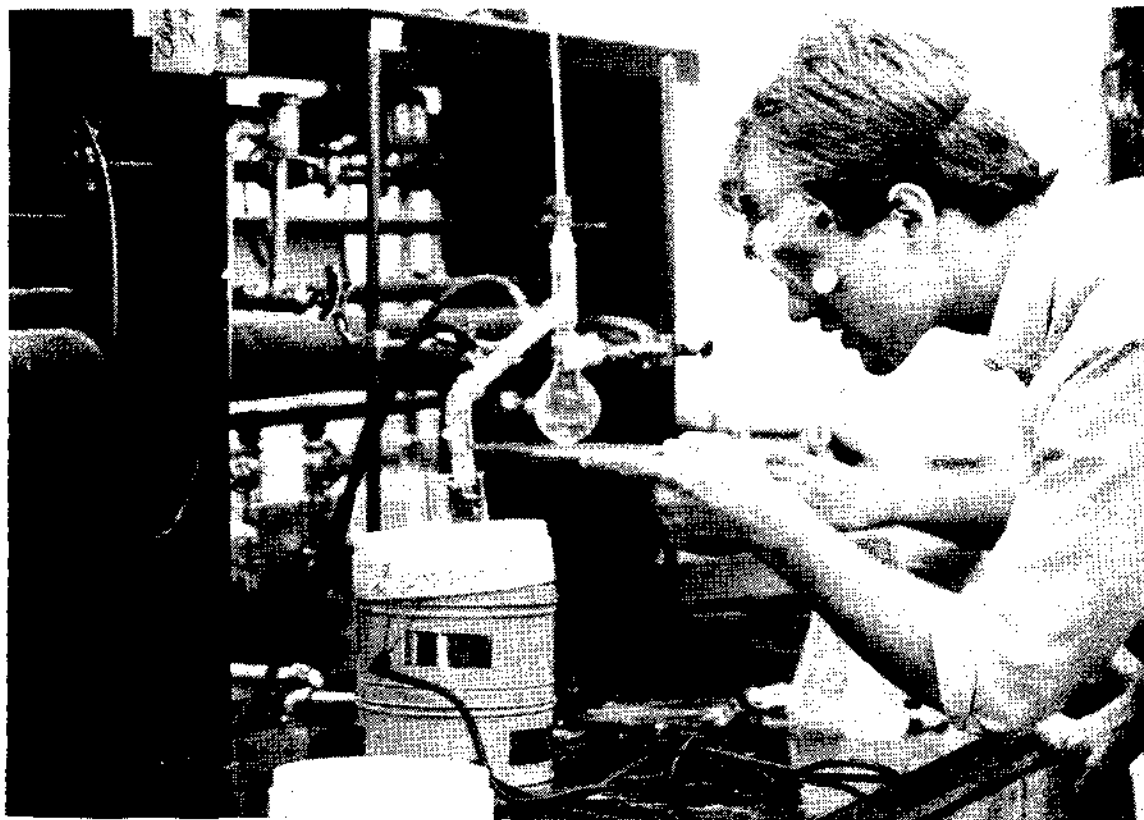
Prereq: Chem 434 and 463. Special methods of separation; acid-base relationships in non-aqueous solvents; chromatography, coulometric and potentiometric methods, determination of organic functional groups, micro-analytical operations and methods. May be repeated for credit.

541 THEORETICAL INORGANIC CHEMISTRY (3)

Prereq: Chem 441 and 463 or permission. Ligand field and molecular orbital approaches to the bonding in inorganic compounds; electronic and vibrational spectra, magnetic behavior, and stereochemistry of inorganic complexes.

542 CHEMICAL APPLICATIONS OF GROUP THEORY (3)

Prereq: a rudimentary knowledge of quantum mechanics obtained from any one of the following: Chem 462 or Physics 381. The use of mathematical group theory and symmetry arguments for solving problems in chemical bonding, quantum mechanics and molecular spectroscopy.



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 STEREOCHEMISTRY (3)

Prereq: Chem 461 (or concurrent) and Chem 353. Stereochemistry of organic molecules including such topics as optical activity, chirality, resolution methods, stereochemistry of cyclic compounds, conformational analysis and optical rotatory dispersion.

561 ADVANCED PHYSICAL CHEMISTRY (3)

Prereq: Chem 463 (equivalent or concurrent). Statistical treatment of thermodynamics and principles of chemical kinetics.

562 QUANTUM CHEMISTRY (3)

Prereq: Chem 463. Molecular orbital theory and its application in bonding of complex molecules.

563 MOLECULAR SPECTROSCOPY (3)

Prereq: Chem 463. Principles of modern spectroscopy.

573 ENZYME CHEMISTRY (3)

Prereq: Chem 463 and 471. Normally offered in alternate years. Preparation and measurement of activities of enzymes; mechanism of enzyme reactions; properties of individual enzymes and coenzymes.

574 PHYSICAL BIOCHEMISTRY (3)

Prereq: Chem 463 and Chem 471, or permission of instructor. Normally offered in alternate years. Quantitative methods applicable to the study of macro-molecules, particularly in systems of biological interest.

575 CHROMOSOMAL PROTEINS AND CHROMATIN STRUCTURE (1)

Prereq: Chem 471. Seminar course dealing with the recent literature on chromatin structure with particular emphasis on function of histones and protamines. May be repeated for credit.

595 SEMINAR (1)

Presentation of contemporary subjects in chemistry. S/U grading. Repeatable to a maximum of 2 credits.

690 THESIS RESEARCH (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 will be required in this course. S/U grading. May be repeated once.

696 INTERNSHIP IN CHEMISTRY IN THE COMMUNITY COLLEGE (9-12)

Prereq: permission of instructor. An in-depth experience in instruction at a selected community college; also provides an exposure to the philosophy of the community college. S/U grading.

Computer Science

The Department of Computer Science offers majors and minors in computer science. Joint majors are offered with mathematics, physics, business, and accounting.

Computer science is a rapidly growing area of human endeavor; its influence is felt in nearly every part of society. It provides opportunities for employment in a wide range of activities: business, science, engineering and teaching. Computer science provides a wealth of problems of intellectual interest. It is an area in which systematic habits of thought are combined with creative energies to produce aesthetically pleasing achievements of practical significance.

The curriculum in computer science is broad and well-balanced. Introductory-level courses are offered at several levels, some acting as service courses for students who wish to obtain a certain degree of computer literacy, others delving more deeply into the underlying concepts. Several high-level languages are taught, including Pascal, FORTRAN, Ada, Modula 2, and COBOL. More advanced topics include algorithm analysis, computer architectures, database theory, compiler construction, operating systems, computer simulations and computer graphics. There are courses oriented toward business, such as "Business Computer Systems," "Computerware and Installation Management" and "Systems Analysis." There are courses oriented toward mathematical applications, such as "Numerical Analysis" and "Operations Research."

The department has access to two VAX 11/780's, an IBM 4341 remote job entry system and a variety of microcomputers. A hands-on laboratory is available for computer science majors. The laboratory is organized around an LSI 11/23. Several graphics workstations are available; a more complete graphics laboratory is planned. A digital laboratory also is planned in the near future. All of this equipment is available for student use.

ACADEMIC PLACEMENT

Students seeking advice in registering for courses in computer science should go to the department office in Bond Hall 302.

Requirements for Admission to the Major

The department has established a policy for admission to the computer science major, and for admission to the various joint majors with mathematics, physics, business and accounting. The complete statement of the procedures can be obtained in Bond Hall 302 or by writing to the chair of the Computer Science Department.

Enrollment Preference for Majors

The department will give enrollment preference for certain high-demand courses to its majors.

Advice to Freshmen

Freshmen may begin study in computer science with the course CS 210 (Programming Fundamentals) if they have had four years of high school mathematics, including an introduction to calculus. Those students without such preparation should complete Math 124 or Math 156 (Calculus and Analytic Geometry) before registering for CS 210. In general, students should seek advice in the department office before registering for computer science courses.

Computer science majors are urged to plan their program of studies in collaboration with their departmental adviser. Those students pursuing a joint major should have an adviser in each of the departments involved. A departmental adviser may be obtained upon request in Bond Hall 302.

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, probability, and three quarters of calculus. They should, if possible, learn to program in a higher-level language, preferably Pascal. Please refer to the description of CS 210 for a list of topics which constitute a strong introductory computer science course. Those students who have followed a program of studies centered around data processing are welcome to the program. They will find, however, that a certain number of their courses will not apply toward a degree in computer science. For example, courses in BASIC, RPG, JCL and courses which require little or no programming often 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

Persons interested in the study of computer science are welcome to write, phone, or visit the chair of the Department of Computer Science, Western Washington University, Bellingham, Washington 98225, Phone: (206) 676-3805.

COMPUTER SCIENCE FACULTY

- JAMES L. JOHNSON (1981) Chair.
Assistant Professor. BS, University of Louisville; MS, PhD, University of Minnesota.
- FRED M. IVES (1971) Associate Professor. BA, MS, PhD, Washington State University.
- LARRY DEAN MENNINGA (1970) Associate Professor. BA, University of Iowa; MA, 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 85 credits
plus supporting courses

- CS 210, 310, 320, 331, 332, 405, 410, 420, 430
- Math 124, 125, 126, 205, 241
- Math-CS 301, 375
- Six additional credits from CS 215, 216, 217
- At least 14 additional credits from any 400-level computer science course (except CS 491), any math-computer science course. No more than 6 of these 14 credits may be special projects (CS 400)

- At least 12 additional credits in an area of application. Acceptable sequences are: Acctg 241, 242, 243; Physics 241, 242, 341; Econ 203, 204, 475; Chem 121, 122, 123; Geol 211, 212, and one 300-level course; Biol 121, 122, 123; Psych 306, 307, 311

Minor — Computer Science 28-29 credits

- CS 210, 310, 331, 332
- Math 124 or 156
- At least 8 additional credits of upper-division computer science courses

Minor — Computer Science Education
29 credits

- CS 210, 310, 331, 332, 410
- EdAF 444, 457a, 457b

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 Accounting Department section for details.

Business Administration/Computer Science: See Management Department section for details.

Mathematics/Computer Science: See Mathematics Department section for details.

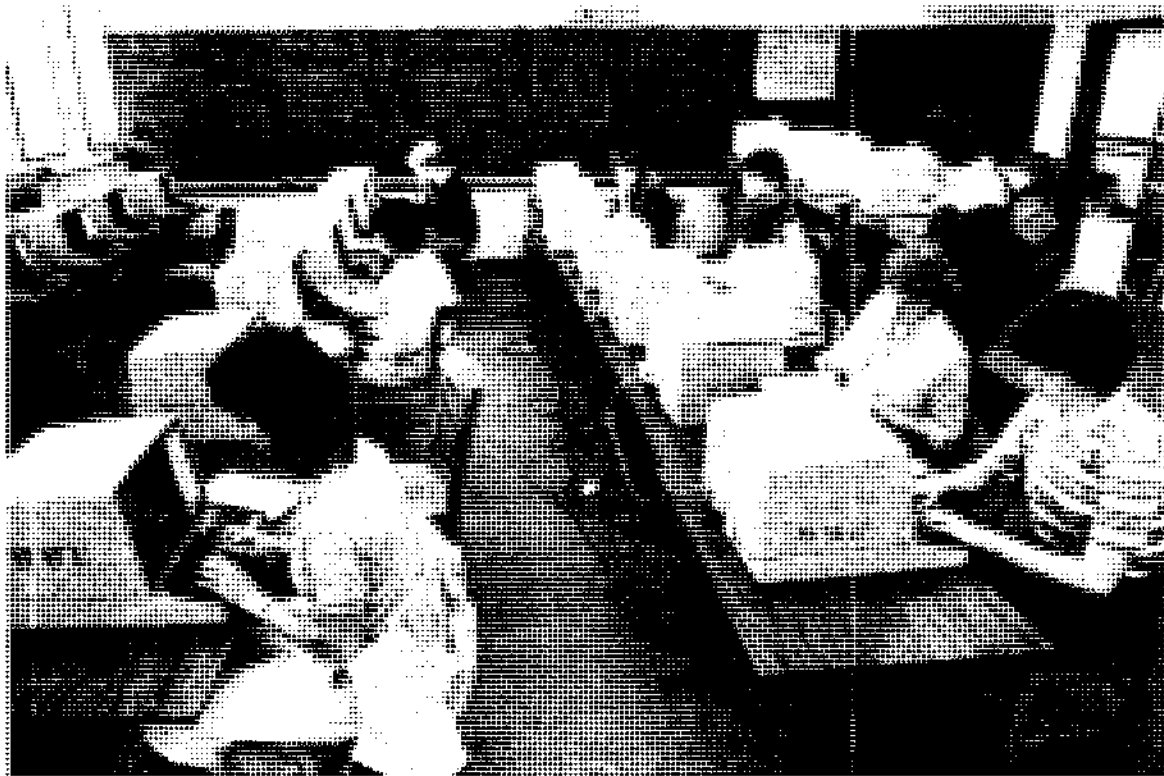
Physics/Computer Science: See Physics Department section for details.

GRADUATE STUDY

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

COURSES IN COMPUTER SCIENCE

- 101 PERSONAL COMPUTERS (3)
Study of home and small business computers. Micro-computer organization; hardware options; software options; relationship between hardware, operating system and application software, brief introduction to programming.
- 110 ELEMENTARY PROGRAMMING (4)
Prereq: Math 102 or equivalent. Basic concepts of computer programming, using PASCAL. Design and construction of computer programs to solve problems. Emphasis on application, including data manipulation and use of prepared programs. Not open to students who have credit in CS 210. Students who intend to take upper-division Computer Science courses should take CS 210.



117 INTRODUCTION TO PROGRAMMING WITH BUSINESS APPLICATIONS (3)

Prereq: Math 155 (it is best but not essential to have had Math 156 before taking CS 117). Basic concepts of computers and computer programming with an emphasis on business applications. Overview of computer history, hardware, software, business applications, trends. Structured programming. Programming assignments which involve numeric and character data, arrays, sorting and searching, file handling and sub-routines. Use of business-oriented canned programs. This course cannot be used toward a major or minor in computer science. Students minoring in computer science or taking a combined major with computer science are not required to take this class. This class cannot be taken in place of CS 210.

210 PROGRAMMING FUNDAMENTALS (4)

Prereq: Math 124 or 156. Intended for students who plan to take upper-division computer science courses. Design and implementation of algorithms, using PASCAL; overview of machine language and operating systems. Emphasis on good programming practices which are transferable between programming languages.

215 PROGRAMMING LANGUAGE LABORATORY (1-3)

Prereq: CS 210 or equivalent; some languages may require CS 331. Students who already know how to program may take this course to learn additional programming languages. May be repeated for credit in different languages. Languages will be available subject to student demand and staffing. Credit is determined on the basis of the programming language studied. S/U grading.

216 FORTRAN (1)

Prereq: CS 110 or 210. Programming using the FORTRAN language. S/U grading.

217 COBOL (3)

Prereq: CS 210. COBOL programming with emphasis on business applications using auxiliary storage.

310 ASSEMBLER LANGUAGE PROGRAMMING (4)

Prereq: CS 210. Computer structure; data representation; machine language; addressing techniques; program segmentation and linkage; macros and conditional assembly; accessing operating system services including I/O; structure of assemblers. The student will learn the machine and assembler languages of a major brand of computer.

320 COMPUTER LABORATORY (3)

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

331 DATA STRUCTURES AND ALGORITHMS I (4)

Prereq: CS 210. Advanced programming concentrating on standard data structures and algorithm design techniques. Data structures include sets, stacks, queues, linked lists, records and sequential files. Other topics include recursions, top-down development and internal searching/sorting algorithms.

332 DATA STRUCTURES AND ALGORITHMS II (4)

Prereq: CS 331. Advanced data structures and software design. Data structures include trees, graphs, storage allocation techniques, direct files, indexed files and hashed files. Other topics include external sorts, software structuring techniques, software testing and efficiency considerations.

405 DESIGN AND ANALYSIS OF ALGORITHMS (4)

Prereq: CS 332, Math-CS 301. Derivation of time and space complexity of algorithms. Typical algorithms investigated include sorts, graph traversals, string matching and arithmetic transforms (e.g. Fast Fourier Transform). Discussion of NP-completeness. Correctness proofs of algorithms.

- 410 **PROGRAMMING LANGUAGES (4)**
Prereq: CS 210, 310 and two languages from CS 215, 216, or 217. Introduction to the structure of programming languages; syntax and semantics; properties of algorithmic languages; special purpose languages.
- 415 **BUSINESS COMPUTER SYSTEMS (4)**
Prereq: CS 332. Components of a business computer system (accounts receivable, accounts payable, etc.), controls, systems flowcharting, programming project.
- 420 **COMPUTER ORGANIZATION (4)**
Prereq: CS 320 and M-CS 301. Digital logic; arithmetic logic; control unit logic; microprogramming; memory and addressing logic; input/output logic; advanced computer architectures; communications.
- 430 **DATABASE THEORY (4)**
Prereq: CS 332. Data structures required for the flexible representation of data relationships; implementation of these structures. 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 emphasizing several of the models.
- 439 **COMPUTER MODELING AND SIMULATION (4)**
Prereq: a college-level course in statistics; a college-level course in calculus; CS 110 or 210. 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 332, Math-CS 301, CS 410 (may be taken simultaneously). Theoretical foundations of all phases of compilation, including lexical analysis, parsing, semantic analysis and code generation. Emphasis is on thorough understanding of relevant formalisms. Students will develop a functional compiler for a simple language.
- 460 **OPERATING SYSTEMS (4)**
Prereq: CS 332 and 420. Principles of operating systems; concurrent processes; resource management; process management; file systems; protection.
- 470 **COMPUTERWARE AND INSTALLATION MANAGEMENT (3)**
Prereq: CS 310. Selection of computer and communications hardware within technical and financial constraints. Evaluation of both hardware and software. Management of a computer installation. Possible visits to computer installations. Computerware selection project.
- 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 332, and Math 205. Overview of the hardware, software and techniques used in computer graphics, raster, storage and refresh display devices; input devices; display files; transformations; windowing; clipping; solid area display; painting; shading; image processing; animation.
- 491 **INTRODUCTION TO CAI PROGRAMMING (5)**
Prereq: one year of teaching experience. The rudiments of Computer-Assisted Instruction (CAI) programming, including two languages: LOGO and PILOT; also the editing of CAI materials by altering existing programs. Over half the terminal time will be devoted to producing and testing instructional computer programs in the student's field of interest. Normally offered summers only.

Graduate Courses

Courses numbered 500, 517, 545, 597 are described on page 28 of this catalog.

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

- 502 **ARTIFICIAL INTELLIGENCE (4)**
Prereq: Math-CS 301, CS 332. Knowledge representation. LISP or PROLOG. Search strategies. Heuristics. Goal refinement. Theorem proving. Symbolic problem solving.
- 505 **VLSI COMPLEXITY THEORY (3)**
Prereq: CS 405. Mathematical models of complex graph problems, such as those encountered in VLSI design. Investigation of time and space complexity of silicon implementations of algorithms.
- 515 **SOFTWARE ENGINEERING (4)**
Prereq: Permission of instructor. Formal approach to state-of-the-art techniques in software design and development. Teamwork required to organize and implement a large software project. Formal models of structured development. Demonstrations of program correctness. Advantages of information hiding. Iterative enhancement. Strength and coupling measures. Reliability analysis. Measures of program complexity and error content.
- 530 **DATABASE MANAGEMENT SYSTEMS (3)**
Prereq: CS 430. Continuation of CS 430. Concurrent processing, locking protocols, distributed databases. Mathematical models of data dependencies in database design. Optional topics may include design of a (part of) a database management system or applications to operating systems.
- 550 **ADVANCED COMPILER DESIGN (3)**
Prereq: CS 450. Graduate level treatment of lexical, parsing, code generation and optimization phases of compilation.
- 565 **COMPUTER COMMUNICATIONS NETWORKS (4)**
Prereq: (Physics 356 or Tech 473) plus elementary queuing theory and network flow analysis as presented in Math-CS 435 and Math-CS 436. 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 **REAL-TIME OPERATING SYSTEMS (3)**
Prereq: (Physics 356 or Tech 473) and CS 460. Hardware needed in real-time systems. Alternative architectures. Specialized operating systems. Asynchronous interrupt handling. Models of event-driven machine behavior. Real-time languages. Reliability in real-time environment.
- 575 **VERY LARGE SCALE INTEGRATION (3)**
Prereq: Physics 356 or Tech 473. Design of VLSI circuits. Physical technologies. Modeling tools. Silicon compilers. Chip simulations.
- 580 **ADVANCED COMPUTER GRAPHICS (3)**
Prereq: CS 480. Mathematics of image creation. Efficient algorithms for windowing, clipping, projecting, hidden line and surface removal, shadowing, and highlighting. Visual realism. Special hardware. Man-machine graphics interface. Two and three dimensional I/O.
- 590 **MICROPROCESSOR SYSTEM DESIGN (4)**
Prereq: (Physics 356 or Tech 473), CS 420. Design of digital systems using microprocessors as controlling elements. Comparison of microprocessor architectures and system bus structures. Microprocessor communications and interfacing. Software/hardware tradeoffs.
- 690 **MASTER'S THESIS**

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.

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, then, through a large number of 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 the 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.

ENGLISH FACULTY

- DOUGLAS B. PARK (1979) Chair. Associate Professor. AB, Hamilton College; PhD, Cornell University.
- BONNIE J. BARTHOLD (1980) Associate Professor. BA, University of Arizona; MA, Ohio State University; PhD, University of Arizona.
- ROBERT D. BROWN (1965) Professor. AB, MA, PhD, Indiana University.
- MEREDITH B. CARY (1964) Professor. BA, Central Missouri State College; MALS, University of Michigan; MA, Michigan State University; PhD, University of Washington.
- MARJORIE J. DONKER (1967) Professor. BA, Western Washington State College; MA, PhD, University of Washington.

- RICHARD L. FRANCIS (1969) Associate Professor. AB, Kenyon College; MA, Duke University; PhD, Yale University.
- SUSAN M. GREENSTEIN (1980) Associate Professor. BA, Wellesley College; MA, PhD, Indiana University.
- ROBERT E. HUFF (1964) Professor. AB, MA, Wayne State University.
- KENNETH B. INNIS (1966) Associate Professor. AB, AM, Indiana University; PhD, University of Kansas.
- ELLWOOD G. JOHNSON (1963) Professor. BA, MA, PhD, University of Washington.
- WILLIAM C. KEEP (1966) Associate Professor. BA, PhD, University of Washington.
- GOLDEN LARSEN (1956) Associate Professor. BS, MS, Utah State University; PhD, University of Washington.
- LAWRENCE L. LEE (1962) Professor. BA, MA, PhD, University of Utah.
- MERRILL E. LEWIS (1962) Professor. BA, MA, University of Oregon; PhD, University of Utah.
- REED B. MERRILL (1969) Associate Professor. BS, MA, University of Utah; PhD, University of Colorado.
- GEORGE M. MULDRON (1960) Professor. BJ, MA, University of Missouri; PhD, Stanford University.
- ROBERT A. PETERS (1964) Professor of English and Linguistics. BA, Ohio State University; MA, Western Reserve University; PhD, University of Pennsylvania.
- KNUTE SKINNER (1962) Professor. AB, Colorado State College; MA, Middlebury College; PhD, University of Iowa.
- 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.

BACHELOR OF ARTS

Major 70 credits

- Eng 304
- Two courses from Eng 306, 307, 308
- Two courses from Eng 309, 310, 311
- Eng 317, 318
- One course from Linguistics 201, Eng 305, 370, 405, 471

Electives: Of the remaining elective hours, 24 credits must be taken at the 300 and 400 levels, with at least 12 of these credits at the 400 level. Elective courses are chosen from among the variety of departmental offerings: literature, creative writing and rhetoric courses. Students may consult with the undergraduate adviser.

Major Concentration in Writing

75 credits

- Eng 304
- 26 credits in literature of which at least 16 must be at the 300 or 400 level
- Two of the following: Eng 301, 302, 351, 353, 354, Th/D 285 (or Th/D 385)
- Three of the following: Eng 305, 370, 371, 471, 474, Interdisciplinary Arts 110
- 20 credits from the following, including 12 credits from *one of the first four groups*. Apart from these 12 credits, the student may, with the approval of the writing adviser, substitute up to eight credits in the departments of Art, Music or Theatre/Dance, or in writing courses outside the English Department:
 - Eng 451, 455, 457
 - Th/D 485, 486, 487, 488; Eng 455
 - Eng 453, 455, 456
 - Eng 454, 455
 - Eng 301, 302, 401, 402
 - Plus Electives

Minors 24 credits**A. English 24 credits**

- Eng 304
- Electives to total 24 credits, with a minimum of twelve of the elective credits at the 300-400 level.

Students may choose among English courses to complete the elective requirements of the minor. Those students who wish to concentrate elective credit in one area may do so; for example, elective courses might be selected with emphasis on American literature, British literature, rhetoric, or expository writing.

B. Creative Writing 24 credits

- Eng 304
- Four creative writing courses including work in at least two genres
- Electives under advisement from the 300 and 400 levels

C. Women's Literature 24 credits

- Two courses from Eng 314, 321, 341
- Electives under advisement, to be selected from topic courses focused on the work of women authors

BACHELOR OF ARTS IN EDUCATION**Major — Secondary 68 credits**

- Eng 304, 370, 442, 443, 444, 474, EdCI 481
- Two courses in British Literature before 1800 at the 300-400 level
- Two courses in British Literature after 1800 at the 300-400 level
- Two of the following: Eng 317, 318, 319
- One of the following: Eng 301, 302, 351, 353, 354

- One of the following: Eng 314, 321, 327, 338, 341, 422, or other appropriate courses
- Electives

The department strongly recommends that students include courses in literary theory and criticism in their electives.

Major — Elementary 45 credits

- Eng 304, 370, 440, 441, 442
- One of the following: Eng 301, 302, 351, 353, 354, 451, 453, 454
- One of the following: Eng 321, 327, 338, 341, 422, 429, or other appropriate courses under departmental advisement
- One of the following: Eng 336, 427, 430
- Electives

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

Interdisciplinary Major Concentration

93 credits (Speech and Broadcast 45 credits & English 48 credits)

English: 48 credits

- Eng 304
- Two courses from Eng 306, 307, 308
- Two courses from Eng 309, 310, 311
- Eng 317, 318, 370, 442, 443, 474
- Eng 371

Speech and Broadcast: (See listing under Speech and Broadcast) 45 credits

Teaching Endorsement

Recommendation for an endorsement in teaching secondary English normally requires completion of the Bachelor of Arts, Secondary Major, or of the Interdisciplinary Major Concentration. 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 the Minor in English, Secondary. No other minors are accepted for a supporting endorsement. 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

- Eng 304, 370, 442, 443, 444

English

- Eng 301 or 302 or 351 or 353 or 354
- One elective in British Literature 300-400 level
- One elective in American Literature 300-400 level
- Electives under advisement

English — Elementary Education 24 credits

- Eng 304, 370, 441, 442
- One course from Eng 301, 302, 351, 353, 354
- Electives under advisement

DEPARTMENTAL HONORS

In addition to the general requirements for all honors students, an English major who wishes to graduate "with honors" must complete Eng 427, one course in criticism, 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, 203, 204, 270, 301, 302, 354, 371, 401, 402.

GRADUATE STUDY

For options leading to the Master of Arts degree, see Graduate section of the catalog.

COURSES IN ENGLISH

Courses numbered X37; X97; 300, 400, 417; 445 are described on page 28 of this catalog.

General University Requirement Courses

English courses which satisfy GUR requirements are as follows:

Communications: 101, 201, 202, 203, 204, 301, 302

Humanities: 214, 215, 216, 238, 281, 282, 283, 336

Non-Western and Minority Culture Studies: 234, 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 "Class Schedule," 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. An intermediate course in writing expository prose, with readings from various disciplines.

202 INTRODUCTION TO FICTION WITH COMPOSITION (4)

Prereq: Eng 101 or equivalent. An introduction to the nature of fiction with an emphasis upon close reading. Critical essays are required in this course.

203 INTRODUCTION TO DRAMA WITH COMPOSITION (4)

Prereq: Eng 101 or equivalent. An introduction to the nature of drama with an emphasis upon close reading. Critical essays are required in this course.

204 INTRODUCTION TO POETRY WITH COMPOSITION (4)

Prereq: Eng 101 or equivalent. An introduction to conventions of poetry with an emphasis upon close reading. Critical essays are required in this course.

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.

231 SCIENCE FICTION AND FANTASY (4)

Critical study of types of modern fantasy literature and varieties of science fiction.

234 INTRODUCTION TO AFRO-AMERICAN LITERATURE (5)

Survey of Afro-American experience and its expression during the past hundred years. Typical writers studied are Chesnut, Dunbar, Johnson, Toomer, McKay, Hughes, Bontemps, Larsen, Hurston, Wright, Ellison, Baldwin, Baraka, McPherson and A. Walker.

238 SOCIETY THROUGH ITS FICTION/DRAMA/POETRY (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.

264 FUNDAMENTALS OF FILM AS COMMUNICATION (4)

A basic course in film studies designed to help students understand visual language and its relation to verbal expression. Recommended for students taking Eng 364; Hist 364; Pol Sci 364.

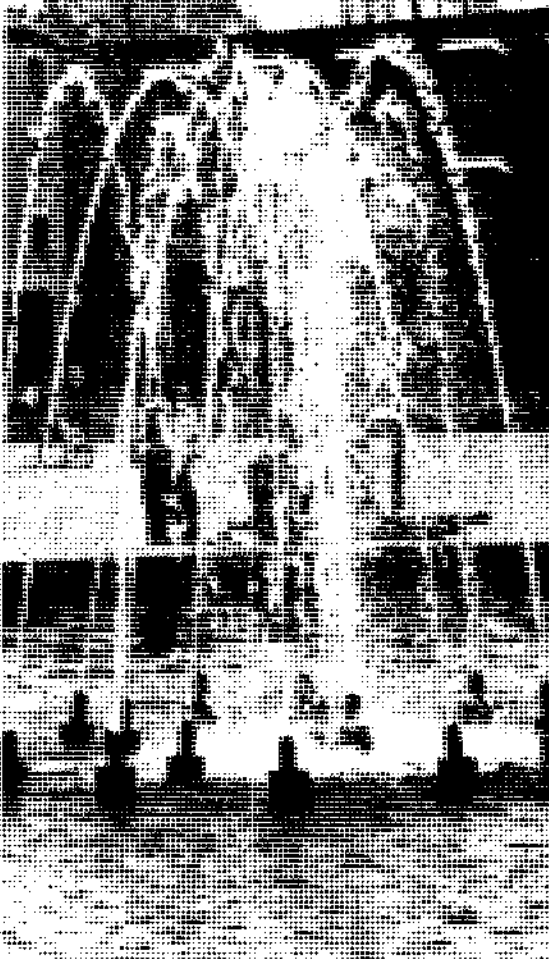
281, 282, 283 WESTERN WORLD LITERATURE (5 ea)

Reading from classical and medieval, renaissance and neo-classical, romantic and modern literature. Not open to students with credit in Lib St 121, 122, 123.

For English majors and minors, all upper-division literature courses have English 304 as a prerequisite.

- 301 **READING AND EXPOSITION (4)**
Prereq: Eng 101 or equivalent. An advanced writing course which deals exclusively with exposition as reading and writing problems and allows for a variety of topical material.
- 302 **READING AND ARGUMENTATION (4)**
Prereq: Eng 101 or equivalent. An advanced writing course which deals exclusively with argumentation as reading and writing problems and allows for a variety of topical material.
- 304 **CRITICAL INTRODUCTION TO POETRY (4)**
Prereq: Eng 101 or equivalent. The course 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.
- 305 **THEORY OF LITERATURE (4)**
The nature and judgment of literature as a form of art; principles and problems; writing of critical studies.
- 306 **BRITISH LITERATURE: MEDIEVAL PERIOD (4)**
- 307 **BRITISH LITERATURE: RENAISSANCE (4)**
- 308 **BRITISH LITERATURE: 18TH CENTURY (4)**
- 309 **BRITISH LITERATURE: ROMANTIC PERIOD (4)**
- 310 **BRITISH LITERATURE: VICTORIAN PERIOD (4)**
- 311 **BRITISH LITERATURE: MODERN PERIOD (4)**
- 314 **MAJOR BRITISH WOMEN AUTHORS (4)**
Prereq: Eng 101. Various authors or combinations of authors will be studied from quarter to quarter. Emphasis will be placed upon women's contributions to literature. See Class Schedule for specific offerings. Repeatable with different topics.
- 317 **AMERICAN LITERATURE: COLONIAL AND ROMANTIC PERIODS (4)**
- 318 **AMERICAN LITERATURE: REALIST PERIOD (4)**
- 319 **AMERICAN LITERATURE: MODERN PERIOD (4)**
- 320 **AMERICAN PROSE AND POETRY SINCE 1945 (4)**
- 321 **MAJOR AMERICAN WOMEN AUTHORS (4)**
Prereq: Eng 101. Various authors or combinations of authors will be studied from quarter to quarter. Emphasis will be placed upon women's contributions to literature. See Class Schedule for specific offerings. Repeatable with different topics.
- 322 **AMERICAN NOVEL TO 1900 (5)**
- 323 **AMERICAN NOVEL SINCE 1900 (5)**
- 324 **AMERICAN SHORT FICTION (4)**
- 325 **MODERN AMERICAN POETRY (4)**
- 327 **STUDIES IN AFRO-AMERICAN LITERATURE (4)**
Different periods, genres and topics such as the Harlem Renaissance or the Black novel will be treated from year to year. See the Class Schedule for specific courses. Repeatable with different topics.
- 334 **CANADIAN LITERATURE (4)**
Reading of selected works, principally 20th century fiction from English Canada, with some attention to French writers in translation. Emphasis on the social and historical context of Canadian Literature.
- 335 **LITERATURE OF THE THIRD WORLD (4)**
Prereq: Eng 101. A comparative study of the new literatures which have emerged in Africa, India and the West Indies since World War II. Such authors with roots in both European tradition and their own cultures as Achebe, Laye, Soyinka, Naipaul and Narayan will be read. Attention will be given to the transformation of Western literary forms in societies with a significantly different world-view.
- 336 **THE BIBLE AS LITERATURE (5)**
Prereq: Eng 101. Cultural backgrounds of the Old and New Testaments, together with a literary analysis of selected passages.
- 338 **WOMEN AND LITERATURE (4)**
Prereq: Eng 101. A study of major works by women including their treatment of intellectual and cultural issues.
- 340 **FORMS OF THE NOVEL AND SHORT STORY (4)**
Various forms of the novel or of short prose fiction will be examined. See Class Schedule for specific offerings. Repeatable with various topics.
- 341 **HISTORY OF THE WOMEN'S NOVEL (4)**
Prereq: Eng 101. Women's contribution to the history of the novel in England and America, 1688 to the present.
- 342 **STUDIES IN DRAMA (4)**
Prereq: Eng 101. Different dramatic periods or topics will be treated from year to year. See Class Schedule for specific courses. Repeatable with various topics.
- 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. S/U grading.
- 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. S/U grading.
- 354 **INTRODUCTION TO THE WRITING OF NON-FICTION PROSE (4)**
Prereq: Eng 101. Opportunity for writers to develop skills on a mature level. The personal essay, biographical sketch, extended argument and other forms. Individual projects. Study of appropriate models. S/U grading.
- 354 **LITERATURE AND FILM (4)**
Prereq: Eng 101. An examination of the relationship between literature and film. Students will view films based on literary works and discuss the nature of each medium. See Class Schedule for specific offerings. Students may elect more than one offering under this number.
- 370 **ENGLISH GRAMMAR (4)**
Study of traditional English grammar: parts of speech, subclasses, phrases, clauses, sentences.
- 371 **INTRODUCTION TO RHETORIC (4)**
Prereq: Eng 101. Rationale of informative and persuasive writing: classical and modern treatments of invention, arrangement, prose style. Rhetorical analysis.
- 401 **THE RHETORIC OF WRITING (4)**
Prereq: senior standing and permission of instructor. Applying rhetorical principles to the writing of expository prose.
- 402 **TECHNICAL AND BUSINESS REPORT WRITING (3)**
Prereq: Eng 101 and upper-division standing. Theory and practice of writing with objectivity and clarity for business, industry and government.

English

- 405 HISTORY OF LITERARY CRITICISM (5)
Prereq: 15 credits in literature. Reading and analysis of major documents of criticism, from Plato and Aristotle to 20th century critics.
- 410 TOPICS IN BRITISH LITERARY HISTORY (2-5)
Varying topics, such as modern Irish literature or meta-physical poetry, will be treated from year to year. See Class Schedule for offerings. Repeatable with various topics.
- 411 BRITISH NOVEL: EIGHTEENTH CENTURY (5)
- 412 BRITISH NOVEL: NINETEENTH CENTURY (5)
- 413 BRITISH NOVEL: TWENTIETH CENTURY (5)
- 414 STUDIES IN MAJOR BRITISH AUTHORS (2-5)
Various single authors or combinations of authors will be studied from quarter to quarter. See Class Schedule for the various authors to be studied. Repeatable with various topics.
- 420 TOPICS IN AMERICAN LITERARY HISTORY (2-5)
Varying topics, such as the West in American literature, will be treated from year to year. See Class Schedule for offerings. Repeatable with various topics.
- 421 STUDIES IN MAJOR AMERICAN WRITERS (2-5)
Various single authors or combinations of authors will be studied from quarter to quarter. Repeatable with various topics.
- 422 THE AFRO-AMERICAN AND THE LITERARY IMAGINATION (5)
Prereq: Eng 101. Study of Afro writers or ways various American writers have portrayed the Afro-American's image, social role, psychology, etc. Typical writers studied are Dixon, Chesnut, Stowe, Melville, Whitman, Twain, Dreiser, Toomer, Wright, Faulkner, Ellison.
- 427 CLASSICAL BACKGROUNDS TO BRITISH LITERATURE (5)
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.
- 429 MODERN AND CONTEMPORARY LITERATURE IN TRANSLATION (4)
Prereq: 15 credits in literature.
- 430 MYTH AND MODERN MAN (4)
Prereq: Eng 101. A study of myth from several vantages: comparative religion, psychology, anthropology and philosophy. The application of myth analysis to the work of selected modern writers.
- 431 LITERATURE AND PSYCHOANALYSIS (5)
Prereq: Eng 101. Influence of psychoanalytic theory on the development of modern literature, aesthetics and criticism.
- 440 ENGLISH FOR THE ELEMENTARY SCHOOL (4)
Survey of resources and methods of teaching the language arts.
- 441 WORLD LITERATURE FOR THE ELEMENTARY AND MIDDLE SCHOOL TEACHER (4)
Myth, legend, folk literature, epic, fairy tales and modern novels for children.
- 442 STUDIES IN LANGUAGE AND LEARNING (4)
Prereq: Eng 370. The characteristics of oral and written discourse. 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 370 and 442. 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)
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)
Practical work in the teaching of English.
- 

- 451 CREATIVE WRITING WORKSHOP: FICTION (4)
Prereq: Eng 351 or equivalent. 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. 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. Opportunity for disciplined expression in a specialized genre of non-fiction prose: essay, critical review, autobiography, article, etc. Course may be repeated a total of three times with a limit of one course per quarter. Study of appropriate prose models.

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. Team taught. Open to students working in any genre, including non-fiction prose. Such activities as group discussions, readings, performances and publication of a class magazine will be encouraged. Study of appropriate models.

456 EXAMINING AND COMPOSING POETIC FORMS (4)

This course combines the approaches of genre study and literary expression.

457 WRITING COMMERCIAL FICTION (4)

Prereq: Eng 101. Restricted to students who have a serious intention to write fiction for a popular, commercial market. Writing will be combined with a study of the market and appropriate models.

471 HISTORY OF THE ENGLISH LANGUAGE (4)

The historical development of the English language; phonology, morphology, syntax, semantics.

474 ENGLISH USAGE (4)

Prereq: Eng 370. Survey of standard American English usage.

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

Graduate Courses

Courses numbered 500, 517, 545, 597 are described on page 28 of this catalog.

Admission to Graduate School or special permission required. See Graduate 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/Dance.

509 LITERARY MAGAZINE EDITING AND PRODUCTION (1-2)

With the permission of the department, a limited number of students may receive credit while working as interns with the editors of a "little magazine." Work will include written evaluations of stories and poems on submission and a comparative study of little magazines in America. The course may be repeated up to a total of 5 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.

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.

In the following literature seminars, the specific subject matter covered will vary from year to year. Sub-titles indicate subject matter most recently covered.

520 STUDIES IN FORMS OF POETRY (5)

Offerings such as "Verse and Stanza Patterns" or "The Imagist Tradition" will 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" will 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" will 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" will 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" will 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 will examine major authors, periods or movements in American literary history. Repeatable under different topics.

560 TOPICS IN BRITISH LITERARY HISTORY (5)

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

594a,b PRACTICUM IN TEACHING WRITING (2)

594a Writing Clinic
594b Classroom
Supervised teaching for M.A. candidates beyond Eng 513. S/U grading.

595 SEMINAR, RESEARCH TOPICS IN RHETORIC (5)

Prereq: Eng 510 or 513. Rhetorical theory, analysis and methods of research in the teaching of writing. Connections with related fields such as cognitive psychology and reading.

598 RESEARCH IN THE TEACHING OF ENGLISH (1-3)

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 & Literatures

The department of Foreign Languages and Literatures offers major and minor programs for both the general and the teacher education student.

For the general student, the study of foreign languages and literatures provides insight into one's own language and culture, facilitates foreign travel and study of other cultures, and is increasingly valuable as preparation for work in multinational fields and endeavors. Students are encouraged to combine foreign language study with other suitable programs, given increasing job opportunities in trans-national fields, including teaching English as a second language and careers with multi-national corporations.

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 pre-school and primary levels.

ADVANCED PLACEMENT CREDIT

If you studied a foreign language in high school, you may be granted additional university credit upon completion of foreign language courses at Western. Advanced placement credit is not awarded for 100-level courses. Application for advanced placement credit is to be made to the chairman.

FOREIGN STUDY

Students can increase language proficiency through travel, work and study abroad. WWU offers quarter and year-round programs at study centers in Morelia, Mexico; Cologne, Germany; Avignon and Rennes, France; Seville and Alicante, Spain; Peking, Nanjing and Shanghai, China. Designed to give students a complete foreign study experience in the host country, each program includes numerous excursions to historical and cultural sites, and a wide range of activities complement formal classroom work. WWU also sponsors academic year university

exchange programs (a) with Asia and Tsuda Universities in Tokyo, Japan; (b) with ISEP at 60 universities in 26 countries. Special application and registration procedures are required for participation in foreign study programs, and students should consult with the Foreign Study Office, Old Main 400, well in advance of their planned quarter abroad.

The department also offers the study of English as a second language to both resident and foreign students who wish to improve their English in order to enroll in university-level courses.

GRADUATE STUDY

Students pursuing language studies at the graduate level, upon satisfactory completion of 48 credit hours, earn a Master of Education degree in German. Spanish is under limited enrollment until further notice. Graduate courses are given each summer so that the M.Ed. candidate may earn the degree after having been enrolled on campus for at least three summers. See the Graduate section of the catalog.

FOREIGN LANGUAGES AND LITERATURES FACULTY

RUDOLF WEISS (1970) Chair.

Professor of German and Phonetics/Linguistics. BA, BA in Ed, Western Washington State College; MA, PhD, University of Colorado.

DARREL W. AMUNDSEN (1969) Professor of Classics. BA, Western Washington State College; MA, University of Washington; PhD, University of British Columbia.

RAUL ARELLANO (1972) Associate Professor of Ethnic Studies and Spanish. BA, Boston University; MA, University of Washington.

HERBERT L. BAIRD, JR. (1937) Associate Professor of Spanish. AA, Santa Ana Junior College; AB, Pomona College; AM, PhD, University of Chicago.

ROBERT S. BALAS (1969) Professor of French. BA, Upsala College; MA, University of Nebraska; PhD, University of Wisconsin.

- HENRICH BROCKHAUS (1965) Associate Professor of German. BA, MA, University of British Columbia; PhD, University of Washington.
- WILLIAM H. BRYANT (1970) Associate Professor of French. BA, University of Hawaii; PhD, University of Missouri.
- WILLIAM E. ELMENDORF (1958) Assistant Professor of Russian and Spanish. BS, University of Puget Sound; MA, University of Washington.
- GUADALUPE GARCIA-BARRAGAN (1965) Professor of Spanish. BA, Colegio Aguilas Serdan; BEd, Instituto America; MA, Normal Superior Nueva Galicia; Doctorat d'Université, Paris, Sorbonne III.
- JESSE HIRAOKA (1972) Professor of French and Ethnic Studies. BA, Roosevelt University; MA, University of Chicago; PhD, Northwestern University.
- ARTHUR S. KIMMEL (1969) Associate Professor of French. AB, MA, University of Miami; PhD, University of California, Berkeley.
- VLADIMIR MILICIC (1962) Associate Professor of Russian and Linguistics. Certificate of Baccalaureate, Gymnasium for Boys, Belgrade; MA, University of Chicago.
- KURT W. MOERSCHNER (1964) Associate Professor of German. BComm, BA, Sir George Williams University, Canada; MA (Psychology), MA (German), PhD, University of Colorado.
- CHARLES PARAM (1969) Professor of Spanish. BA, Oklahoma State University; MA, PhD, University of Arizona.
- DANIEL RANGEL-GUERRERO (1969) Associate Professor of Spanish. AA, Sierra College; BA, Stanford University; MA, PhD, University of Oregon.
- NICOLE B. RAPOZA (1968) Associate Professor of French. AA, Long Beach City College; BA, Long Beach State College; MA, PhD, University of California, Berkeley.
- WALTER L. ROBINSON (1960) Professor of German. BA, MA, PhD, University of Texas.
- MICHIKO YUSA (1983) Assistant Professor of Japanese and East Asian Studies. BA, International Christian University (Tokyo); MA, PhD, University of California, Santa Barbara.

BACHELOR OF ARTS

Major — French, German, Spanish, Russian

55 credits: minor concentration recommended; GPA of 2.5 or above required in the major.

The Foreign Language Requirement

- Up to 15 credits in the language on the 200 level
- Remaining credits in the language at the upper-division level, including 401 and two additional 400-level courses. German and Spanish majors must include 402

Courses numbered 367, 375, and 425, and German 280 are normally not applicable to the major.

Minor Concentration Recommended

Students are advised to develop a minor concentration which complements the language major and is appropriate to the student's future plans. Examples include a second foreign language, Speech, Business, English as a Second Language, East Asian Studies, among others.

Major — Classical Studies

A student-faculty designed major in Classical Studies may be arranged.

BACHELOR OF ARTS IN EDUCATION

Teaching Endorsement

Completion of courses in the major with a GPA of 2.5 or above. See overall GPA requirements for Teacher Certification in Teacher Education section.

Major — French, German, Spanish

60 credits

- Up to 15 credits in the language on the 200 level
- Remaining credits at the upper-division level, including 301, 314, two courses in literature, and three courses at the 400 level, including 401 (German majors add 305, 331 or 332, 402; Spanish majors add 402)
- FL 410, 420

German 280 is normally not applicable to the major.

Students preparing in two language areas may apply 10 upper-division credits in a second foreign language towards the 60 credits required.

These minors are appropriate for both Bachelor of Arts and Bachelor of Arts in Education degrees:

Minor — A Modern Foreign Language

- 25 credits above the 200 level, with a limit of 15 credits at the 200 level. GPA of 2.50 or above in courses used in the minor. Teaching endorsement for the minor requires completion of FL 410, 420 and 314 in the language in addition to 25 credits above the 200 level. Also see overall GPA requirements for teaching competence.

Minor — Chinese

- Completion of the 200-level sequence and at least one course at the 300 level

Minor — Classical Studies

- Classical Studies 350
- 15 credits from Classical Studies 411, 421, 422, 431, 441
- 6 credits from History 411, 412, 413, 414; Philosophy 304

Minor — Greek or Latin

- 12 credits beyond the first year in college Greek or Latin

Minor — Japanese

- Completion of the 200-level sequence and at least one course at the 300 level

Foreign Languages/Literatures

Minor — Linguistics

- Linguistics 201, 301, 302, 303
- Speech 373
- 6 credits in a foreign language selected under departmental advisement

GRADUATE STUDY

For a concentration in German or Spanish leading to the Master of Education degree, see Graduate section of catalog.

COURSES IN FOREIGN LANGUAGES

General Courses

Courses numbered X37, X97, 300, 400, 417, 445 are described on page 28 of this catalog.

FL-ESL ENGLISH AS A SECOND LANGUAGE

Prereq: pre-college English study in the country of origin or equivalent ability. Intensive English training for foreign students intending to enroll in university-level classes. Supervised audit of selected college-level classes where available. Not applicable toward graduation requirements. May be repeated.

109a,b,c DIRECTED INSTRUCTION IN MODERN FOREIGN LANGUAGES (3-5)

Prereq: Each course prerequisite to the next. Beginning level. A maximum of 15 credits permitted at the 109 level. Only those languages for which qualified instructors are available for supervision and testing will be offered.

209a,b,c DIRECTED INSTRUCTION IN MODERN FOREIGN LANGUAGES (3-5)

Prereq: FL 109; each course prerequisite to the next. Intermediate level. A maximum of 15 credits permitted at the 209 level. Only those languages for which qualified instructors are available for supervision and testing will be offered.

230 ADVANCED INTENSIVE ENGLISH FOR FOREIGN STUDENTS (5)

Prereq: completion of FL-ESL or equivalent. Identification and correction of grammatical and phonological problems, written and oral presentations, idiomatic expressions, discussions on American history and culture.

309a,b,c DIRECTED INSTRUCTION IN MODERN FOREIGN LANGUAGES (3-5)

Prereq: FL 209; each course prerequisite to the next. Advanced level. A maximum of 15 credits permitted at the 309 level. Only those languages for which qualified instructors are available for supervision and testing will be offered.

410 INTRODUCTION TO APPLIED LINGUISTICS FOR FOREIGN LANGUAGE MAJORS (4)

Prereq: six credits in one modern foreign language beyond the second year. Comparison of structures (phonological, morphological and syntactic) of English and other languages.

420 METHODS AND MATERIALS FOR TEACHING MODERN FOREIGN LANGUAGES (4)

Prereq: six credits in one modern foreign language beyond the second year. To be taken prior to student teaching. Topics for the secondary or elementary teacher. Practice in teaching activities: lesson organization, text selection and micro-teaching presentations. School observations.

425 TEACHING/LEARNING PROCESS IN ESL (3 or 6)

Prereq: Linguistics 201 or FL 410; written permission of department; FL 420 recommended. Practicum in course preparation, classroom and language lab procedures, materials evaluation, counseling and tutoring of ESL students. Offered for 3 credits academic year; 6 credits summer workshop. May be repeated to a maximum of 6 credits. S/U grading.

For courses taught in translation, see Classical Studies and East Asian 367.

Chinese

101, 102, 103 ELEMENTARY CHINESE (5 ea)

Each course prerequisite to the next. Fundamentals of the language; pronunciation, grammar, aural comprehension, reading and speaking; formal instruction and self-instruction using cassette recorders and other materials.

201, 202, 203 INTERMEDIATE CHINESE (5 ea)

Prereq: Chinese 103 or equivalent; each course prerequisite to the next. Review of the fundamentals of the language; emphasis on acquisition of oral and written vocabulary; intensive reading and discussion in Chinese of graded materials in modern Chinese.

301, 302, 303 ADVANCED CHINESE (5 ea)

Prereq: Chinese 203; each course prerequisite to the next. Intensive reading, written vocabulary acquisition (reaching the 1,400 character level by the end of the sequence) and oral comprehension of materials in modern Chinese via small tutorials and self-instruction using taped exercises keyed to written texts.

Classical Studies

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

350 GREEK AND ROMAN MYTHOLOGY (3)

Important classical myths seen in the context of classical literature; influence on Western literature.

411 GREEK AND ROMAN EPIC (3)

Prereq: Lib St 121 or Eng 281 or Classical Studies 350. Origins, development, nature of classical epic; readings from Homer, Apollonius of Rhodes, Virgil, Lucan.

421 GREEK AND ROMAN TRAGEDY (3)

Prereq: Lib St 121 or Eng 281 or Classical Studies 350. Origins and development of earliest European drama, thematic and structural principles of major dramatists; influence on later Western literature.

422 GREEK AND ROMAN COMEDY (3)

Prereq: Lib St 121 or Eng 281 or Classical Studies 350. Nature of classical comedy; readings from Aristophanes, Menander, Plautus, Terence.

431 THE CLASSICAL NOVEL (3)

Prereq: Lib St 121 or Eng 281 or Classical Studies 350. Readings from the Greek romances, Petronius' "Satyricon," Apuleius' "The Golden Ass," earliest extant novels in Western literature.

441 ROMAN SATIRE (3)

Prereq: Lib St 121 or Eng 281 or Classical Studies 350. Roman satire as a distinct genre in Latin literature; influence on later satiric tradition; readings from Juvenal, Horace, Seneca, Persius, Lucian.

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)**
Recommended for all students needing a review of basic grammar and vocabulary before entering the intermediate level. Can be substituted for French 103. Offered fall quarter only.
- 201, 202 **INTERMEDIATE FRENCH (5 ea)**
Prereq: French 103 or two years of high school French; to be taken in sequence. Continuation of skill development begun in Elementary French, with additional work in vocabulary acquisition and grammar. Reading and discussion in French of passages from modern French texts.
- 230 **FRENCH LANGUAGE AND CULTURE (3 or 6)**
Prereq: French 103 or equivalent. An intermediate course in conversation, culture study and expression. Films, oral and written presentations. Offered for 3 credits academic year; 3 or 6 credits summer quarter.
- 280 **FRENCH FOR A READING KNOWLEDGE (4)**
Prereq: French 103 or equivalent. Individualized instruction designed to improve speed and comprehension in reading for upper-division work. Work on translation skills. S/U grading.
- 301 **GRAMMAR REVIEW AND WRITTEN EXPOSITION (5)**
Prereq: French 202 or equivalent. Course designed to give the advanced student practice in French written expression and review of French grammar. Writing, study of grammar, and vocabulary building.
- 305 **ORAL EXPOSITION (5)**
Prereq: French 202 or equivalent; may be taken concurrently with French 311. Students give expository talks and discuss articles taken from current French periodicals. Vocabulary building.
- 314 **PHONETICS (5)**
Prereq: French 202 or equivalent. Phonetic transcription, improvement of pronunciation and intonation, and specific problems of acquiring French sounds.
- 330 **FRENCH CIVILIZATION (4 or 6)**
Prereq: French 202 or equivalent. An advanced French course on civilization and culture. Films, written and oral presentations. Offered for 4 credits academic year; 4 or 6 credits summer quarter.
- 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 (340 recommended). An introduction to literary analysis, *explication de texte* involving poetry, prose and drama from works of major authors after 1800.
- 360 **FRENCH FOR BUSINESS AND ECONOMICS (4)**
Prereq: French 202 or equivalent. An introduction to the basic concepts and vocabulary of business and economics, based on texts and exercises in French.
- 401 **ADVANCED COMPOSITION AND GRAMMAR (5)**
Prereq: French 301 or 305. Advanced written and oral expression, identification and correction of phonological and grammatical problems.

411a,b,c **STUDIES IN FRENCH LANGUAGE AND LINGUISTICS (5 ea)**

Prereq: 5 credit hours at 300 level. Comparison of structures (phonological, morphological, syntactic) of English and French; development of phonology, morphology and syntax from Latin to modern French; advanced problems in phonetics and stylistics. Topics — (a) History of the French Language; (b) Applied Linguistics; (c) Phonetics and Stylistics.

425 **TEACHING-LEARNING PROCESSES IN ELEMENTARY FRENCH (2)**

Prereq: written permission of department and two courses in upper-division French. Practicum in course preparation, class-room and language laboratory procedures, materials, evaluation and counseling. May be repeated. S/U grading.

450 **SEMINAR IN FRENCH LITERATURE (3-5)**

Prereq: two courses in upper-division French and permission of department. Major authors and movements. Since topics vary, the course may be repeated.

451a,b,c **LITERARY GENRE STUDIES (5 ea)**

Prereq: 5 credits in 340-341. Topics: (a) theory of prose and its development through the novel; (b) theory of drama and its development; (c) theory of poetry and its development.

452a,b,c **LITERARY PERIOD STUDIES (5 ea)**

Prereq: 5 credits in 340-341. Topics: (a) Medieval and Renaissance: French literature and civilization from 1100-1630; (b) 17th and 18th Centuries: French literature and civilization from 1630-1802; (c) 19th and 20th Centuries: French literature and civilization from 1802-present.

German

101, 102, 103 **ELEMENTARY GERMAN (5 ea)**

Each course prerequisite to the next. Fundamentals of the language; pronunciation, grammar, aural comprehension, reading and speaking.

104 **REVIEW OF ELEMENTARY GERMAN (5)**

Recommended for all students needing a review of basic grammar and vocabulary before entering the intermediate level. Can be substituted for German 103. Offered fall quarter only.

201, 202, 203 **INTERMEDIATE GERMAN (5,5,3)**

Prereq: German 103 or two years high school German or equivalent; each course prerequisite to next. Review of the fundamentals, reading and conversation.

230 **GERMAN CULTURE AND CIVILIZATION STUDY TOUR (8)**

A culture study tour of Germany which includes a stay in East Germany, Berlin and different parts of West Germany. Sites are carefully chosen to provide a means of contrasting differences in culture and life styles between Americans and Germans as well as between West and East Germans. Intended for beginning students of German. S/U grading. Summers only. Next offered summer 1987.

280 **GERMAN FOR A READING KNOWLEDGE (3)**

Prereq: one year of college German. For fulfillment of master's degree reading requirement.

301, 302 **THIRD YEAR COMPOSITION (3 ea)**

Prereq: German 203 or equivalent; German 301 prerequisite to 302. Written and oral composition and grammar, and vocabulary building.

Foreign Languages/Literatures

- 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.
- 317 GERMAN DICTION FOR VOICE STUDENTS (2)
Prereq: prior approval by applied music instructor. German pronunciation course designed for singers and voice students. Emphasis is placed on learning the proper articulation of German sounds as well as rules of German orthography S/U grading.
- 330 GERMAN CULTURE AND CIVILIZATION STUDY TOUR (8)
Prereq: German 202 or equivalent. A culture study tour of Germany which includes a stay in East Germany, Berlin and different parts of West Germany. Sites are carefully chosen to provide a means of contrasting differences in culture and life styles between Americans and Germans as well as between West and East Germans. Intended for intermediate/advanced students. An opportunity for the improvement of language skills. S/U grading Summers only. Next offered summer 1987.
- 331 CIVILIZATION OF GERMANY THROUGH THE NINETEENTH CENTURY (3)
Prereq: German 201, 202, 203 or equivalent. Significant elements of German civilization presented through German texts.
- 332 GERMAN CIVILIZATION TODAY (3)
Prereq: German 201, 202, 203 or equivalent. Significant elements of German civilization.
- 340 INTRODUCTION TO GERMAN LITERATURE (4)
Prereq: 10 credits of second-year German 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. May be repeated when topics vary.
- 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.
- 385a,b,c GERMAN CULTURE AND CONVERSATION (1 ea)
Prereq: German 201; may be repeated for credit. German culture through film, talks and song. General discussion of Germany and its culture, especially in contrast to our own. S/U grading.
- 401, 402 ADVANCED COMPOSITION AND GRAMMAR (3 ea)
Prereq: German 302. Advanced written and oral expression.
- 425 TEACHING-LEARNING PROCESS IN ELEMENTARY GERMAN (2)
Prereq: written permission of department and six credits upper-division German. Practicum in course preparation, classroom and language laboratory procedures, materials, evaluation and counseling. May be repeated 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. Since topics vary, the course may be repeated

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 Graduate section of this catalog.

- 501 CULTURE AND CONVERSATION (4)
Prereq: German 401 or equivalent. Oral and written composition based on topics reflecting history of German civilization up to 1850. Conversational practice and study of daily life.
- 502 CULTURE AND CONVERSATION (4)
Prereq: German 401 or equivalent. Oral and written composition based on topics reflecting the history of German civilization from the 2nd Reich through contemporary Germany. Conversational practice on topics from daily life.
- 503 CULTURE AND CONVERSATION (4)
Prereq: German 401 or equivalent. Oral and written composition based on topics reflecting contemporary German civilization. Conversational practice on topics of daily life. This course is normally conducted as part of a field trip to Germany
- 504 APPLIED GERMAN LINGUISTICS (4 ea)
Prereq: graduate status or permission of department.
504a German Phonetics and Phonemics
504b German Morphology and Syntax
- 505 ADVANCED COMPOSITION: EXPOSITORY WRITING (4)
Prereq: German 401 or equivalent. By writing narratives, descriptions, letters and dialogues, students practice syntax and style. An awareness of the various levels of language is stressed.
- 510 SEMINAR IN LITERATURE (4 ea)
Prereq: graduate status or permission of department. Three seminars required. Emphasis on teaching of literature in community colleges and high schools, research methods and evaluation. Topics announced in advance from the following:
510a The modern short narrative
510b The short drama: *Hoerspiel, Einakter, Laienspiel*
510c Poetry, *Volkslied, Ballade, moderne Lyrik*
- 532 THE TEACHING OF GERMAN (4)
Prereq: graduate status or permission of department. Methods and materials for teaching German in the community college, secondary and elementary schools.

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.

111, 112, 113 NEW TESTAMENT GREEK (3 ea)

Each course prerequisite to the next. Study of the basic grammar and vocabulary of the Koine dialect, to include New Testament and Patristic sources, with emphasis placed on the acquiring of a reading knowledge.

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. Since topics vary, the course may be repeated.

Japanese**101, 102, 103 ELEMENTARY JAPANESE (5 ea)**

Each course prerequisite to the next. Fundamentals of the language: writing and reading *hiragana*, *katakana*, and some *kanji*; grammar, aural comprehension and speaking. Self-study language lab is an integral part of the course.

201, 202, 203 INTERMEDIATE JAPANESE (5 ea)

Prereq: Japanese 103 or equivalent. Each course prerequisite to the next. Emphasis on the acquisition of *kanji* and reading ability, vocabulary building and reading. Self-study language lab is an integral part of the course.

280 KANJI (2)

Prereq: Japanese 103 or permission of instructor. Development of the knowledge of *kanji* for technical reading. Tailored to the needs and levels of students. S/U grading.

301, 302, 303 ADVANCED JAPANESE (3 ea)

Prereq: Japanese 203 or permission of the instructor. Emphasis on reading, *kanji* acquisition, presentation and discussion of materials in Japanese.

Latin**101, 102, 103 ELEMENTARY LATIN (5 ea)**

Each course prerequisite to the next. 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; each course prerequisite to the next. Review of fundamentals; selected readings from various Roman writers; introduction to Latin civilization.

350 READINGS IN LATIN LITERATURE (3 ea)

Prereq: Latin 203 or equivalent. Readings in major genres. Since topics vary, the course may be repeated.

Russian**101, 102, 103 ELEMENTARY RUSSIAN (5 ea)**

Each course prerequisite to the next. 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 (5)**

Prereq: Russian 203 or equivalent. Written and oral expression, advanced grammar, and vocabulary building.

330 CIVILIZATION OF RUSSIA (3)

Prereq: Russian 201, 202, 203 or equivalent. Significant elements of Russian civilization presented through Russian texts.

Spanish**101, 102, 103 ELEMENTARY SPANISH (5 ea)**

To be taken in sequence. Fundamentals of speaking, reading, writing and understanding.

104 REVIEW OF ELEMENTARY SPANISH (5)

Recommended for all students needing a review of basic grammar and vocabulary before entering the intermediate level. Can be substituted for Spanish 103. Offered fall quarter only.

Foreign Languages/Literatures

- 201, 202, 203 INTERMEDIATE SPANISH (5,5,3)
Prereq: Spanish 103 or equivalent; to be taken in sequence. Review of fundamentals; speaking, reading, writing and understanding.
- 205 INTERMEDIATE CONVERSATION (2)
Prereq: Spanish 201 or equivalent. May be taken concurrently with 202 and 301. Emphasis on speaking and vocabulary building based on daily life situations. Introduction to culture in the Hispanic world. May be repeated for credit once only.
- 301a,b,c ORAL EXPRESSION AND COMPOSITION (3 ea)
Prereq: Spanish 203 or equivalent. Advanced work in oral expression, composition, grammar review and vocabulary building. Repeatable twice.
- 305a,b,c THIRD YEAR CONVERSATION (2 ea)
Prereq: Spanish 203 or equivalent; may be taken concurrently with Spanish 301, 314. Conversational practice involving situations of daily life; vocabulary building. May be repeated for credit.
- 310 MEXICAN AND CHICANO LITERATURE (4)
Prereq: any introductory course in Ethnic Studies or Spanish. Mexican literary and cultural influences on Chicano literature. Chicano literature as a mirror of ethnic history, social and cultural experience, and changing social status.
- 314 INTRODUCTION TO SPANISH PHONOLOGY (3)
Prereq: Spanish 301 or equivalent. Intensive study of the Spanish sound system.
- 331 MEXICAN CULTURE AND CIVILIZATION (3)
Prereq: Spanish 201, 202, or equivalent. Panoramic view of Mexican civilization and culture from pre-Columbian times to the present.
- 340 INTRODUCTION TO HISPANIC LITERATURE (3)
Prereq: Spanish 301 or equivalent. Emphasis on reading and methods of literary analysis based generally on the major works of Hispanic writers.
- 350a,b,c,d MAJOR WORKS IN SPANISH-AMERICAN LITERATURE (3 ea)
Prereq: Spanish 340 or equivalent. Study of genres and trends during various periods in Spanish-American literature. Specific topics to be listed. May be repeated for credit when topics vary.
- 351a,b,c,d MAJOR WORKS IN SPANISH LITERATURE (3 ea)
Prereq: Spanish 340 or equivalent. Study of genres and trends during various periods in Spanish peninsular literature. May be repeated for credit when topics vary.
- 353 CONTEMPORARY MEXICAN LITERATURE (3)
Prereq: Spanish 340 or equivalent. Reading and discussion of selected major documents from twentieth century Mexican literature.
- 401 ADVANCED COMPOSITION AND GRAMMAR (3)
Prereq: Spanish 301 or equivalent. Advanced written and oral expression, identification and correction of phonological and grammatical problems.
- 402 ADVANCED COMPOSITION AND GRAMMAR II (3)
Prereq: Spanish 401 or equivalent. Advanced written and oral expression, identification and correction of phonological and grammatical problems.
- 405a,b,c ADVANCED CONVERSATION (2 ea)
Prereq: Spanish 301, 335; may be taken concurrently with Spanish 401. Advanced conversational practice on topics reflecting current events in the Hispanic world; students give expository talks and discuss articles taken from periodicals; vocabulary building. May be repeated for credit.
- 425 TEACHING-LEARNING PROCESSES IN ELEMENTARY SPANISH (2)
Prereq: written permission of department and two courses of upper-division Spanish. Practicum in course preparation, classroom and language laboratory procedures, materials, evaluation and counseling. May be repeated. S/U grading
- 450 STUDIES IN SPANISH LITERATURE (3)
Prereq: two courses in upper-division Spanish and permission of department. Major authors and movements. Since topics vary, the course may be repeated.

Graduate Courses in Spanish

Courses numbered 500; 517-545; 597 are described on page 28 of this catalog.

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

- 501 CONVERSATION AND COMPOSITION (4)
Prereq: Spanish 401 or equivalent. Syntax, written and oral composition, conversation based on topics reflecting the history of Spanish civilization from the beginnings to the Renaissance.
- 502 CONVERSATION AND COMPOSITION (4)
Prereq: Spanish 401 or equivalent. Syntax, written and oral composition, conversation based on topics reflecting the history of Spanish civilization from the Golden Age to the 19th century.
- 503 CONVERSATION AND COMPOSITION (4)
Prereq: Spanish 401 or equivalent. Syntax, written and oral composition, conversation based on topics reflecting contemporary Hispanic civilization.
- 504 APPLIED LINGUISTICS (4)
Prereq: graduate status or permission of department. Studies of problems of Spanish structure as related to the classroom situation.
- 505 HISTORY OF THE SPANISH LANGUAGE (4)
Prereq: graduate status or permission of department. The development of the Spanish language from Latin to the present day; study of phonology, morphology and syntax.
- 510 SEMINAR IN LITERATURE (4 ea)
Prereq: graduate status or permission of department. Three seminars required. Emphasis on teaching literature and civilization in the community college, high school and elementary school. Topics to be announced in advance from the following:
510a Spanish Civilization
A study of the evolution of Spanish civilization from its earliest history to the present
510b Spanish-American Civilization
A study of Spanish-American civilization from pre-Columbian times to the present
510c Culture of the Spanish-speaking People of the World Through Literature
(Other elective special topic seminars in literature will be added as indicated by demand.)
- 532 THE TEACHING OF SPANISH (4)
Prereq: graduate status or permission of department. Methods and materials for teaching Spanish in the community college, secondary and elementary schools.

Geography & 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 man and his 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 on 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 DEPARTMENT

Faculty

The members of the department 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.

Course Offerings

The department provides more than 40 undergraduate courses and about a dozen graduate courses. These fall into three principal categories: (1) those which deal with particular regions of the world; (2) those treating major sub-fields of the two disciplines; and (3) those which provide opportunities to develop specific skills in techniques of geographic research and planning.

Programs and Degrees

The department offers undergraduate major programs in geography and in planning, as well as an extended minor in cartography and a minor in geography. B.A. and B.A. in Education degrees are granted. At the graduate level, there are concentrations in geography and in planning for which the M.S. degree is granted.

Facilities and Equipment

A major facility of the department is its well-stocked map library, which contains more than 180,000 sheet maps, atlases and air photos, as well as many reference works for cartographic and photogrammetric research. The library is an official depository for maps issued by the United States Geological Survey, the United States Defense Mapping Agency, the Canadian Department of Energy, Mines and Resources, and other governmental agencies. A permanent staff map curator is in charge of the collection. A well-equipped cartographic laboratory, the services of a permanent staff cartographer, a wide

variety of equipment for field research, and an extensive wall-map collection are further aids to teaching and research. In addition, more than 120 English language and foreign geographical journals are available in Wilson Library.

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 analysis, the employment options are much increased. Particularly useful for the acquisition of such skills is the extended minor in 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) Chair.
Professor. BSc, MSc, University of Calcutta; PhD, University of Florida.
- RICHARD H. BERG (1970) Associate Professor. BS, MS, University of Washington; PhD, Oregon State University; PE, State of Washington.
- HOWARD J. CRITCHFIELD (1951) Professor. BA, MA, PhD, University of Washington.
- JEANNE DOWNING (1983) Associate Professor. BA, Washington University; MRP, Cornell University; PhD, University of Washington.
- ROBERT L. MONAHAN (1955) Professor. BA, University of Washington; MA, University of Michigan; PhD, McGill University.
- FRANKLIN C. RANEY (1966) Associate Professor. BS, University of Chicago; MS, Washington State University; PhD, University of California, Davis.
- JAMES W. SCOTT (1966) Professor. BA, MA, Cambridge University; PhD, Indiana University.

- RICHARD G. SMITH (1970) Associate Professor. BS, University of Alaska; MS, PhD, University of Wisconsin.
- THOMAS A. TERICH (1973) Associate Professor. BA, MA, California State University, L.A.; PhD, Oregon State University.

BACHELOR OF ARTS

The program of the undergraduate major or minor in geography should include fundamental courses in both the natural sciences and the social sciences. The department will recommend supporting courses related to the student's career objectives. The student contemplating work toward a graduate degree is advised to acquire a reading knowledge of a foreign language and competence in statistics and/or computer science during his undergraduate years.

Students in geography should consult the undergraduate adviser, Dr. Thomas A. Terich, at the earliest opportunity to plan their programs.

Students in urban and regional planning should consult with Dr. Debnath Mookherjee, director of the Urban and Regional Planning Program.

Major — Geography 68 credits

- Geog 201, 203, 207, 251, 301, 311, 351, 354, 486
- One course from Geog 310, 313, 314, 315, 318, 319, 321, 322
- One course from Geog 330, 331, 422, 423, 424, 426
- Two courses from Geog 340, 341, 342, 345, 370, 373, 374, 407, 409, 444, 445
- One course from Geog 325, 326, 352, 425, 451, 452, 453, 455
- Supporting course Math 240 or Soc 315
- Electives under departmental advisement

Minor — Geography 25 credits

- Geography 201
- Electives under departmental advisement

Extended Minor — Cartography

35 credits

- Geog 201 or 251, 325, 351, 352, 451, 452
- One course from Comp Sci 110 or 210
- Tech 240
- Additional credits from the following to total 35: Geog 354, 456, Math 240, Art 271, 371, Tech 240, 260, 340, 341, 440

Major — Urban and Regional Planning

105 credits

An interdisciplinary approach, based on the strengths of six departments in the College of Arts and Sciences and Huxley College of Environmental Studies, characterizes the program.

The Department of Geography and Regional Planning administers the program with support from other departments, particularly economics, political science and sociology. This multi-disciplinary character of the program, drawing upon specialized resources of the various departments, 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.

NOTE: Students who are currently enrolled in other institutions but who intend to transfer to Western to complete the urban and regional planning program should review carefully both the general education requirements of the College of Arts and Sciences and the requirements of the planning program. Those who transfer to Western at the end of their sophomore year or later, may encounter difficulties in completing all requirements within a normal four-year total period.

Specified Requirements

Planning Core Areas

- Econ 203 or 204, 482
- Geog 201, 207, 280, 341, 351, 354, 380, 480
- Huxley 436
- Math 240 or Soc 315
- Pol Sci 250, 353
- Soc 202, 340
- Comp Sci 110 or 210

Electives

Either 26 or 28 credits to be selected from the following, with two courses from each group:

- Geog 301, 325, 326, 352, 425, 432, 452, 453
- Geog 331, 340, 342, 370, 373, 374, 407, 409, 417, 422, 423

or 16 or 18 hours of electives from the two groups above, with at least one course from each, and 10 hours from an approved physical science or social science discipline.

BACHELOR OF ARTS IN EDUCATION

Some courses may be offered only on an alternative year schedule. Students should note this in planning their schedules and should consult the departmental adviser, Dr. Thomas A. Terich.

Major — Elementary or Secondary

45 credits

- Geog 201, 203, 207, 251, 311, 460
- Five credits from Geog 310, 313, 314, 315, 318, 319, 321, 322

- One course from Geog 330, 331, 370, 422, 423, 424, 426
- One course from Geog 340, 341, 342, 345, 407, 409, 444
- One course from Geog 301, 351, 352, 354, 417, 453, 455
- Electives

All selections to be made under departmental advisement.

NOTE: Students in secondary education must also complete the specific program requirements for social studies education, including the social studies minor, as outlined in the College of Arts and Sciences Interdisciplinary Programs section. Completion of this major/minor program leads to a teaching endorsement in social science and geography at the secondary level.

Minor — Geography 25 credits

- Geog 201, 203, 311
- Electives under departmental advisement

GRADUATE STUDY

For concentration in geography leading to Master of Science degree, see Graduate section of catalog.

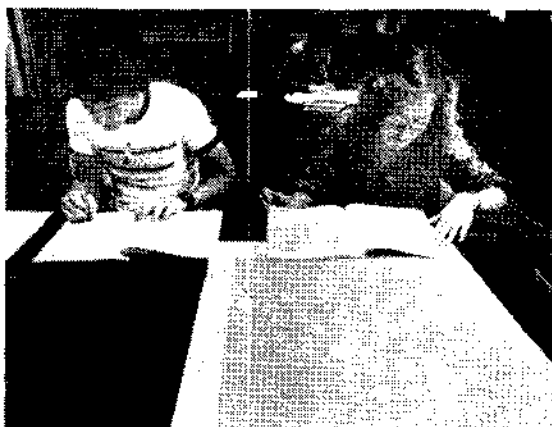
COURSES IN GEOGRAPHY

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 (5)
Principles and techniques in analysis of areal distributions in the natural environment; land forms, water, climate, soils, vegetation.
- 207 ECONOMIC GEOGRAPHY (5)
Location analysis of economic activities; interrelationships of resources, industry, trade and transportation.
- 210 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.
- 280 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, 207. Source materials, research and writing techniques; emphasis on the nature and development of geography and planning.

Geography/Regional Planning

- 31C THE PACIFIC NORTHWEST (3)
Prereq: Geog 201 or 203 or 207. 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. Topical 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 appreciation of Canada.
- 314 LATIN AMERICA (5)
Prereq: Geog 201. Caribbean, Central America, South America; their biotic, cultural and earth resources; prospects and problems in international affairs.
- 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.
- 31E THE PACIFIC (3)
Prereq: Geog 201. Environment, economies and societies of Australia, New Zealand, Micronesia, Melanesia and Polynesia. Normally offered alternate years.
- 31F 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.
- 325 REMOTE SENSING I: PRINCIPLES OF AERIAL PHOTOGRAPHY (4)
Prereq: Geog 251 and 4 additional credits in geography. A general introduction to spectral reflectance and remote sensing principles. Multi-spectral cameras and principles of photographic interpretation.
- 326 REMOTE SENSING II: PRINCIPLES OF NON-PHOTOGRAPHIC IMAGERY (3)
Prereq: Geog 325. Manned satellite imagery and the LANDSAT system, Thermal IR and Radar. Emphasis is placed on system characteristics and product analysis.
- 330 GEOGRAPHY OF LANDFORMS (5)
Prereq: Geog 203 or Geol 101. Topical and regional analysis of landforms; interrelationships of landforms and other physical and cultural phenomena.
- 331 CLIMATOLOGY (5)
Prereq: Geog 203 or Physics 101 or 131. Physical basis of climate; world patterns of climate; applied climatology.
- 34C 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.
- 342 RURAL SETTLEMENT AND LAND USE (3)
Prereq: Geog 201. Geographical analysis of rural settlement and land use; origins, diffusion and patterns in selected regions.
- 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 251. Map and chart design, construction and reproduction; computer mapping.
- 352 COMPUTER MAPPING (3)
Prereq: Geog 351 or CS 110 or 210. Conceptual exploration of existing mapping programs; interactive work with electronic digitizers and cathode ray tube displays; exploration of the capabilities and limitations of various computer-driven graphic display systems.
- 354 ANALYSIS OF AREAL DATA (4)
Prereq: Math 240 or Soc 315; Geog 201 or 280 and 203 or 207. Statistical and cartographic techniques in solving geographic problems.
- 370 NATURAL RESOURCES MANAGEMENT (3)
Prereq: Geog 201 or 203 or 207. Conservation as an operational philosophy and as an instrument of policy; legal and institutional options for conservation of mass and energy in the ecosystem.
- 373 LAND RESOURCE ANALYSIS (3)
Prereq: Geog 201 or 207 or 280. The physical, biological, economic and institutional factors affecting, conditioning and controlling man's use of land.
- 374 NATURAL HAZARDS (3)
Prereq: Geog 203 and 280. Identification and analysis of natural hazards; their distribution and geographic patterns; cause and effects; risk assessment methods and disaster planning. Offered in alternate years.
- 380 THE PLANNING PROCESS (3)
Prereq: Geog 280. Nature of the planning process; survey and analysis; goal formulation; plan development and implementation.
- 407 AGRICULTURAL GEOGRAPHY (3)
Prereq: Geog 201 or 207. Agricultural types, production, and commodities, land use and land tenure.

- 409 **TRANSPORTATION SYSTEMS AND PLANNING (3)**
Prereq: Geog 201 or 207. Locational and network analysis of local, regional and national systems; transportation and planning.
- 422 **GEOGRAPHY OF WATER RESOURCES (5)**
Prereq: Geog 203 or Geol 101. Water sources, sinks, shunts and loops of continents and basins; quality, quantity, allocation and legal aspects of water use.
- 423 **GEOGRAPHY OF SOILS (3)**
Prereq: Geog 203 or Geol 101. Soil formation, characteristics, classification, mapping and management for agriculture and engineering; field trips and laboratory study.
- 424 **BIOGEOGRAPHY (3)**
Prereq: Geog 203 or Biol 101. Distribution and environmental relationships of world biomes and their subdivisions; origin and dispersal of agricultural plants, animals, insects and diseases.
- 425 **REMOTE SENSING III: DIGITAL IMAGE PROCESSING (3)**
Prereq: Geog 326. The nature and scope of digital image processing is explored. Applications to satellite imagery are emphasized. Interactive computer programs are introduced.
- 426 **THE URBAN ENVIRONMENT (3)**
Prereq: Geog 203. Urban influences on the natural environment; applied physical geography of cities; environmental factors in urban planning.
- 432 **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.
- 444 **THE DEVELOPING WORLD: SPATIAL PROBLEMS, STRATEGIES AND SOLUTIONS (3)**
Prereq: Geog 201 or 207 and one of the following: Geog 314, 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.
- 451 **MAP REPRODUCTION AND GRAPHICS (3)**
Prereq: Geog 351. Fundamentals of map reproduction and graphics through photographic and non-photographic processes.
- 452 **CARTOGRAPHIC COMPILATION AND DESIGN (3)**
Prereq: Geog 351. Analysis and application of cartographic design and compilation techniques to practical mapping projects. Computer geographic information systems and/or manual mapping methods may be used.
- 453 **FIELD METHODS IN GEOGRAPHY (3)**
Prereq: Geog 351. Recording, mapping, and analysis of physical and cultural features.
- 455 **FIELD CAMP (3)**
Prereq: Geog 201, 203 and permission of instructor. Methods of geographical field investigation.
- 460 **THE TEACHING OF GEOGRAPHY (3)**
Prereq: Geog 201 and six additional credits in geography. Source materials and methods of geographic instruction.
- 480 **PLANNING STUDIO (6)**
Prereq: Geog 380. 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.

- 486 **SEMINAR IN SYSTEMATIC GEOGRAPHY (5)**
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 28 of this catalog.

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

- 501 **HISTORY AND PHILOSOPHY OF GEOGRAPHY (3)**
Prereq: graduate status. Evolution of geographic concepts, philosophy and methodology.
- 503 **HISTORY AND THEORY OF PLANNING (3)**
Prereq: graduate status. Evolution of planning theory and methods.
- 510 **RESEARCH TECHNIQUES (3)**
Prereq: Geog 454. Application of bibliographic, cartographic, field and other research techniques in geography and planning.
- 511 **PLANNING ADMINISTRATION AND IMPLEMENTATION (3)**
Prereq: Geog 503 and 510. Administration in urban and regional planning offices. Program evaluation, legal requirements, instruments of implementation.
- 521 **SEMINAR IN SYSTEMATIC GEOGRAPHY (5)**
Prereq: Geog 501 and 510. Investigation of major topics in human and physical geography.
- 531 **ADVANCED SEMINAR IN GEOGRAPHY (5)**
Prereq: Geog 521. Selected topics in human or physical geography.
- 535 **ENVIRONMENTAL PROBLEMS IN URBAN AND REGIONAL DEVELOPMENT AND PLANNING (5)**
Prereq: Geog 511 or 521. Cities and regions as complex systems of interdependent natural and human elements; key problems and approaches to their solution through planning.
- 541 **ADVANCED PLANNING STUDIO (6)**
Prereq: Geog 503, 510, 511. Application of theory, principles and methods of planning. Demonstration of integration of cultural and bio-physical data in addressing planning problems at community and regional scales.
- 551 **RESEARCH PROBLEM (5)**
Prereq: completion of all other 500-level required courses. Formulation and development of a hypothesis for a thesis. Development of the necessary methodology; preparation of bibliography and review of the literature.
- 590 **GRADUATE COLLOQUIUM (1)**
Current trends in geographic research. To be repeated each year of enrollment in program.
- 599 **DIRECTED RESEARCH (3)**
Prereq: advancement to candidacy and permission of instructor. Advanced individual projects under supervision. May be repeated for credit.
- 690 **THESIS (6)**
Prereq: advancement to candidacy for the master's degree and appointment of thesis adviser and thesis committee.

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 135 geology undergraduate majors and approximately 40 graduate students in the department.

FACILITIES AND EQUIPMENT

Geology is a science which studies the earth, its surfaces, interior and history and the processes which 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 environ-

ment of Puget Sound provide a broad spectrum of geologic features for study.

A number of concentrations are offered within the geology program.

These include:

Coastal Geology	Hydrology
Economic Geology	Paleomagnetism
Environmental Geology	Paleontology
Geochemistry	Petrology
Geomorphology	Sedimentation
Geophysics	Stratigraphy
Glacial Geology	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

- EDWIN H. BROWN (1966) Chair.
Professor. AB, Dartmouth College; MSC, University of Otago; PhD, University of California, Berkeley.
- RANDALL S. BABCOCK (1967) Associate Professor. AB, Dartmouth College; MS, PhD, University of Washington.
- MYRL E. BECK, JR. (1969) Professor. BA, MS, Stanford University; PhD, University of California at Riverside.

- ROBERT A. CHRISTMAN (1960) Associate Professor. BS, MS, University of Michigan; PhD, Princeton University.
- DON J. EASTERBROOK (1959) Professor. BS, MS, PhD, University of Washington.
- ROSS C. ELLIS (1962) Professor. BA, Occidental College; PhD, University of Washington.
- DAVID C. ENGBRETSON (1983) Assistant Professor. BA, Western Washington University; MS, PhD, Stanford University.
- HARVEY M. KELSEY (1984) Associate Professor. BA, Princeton University; PhD, University of California, Santa Cruz.
- MAURICE L. SCHWARTZ (1968) Professor of Geology and Education. BA, MS, PhD, Columbia University.
- CHRISTOPHER A. SUCZEK (1977) Associate Professor. AB, University of California, Berkeley; PhD, Stanford University.
- JAMES L. TALBOT (1976) Professor of Geology. BA, University of Cambridge; MA, University of California, Berkeley; PhD, University of Adelaide.
- ANTONI WODZICKI (1977) Associate Professor. BE, University of Otago; MS, University of Minnesota; PhD, Stanford University.

Research Associates

- Russell F. Burmester (1978)
BS, Stanford University; MA, University of Texas, Austin; PhD, Princeton University.
- Frank Danes (1973)
BS, PhD, Charles' University, Prague, Czechoslovakia.
- Jimmy Diehl (1977)
BA, MS, Western Washington State College; PhD, University of Wyoming.
- Suzanne Beske Diehl (1977)
BA, University of Minnesota; MS, Western Washington State College; PhD, University of Wyoming.

BACHELOR OF ARTS

Major 50 credits plus Supporting Courses

An accompanying minor in one of the sciences or in mathematics is recommended.

- Geol 211, 212, 304 or 305, 306, 310, 316, 318, 407
- Electives under advisement from Geol 214, 300, 340, 352, 360, 400, 410a, 410b, 412, 414, 416, 423, 424, 425, 430, 432, 433, 440, 444, 453, 454, 455, 460, 461
- Supporting courses: Chem 121, 122; Physics 131 or 241; Math 124; 16 additional credits under advisement in physics, biology, chemistry or mathematics

Minor 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 an earth science major or a geology minor combined with a major in one of the other physical or biological sciences.

Major — Earth Science Elementary

45 credits

- Geol 211, 212, 304, 306, 310 and 407
- Geog 203, 331; Physics 131; Astronomy 103
- Electives under departmental advisement from Geol 214, 316, 318, 340, 352, 399, 400, 410a, 410b, 412, 414, 416, 430, 440; Geog 353; one from Geog 422 or 423; Astronomy 315, 316; Biol 406

Major — Earth Science Secondary

45 credits

- Geol 211, 212, 304 or 305, 306, 310, 407
- Geog 331; Physics 131; Astronomy 315; Sci Ed 399, 492
- Electives from Geol 214, 316, 318, 340, 352, 399, 400, 410a, 410b, 412, 414, 416, 418, 420, 430, 440, 460; Geog 203, 353, one from 422 or 423; Astronomy 316

This major must be accompanied by a minor in physical science, chemistry, physics or biology; exceptions must be approved by the major department.

Combined Major — Earth Science/ Physical Science Secondary

71-74 credits

- Geol 211, 212, 304 or 305, 306, 310, 407
- Geog 331
- Chem 121, 122, 123
- Physics 131, 132, 133 (or 241, 242, 341) and Astronomy 315
- Sci Ed 399, 492
- 3-5 additional credits in physics or chemistry or history of science under advisement

Minor — Geology 25 credits

- Geology 211, 212
- Electives under departmental advisement

BACHELOR OF SCIENCE

Major Concentration 110 credits

This program is recommended for students who are preparing to become professional geologists and intend to enroll in a graduate program or enter industry upon completion of degree.

- Geol 211, 212, 305, 306, 310, 316, 318, 352, 399, 410a, 410b, 416, 418, 420
- 1 credit under advisement from Geol 214, 300, 340, 360, 400, 414, 423, 424, 425, 430, 432, 433, 440, 444, 453, 454, 455, 460, 461
- Supporting courses to total 50 credits, including: Chem 121, 122, 123; Physics 241, 242, 341, 351; Math 124, 125, Comp Sci 110 or higher, and Math 126 or 240.

Geology

- Remaining credits under advisement from chemistry, physics, math, computer science or biology to total 110 credits.

Students concentrating in biostratigraphy or paleontology may be allowed substitutions in biology under advisement.

Students preparing for graduate work are advised to complete one year of a foreign language.

Environmental Geology

Major Concentration 110 credits

Core Program (Required Courses)

- Geol 211, 212, 214, 304 or 305, 306, 407 or 418 and 420, 310, 316, 318, 352, 410a, 410b
- Chem 121, 122, 123
- Physics 241, 242, 341, 351
- Math 124, 125, Comp Sci 110 or higher, and Math 126 or 240
- Credits under advisement from geology, biology, chemistry, physics, geography and Huxley College to total 110; care should be taken to avoid duplications of courses among different disciplines

Geophysics Major Concentration

110 credits

- Geology 211, 212, 304, 306, 318, 352, 354, 407, 410a, 410b, 416, 454
- Math 124, 125, 126, 205, 224, 331, Comp Sci 110
- Physics 241, 242, 341, 342, 343
- Chemistry 121
- A minimum of 4 credits from: Geol 360, 453, 455; Math 332, 430; Physics 351, 352, 353, 471, 475, 485; Chem 122, 123

Geophysics Extended Minor 40 credits

Suitable only for majors in a physical science or others with a strong background in mathematics and physics. NOTE: A number of these courses have prerequisites:

- Geol 211, 212, 304, 306, 318, 352, 354, 407, 453, 454
- A minimum of three credits from the following: Geol 214, 316, 360, 410a, 410b, 416, 432, 455, 460

Combined Major — Geology/Mathematics:

Major Concentration 110 credits

- Geol 211, 212, 304 or 305, 306, 318, 352, 407, 410a, 410b
- Math 124, 125, 126, 205, 224, 331, 341, 342; Math/Comp Sci 375, 475; Comp Sci 210
- Chem 121
- Physics 241, 242, 341, 351
- Additional credits under advisement from geology and mathematics to total 110

DEPARTMENTAL HONORS

In addition to the general requirements for all honors students, a geology major who wishes to graduate "with honors" must include Geology 399.

GRADUATE STUDY

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

COURSES IN GEOLOGY

Courses numbered X37; X57; 300, 400, 417; 445 are described on page 28 of this catalog.

101 GENERAL GEOLOGY (4)

Introduction to geology for non-science majors; practical applications of geology; processes that have produced the earth and its landforms. Geology majors and those having had geology in high school should take Geology 211.

102 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.

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.

214 ENVIRONMENTAL GEOLOGY (3)

Prereq: Geol 101 or 211. Role of geological processes in the natural environment. Effects of man's alteration of the earth's surface and consumption of natural resources.

304 CRYSTALLOGRAPHY (1)

Prereq: Geol 211 and high school or college chemistry. Introduction to crystallography with emphasis on crystal study fundamental to mineral identification. Not open to those with credit in Geol 305. Can be taken concurrently with Geol 306.

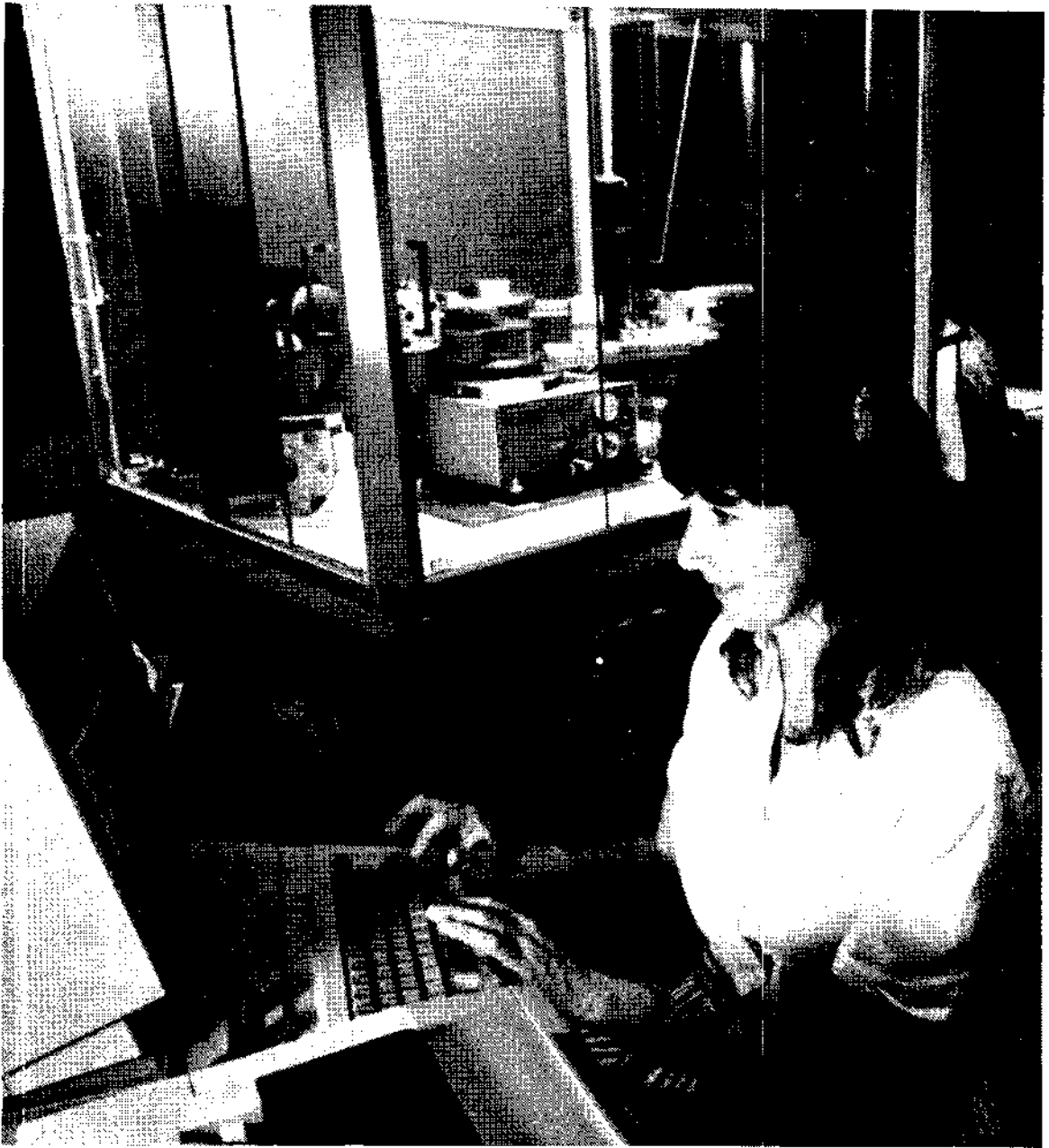
305 CRYSTALLOGRAPHY AND CRYSTAL CHEMISTRY (3)

Prereq: Geol 211 and Chem 121 or equivalent. Introduction to crystallography, crystal chemistry and chemical principles fundamental to study of minerals.

306 MINERALOGY (5)

Prereq: Geol 304 or 305. 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.
- 316 **PRINCIPLES OF PALEONTOLOGY (5)**
Prereq: Geol 212. Life on the earth as revealed by its inhabitants, past and present.
- 318 **STRUCTURAL GEOLOGY (4)**
Prereq: Geol 211, 212; Math 105 and Physics 241 recommended. 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 211, 318, Physics 241 or 131 and Math 124. Basic elements of geomagnetism, seismology, gravity, and heat flow with reference to the internal structure of the earth.
- 354 **POTENTIAL FIELD METHODS IN GEOPHYSICS (3)**
Prereq: Geol 352. Principles of gravity, magnetics, electrical and electromagnetic methods.
- 360 **GEOLOGY OF FOSSIL FUELS (4)**
Prereq: Geol 212. Origin and accumulation of fossil fuels; methods of locating fossil fuels resources.
- 396a,b,c **HONORS TUTORIALS (2-5)**
- 399 **SEMINAR IN GEOLOGICAL LITERATURE (1)**
Prereq: 14 credits in geology. Geological reports, papers and discussion.
- 407 **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.
- 410a **FIELD THEORY (5)**
Prereq: 13 credits in geology and permission of department, Geol 318. Methods of geological field investigations; use of field instruments. Offered August-September and spring quarter off campus. Concurrent enrollment in 410b recommended.
- 410b **FIELD METHODS (5)**
Prereq: concurrent or successive enrollment in 410a. Application of geological field trip methods to making geological maps and reports of specific areas; supervised investigation of one or more map areas. Offered August-September and spring quarter off campus.
- 412 **FIELD GEOLOGY FOR TEACHERS (2-5)**
Prereq: Geol 211. The geology of Northwest Washington as observed in the field. Summer only.
- 414 **GEOLOGY OF WASHINGTON (3-5)**
Prereq: Geol 101 or 211. The significant geologic features of Washington State; field studies.
- 416 **STRATIGRAPHY AND SEDIMENTATION (4)**
Prereq: Geol 212; 399 recommended. Analysis of transportation, deposition and consolidation of sediments; physical and biological characteristics of stratified rock sequences; principles of correlation, determination of geologic age and facies relationships.
- 418 **OPTICAL MINERALOGY (4)**
Prereq: Geol 306. Optical phenomena as related to mineralogy and identification of minerals from optical properties with the use of the polarizing microscope.
- 420 **PETROGRAPHY AND PETROLOGY (5)**
Prereq: Geol 352 and 418. Origin, occurrence and classification of igneous, sedimentary and metamorphic rocks; hand specimen and thin section identification of minerals.
- 423 **IGNEOUS PETROGRAPHY AND PETROLOGY (5)**
Prereq: Geol 420. Origin, occurrence and classification of igneous rocks and minerals and use of thin sections in identifying igneous minerals.
- 424 **SEDIMENTARY PETROGRAPHY AND PETROLOGY (5)**
Prereq: Geol 420. Origin, occurrence and classification of sedimentary rocks and minerals, and use of thin sections in identifying sedimentary minerals. Offered in alternate years.
- 425 **METAMORPHIC PETROGRAPHY AND PETROLOGY (5)**
Prereq: Geol 420. Origins, occurrence and classification of metamorphic rocks and minerals and use of thin sections in identifying metamorphic minerals.
- 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 (4)**
Prereq: Geol 306. The occurrence and origin of metallic and non-metallic ore deposits; geological and geochemical exploration techniques; prospect evaluation, sampling and mine mapping.
- 433 **ECONOMIC GEOLOGY -- ORE PETROLOGY LAB (3)**
Prereq: Geol 418. Microscopic study of hydrothermally altered rocks, reflected light microscopic study of opaque ore minerals and fluid inclusion research. Concurrent enrollment in Geol 432 suggested.
- 440 **GLACIAL GEOLOGY (4)**
Prereq: Geol 310. Processes and phenomena of modern and ancient glaciers; effects of Pleistocene glaciations.
- 444 **X-RAY DIFFRACTION (2)**
Prereq: Geol 306, Chem 122, and permission of department. Basic analytical techniques with x-ray equipment.
- 450 **ADVANCED STRUCTURAL GEOLOGY (3)**
Prereq: Geol 318, 418. Analysis of small- and large-scale structures in rocks, including those resulting from multiple deformation.
- 453 **GEOTECTONICS (4)**
Prereq: Geol 352. Crust-mantle interactions, isostasy, continental drift, sea floor spreading, theories of mountain building.
- 454 **SEISMIC METHODS IN GEOPHYSICS (3)**
Prereq: Geol 352, Math 126, Comp Sci 110. Principles of applied seismology, including refraction and reflection; elements of data-processing.
- 455 **PALEOMAGNETISM AND ROCK MAGNETISM (5)**
Prereq: Geol 352. Origin and interpretation of natural magnetism of rocks; origin of geomagnetic field; application to problems in petrology, structural geology and geodynamics.



- 463 GEOLOGIC PHASE EQUILIBRIA (3)
Prereq: Math 124, Chem 122, 123, Geol 306. Application of classical thermodynamics to interpretation of geologic phase equilibria.
- 461 ANALYTICAL GEQCHEMISTRY (2)
Prereq: Geol 306, Chem 122, 123. Techniques of chemical analysis of geologic materials; atomic absorption spectrophotometry, x-ray fluorescence spectrophotometry, and gravimetric, volumetric, and colormetric methods.
- 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: Geol 472, calculus. Principles of hydrogeology, with emphasis on groundwater resources.

Graduate Courses

Courses numbered 500, 517, 545, 597 are described on page 28 of this catalog.

Admission to Graduate School or special permission required. See Graduate 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.
- 510 FIELD PROBLEM (2-5)
Field mapping problem and report in geology.

- 511 **ADVANCED STUDIES IN PHYSICAL GEOLOGY (3)**
Prereq: Geol 420 or permission of department. Independent or class study of recent advances in physical geology.
- 512 **ADVANCED STUDIES IN HISTORICAL GEOLOGY (3)**
Prereq: Geol 315 or permission of instructor. Independent or class study of recent advances in historical geology.
- 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 on 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.
- 518 **SEDIMENTATION AND TECTONICS (3)**
Prereq: Geol 416. Analysis of the depositional framework, plate tectonic setting and tectonic evolution of sedimentary basins, both marine and non-marine, including tectonic and environmental controls on facies relationships.
- 519 **GEOCHEMISTRY OF HYDROTHERMAL ORE DEPOSITS (4)**
Prereq: Geol 420, 432, Chem 123. Investigation of composition, sources and transportation and deposition mechanisms of hydrothermal ore deposits.
- 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 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.
- 526 **IGNEOUS AND METAMORPHIC PETROLOGY AND GEOCHEMISTRY (5)**
Prereq: Geol 423 or 425 or equivalent. Petrogenesis of igneous and metamorphic rocks and minerals.
- 527a **SPECIAL PROBLEMS IN SEDIMENTARY PETROLOGY — SEDIMENTARY GEOCHEMISTRY (3)**
Prereq: Geol 420. The distribution of elements in sedimentary rocks, geochemical mass balance, carbonate solution chemistry and geochemical indicators of paleosalinity. To be offered on alternate years with 527b.
- 527b **SPECIAL PROBLEMS IN SEDIMENTARY PETROLOGY — CARBONATE PETROLOGY (3)**
Prereq: Geol 420. The origin, occurrence, description and classification of carbonate rocks, with the techniques needed in their interpretation. To be offered on alternate years with 527a.
- 533 **ECONOMIC GEOLOGY — ORE PETROLOGY LAB (3)**
Prereq: Geol 418. Advanced microscopic study of hydrothermally altered rocks, reflected light microscopic study of opaque ore minerals and fluid inclusion research.
- 535 **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.
- 544 **X-RAY DIFFRACTION AND CRYSTALLOGRAPHY (3)**
Prereq: permission of instructor. Powder diffraction methods using the diffractometer and powder camera; identification of minerals and indexing of diffraction data.
- 550 **STRUCTURAL ANALYSIS OF DEFORMED ROCKS (4)**
Prereq: permission of instructor. Analysis of geologic structures at all scales. Structural regimes and plate tectonics.
- 552a,b **ADVANCED STUDIES IN GEOPHYSICS (4 ea)**
Prereq: Geol 453 or 454 or permission of instructor. Advanced topics in geophysics.
- 553 **GEOTECTONICS (4)**
Prereq: permission of instructor. Mechanical behavior of earth materials; structure of the interior of the earth; theories of mountain building; plate tectonics.
- 554 **SEISMIC METHODS IN GEOPHYSICS (3)**
Prereq: permission of instructor. Principles of applied seismology, including refraction and reflection; elements of data-processing.
- 555 **PALEOMAGNETISM AND ROCK MAGNETISM (5)**
Prereq: permission of instructor. Origin and interpretation of natural magnetism of rocks; origin of geomagnetic field; advanced application to problems of petrology, structural geology and geodynamics.
- 560 **GEOLOGIC PHASE EQUILIBRIA (3)**
Prereq: permission of instructor. Analysis of geologic phase equilibria in terms of classical thermodynamics. Review of current research literature and seminar presentations.
- 561 **ANALYTICAL GEOCHEMISTRY (2)**
Prereq: permission of instructor. Advanced techniques of chemical analysis of geologic materials.
- 573 **GROUNDWATER HYDROLOGY (4)**
Prereq: Geol 472, 1 year calculus. 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 will be on practical applications of geology and basic principles of groundwater hydraulics to water resource problems.
- 580 **ADVANCED METHODS IN FIELD GEOLOGY (2)**
Prereq: Geol 410a,b or equivalent field experience, Geol 352 or equivalent. Transportation fee will be charged. Field trips open only to those enrolled in course.
- 595 **SEMINAR IN CONTEMPORARY GEOLOGY PROBLEMS (1)**
Prereq: graduate standing in department. May register for a maximum of three (3) credits. Presentation of contemporary subjects in geology. S/U grading.
- 690 **THESIS (3-12)**
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

- ROLAND L. DE LDRME (1966) Chair.
Professor. AB, University of Puget Sound; MA, University of Pennsylvania; PhD, University of Colorado.
- WILLIAM A. BULTMANN (1965) Professor. AB, PhD, University of California, Los Angeles.
- DOUG D. EKLUND (1968) Associate Professor. BA, University of New Mexico; MA, Colorado State College; PhD, University of Colorado.
- LEONARD M. HELFGOTT (1970) Associate Professor. BA, MA, PhD, University of Maryland.
- HARLEY E. HILLER (1957) Professor. BA, Westmar College; MA, PhD, University of Minnesota.
- 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.

- HARRY D. JACKSON (1967) Associate Professor. BEd, Wisconsin State University, Whitewater; MA, PhD, The University of Iowa.
- EDWARD H. KAPLAN (1968) Associate Professor. BS, Georgetown University; MA, PhD, The University of Iowa.
- GEORGE ERIC MARIZ (1970) Associate Professor. BA, MA, PhD, University of Missouri.
- AUGUST RADKE (1953) Professor. BA, MA, PhD, University of Washington.
- JAMES B. RHOADS (1984) Adjunct Professor. BA, MA, University of California, Berkeley; PhD, The American University.
- HARRY R. RITTER (1969) Associate Professor. BA, University of Arizona; MA, PhD, University of Virginia.
- PAUL L. ROLEY (1967) Associate Professor. BA, Illinois College; MA, Northwestern University; PhD, University of Illinois.
- HENRY G. SCHWARZ (1959) Professor of Political Science and History. BA, MA, PhD, University of Wisconsin.
- LESLIE J. THOMAS (1962) Associate Professor. BA, St. Olaf College; MS, PhD, University of Wisconsin.
- 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 taken in upper-division courses.

Major 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

The department recommends that majors take the maximum permissible number of history courses in the General University Requirements program. Up to 12 credits of General University Requirement history courses may be applied toward a major or minor in history. (See General University Requirements in the College of Arts and Sciences section.)

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. Possession of such proficiency is a requirement for departmental honors at graduation for those who elect a four-course history concentration in a field where English is not predominant.

A minimum grade point average in history of 2.5 is required for graduation.

Minor 25 credits

For purposes of 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 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 2.5 is required for graduation.

Minor in 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 (425, 426, 427, 428, 429)
- Two courses in one of the following areas: France and the French-speaking world (277, 386, 441, 442); Germany (430, 431); Latin America (271, 273, 473); Russia (433, 434)
- Electives under advisement

Area Studies Minor

Minor programs are available in the following fields:

- Canadian-American Studies
- East Asian Studies
- Latin American Studies

Courses taken for credit in these programs may not be counted toward the major. See the College of Arts and Sciences Interdisciplinary Program section for details.

BACHELOR OF ARTS IN EDUCATION

The department recommends that students take its offerings in the General University Requirements program, up to 12 credits of which may be applied toward a major or minor in history. (See General University Requirements.)

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 — 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
- Soc St Ed 426
- Electives under advisement

NOTE: Students must also complete the specific program requirements for social studies education, including the social studies minor, as outlined in the College of Arts and Sciences Interdisciplinary Program section.

Completion of this major/minor program leads to a teaching endorsement in history and social studies at the secondary level.

Major — Elementary 45 credits

- Hist 103, 104
- Two courses from Hist 425 through Hist 449
- One course from Hist 410 through Hist 420
- Hist 391
- Electives under advisement; Hist 391 strongly recommended

A minimum grade point average in history of 2.50 is required for graduation and recommendation for teaching endorsement.

Minor — Elementary 25 credits

- History 103, 104
- Electives under advisement

GRADUATE STUDY

For concentrations in history leading to the Master of Arts degree and for information concerning the archival training program, see Graduate section of catalog.

COURSES IN HISTORY

Courses numbered X37; X97; 300, 400; 417; 445 are described on page 28 of this catalog.

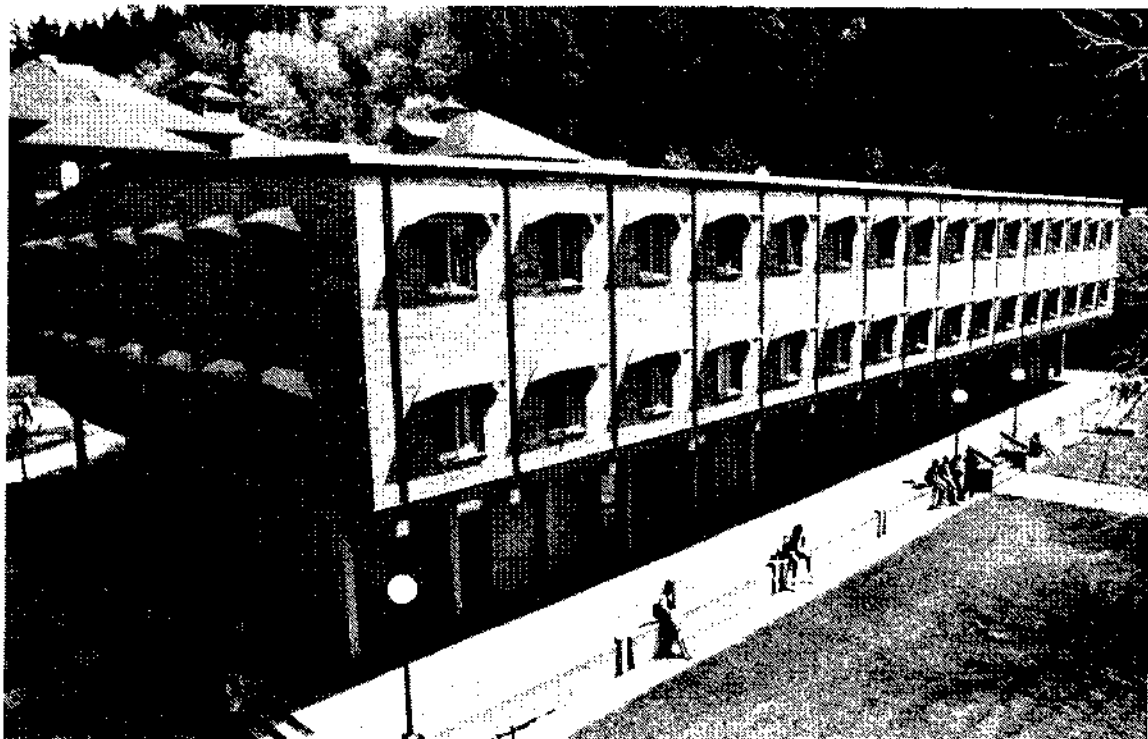
- 103, 104 INTRODUCTION TO AMERICAN CIVILIZATION (5 ea)
- 103 American History to 1865
From the European background to the end of the Civil War.
- 104 American History Since 1865
From the end of the Civil War to the present.
- 111, 112, 113 INTRODUCTION TO WESTERN CIVILIZATION (5 ea)
- Course should not duplicate Lib St 121, 122, 123. 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.
- 271 INTRODUCTION TO LATIN AMERICAN CIVILIZATION (5)
- A survey of various themes such as Hispanidad, Indianismo, the Church, the peasant, urbanism, the army, which together make up the Latin American experience.
- 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.
- 281 INTRODUCTION TO EAST ASIAN CULTURES (5)
- The origins and evolution of the religio-philosophical, intellectual and literary aspects of the cultures of East Asia 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.
- 321 THE SAMURAI: WARRIOR GOVERNMENT, SOCIETY AND CULTURE (4)
- Prereq: junior status. The decline of the aristocratic court and the rise of a warrior class in medieval Japan; Samurai values and religious beliefs; the evolution of legal and economic practices.
- 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, 112 or 113, or Lib St 121, 122 or 123 or equivalent. A study of the evolution of Western thought from its Greek and Hebrew origins to the eighteenth century, with special emphasis on the period since the Renaissance.
- 348 EUROPEAN INTELLECTUAL HISTORY II (5)
- Prereq: Hist 111, 112 or 113 or Lib St 121, 122 or 123. A study of the evolution of Western thought since the eighteenth century.
- 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.
- 363 AMERICAN CONSTITUTIONAL HISTORY (5)
- Prereq: sophomore status. The constitutional development of the United States from the Articles of Confederation to the present, emphasizing the Supreme Court's constitutional interpretation via judicial review in the context of partisan political debate.
- 364 FILM AS HISTORY (4)
- Prereq: any introductory American or European history course or Lib St 121, 122, 123. Readings and related films on selected historical topics; subject and course content varies with instructor. Repeatable for credit 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 AMERICAN SOCIETY AND THOUGHT: ORIGINS 1620-1800 (5)
Prereq: Hist 103 or equivalent. Social and intellectual development during the colonial and early national periods.
- 367 AMERICAN SOCIETY AND THOUGHT: 1800-1900 (5)
Prereq: Hist 103/104 or equivalent. Transcendentalism, Romanticism, Slavery, the Utopias; intellectual impact of the Civil War, Social Darwinism as trends in American history.
- 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 281 or Lib St 272 or 273 or 274 or equivalent. The religious, intellectual and literary life of China from earliest times to the present.
- 376 CHINGGIS KHAN AND THE MONGOL WORLD EMPIRE (3)
Prereq: sophomore status. The evolution of Steppe confederations from prehistoric times to and including the Mongol world empire.
- 377 MONGOLIA SINCE THE WORLD EMPIRE (3)
Prereq: sophomore status. Hist 376 recommended. The dissolution of the Mongol world empire, the division and occupation of Mongolia and twentieth-century events.
- 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 Lib St 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, Ethiopia and the Horn.
- 390 TOPICS IN HISTORY (3-5)
Prereq: junior status. Specialized topics dealing with history as a social science discipline. The subject of each individual course and its prerequisite will be announced in the class schedule. Repeatable to 10 credits.
- 391 HISTORY AND GOVERNMENT OF WASHINGTON (3)
Prereq: sophomore status. General history of the Pacific Northwest, state development, samples of local history, and state and local government. Required for certification of elementary teachers and secondary school social studies teachers.
- 394 GENEALOGY AND FAMILY HISTORY (3)
Prereq: junior status. A discussion of the methods and research aids in composing a genealogy and family history. Also discussed will be the importance of this research to prosopographical and historical studies in general.
- 407 HISTORY OF THE FIRST WORLD WAR (3)
Prereq: junior status. Analysis of the First World War with emphasis on the strategic and tactical considerations that governed its course.
- 408 HISTORY OF THE SECOND WORLD WAR (4)
Prereq: junior status. Analysis of the Second World War with emphasis on the strategic and tactical considerations that governed its course.
- 410 ANCIENT NEAR EAST (5)
Prereq: Hist 111 or Lib St 121. Genesis of Western civilization; our cultural debt to the ancient Mesopotamians, Egyptians, Hittites, Phoenicians, Aramaeans, Hebrews, Assyrians and Persians.
- 411 GREECE TO 404 B.C. (5)
Prereq: Hist 111 or Lib St 121; open to sophomores with permission of instructor. The Greek world from Minoan-Mycenaean period to end of Peloponnesian War.
- 412 GREECE: 404 TO 220 B.C. (3)
Prereq: Hist 111 or Lib St 121; open to sophomores with permission of instructor. Greece from the end of the Peloponnesian War to the intervention of Rome.
- 413 THE ROMAN REPUBLIC (5)
Prereq: Hist 111 or Lib St 121; open to sophomores with permission of instructor. From the foundation of Rome (753 B.C.) to the end of the Republic.
- 414 THE ROMAN EMPIRE (3)
Prereq: Hist 111 or Lib St 121; open to sophomores with permission of instructor. From the foundation of the Roman Empire to the death of Theodosius (395 A.D.) and the division of the Empire.
- 415 THE BYZANTINE EMPIRE (5)
Prereq: Hist 111 or 112, or Lib St 121; open to sophomores with permission of instructor. From the dedication of Constantinople to its fall (330-1453).
- 416a,b EUROPE IN THE MIDDLE AGES (5 ea)
Prereq: Hist 112, Lib St 121; open to sophomores with permission of instructor.
- 416a The Patristic Age and the Shaping of Europe, 284-1000. Impact of Christianity and the barbarian invasions upon Europe; shaping of the feudal society.
- 416b Central Middle Ages to the Era of Transition, 1000-1450. From feudal world to nation-state; fruition and transformation of feudal Europe.
- 419 CONSTITUTIONAL, LEGAL AND ADMINISTRATIVE HISTORY OF ENGLAND (3)
Prereq: junior status. A study of the institutions, social and political forces, and ideas which contributed to the development of the British Constitution, especially during the formative period before the Glorious Revolution.

History

- 420 **THE RENAISSANCE AND THE REFORMATION (5)**
Prereq: Hist 112 or Lib St 121; open to sophomores with permission of instructor. Transition from the Medieval to the Modern; Western Europe from the eve of the Hundred Years War to the Treaty of Westphalia (1337-1648).
- 423 **MODERN EUROPE: 1648-1789 (5)**
Prereq: junior status. Development of the modern state system and the conflict between monarchs and the growing middle class.
- 425 **MODERN EUROPE, 1789-1850 (5)**
Prereq: junior status. Political, economic, social, and diplomatic developments between the French Revolution and mid-nineteenth 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.
- 430 **GERMANY BEFORE 1815 (5)**
Prereq: junior status. German development from the late Middle Ages to the Napoleonic era.
- 431 **GERMANY SINCE 1815 (5)**
Prereq: junior status. Since the Congress of Vienna; national unification, the German state system; role in international affairs.
- 433 **ROOTS OF REVOLUTION: RUSSIA, 1801-1917 (3)**
Prereq: junior status. A history of Russia in the 19th century with particular emphasis upon social and intellectual trends and upon the rise of the revolutionary movement.
- 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 went wrong.
- 435 **THE HAPSBURG MONARCHY, 1815-1918 (5)**
Prereq: Hist 113 or equivalent. A political and sociological analysis of the decline and collapse of a great empire. Offered in alternate years.
- 438 **ENGLAND, 1485-1688 (5)**
Prereq: Hist 112 or Lib St 122 or equivalent. Political, social, economic and constitutional history of England from the end of the Wars of the Roses to the Glorious Revolution.
- 439 **ENGLAND, 1688-1832 (5)**
Prereq: Hist 113 or Lib St 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, Lib St 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 twentieth century on British politics, economics and society.
- 441 **FRANCE, 1643-1815 (5)**
Prereq: Hist 112 or 113 or Lib St 122 or equivalent. Political, social and economic development from Louis XIV through Napoleon.
- 442 **FRANCE SINCE 1815 (5)**
Prereq: Hist 113, Lib St 123 or equivalent. Political, social and economic development of France since Napoleon.
- 448 **EAST CENTRAL EUROPE TO 1919 (5)**
Prereq: junior status. The political, social and intellectual history of Poland, the Danube Basin and the Balkan Peninsula to the end of World War I.
- 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-eighteenth century; colonial reaction to imperial policies in the context of internal partisan politics from 1763 to the Declaration of Independence.
- 451 **THE ERA OF THE AMERICAN REVOLUTION, 1763-1783 (5)**
Prereq: junior status. Colonial reaction to British imperial policies and the political, economic, military and diplomatic problems of the Revolutionary Era in the context of internal partisan politics.
- 452 **THE EARLY NATIONAL PERIOD: HAMILTONIANS VS. JEFFERSONIANS (5)**
Prereq: junior status. The problems of the Confederation government, the debates and compromises in the Philadelphia Convention of 1787, and the origin of the two-party system as a result of the partisan political debates over constitutional interpretations, economic policies, and foreign policy to 1812.
- 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.
- 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.
- 461 **DIPLOMATIC HISTORY OF THE UNITED STATES TO 1945 (5)**
Prereq: junior status. Relationship of the United States to world politics from colonial times to 1945.
- 462 **DIPLOMATIC HISTORY OF THE U.S. SINCE 1945 (4)**
Prereq: junior status. A historical analysis of the United States in its relations to other powers in the post World War II world.
- 468 **U.S. AND REGIONAL MARITIME HISTORY (3)**
Prereq: permission of instructor. Naval and maritime development of the nation and Pacific Northwest.

- 473 **SELECTED MAJOR LATIN AMERICAN STATES IN THE 20th CENTURY (5)**
Prereq: junior status. A contemporary history of major states of current interest.
- 477 **CANADA SINCE 1945 (4)**
Prereq: junior status. Canadian internal and external developments since 1945.
- 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, 281, East Asian 301, 302, 303, Lib St 275. 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.
- 484 **EARLY MODERN JAPAN (5)**
Prereq: one of the following or equivalent: Hist 280, 281, East Asian 301, 302, 303, Lib St 275. Breakdown of central authority, growth of feudalism; wars of the fifteenth century; the path of reunification; the Tokugawa settlement and the politics of the *baku-han* system. Tokugawa social and economic change: commercialization, urbanization, bureaucratization; Tokugawa cultural and artistic expression, philosophy and intellectual life.
- 485 **MODERN JAPAN (5)**
Prereq: one of the following or equivalent: Hist 280, 281, East Asian 301, 302, 303, Lib St 275. Japan and the West; the decline of the Tokugawa order; the Meiji Restoration and modernization; Japan's industrial revolution and the modern state; the rise of democracy and imperialism; Japan in the new world order; the rise of militarism and the coming of the Pacific War. War, occupation and post-war Japan.
- 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
- 491 **SURVEY OF COMMUNITY HISTORY (2)**
Prereq: Hist 391. A survey of local history, with emphasis upon the interrelated local, regional, and national factors involved in the development of selected communities of the Pacific Northwest.
- 494 **HISTORY OF AMERICAN HISTORIOGRAPHY (4)**
Prereq: open only to upperclassmen or fifth-year students who are majors or minors in history, with permission of the instructor. A survey of the major historians of the American past and their varying styles of writing and differing patterns of interpretation, reflecting changing climates of opinion.
- 495 **PHILOSOPHICAL PROBLEMS OF HISTORY (5)**
Prereq: open only to juniors and seniors. Selected readings in European philosophies of history and their contributions to the development of the modern historical consciousness as reflected in modern historical writings and analyses.
- 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. The student will normally work under an instructor within the field of his choice.



Humanities Building

History

Graduate Courses

Courses numbered 500, 517, 545, 597 are described on page 28 of this catalog.

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

NOTE: "a" designates a reading seminar, "b" a writing seminar.

- 501 HISTORIOGRAPHY I (4)
Selected historiographical studies — Europe.
- 502 HISTORIOGRAPHY II (4)
Selected historiographical studies — United States.
- 511a ANCIENT GREECE (4)
Prereq: Hist 411 and 412. Readings from the Minoan-Mycenaean period to about 220 B.C.
- 512a ROMAN HISTORY (4)
Prereq: Hist 412. Readings in Roman history up to the death of Theodosius and the division of the Empire.
- 515a MEDIEVAL HISTORY (4)
Prereq: Hist 416a or b, or special permission of department. Selected studies from the Fall of Rome to the Renaissance.
- 520a RENAISSANCE AND REFORMATION (4)
Readings in the history of Europe from 1337-1648.
- 533a RUSSIAN HISTORY (4)
Prereq: Hist 434 or equivalent, or permission of the department.
- 536a,b ENGLISH HISTORY (4)
Prereq: one undergraduate course in English history or permission of the department.
- 537 a,b BRITISH EMPIRE AND THE COMMONWEALTH (4)
Prereq: permission of the department.
- 540a,b TWENTIETH CENTURY EUROPEAN DIPLOMATIC HISTORY (4)
Prereq: Hist 428 or equivalent or permission of the department.
- 541 SEMINAR IN EUROPEAN INTELLECTUAL HISTORY (4)
Prereq: an introductory undergraduate course in European intellectual history and graduate status.
- 542 EUROPEAN POLITICS AND POLITICAL THOUGHT, 1848-1914 (4)
Prereq: graduate status.
- 550a,b COLONIAL AMERICAN HISTORY (4)
Prereq: Hist 451 or equivalent or permission of the department.
- 554a,b CIVIL WAR AND RECONSTRUCTION (4)
- 556a,b 20th CENTURY AMERICAN HISTORY (4)
Prereq: Hist 458 or 459.
- 560a AMERICAN ECONOMIC AND BUSINESS HISTORY (4)
- 561 a,b AMERICAN DIPLOMATIC HISTORY (4)
- 563a AMERICAN CONSTITUTIONAL HISTORY (4)
Prereq: Hist 363 or equivalent, or permission of the department.
- 566a,b AMERICAN SOCIETY AND THOUGHT (4)
- 571a,b CANADA (4)
Prereq: permission of the department.
- 573a LATIN AMERICA (4)
Prereq: permission of the department.
- 581a IMPERIAL CHINA (4)
Selected readings from the period.
- 582a REPUBLICAN AND COMMUNIST CHINA (4)
Prereq: Hist 482 or equivalent or permission from the department. Readings in the history of China from 1912 to the present.
- 583 ANCIENT JAPAN (4)
Prereq: graduate standing in history and Hist 483. Readings in Japanese historical writings up to the Meiji Restoration.
- 585 MODERN JAPAN (4)
Prereq: graduate standing in history and Hist 484. Readings in Japanese historical writings from the Meiji Restoration to the present.
- 587a SEMINAR IN MIDDLE EASTERN HISTORY (4)
- 588a,b AFRICA (4)
Prereq: undergraduate preparation in African history, or permission of instructor.
- 591a,b SEMINAR IN AMERICAN WESTERN AND REGIONAL HISTORY (4)
- 592a,b,c SEMINAR IN HISTORIC PRESERVATION (4,4,10)
Prereq: 592a,b, graduate standing in history; 592c, approval of the Historic Preservation Intern Selection Committee. Readings, research and writing, and internship experience in the theory and application of the field of historic preservation.
- 594* SEMINAR ON THE TEACHING OF HISTORY (2)
Develops alternate teaching strategies for application at the community and college levels.
- 598a, b,c GRADUATE PROGRAM IN ARCHIVES AND RECORDS MANAGEMENT (8,10,10)
Prereq: minimum of 20 graduate credit hours of history or an M.A. in an allied field, approval of the Intern Selection Committee. A graduate-level program conducted jointly by the Department of History and various cooperating agencies, institutions and companies. Training includes a one-quarter course of instruction on campus providing an introduction to archival and records management techniques and administration. This is followed by a two-quarter internship at one of the cooperating agencies. The initial quarter of instruction carries eight credits while each quarter of the internship carries ten. 598a may be counted as an elective for the M.A. in history.
- 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.

*This course does not meet requirements for subject matter seminars.

Home Economics

HOME ECONOMICS — A DEFINITION

Home Economics has as its focus the well-being of individuals and families. Home Economics in the 1980s looks at the relationships between people and environments. In Home Economics, the faculty, staff and students work together to create a teaching-learning environment that emphasizes common concepts, competencies and community service which help individuals function more effectively as members of families, households and as consumers.

The programs in Home Economics help students develop knowledge and skills that will be of value in solving everyday problems, not only in their present lives but also in their future. Home Economics has an interdisciplinary, cohesive and global outlook. The role and mission of the Department of Home Economics is to interpret its content to enhance personal development and family welfare.

"Home Economics is a profession because it affords a life career, involves intellectual activities and responsibilities, demands a body of specialized theoretical knowledge, skills and attitudes, has a well-defined function, exalts service above personal gain and demands continual growth."^{*}

HOME ECONOMICS FACULTY

ROSALIE ROSSO KING (1983) Chair.

Associate Professor. BS, University of Washington; MEd, Massachusetts State College at Framingham; PhD, University of Washington.

JANICE R. PEACH (1964) Assistant Professor. BS, South Dakota State University; MS, Oklahoma State University.

DOROTHY E. A. RAMSLAND (1949) Professor. BS, University of Wisconsin; MS, PhD, Michigan State University.

JANE E. ROBERTS (1966) Associate Professor. BS, MS, PhD, University of Wisconsin.

^{*}*Home Economics: An Introduction to a Dynamic Profession*, 2nd edition, Macmillan Pub., p. 10

ADMISSIONS REQUIREMENTS

Due to increased demand for courses in home economics programs, the department has established admissions requirements for all concentrations. A 2.50 GPA must be achieved in required home economics courses, including supporting courses, for entrance as a declared major and must be maintained to continue in the program. Certain concentrations may find it necessary to require additional admissions or GPA criteria. Any adjustment in admission or GPA criteria or registration procedures will be published in the Class Schedule. Early advisement is essential, and priority in registration for courses will be given to declared majors.

BACHELOR OF ARTS

Major Concentration: General Home Economics 110 credits

The student seeking a Bachelor of Arts degree in general home economics is required to take courses in each of the five areas of home economics. Students may concentrate electives in one or two areas to meet a specific goal or career objective. In addition to the wide scope of courses in home economics, a student selects supporting courses from other departments, under departmental advisement.

Graduates with a degree in general home economics find opportunities in government, business and industry. The general background is desirable for work in consumer relations, mass media, and social, health and family services.

- Core requirements:* Home Econ 122, 175, 250, 332, 410 (14 credits)
- Concentration requirements:* Selected credits from each home economics area listed

Home Economics

below with faculty advisement (9 credits minimum from each area):

- Family Relationships/Child Development
- Foods and Nutrition
- Textiles and Clothing
- Housing, Furnishings and Equipment
- Family Economics/Home Management

- Electives:* 11 credits in home economics
- Supporting Courses:* Econ 203 or 204 plus 35 credits from disciplines other than home economics. A total of 12 GUR credits may be applied toward supporting course requirement

Major Concentration: Interior Design and Merchandising 110 credits

This concentration is designed for the student desiring a broadly based interior design education in home economics. The focus of the program is the improvement of the quality of the human environment for the family and home, the work place and the community. Aesthetic, spatial, visual and functional problem-solving is encouraged through simulated and actual problems in residential and contract design. Important aspects of the program include: opportunity to apply design concepts to situations within the community or University; field trips relevant to current marketing and merchandising concepts of the interior furnishings field; developing awareness of historic and new furnishings design; and meeting professionals in the field.

Early advising is important for this program; classes must be taken in sequence and prerequisites followed; and some class sections are for declared interior design majors. Students are considered a pre-major until the successful completion of home economics and supporting course requirements at the 100 and 200 levels.

A competitive selection process gives students entry to a block of interior design classes at the senior level which provide an in-depth experience. Work experience in the interior design or architectural design fields is an elective part of the program.

Supporting courses outside home economics may be individually planned to meet the student's career objectives.

Career opportunities in the interiors furnishing field are varied: merchandising, management, marketing, retailing, residential and contract design, furnishings product design, historic preservation, communications and education are broad categories for many possible specific careers.

- Core requirements:* Home Econ 122, 175, 250, 332, 410 (14 credits)
- Concentration requirements:* Home Econ 101, 164, 201, 370, 371, 372, 375, 376, 464, 475, 478, 480 (42 credits)

- Electives:* 14 credits in home economics courses (courses relating to interior design preferred)
- Supporting courses:* Econ 203 or 204; Tech 210, 311 and 313; plus 23 credits selected with faculty advisement from disciplines other than home economics, e.g., art history, art, business administration, computer science, philosophy, technology, speech or other appropriate disciplines. A total of 12 GUR credits may be applied toward supporting course requirement

Minor 25 credits

Prior consultation and departmental program approval are required of students wishing to secure a minor in Home Economics.

Major Concentration: Apparel Design 110 credits

Note: This major concentration and its courses offered only at Seattle campus.

A discipline embracing both artistic and technical endeavors, the apparel design option prepares students to project abstract ideas and concepts to a usable and salable product. The curriculum is planned to familiarize the student with business and communication skills as well as historic, psychological, social and ethnic studies in conjunction with practical and technical education.

- Core requirements:* Home Econ 122, 175, 250, 332, 410 (14 credits)
- Concentration requirements:* Home Econ 164, 300, 301, 313, 318, 319, 380, 382, 383, 384, 385, 386, 387, 388, 390, 391, 392, 394, 395, 461 (68 credits)
- Supporting courses:* Econ 203 and 204 (9 credits)
- Electives:* 19 credits

Major Concentration: Fashion Marketing 110 credits

Note: This major concentration and its courses offered only at Seattle campus.

Consisting of all essential activities involved in planning, acquiring and selling soft goods, the marketing discipline encompasses creative and productive efforts to include those fields in manufacturing and wholesaling as well as retail work. The curriculum is planned to prepare students in the special skills of human resource management, merchandising, marketing, promotion, buying and data processing.

- Core requirements:* Home Econ 122, 175, 250, 332, 410 (14 credits)

- Concentration requirements: Home Econ 164, 300, 301, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 318, 380, 394, 395, 461; Mgmt 304, 322 (71 credits)
- Supporting courses: Econ 203 and 204 (9 credits)
- Electives: 16 credits

BACHELOR OF ARTS IN EDUCATION

Major: Secondary Vocational Home Economics 70 credits

A teaching career in home economics offers

opportunity to work in a variety of subject areas: consumer education, family relationships, human development, foods and nutrition, housing and furnishings, textiles and clothing, and management. The home economics teacher is prepared to work with learners at the secondary level. The home economics teacher assumes a dynamic professional role in planning and managing classroom learning, guiding growth, and working with school personnel, families and groups in the community. Early in the program, the prospective teacher becomes involved in field experiences to observe learners in actual classrooms. The program includes experiences



Home Economics

in micro-teaching, video taping, planning relevant units and curriculum, utilizing multi-media resources, guiding interaction and applying evaluation skills. The concepts and experiences are current and relevant. The teacher preparation culminates with student teaching in a secondary vocational home economics program.

Graduates of this comprehensive program discover a wide variety of employment options in addition to teaching. Such options include adult education, extension, consumer programs, as well as being home economists for business, industry and government.

- *Core requirements:* Home Econ 122, 175, 250, 332, 410 (14 credits)
- *Concentration requirements:* Home Econ 101, 164, 260, 322, 334, 338, 350, 353, 370, 375, 422, 432, 441, 448 (Child Development and Family Relationships credits to total 12)
- *Electives:* 7 credits in home economics
- *Supporting courses:* Econ 203 or 204; Chem 115 is strongly recommended. A total of 12 GUR credits may be applied toward supporting course requirements

The vocational certificate is granted upon completing the requirements for the Bachelor of Arts in Education including the above major concentration and supervised teaching in home economics and compliance with WAC Code 390-28-010(6) for instruction in safety and industrial hygiene.

Teaching Endorsement

A minimum grade point average of 2.50 in home economics is required for graduation. Certification for teaching competency requires a 2.75 cumulative GPA.

Major: Child Development and Family Relationships 45 credits

Combined with Elementary Education Minor

The major emphasis of this program is the study of the child as he or she interacts with the total environment (family, school, community agencies, etc.). The program involves the concepts of how children grow and learn, how to design and manage environments that will promote a child's maximal growth and development, and how to work with children as individuals and in groups — important facets of the learning process. In addition to regular classroom learning, the students have an opportunity to participate in a variety of community programs involving children.

Graduates of this curriculum may work in such occupations as teachers in nursery school, day care, Head Start, kindergarten and primary grades; family life educator; curriculum specialist; case worker for welfare and other social service agencies; and parenting. Job opportunities

continue to expand as social and economic changes create new needs and new employment demands.

This major must be combined with elementary teaching minor. See Department of Educational Curriculum and Instruction for details of basic core and student teaching requirements and options in general classroom, early childhood, or special education.

- *Core requirements:* Home Econ 122, 175, 250, 332, 410 (14 credits)
- *Concentration requirements:* 15-18 credits from the following courses with approval of departmental adviser: Home Econ 322, 327 or 427, 420, 421, 422, 426
- *Electives:* 13-16 credits in home economics courses selected under faculty advisement

Minor: Child Development and Family Relationships 25 credits

This minor to be combined with professional concentration in elementary education or special education major.

- *Concentration requirements:* 25 credits in home economics courses selected under faculty advisement. Preliminary consultation is essential before undertaking a minor

BACHELOR OF SCIENCE

Interdisciplinary Nutrition Program

The focus of the Interdisciplinary Nutrition Program is human nutrition. It is collaborative in nature and draws from faculty and courses throughout the university. The Interdisciplinary Nutrition Program is designed to prepare students for employment or advanced study in one of several professions, including public health nutrition, nutritional sciences and consumer advocacy in nutrition. The Interdisciplinary Nutrition Program is based on minimum academic requirements for membership in the American Dietetic Association. Students interested in community nutrition, research or other special aspects of nutrition are encouraged to seek advice from any of the participating faculty members.

Interdisciplinary Nutrition Program Faculty

ROBERT MOFFATT, Department of Physical Education, Health and Recreation.

JANICE R. PEACH, Department of Home Economics.

DONALD J. SCHWEMMIN, Department of Biology.

DON C. WILLIAMS, Department of Biology

MING-HO YU, Huxley College.

For further information about the program contact Janice R. Peach (676-3339) or Ming-Ho Yu (676-3504).

Major 105-107 credits

- Biol 101, 345, 348, 349
- Econ 203
- Chem 121, 122, 251, 371
- Home Econ 250, 350, 353, 450, 454, 456
- Hux 352a, 452, 453, 454
- Mgmt 304
- Math 240
- Psych 201, and 321 or 351
- Soc 202

Minor 25 credits

- Home Econ 250, 350, 450
- Hux 352a,b, 452, 454

PROFESSIONAL PROGRAMS

For information on professional programs, see "Professional Programs" in the All-University Programs section of this catalog.

COURSES IN HOME ECONOMICS

Courses numbered X37; X97; 300, 400; 417; 445 are described on page 28 of this catalog.

- 101 DESIGN ORIENTATION (3)
Prereq: written permission of department. Fundamental design principles, design concepts and techniques as studio experiences.
- 122 CHILD AND FAMILY STUDIES (3)
Developmental characteristics of children and families; emphasizing application and a preventive approach, responsibilities of caregivers, interaction of families with other social systems and integration of knowledge from areas related to home economics.
- 164 TEXTILES FOR THE CONSUMER (3)
Comparative properties of textile fibers and fabrics. Emphasis on use, care and economics of natural and synthetic textiles.
- 175 PERSONAL AND ENVIRONMENTAL DESIGN (3)
Design aspects of the individual's environment; architecture, interiors, urban planning and renewal, clothing and personal adornment. Aesthetic, cultural and ecological study.
- 201 DESIGN CRITERIA FOR INTERIORS (3)
Prereq: Home Econ 101 or equivalent; Home Econ 175; written permission of department; limited to Interior Design and Merchandising majors. Studio experience in design relating to interiors and architectural problems.
- 250 HUMAN NUTRITION (3)
Prereq: general university requirement in chemistry and Biol 101 or equivalent. Basic nutrition principles and applications; food habits and nutritive needs of people.
- 260 CLOTHING CONSTRUCTION AND ANALYSIS (5)
Prereq: Home Econ 101, 164, 175; written permission of department. New techniques particularly applicable to the methods of teaching clothing, selection of clothing, principles of fitting and pattern manipulation, fabric preparation, construction techniques of basic garments.
- 301 FASHION MERCHANDISING I (4)
Prereq: junior standing. Introduction to the comparative study of fashion through time and across continents. Survey of concepts, the language of fashion and overview of the industry. (Offered off campus only.)
- 302 FASHION MERCHANDISING II (4)
Prereq: Home Econ 301. Nature and development of fashion in the United States and abroad. Interpretation of fashion in economic, social/psychological terms as well as commodity. (Offered off campus only.)
- 303 APPAREL MARKETING MANAGEMENT (4)
Prereq: Home Econ 301, 302. Analysis of factors and concepts used by management in planning, establishing policies and solving marketing problems. Consumer behavior, marketing function, channels, pricing, promotion. (Offered off campus only.)
- 304 THE MERCHANDISER IN APPAREL MANUFACTURING (3)
Prereq: senior status. Understanding the role of the fashion merchandiser in an apparel manufacturing company. Interrelationships of merchandising, production, design, sales. (Offered off campus only.)
- 305 SALES PROMOTION AND THE MEDIA (3)
Prereq: junior standing. Management of advertising, publicity, fashion show production, special events. Theories and practices pertinent to fashion coordination. (Offered off campus only.)
- 306 PRINCIPLES OF FASHION SELLING (5)
Prereq: junior standing. Principles of good selling techniques, their role and distribution in business methods involved in making sales in the apparel field. (Offered off campus only.)
- 307 FASHION RETAILING (4)
Prereq: junior standing. Tools, factors and concepts in retail business control, including stock control, store layout, location, organization, policies, activities, systems. (Offered off campus only.)
- 308 MEN'S WEAR MARKETING (3)
Prereq: Home Econ 301, 302. The marketing research process and research of men's apparel and accessories market. Problems in forecasting, advertising, budgeting. (Offered off campus only.)
- 309 MERCHANDISING PLANNING AND CONTROL (3)
Prereq: Home Econ 301. Knowledge of activities involved in buying and selling functions of retail stores. For those in buying specialties and retail management. (Offered off campus only.)
- 310 INTERNATIONAL BUYING: IMPORT/EXPORT (3)
Prereq: Home Econ 301, 302, 309. Survey of the international environment of apparel and textiles. Structure and function of import-export buying at all levels of distribution. (Offered off campus only.)
- 311 VISUAL PRESENTATION STUDIO (5)
Prereq: junior standing. Survey and participation in the art of visual presentation, illustrations to bring to life merchandising concepts. Theory, demonstration and laboratory. (Offered off campus only.)
- 312 PRACTICUM IN FASHION MARKETING (5)
Prereq: senior status. Internship program placing the student in a work environment within the industry. (Offered off campus only.)

Home Economics

313 INTRODUCTION TO THE APPAREL INDUSTRY (3)

Prereq: junior standing. Study of the apparel industry as it exists in the Northwest. Factory, wholesale and retail operations will be visited and evaluated through class discussion. (Offered off campus only.)

314 INTRODUCTION TO INFORMATION SYSTEMS (3)

Prereq: junior standing. Structure of management systems and their application to computers in the apparel industry. (Offered off campus only.)

315 SPECIAL EVENTS/PROMOTION PRODUCTION (2)

Prereq: junior standing. Specialized, individual instruction involving fashion show production. Practical application of coordination, production and promotion. (Offered off campus only.)

316 TAILORING (3)

Prereq: Home Econ 380, 381. Examination of techniques to tailor suits and coats using traditional methods. (Offered off campus only.)

318 319 FASHION ILLUSTRATION I, II (3 ea)

Prereq: Home Econ 318 for Home Econ 319. Drawing the fashion figure and apparel. Studies and compositions in a variety of media. (Offered off campus only.)

322 ADVANCED CHILD AND FAMILY STUDIES (5)

Prereq: Home Econ 122. Development of children from birth through adolescence within the family. Emphasis on physical, cognitive, social and emotional development of children; parenting and parent education; and interaction of the family within its environment.

327 FIELD EXPERIENCES IN HOME ECONOMICS (2-5)

Prereq: permission of department required one quarter prior to registration. Opportunity to work with community, business and government organizations and agencies utilizing home economics skills. S/U grading.

332 FAMILY RESOURCE MANAGEMENT (3)

Prereq: Home Econ 122. Interaction of the family and its environment. Concepts of decision-making and resource management: time, energy, money, food, clothing, housing, furnishings and equipment.

334 CONSUMER ISSUES (3)

Current consumer issues in the economic world: responsibilities and protections.

338 FAMILY FINANCE (3)

Prereq: Econ 203 or 204. Management of family income and expenditures in the changing family cycle.

350 MATERNAL AND CHILD NUTRITION (3)

Prereq: Home Econ 250. Nutritional needs for pregnancy and lactation; application of nutrition principles to growth and development of children; indices of nutritional status.

353 FOODS AND MEAL MANAGEMENT (5)

Prereq: Home Econ 250 and written permission of department. Specific principles of food preparation; concepts of management applied to meal service; includes laboratory experience, demonstration and evaluation procedure.

366 CLOTHING CONSUMPTION (2)

Prereq: upper-division status; Home Econ 164, 313; Home Econ 461 recommended. Clothing use patterns as they relate to the consumer on many price levels. Social/psychological needs of the consumer as they relate to product. (Offered off campus only.)

367 WEAVING DESIGN (3)

Prereq: Home Econ 101, 164. Basic fabric construction; emphasis on color, texture and design. Offered alternate years or summers.



368 STUDY TOURS, NATIONAL AND INTERNATIONAL (4-6)

Prereq: upper-division status; Home Econ 164, 301, 307. Tours of the fashion centers of the world. Yearly option of tour to New York, and alternating yearly tours to Europe or the Orient. Visits to prime fashion houses and manufacturers, costume museums, textile producers. (Offered off campus only.)

370 HOUSING (3)

Prereq: Home Econ 101 or equivalent, Home Econ 175. Housing alternatives for the family; historical, aesthetic and cultural implications.

371 SPACE PLANNING FOR LIVING ENVIRONMENTS (3)

Prereq: Home Econ 201, 370; Tech 313; written permission of department; limited to Interior Design majors. Analyzing human needs; planning interior spaces.

372 HOUSEHOLD SYSTEMS (3)

Prereq: Home Econ 370 recommended. Factors affecting home environment systems and energy utilization.

375 ENVIRONMENTAL INTERIORS (3)

Prereq: Home Econ 101 or equivalent; Home Econ 164 and 175; written permission of department. Laboratory experiences with selection, arrangement, design of home furnishings.

376 HISTORY OF FURNITURE AND DECORATIVE ARTS (3)

Prereq: Home Econ 375 or Lib St 122 or 123; written permission of department. Development of furniture and decorative arts from ancient to contemporary times.

- 380 CLOTHING CONSTRUCTION I (3)
Prereq: junior standing. Techniques for producing high-quality garments. Emphasis on analysis of construction methods to select correct technique for the fabric and application. (Offered off campus only.)
- 381 CLOTHING CONSTRUCTION II (3)
Prereq: Home Econ 380. Broader examination of special fabrics and fabrications. Market survey of garments in various price ranges. Development of basic sloper. (Offered off campus only.)
- 382 DRAPING I (5)
Prereq: Home Econ 380, 381. Introduction to basic draping techniques. Developing basic slopers from standard dress-form. Create a personal dress-form. (Offered off campus only.)
- 383 DRAPING II (5)
Prereq: Home Econ 382. Development of original designs through the draping method including advanced draping techniques. (Offered off campus only.)
- 384 FLAT PATTERN I (5)
Prereq: Home Econ 381. Development of the basic pattern blocks. Using this tool, fashion patterns will be created. Basic manipulations to include bodice, skirt and sleeve treatments. (Offered off campus only.)
- 385 FLAT PATTERN II (5)
Prereq: Home Econ 384. Continuation of skills development. Basic block for pants, coats, suits and advanced dress styles. (Offered off campus only.)
- 386 FLAT PATTERN III (5)
Prereq: Home Econ 384, 385. Transferring fashion sketches of advanced styling to patterns and sample garments. Special emphasis on original designs. (Offered off campus only.)
- 387 PATTERN DRAFTING AND GRADING (3)
Prereq: Home Econ 384, 385, 386. Development of basic blocks from standardized sizes. Transferring the blocks through the complete size range. Production pattern and marker construction. (Offered off campus only.)
- 388 DESIGN ROOM TECHNIQUES AND MANUFACTURING PROCESSES (3)
Prereq: senior standing. A study of the work flow through the design room, from designer to sample maker; discussion of typical apparel manufacturing operations. (Offered off campus only.)
- 389 DESIGN STUDIO I-V (2 ea)
Prereq: junior standing. The study of design principles as they relate to apparel. Advanced classes will design sample lines in a variety of classifications. (Offered off campus only.)
- 390 MEN'S AND CHILDREN'S WEAR DESIGN (3)
Prereq: Home Econ 384, 385, 386. Using skills developed in previous course work, the student will apply techniques for the design of garments for men and children. (Offered off campus only.)
- 391 PRACTICUM IN APPAREL DESIGN (5)
Prereq: Home Econ 388; senior standing. Placement of the student in a work environment within the industry for first-hand experience in the apparel manufacturing process. Supervision by professionals in the field and evaluation by sponsor and faculty. (Offered off campus only.)
- 392 PORTFOLIO COLLECTION (1)
Prereq: senior standing. The development of a portfolio as a tool for design presentation. Artistic renderings, collection and/or ensemble design, photography and lay-out as they apply. (Offered off campus only.)
- 394, 395 HISTORY OF COSTUME I, II (3 ea)
Tracing the development of costume and accessories of ancient civilizations through the 19th century. Emphasis on the effect of religion, economic and social influences on clothing styles. (Offered off campus only.)
- 396 TWENTIETH-CENTURY COSTUME (3)
Prereq: Home Econ 394, 395. Understanding of current designers and the development of couture industry from early 1900s to present. Effect of designers on ready-to-wear market. (Offered off campus only.)
- 398 CROSS-CULTURAL PERSPECTIVES ON TEXTILES AND CLOTHING (3)
Prereq: junior standing. Surveys of ethnic fashion from archaic to modern periods. American, Asian, African, European folk cultures will be examined. (Offered off campus only.)
- 410 PROFESSIONAL ISSUES IN HOME ECONOMICS (2)
Prereq: home economics major; must have completed 45 credits in required home economics courses. Current issues, public policy, research, concepts and professional development. S/U grading.
- 420 PRE-SCHOOL EDUCATION (3)
Prereq: Home Econ 122. Curriculum materials for pre-school age children; behavior management techniques, classroom organization, teaching strategies.
- 421 DEVELOPMENTAL ASPECTS OF ADULTHOOD AND AGING (3)
Prereq: Lib St 105 or equivalent. Physical, economic, psychological and social changes in the middle and later years. Emphasis on changes in family relationships, finances, living environment and employment. Personal, social and community resources explored.
- 422 LABORATORY EXPERIENCE WITH THE PRE-SCHOOL CHILD (3-5)
Prereq: Home Econ 122 and 420 and written permission of department; a tuberculosis test required in compliance with state law. Observation, planning, implementation and evaluation of pre-school laboratory program. S/U grading.
- 425 INFANT DEVELOPMENT (3)
Prereq: 5 credits in upper-division child development courses. In-depth study of infant development including prenatal development, temperament and culture, physical growth and motor development, cognition and perception, and social and emotional development of the infant.
- 426 PARENT-CHILD INTERACTION (3)
Prereq: Home Econ 322 or equivalent. Emphasizes child-rearing practices, parent effectiveness and training.
- 427 FIELD EXPERIENCES IN HOME ECONOMICS (2-5)
Prereq: permission of department required one quarter prior to registration. Opportunity to work with community, business and government organizations and agencies utilizing home economics skills. S/U grading.
- 432 HOME MANAGEMENT (3)
Prereq: Home Econ 332. Application of concepts and principles of home management to group and home living, utilizing lab experiences.
- 440 CONTEMPORARY ISSUES AND TEACHING TECHNIQUES (2)
Prereq: home economics teaching experience or student teaching experience. Current issues, concepts, teaching techniques for implementation for home economics subject areas in middle school, junior and senior high schools.

Home Economics

441 HOME ECONOMICS VOCATIONAL EDUCATION (5)

Prereq: Psych 371, Ed 420; and 36 credits in required home economics; to be taken immediately preceding student teaching. Competency-based program designed for entry level of all aspects of secondary vocational home economics teaching; lesson, unit, course planning and department management.



443 ADULT EDUCATION IN HOME ECONOMICS (3)

Prereq: written permission of department. Principles of education for adult learners, development of home economics programs for adult education; philosophies, issues and objectives. Normally offered alternate years.

444 DYNAMICS OF TEACHING HOME ECONOMICS (2)

Prereq: student teaching and/or teaching experience. Application and analysis of diversified classroom approaches for teaching home economics in middle school, high school or adult classrooms.

448 EVALUATION IN HOME ECONOMICS (2)

Prereq: Psych 371, home economics major or minor. Application of current concepts in evaluation; techniques and non-test devices appropriate to each subject area of home economics.

449 SUPERVISORY TRAINING FOR HOME ECONOMICS COOPERATING TEACHERS (3)

Prereq: vocationally certified home economics secondary master teachers meeting supervisory criteria, and permission of department. In-service training to prepare cooperating teachers for assuming specified supervisory tasks (in lieu of University supervision) when working with home economics student teachers.

450 ADVANCED NUTRITION (5)

Prereq: Home Econ 250. Nutritional needs throughout the life cycle; survey and application of research studies; current issues and trends in nutrition.

452 SEMINAR IN NUTRITION AND FOODS (3)

Prereq: Home Econ 350 or 450. Current issues and problems in foods and nutrition. Survey and application of research studies. (Normally offered in alternate years or summer.)

453 SOCIAL AND CULTURAL ASPECTS OF FOOD (3)

Prereq: Home Econ 353; Anth 201. Social and cultural development of people as related to the acceptance and use of food. (Normally offered summers.)

454 COMMUNITY NUTRITION AND DIET THERAPY (5)

Prereq: Home Econ 450. Nutrition and preventive health care in the community; nutrition assessment, implementation and evaluation of individual nutritional care plans; nutritional management of various disease states. Normally offered alternate years or summer.

456 FOOD SERVICE MANAGEMENT (5)

Prereq: Home Econ 353, Hux 453; junior/senior status. Principles and procedures involved in the management of community food operations; lectures, laboratory, demonstrations.

461 CLOTHING AND HUMAN BEHAVIOR (3)

Implications and significance of clothing in Western society, with special emphasis on clothing symbolism, social stratification, development of self-concept and fashion. (Normally offered alternate years or summers.)

464 TEXTILE FIBER AND FABRIC ANALYSIS (5)

Prereq: Home Econ 164. Emphasis on physical characteristics, properties of textile fibers and finishes, particularly as related to fabric performance. Fabric for interiors and apparel will be analyzed using specialized textile test equipment, recognized test methods and data analysis.

475 CONTEMPORARY DESIGN FOR INTERIORS (3)

Prereq: Home Econ 175 or 375, written permission of department; senior interior design block take concurrently with Home Econ 478, 480. American and international influences on contemporary design.

476 HISTORIC HOMES AND THEIR INTERIORS (3)

Prereq: Home Econ 370, 376 or equivalent. A research/case study of historic homes and their interiors using community resources.

477 FIELD EXPERIENCE IN INTERIOR DESIGN AND MERCHANDISING (3-5)

Prereq: Home Econ 376, 475, 478, 480; permission of department. Due to limited availability, student placements will be reviewed by IDM faculty committee. Supervised experience in a professional interior design studio, architectural office or retail interiors business. S/U grading.

478 INTERIOR DESIGN PLANNING (5)

Prereq: Tech 311 and 313; 50 credits from interior design and merchandising curriculum, written permission of department; concurrent registration in the IDM block: Home Econ 475, 480. Planning course for interior designers. Variety of projects — residential and contract, presentations and critiques. Field trips to professional designers. S/U grading.

479 BUSINESS OF INTERIOR DESIGN (2)

Prereq: junior standing in interior design and merchandising, and written permission of department. Cost-study workshop with emphasis on ethics; contracts and building construction; sources for the environment; compensation and fees; complaints and adjustments; installation; public relations. (Summer only.)

480 RESOURCES OF INTERIOR DESIGN (5)

Prereq: 50 credits from the interior design curriculum; written permission of department. Concurrent registration in the IDM block: Home Econ 475, 478. Evaluating and utilizing workrooms, interior design studios, the Design Center, and the Furniture Mart. Participation in professional organizations. Supervised professional workroom experience. S/U grading.

488 SCANDINAVIAN DESIGN (3-5)

Prereq: Home Econ 175 or equivalent courses in art or design; written permission of department. Study of design, art, architecture, home furnishings, industrial design, arts and crafts of Norway, Sweden, Finland and Denmark, with emphasis on contemporary design. Offered for 3 credits academic year; 5 credits as a summer tour.

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

- GERSON F. MILLER (1967) Chair.
Professor. BA, University of California, Berkeley, MA, Pennsylvania State University.
- CAROLYN DALE (1977) Assistant Professor. BA, MC, University of Washington.
- LYLE E. HARRIS (1976) Associate Professor. BA, MA, University of Montana; PhD, University of Missouri.
- R. E. STANNARD, JR. (1969) Associate Professor. BA, University of Washington; MA, Cornell University.
- PETE STEFFENS (1972) Professor. BA, Harvard; BA, MA, Balliol College, Oxford.

BACHELOR OF ARTS

Major 61 credits

- Journ 104 or 406
- Journ 160, 204, 304, 340, 350, 404, 470, 480
- Three journalism staff courses from list (a) and three additional courses 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, 431, 432, 433
(May be waived by substitution of equivalent professional experience.)
- Journ 430
- 15 credits in other academic areas under departmental advisement.
- Cumulative GPA of 2.25 or higher in major

Minor 25 credits

- Journ 104 or 406
- Journ 160, 204, 304, 340, 350
- Three staff courses, or equivalent professional experience, from:
 - (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, 431, 432, 433
At least two courses of the above are to be selected from list (a)

COURSES IN JOURNALISM

Courses numbered X37; X97; 300, 400, 417; 445 are described on page 28 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.

Journalism

- 111, 112, 113, 114 **NEWSPAPER STAFF (2 ea)**
Prereq: freshman standing; Journ 104. Participation on the staff of the university newspaper; critiques in news reporting, writing, editing and make-up.
- 121, 122, 123 **PERIODICAL STAFF (2 ea)**
Prereq: freshman standing; Journ 104. Workshop in periodical design, layout and production, training in the creative combination of type, heading, 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.
- 204 **COPY EDITING (3)**
Prereq: Journ 104. News copy desk operations; editing, headline writing; dummaging; page make-up; editorial writing.
- 211, 212, 213, 214 **NEWSPAPER STAFF (2 ea)**
Prereq: sophomore standing; Journ 104. Participation on the staff of the university newspaper; critiques in news reporting, writing, editing and make-up.
- 221, 222, 223 **PERIODICAL STAFF (2 ea)**
Prereq: sophomore standing; Journ 104. 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: 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.
- 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 standing; Journ 104. Participation on the staff of the university newspaper; critiques in news reporting, writing, editing and make-up.
- 321, 322, 323 **PERIODICAL STAFF (2 ea)**
Prereq: junior standing; Journ 104. 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, libel, contempt, privacy; other restrictions.
- 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 free-lance 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 standing; Journ 104. Participation on the staff of the university newspaper; critiques in news reporting, writing, editing and make-up.
- 421, 422, 423 **PERIODICAL STAFF (2 ea)**
Prereq: senior standing; Journ 104. 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. 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.
- 431, 432, 433 **TELEVISION NEWS STAFF (2 ea)**
Prereq: Journ 304, and written permission. Workshop course in planning, gathering and preparing news for television; integrating words, sound and pictures; critiques; participation on the staff of the university television news program. Concurrent enrollment in Speech 442 or Tech 442 recommended.
- 440 **PRESS AND WORLD AFFAIRS (3)**
The international role and operations of the press; factors affecting the free flow of news; major world news systems.
- 460 **LITERATURE OF JOURNALISM (3)**
Prereq: Journ 160. Readings and critical evaluation of literature by and about journalists.
- 470 **MASS COMMUNICATIONS THEORY AND RESEARCH (3)**
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, social science 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:

1. The department offers interdisciplinary courses which partially fulfill the WWU General University Requirements in Humanities, Social Science, and Non-Western and Minority Cultural Studies. (See the University Graduation Requirements section of this catalog for the complete General University Requirements and options for satisfying them.)
2. 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.
3. The department offers interdisciplinary minor programs in humanities and in the study of religion, and participates with other

departments in the East Asian Studies and American Studies programs.

4. 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.
- MICHAEL H. FISHER (1978) Associate Professor. BA, Trinity College; MA, PhD, University of Chicago.
- MILTON H. KRIEGER (1970) Associate Professor. BA, Reed College; PhD, University of Toronto.
- ULRICH MAMMITZSCH (1971) Associate Professor. BA, University of Hamburg, Germany; MA, Southern Illinois University; PhD, University of Hawaii.
- RODNEY J. PAYTON (1970) Associate Professor. BA, MA, Washington State University; PhD, University of Chicago.
- ROBERT F. STOOPS, Jr. (1983) Assistant Professor. BA, 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, 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 human-

ities, 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 non-Western civilization. Students will have opportunity to develop a sense of historical and cultural context and to develop analytical and expressive skills of broad application. The major is offered in cooperation with the Department of Philosophy.

- Lib St 121, 122, 123
- One course from each of the following:
 - Phil 112, 201
 - Phil 113, Lib St 231, 232, 235
 - Phil 205, Lib St 242, 243
 - Lib St 271, 272, 273, 274, 275, 276
- Lib St 302, Eng 304
- Three courses from Lib St 417a-d
- Electives under advisement from Lib St 332, 333, 370, 371, 372, 373, 378, Phil 304, 305, 306, 307, 320, 330, 420, and other appropriate upper-division courses
- Lib St 499

Lib St 302 and Eng 304 should be completed before enrolling in Lib St 417a-d. Arrangements regarding topic and faculty adviser for Lib St 499 should be made at the beginning of the quarter preceding enrollment in the course. Students who are deficient in expository writing may be required to complete an appropriate additional writing 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)* 47 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 minor, and to provide resources for the "academic study in depth" in the elementary education major. 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.

- Lib St 121, 122, 123
- Two courses from Lib St 231, 232, 235; Lib St 242, 243; Lib St 271, 272, 273, 274, 275, 276
- Lib St 302, Eng 304 (preferred) or 301
- Two or three courses from Lib St 417a-d
- Electives under advisement from Lib St 332, 333, 370, 371, 372, 373, 378 and other appropriate upper-division courses

*Contact department before enrolling.

Lib St 499

Lib St 302 and Eng 304 or 301 should be completed before enrolling in Lib St 417a-d. Arrangements regarding topic and faculty adviser for Lib St 499 should be made at the beginning of the quarter preceding enrollment in the course. Students who are deficient in expository writing may be required to complete an appropriate additional writing 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.

- Lib St 121, 122, 123
- One course from: Lib St 232 or 242
- Two courses from Lib St 271, 272, 273, 274, 275, 276
- Lib St 332

Minor — The Study of Religion

24-27 credits

A 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.

- Lib St 231
- Three courses from Lib St 235, 272, 378; Hist 267, 287; Phil 113
- Remaining credits from the following: Anth 330; Eng 336; Lib St 332, 333; Hist 387; Psych 346; 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 28 of this catalog.

105 BEHAVIORAL SCIENCE (5)

Man as a biological, psychological and social organism; the processes of perception, learning and motivation, and their social and cultural context.

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.
- 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.
- 235 **THE BIBLICAL TRADITION (4)**
Examination of selected topics in the development and textual analysis of the Hebrew and Christian scriptures; interdisciplinary perspective; attention to original languages.
- 242 **MUSIC AND THE IDEAS OF WESTERN MAN (4)**
The relation of the art of music to mathematics, cosmology, psychology and aesthetics. Not open to music majors.
- 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, literary patterns, societal and cultural ideals.
- 276 **HUMANITIES IN 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.
- 302 **METHODS OF INTERDISCIPLINARY STUDY (4)**
Prereq: Lib St 121, 122, 123, or equivalent. 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 standing. 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.
- 370 **MAJOR NON-WESTERN TRADITIONS: THE TRADITIONAL ORDER (4)**
The basic cultural assumptions, value systems and social orders of China, Japan, India and Africa, to the nineteenth century.
- 371 **MAJOR NON-WESTERN TRADITIONS: THEIR MODERN FATE (4)**
Modern challenges to the traditional orders of China, Japan, India and Africa and their responses; issues and models in reconciling traditional and modern values, indigenous and foreign forces.
- 372 **INDIVIDUAL AND SOCIETY IN CONTEMPORARY NON-WESTERN 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 THE CONTEMPORARY NON-WESTERN WORLD: 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 **RELIGIONS OF INDIA (4)**
Prereq: junior status. Examination of India's major religious traditions — Vedic Hindu, Buddhist, Sikh and Islamic — from earliest Vedic times to the present; analysis of systems of belief, philosophy, ritual and social organization; attention to village religion and popular devotionism.
- 499 **RESEARCH IN HUMANITIES (4)**
Prereq: two courses from Lib St 417a-d, senior standing. Research and writing of a formal paper on a topic developed by the student in consultation with a faculty adviser; adviser will be assigned and topic identified at the beginning of the quarter prior to enrollment in 499.
- 532 **DANTE AND THE MEDIEVAL WORLDVIEW (4)**
Prereq: admission to graduate standing and one upper-division course in literature or history. Examination of the *Divine Comedy* and other works by Dante Alighieri, in relation to medieval conceptions of the universe and of human possibility within it; seminar.

Mathematics

The Department of Mathematics offers majors and minors in mathematics, applied mathematics and mathematics education. Joint majors are offered in mathematics and computer science, biology and mathematics, chemistry and mathematics, economics and mathematics, geology 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. Persons planning a career in almost any field will find their opportunities for interesting and challenging positions enhanced by the study of mathematics and computer science. Persons who develop quantitative skills increase their ability 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 and 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; the latter is the better choice for those interested in the computer science aspects of such applications. A student who is interested in some branch of mathematics itself, or who is somewhat unsure about future plans, should consider the mathematics major, especially because it offers greater flexibility.

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, probability, statistics, number theory, geometry 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, as long as they take Math 483 in addition to the requirements for the major.

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

Students registering for their first course in mathematics must do so on the basis of one of the following: (1) a Mathematics Placement Test; or (2) completion of a course named Precalculus Mathematics or College Algebra or Calculus at another university; or (3) an Advanced Placement Test; or (4) a high school course in calculus. Entering freshmen will usually take a Mathematics Placement Test as part of the entry process.

Requirement for Admission to a Major

The department has established a policy for admission to the joint major in mathematics-computer science. The department may, at any time, establish a policy for admission to any or all of its other major programs. Complete statements of such procedures can be obtained in Bond Hall 202 or by writing to the chair of the Department of Mathematics.

Enrollment Preference for Majors

The department will give enrollment preference for certain high demand courses to its majors.

Advice to Freshmen

Both calculus and linear algebra are required for most majors offered by the department. At least one of them is a prerequisite for almost every other course in mathematics. Prospective majors should normally take calculus and linear algebra in their freshman year. Students are prepared to take Math 124 if they have completed the following courses in high school:

- (a) one and one-half years of algebra;
- (b) one year of geometry;
- (c) one quarter of trigonometry, and
- (d) one additional year of work including the real number system, equations, inequalities, and functions and their graphs.

Students who are deficient in (a) should enroll in Math 102; students deficient in (c) should enroll in Math 104; Math 103 and 105 cover the topics

listed in (d). These courses, if needed, should be completed before enrollment in Math 124. As was mentioned above, students registering for their first mathematics course may have to take a placement test.

Persons who pursue a major program in this department are urged to plan their program of studies in collaboration with their departmental adviser. Those students pursuing a joint major should have an adviser in each of the departments involved. A departmental adviser may be obtained upon request in Bond Hall 202.

Advice to Transfer Students

Mathematics majors who expect to enter Western from a two-year college should complete a sequence in calculus unless they plan to take that sequence at Western. Courses in linear algebra, differential equations and probability theory are also good preparation.

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

Those interested in study of mathematics are welcome to write, telephone, or visit the Chair of the Department of Mathematics, Western Washington University, Bellingham WA 98225. Telephone: (206) 676-3785.

MATHEMATICS FACULTY

- ALBERT J. FRODERBERG (1968) Chair. Associate Professor. BS, MS, PhD, University of Washington.
- MICHAEL BALLOTTI (1983) Assistant Professor. BA, Tulane University; MS, University of Chicago; PhD, Tulane University.
- DONALD R. CHALICE (1967) Associate Professor. BA, University of Wisconsin; MA, PhD, Northwestern University.
- ROBIN W. CHANEY (1969) Professor. BA, PhD, Ohio State University.
- KEITH CRASWELL (1966) Associate Professor. BS, MS, PhD, University of Washington.
- JAMES E. DUEMEL (1966) Associate Professor. BA, MA, PhD, Ohio State University.
- SARA JEANNE GAMLEN (1967) Associate Professor. BA, Linfield College; MA, Bowling Green State University; PhD, Washington State University.
- NEIL R. GRAY (1964) Associate Professor. BA, San Francisco State College; MS, PhD, University of Washington.
- NORA HARTSFIELD (1984) Assistant Professor. BA, Humboldt State University; MA, PhD, University of California at Santa Cruz.
- FRANCIS H. HILDEBRAND (1968) Associate 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) Assistant Professor. BA, Augsburg College; MS, California Institute of Technology; MA, University of California at Los Angeles; PhD, University of Washington.
- RICHARD G. LEVIN (1967) Associate Professor. BS, University of Pennsylvania; PhD, University of California, Davis.

Mathematics

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; MA, University of Idaho; PhD, University of Washington.

PAUL T. RYGG (1962) Professor. BA, Montana State University; MS, PhD, Iowa State University.

JOHN W. WOLL (1968) Professor. BS, Haverford College; PhD, Princeton University.

BACHELOR OF ARTS IN EDUCATION

Major — Elementary 45 credits

- Math 124, 125, 205, 241, 281, 305, 341, 360, 481
- CS 210
- Math-CS 301

Major — Secondary 63 credits

- Math 124, 125, 126, 224, 205, 241, 305, 312, 341 or 441, 360, 483
- CS 210
- Math-CS 301 or Math 401 or Math 404
- At least one of the following two-course sequences: Math-CS 335-435, Math-CS 375-475, Math 401-402, Math 331-332, Math 331-430, Math 331-431, Math 442-443, or Math 423-424.

Minor 33 credits

- Math 124, 125, 205, 241, 360, 483
- Math 305 or 401 or 404 or Math-CS 301
- CS 210

Combined Major Concentration

See the Chemistry Department section for Mathematics-Chemistry major. See the Physics/Astronomy Department section 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 69 credits

- Math 124, 125, 126, 205, 224
- CS 210
- Not fewer than 20 credits in approved mathematics or mathematics-computer science courses numbered 400 or above except Math 481, 483 and 494
- Electives under departmental advisement

- 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, 443, Math-CS 335, 435, 436, and Math-CS 375, 475, 476 as part of their major programs.

Major — Applied Mathematics

88 credits plus Supporting Courses

- Math 124, 125, 126, 205, 224, 312, 331, 332, Math CS 335, 375
- CS 210 and at least one other course in computer science at the 300 level or above
- Math 341-342 or Math 441-442
- One of the following concentrations:
 - a) Engineering Mathematics Concentration: Math 423, 424, 425, 431, Math-CS 475, 476 and one course from Math 404, 443, Math-CS 435, CS 439
 - b) Operations Research Concentration: Math 404, Math-CS 435-436, CS 439 and three courses from Math 423, 424, 425, 430, 443, Math-CS 475, 476
- Supporting courses: Phys 241, 242, 341, 351. Students electing the Operations Research Concentration may be able to obtain permission from their departmental adviser to substitute an appropriate 12-credit sequence in economics

Students interested in this major should normally complete Math 124, 125, 126, 205 and CS 210 in the freshman year. Courses completed in the sophomore year should include Math 224, 331, 332 and 312.

Minor — Mathematics 33 credits

(Not available to computer science majors.)

- Math 124, 125, 126, 224
- Math 205
- CS 110 or 210
- Electives under departmental advisement

Major — Mathematics-Computer Science 88 credits

- Math 124, 125, 126, 224; 205, 241, 312, 331; 332 or 430; 401 or 404
- Three courses from Math-CS 335, 375, 435, 475
- CS 210, 310, 331, 332, 405
- Math-CS 301
- 9 additional credits in mathematics and computer science as advised.

Combined Majors

The Department of Mathematics cooperates with

other departments in offering combined (or double) majors for students wishing to achieve considerable depth in both areas.

Biology-Mathematics: See Biology Department section for details.

Economics-Mathematics: See Economics Department section for details.

Physics—Physics-Mathematics concentration: See Department of Physics and Astronomy section for details.

Geology-Mathematics: See Geology Department section for details.

GRADUATE STUDY

For concentration in mathematics leading to the Master of Science degree, see the Graduate section of the catalog.

COURSES IN MATHEMATICS

Courses numbered X37, X97, 300, 400, 417, 445 are described on page 28 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. Intended for students who have had one year of high school algebra. Polynomials, first- and second-degree equations and inequalities, graphs, quotients of polynomials, roots and radicals, an introduction to the quadratic formula. Word problems are heavily emphasized. Students who have done fairly well in one and one-half years of high school mathematics should probably take 103 or 104 or 105. Cannot be counted toward majors or minors in mathematics or computer science.

103 COLLEGE ALGEBRA I (3)

Prereq: suitable score on the *Intermediate Algebra* mathematics placement test or Math 102. Functions and their graphs, graphs of polynomials and rational functions. Exponential and logarithm functions and their use in growth and decay problems, business and other applications. Students who have done well in four semesters of high school algebra (including logarithmic and exponential functions) may be ready for Math 104 or Math 105. Cannot be counted toward majors or minors in mathematics or computer science.

104 TRIGONOMETRY (3)

Prereq: suitable score on the *Intermediate Algebra* mathematics placement test or Math 103. Angles and angle measurement, trigonometric functions, identities, trigonometric equations, inverse trigonometric functions. Students who have done well in four semesters of high school algebra, one semester of geometry, and one semester of trigonometry may be ready for Math 105. Cannot be counted toward majors or minors in mathematics or computer science.

105 COLLEGE ALGEBRA II (3)

Prereq: suitable score on the *Intermediate Algebra* mathematics placement test or suitable score on the *Pre-calculus* mathematics placement test or Math 104. An introduction to matrices, linear systems, and determinants in dimensions 2 and 3. Zeroes of polynomials, arithmetic and geometric progressions, summation and sigma notation, the binomial theorem, complex numbers.

124 CALCULUS AND ANALYTIC GEOMETRY (5)

Prereq: suitable score on the *Pre-calculus* mathematics placement test or Math 105. Derivatives, rules for computing derivatives, applications, anti-derivatives and an introduction to definite integrals.

125 CALCULUS AND ANALYTIC GEOMETRY (5)

Prereq: Math 124. Application of the definite integral to area, volume, planar motion, etc. Calculus of logarithmic and exponential functions. Techniques of integration. Improper integrals.

126 CALCULUS AND ANALYTIC GEOMETRY (5)

Prereq: Math 125. Conic sections, polar coordinates, curves and vectors in the plane and space. Introduction to partial derivatives. Taylor's Theorem. Infinite sequences and series.

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, 155, 205, 240, 241.

155 ALGEBRA WITH APPLICATIONS TO ECONOMICS AND BUSINESS (4)

Prereq: suitable score on the *Intermediate Algebra* mathematics placement test or Math 102. Systems of linear equations and systems of linear inequalities; matrix notation for linear systems; logarithms, geometric series, and mathematics of finance.



156 CALCULUS WITH APPLICATIONS TO BUSINESS AND ECONOMICS (4)

Prereq: Math 155 or Math 105 or suitable score on the *Pre-calculus* mathematics placement test. Functions and limits; differential and integral calculus, including partial differentiation.

205 VECTORS AND MATRIX ALGEBRA (4)

Prereq: Math 124 or Math 156. Matrices, determinants, matrix algebra, linear equations, linear transformations, characteristic roots and characteristic vectors, orthogonality.

224 MULTIVARIATE CALCULUS (5)

Prereq: Math 126. Partial derivatives, maxima and minima with two or three variables, multiple integrals, line integrals. Green's Theorem, the divergence theorem, and Stoke's Theorem in the plane.

Mathematics

- 240 INTRODUCTION TO STATISTICS (3)
Prereq: suitable score on the *Intermediate Algebra* mathematics placement test or Math 102. This course deals with 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.
- 241 INTRODUCTION TO PROBABILITY (3)
Prereq: suitable score on the *Precalculus* mathematics placement test or Math 105 or Math 124. Introduction to probability with applications.
- 281 THEORY OF ARITHMETIC (4)
Prereq: any one of the following: (1) suitable score on the *Intermediate Algebra* mathematics placement test (administered through the University Testing Center); or (2) grade of C- or better in Math 102; or (3) grade of C- or better in any course named *Precalculus Mathematics* or *College Algebra* or *Calculus* at any two-year college or four-year college. Mathematical development of arithmetic, informal geometry, problem solving and metric measurement. This course covers mathematics for the elementary school from an advanced standpoint.
- 305 NUMBER THEORY (4)
Prereq: Math 125 or 205. The properties of integers, Euclid's algorithm, Diophantine equations, congruences, continued fractions and residues.
- 312 MAPPING AND CONTINUITY (4)
Prereq: Math 126 and either 205 or 305. Open and closed sets in the line and plane; sequences; definitions and elementary properties of continuous functions. Bolzano-Weierstrass theorem and applications. The student is expected to develop some competence in proving basic theorems.
- 320 HISTORICAL PERSPECTIVES OF MATHEMATICS (3)
Prereq: Math 241, 312, Math 341 or 441. History and development of mathematical thought from ancient to modern times. Philosophical, sociological and biographical perspectives.
- 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 in the Department of Mathematics.
- 331, 332 ORDINARY DIFFERENTIAL EQUATIONS (4 ea)
Prereq: Math 126; students should also have (or take concurrently) Math 205; 331 is prerequisite to 332. An introductory course in ordinary differential equations and applications, including topics selected from first order differential equations and systems, higher order differential equations, series and numerical solutions, Laplace transforms, special functions, Fourier series, Sturm-Liouville theory, comparison theorems, stability theory, and applications of these concepts to scientific problems.
- 341, 342 STATISTICAL METHODS (4 ea)
Prereq: suitable score on the *Intermediate Algebra* mathematics placement test or Math 103 or Math 105; 341 prerequisite to 342. Statistical methods, including use of computer packages. Emphasis is on the use and validity of tests. Inference and hypothesis testing, ANOVA, regression and correlation, contingency, nonparametric tests. Applications from economics, business, the sciences, education and psychology.
- 360 EUCLIDEAN AND NON-EUCLIDEAN GEOMETRY (4)
Prereq: Math 125 or 205. Metric development of Euclidean geometry and consideration of non-Euclidean geometries.
- 401, 402 INTRODUCTION TO ABSTRACT ALGEBRA (4 ea)
Prereq: Math 205, Math 401 prerequisite to 402. Groups, rings, fields, field extensions, Galois Theory.
- 404 LINEAR ALGEBRA (4)
Prereq: Math 126 and 205. Vector spaces, linear transformations, spectral theory, orthogonal matrices.
- 423 ADVANCED CALCULUS (4)
Prereq: Math 224 and 312. Detailed topics of advanced calculus of basic importance in many applications, both scientific and theoretical. Topics include uniform convergence; properties of continuous functions, the theory of the derivative and the Riemann integral. Normally offered fall quarter.
- 424, 425 PARTIAL DIFFERENTIAL EQUATIONS (4 ea)
Prereq: Math 331, 423; Math 424 prerequisite to 425. The basic theory of partial differential equations, including classification, characteristics, well posed problems, orthogonal functions, Sturm-Liouville theory, the Fourier transform, heat flow, and wave motion.
- 428 CALCULUS OF SEVERAL VARIABLES (4)
Prereq: Math 224, 404, and 423. Parameterization of curves and surfaces, implicit function theorem, differentials, integration of differential forms, generalized Stoke's theorem.
- 430 FOURIER SERIES AND PARTIAL DIFFERENTIAL EQUATIONS (4)
Prereq: Math 224 and 331. Math 430 is 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.
- 431 INTRODUCTION TO COMPLEX VARIABLES (4)
Prereq: Math 331 or 423. Differentiation and integration of complex-valued functions; Cauchy integral theorem; calculations of residues.
- 441, 442, 443 MATHEMATICAL STATISTICS (4 ea)
Prereq: Math 205 and 224; each course prerequisite to the next. Probability theory; development of distributions; generating functions; averages, moments, regression, correlation, variance, and statistical inference.
- 481 MATHEMATICS IN GRADES K THROUGH 8 (4)
Prereq: Math 281. Survey of instructional modes and teaching strategies. Topics included are sequencing, evaluation, remediation, problem solving and attitudes.
- 483 MATHEMATICS IN GRADES 7 THROUGH 12 (4)
Prereq: at least two upper-division mathematics courses. Topics discussed include pre-algebra, algebra, geometry, problem solving and resource materials.
- 494 EXPERIENCES IN THE MATHEMATICS LABORATORY (3)
Prereq: one year of teaching experience and currently teaching mathematics. Each participant develops materials and experiences for use in the mathematics laboratory approach in his or her own teaching.

Graduate Courses

Courses numbered 500, 517, 545, 597 are described on page 28 of this catalog.

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

- 501 ADVANCED ABSTRACT ALGEBRA (3)
Prereq: Math 401 or its equivalent. Special topics in algebra based on the theory of groups and the application of group theory to other fields.

- 502 **TOPICS IN ABSTRACT ALGEBRA (3)**
Prereq: Math 401 and 404. Topics such as error correcting codes, group characters, crystallography.
- 504 **COMBINATORICS (3)**
Prereq: graduate status in mathematics. Counting techniques, generating functions, coding, coloring, relationships to probability theory.
- 505 **APPLIED MATRIX ALGEBRA (3)**
Prereq: Math 404. Linear modeling of mathematical phenomena, including phenomena from the sciences, and the application of matrix theory.
- 510 **MATHEMATICAL MODELING (3)**
Prereq: Math 404. The use of mathematics to model problems in the real world.
- 518 **TOPOLOGY (3)**
Prereq: Math 423. Topological spaces, metric spaces, connectedness, compactness, product and quotient spaces, function spaces.
- 520 **LEBESGUE MEASURE AND INTEGRATION (4)**
Prereq: Math 423, corequisite Math 404. Lebesgue outer measure and measure, Lebesgue integral of measurable functions of a real variable. Convergence theorems. $L_p(0,1)$. Holder and Minkowski inequalities, Riesz-Fisher Theorem. Abstract outer measure, measure and integration on a sigma-algebra of sets, product measures. Fubini's Theorem.
- 521 **HILBERT SPACE THEORY AND APPLICATIONS (3)**
Prereq: Math 520, Math 430 or equivalent. Bounded operators, continuous linear functionals, the Riesz theorem, projections, self-adjoint operators, unitary operators, completely continuous self-adjoint operators and their eigenfunction expansions, integral operators, applications to differential equations, a brief discussion of quantum mechanics, other applications to physical problems.
- 522 **FOURIER-LAPLACE TRANSFORM AND APPLICATIONS (3)**
Prereq: Math 521, 531. Algebraic properties (including behavior of derivatives and convolution products), the inverse transform, generalized functions (and why they are necessary), solution of partial differential equations, Abel's mechanical problem and other specific scientific applications.
- 524, 525 **PARTIAL DIFFERENTIAL EQUATIONS (4 ea)**
Prereq: Math 331 and 423, Math 524 prerequisite to 525. Topics in the theory of partial differential equations.
- 528 **ADVANCED CALCULUS OF SEVERAL VARIABLES (4)**
Prereq: Math 224, 404, and 423. Parameterization of curves and surfaces, implicit function theorem, differentials, integration of differential forms, generalized Stoke's theorem.
- 532 **TOPICS IN COMPLEX VARIABLES (3)**
Prereq: Math 423 and 431. Topics taken from conformal mapping, infinite series and products, normal families and the Riemann mapping theorem, harmonic functions and the Dirichlet problem, asymptotic methods.
- 541 **PROBABILITY (3)**
Prereq: Math 441. Probability theory, both discrete and continuous. The Central Limit Theorem.
- 546 **STOCHASTIC PROCESSES (3)**
Prereq: Math 404 and 441. Topics from Markov and sequential decision processes, renewal theory, inventory theory, stochastic control, etc.

- 570 **OPTIMIZATION (4)**
Prereq: Math 404 and 423. Topics taken from nonlinear programming, calculus of variations or the theory of optimal control.
- 576 **NUMERICAL ANALYSIS (4)**
Prereq: Math-CS 475, corequisite Math 525. Topics in advanced numerical analysis.
- 599 **MATHEMATICS SEMINAR (1-3)**
- 690 **THESIS (variable credit)**

COURSES IN MATHEMATICS-COMPUTER SCIENCE

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.

- 301 **INTRODUCTION TO DISCRETE STRUCTURES (4)**
Prereq: Math 205, 241, and CS 210. Basic algebraic structures; Boolean algebra and propositional logic; elementary graph theory; applications to computer science.
- 335 **LINEAR PROGRAMMING (4)**
Prereq: Math 205 and CS 210. Linear and quadratic programming; applications to game theory and to allocation and transportation problems.
- 375 **NUMERICAL METHODS (4)**
Prereq: CS 210, Math 126 and 205. Elementary discussion of error, solution of non-linear algebraic equations, polynomial interpolation, least squares approximation, numerical quadrature, and numerical differentiation.
- 435 **OPERATIONS RESEARCH I (4)**
Prereq: Math 126 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.
- 436 **OPERATIONS RESEARCH II (4)**
Prereq: Math-CS 435 and some knowledge of probability theory (for example, Math 241 or Math 341 or Math 441). Linear, non-linear and dynamic programming problems in which statistical considerations form an essential part of the problem.
- 475 **NUMERICAL ANALYSIS (4)**
Prereq: Math-CS 375 and Math 331. Numerical solution of ordinary differential equations, solution of systems of linear equations, calculation of eigenvalues and eigenvectors.
- 476 **NUMERICAL SOLUTIONS OF PARTIAL DIFFERENTIAL EQUATIONS (4)**
Prereq: Math-CS 475, corequisite or prerequisite Math 425 or Math 430. Numerical solution of partial differential equations, including the finite difference and the finite element methods.

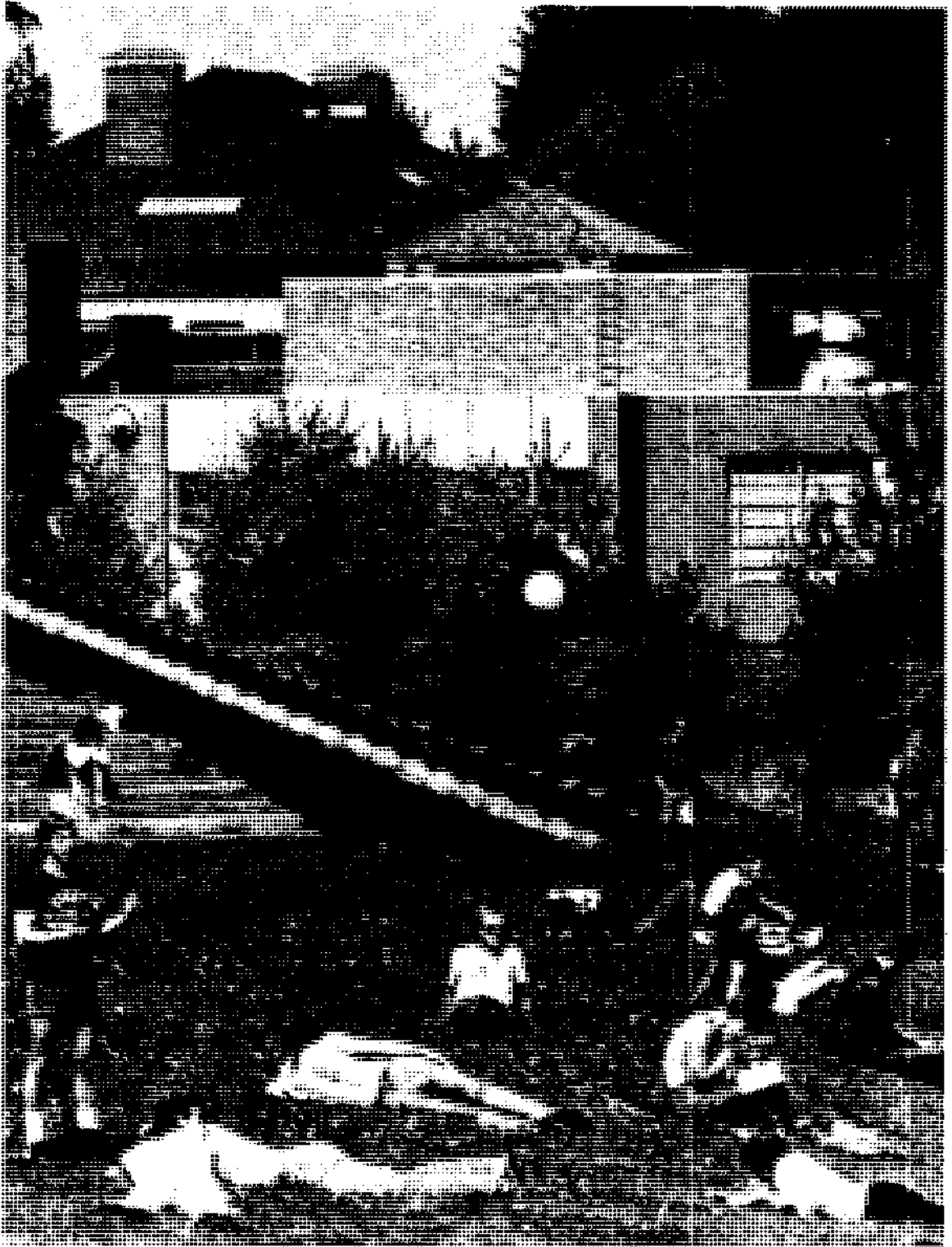
Graduate Courses

547 QUEUEING THEORY (3)

Prereq: Math 441 or Math-CS 436. Analysis of random arrival and service processes to determine expected waiting time, number in waiting line, etc. Bulk arrivals, networks, balking, pre-emptive queues and various applications.

564 GRAPH THEORY (3)

Prereq: graduate status in mathematics. Basic properties of graphs, planar graphs, trees, path theory, intersection graphs, interval graphs, duality theory, graph coloring (Eulerian and Hamiltonian circuits), line graphs, max-flow-min-cut theorem, and specific applications to such areas as game theory, electrical networks, error-correcting codes and coloring problems.



Nursing

PRE-NURSING

Western Washington University offers a one- and a two-year pre-nursing transfer program designed to assist students in meeting the requirements for admission to a nursing program at another college or university. A student may become a registered nurse by completing a nursing program in a two-year community college or a baccalaureate program in a four-year college or university and successfully completing State Board Examination for licensing.

Requirements for these programs vary; students are advised to seek individual guidance from the Department of Nursing.

Each institution selects the number of students that can be accommodated in the upper division. Therefore, no assurance can be given that all applicants admitted to WWU and successfully completing lower-division work will be admitted into the upper-division curriculum.

RN-BSN PROGRAM

The baccalaureate program at Western is an upper-division nursing major designed for individuals who possess a current "R.N." license and who wish to obtain a Bachelor of Science in Nursing. These individuals are graduates of associate degree nursing programs or diploma programs of nursing.

The Department of Nursing shares the University's commitment to teaching, learning, research and service.

THE DOMAIN OF NURSING

Nursing is a service to clients — healthy and sick — individuals or groups. Nursing facilitates the individual's adaptation to a variety of factors and encourages the client to assume increasing responsibility and participation in his own health care. The purpose of nursing is to assist clients and families to maintain a steady state of health,

adapt to illness and/or optimal function. Nursing recognizes the right of the client to make autonomous decisions and participate in the planning and implementation of health care. The complexity of society necessitates health care to be offered in a variety of settings. Nursing collaborates with the client to assist him in the most economical use of resources to maintain a quality state of health. These activities are applicable to: 1) the physiological factors and adaptations of all individuals regardless of health; 2) the psychological coping of all individuals; and 3) the social, cultural and economic situations encountered throughout a lifetime.

The practice of nursing is based in theory and is a predictive science. Nursing consists of interdependent and independent functions which are coordinated with the health care team and system. All of nursing's activities require that a variety of facts, principles and concepts be synthesized for the delivery of health care in today's society.

THE DOMAIN OF EDUCATION

Nursing education is committed to accountable and responsible nursing care and practice. Therefore, nursing education is an organized activity, and its purpose is to facilitate: the acquisition of knowledge; the application of the nursing process to client care within a variety of health care settings; proficiency in nursing skills for the delivery of health care; and, the utilization of research findings. With further academic preparation the nurse is competent to initiate and conduct independent investigations in health care.

Learning is an individual activity which is characterized by changes in behavior which occur throughout a lifetime. To be effective, learning must be learner-directed and facilitated by a teacher through the interpretation of concepts and the significance of phenomenon. The responsibility for learning is mutually shared

Nursing

between learner and teacher in an atmosphere of respect. Each learner has individual needs, abilities and motivation.

THE DOMAIN OF RESEARCH

Research contributes to the body of knowledge of the discipline through investigations into the significance of health. Nursing studies, study replications, and the generation of questions concerning the applicability of these findings to the health care of the client are the prime focus. The practice of nursing is improved through the use of research findings in the delivery of client health care and nursing education.

THE DOMAIN OF SERVICE

The educational unit in nursing provides services including direct health care to clients, families and communities; continuing education to meet the needs of practicing nurses and consultation to service and educational agencies. The faculty members of the Department of Nursing are responsible for participation in professional, community and governmental health care organizations. Through participation in these activities the Department of Nursing is responding to the health needs of the citizens of the state of Washington.

ACCREDITATION

The Department of Nursing is accredited by the National League for Nursing.

ADMISSION TO THE DEPARTMENT OF NURSING

Applications for admission to the Department of Nursing are welcomed from individuals with a current R.N. license who wish to continue their education toward a baccalaureate in nursing. The Department of Nursing is committed to assuring non-discrimination based on race, color, religion, national origin, sex, age, marital

status or presence of any sensory, mental or physical handicap, provided the applicant meets the qualifications of the program. Admission to the program is competitive.

The applicant is encouraged to seek guidance from the faculty, Department of Nursing, prior to course selection.

Information to be provided by all candidates:

1. A completed University application form and payment of the fifteen dollar (\$15) application fee.
2. A completed Department of Nursing application form.
3. An official transcript from each school, college, university attended.
4. One letter of reference from each of the following individuals: (a) dean/chairperson/director or nursing instructor from the nursing program you attended; (b) nursing supervisor (if you have not been employed as a graduate nurse, substitute a second nursing instructor); (c) peer who can evaluate your nursing practice.
5. A valid Washington state license to practice professional nursing (required of the applicant at the time of admission interview).
6. A personal interview with members of the Nursing Admissions Committee. This interview will be arranged after all of the information has been received from the candidate. The candidate will be notified of the time and place of this interview by the Department of Nursing.
7. Evidence of current professional liability insurance must be submitted to the Department of Nursing before the beginning of nursing courses.
8. Applications for admission to the Department of Nursing are required from July, 1985, through May, 1986, and July, 1986, through May, 1987.



The candidate who is admitted to the Department of Nursing as a transfer student must have a cumulative grade point average of 2.5 (C+) or better.

Candidates who have completed college/university science courses (biology, chemistry, microbiology and anatomy or physiology) more than seven (7) years before the quarter of admission will be required to establish competency in these courses prior to admission into the nursing major. Competency may be established through self study and examination; review class and examination; or retaking the course(s).

If the candidate is a graduate of an accredited or non-accredited diploma program, the candidate must obtain college credit for the nursing courses through the completion of examinations from the American College Testing, Proficiency Examination Program (ACT/PEP) at the standard score of 45 or above.

NURSING FACULTY

ANN HARLEY (1980) Chair.

Professor. BSN, MSN, University of Pennsylvania; EdD, Teachers College, Columbia University.

KAREN D. MOREN (1981) Assistant Professor. BSN, University of Nevada; MPH, Tulane University.

MARY ELLEN O'KEEFE (1981) Assistant Professor. BSN, Montana State University; MN, University of Washington.

MARTHA C. THOMAS (1982) Assistant Professor. BSN, University of Oregon; MS, University of Colorado.

BACHELOR OF SCIENCE

Courses prerequisite to the nursing major:

- Eng 101
- Speech 101
- Psych 201, 316
- Anth 201
- Math 102 or satisfactory Math Intermediate Algebra Placement Exam
- Biol 101, 345, 348, 349
- Chem 115, 251

Major Concentration 69 credits

- Nurs 310, 320, 330, 430, 440, 445, 450, 460, 461
- Supporting Courses: Chem 371, 375; Anth 424 or upper-division cross-cultural course; Biol 449; Home Econ 250; Math 240
- Electives, selected under departmental advisement in nursing, humanities, non-Western and minority cultural studies to total 97 credits

A minimum of 180 quarter hours of credit is required for a Bachelor of Science degree in Nursing.

CHALLENGE EXAMINATIONS

The faculty of the Department of Nursing offer selected course challenge examinations which

facilitate the systematic acceleration of the registered nursing students through the program of study. For further information contact the Department of Nursing, (206) 676-3013.

SCHOLARSHIP

A cumulative grade point average of 2.5 must be maintained throughout the course of study leading to a Bachelor of Science in Nursing.

COURSES IN NURSING

Courses numbered X37; X97: 300, 400, 417, 445 are described on page 28 of this catalog.

- 310 NURSING HEALTH ASSESSMENT OF THE INDIVIDUAL (3)
Prereq: admission to nursing major. Physical assessment of the individual to promote health; includes all ages and clinical application.
- 320 NURSING PROCESS ACROSS THE AGE CONTINUUM I (6)
Prereq: Chem 371, 375; Anth 424. The theoretical system of nursing as applied to individuals and families to facilitate health; includes clinical application.
- 330 NURSING PROCESS ACROSS THE AGE CONTINUUM II (6)
Prereq: Nurs 320, Biol 449. The theoretical system of nursing as applied to children, adults and families to facilitate health; includes clinical application.
- 410 GERONTOLOGICAL NURSING (3-6)
Prereq: Nurs 320; Chem 371, 375; Biol 449. Application of the nursing process to older persons to facilitate health; includes optional clinical application.
- 411 ADOLESCENT HEALTH CARE (3-6)
Prereq: Nurs 320, 330. Application of the nursing process to facilitate and promote health in the young adolescent; includes optional clinical application.
- 430 PSYCHOSOCIAL NURSING (6)
Prereq: Nurs 320, 330. The nursing process applied to individuals, families and groups having multiple, physical and mental health needs; includes clinical application.
- 440 NURSING RESEARCH, AN INTRODUCTION (3)
Prereq: Math 240; Nurs 320, 330. Research method applied to nursing problems including use of descriptive and inferential statistics.
- 450 PUBLIC HEALTH NURSING (6)
Prereq: Nurs 320, 330; Math 240. Nursing process applied to individuals, family, community and aggregate populations to promote and preserve health; includes all ages and diagnostic groups. Community analysis and diagnosis as a basis for intervention; includes clinical application.
- 460 ANALYSIS OF A CARE SYSTEM (3)
Prereq: Nurs 320, 330, 440, 450. The action research design applied to health-care systems as they influence nursing.
- 461 MANAGEMENT OF A CARE SYSTEM (6)
Prereq: Nurs 320, 330, 430, 440, 450. Health-care management system in nursing service, quality assurance; role of nurse and client. Clinical application.

Philosophy

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 and to encourage students to consider a double major.

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.

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. 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.

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.

PHILOSOPHY FACULTY

HUGH FLEETWOOD (1962) Chair.

Associate Professor. AB, MA, PhD, The University of Michigan.

THOMAS DOWNING (1968) Assistant Professor. AB, Wayne State University; PhD, Stanford University.

PHILLIP MONTAGUE (1956) Professor. BS, Loyola University; PhD, Stanford University.

RICHARD L. PURTILL (1962) Professor. BA, MA, PhD, University of Chicago.

ROBERT E. WACHBRIT (1983) Assistant Professor. BA, MA, PhD, UCLA.

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 50 credits

- Phil 102, 112, 201, 202, 304, 306, 309, 310, 410, 417, 420, 425
- One course from Phil 305, 307
- Electives under departmental advisement

Minor 25 credits

- Phil 102, 112, 201, 310
- Electives under departmental advisement

COURSES IN PHILOSOPHY

Courses numbered X37; X97; 300, 400, 417; 445 are described on page 28 of this catalog.

102 INTRODUCTION TO LOGIC (3)
 Introduction to the techniques of formal reasoning. Acceptable general education alternative to Math 151 for students with three years of high school math.

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. Systems of logic and their application to philosophical problems.

205 AESTHETIC VALUES AND THE PHILOSOPHY OF ART (3)
 Examination of the nature of art, and of its creation, appreciation and criticism. The importance of aesthetic values in art and the environment.



207 PHILOSOPHY AND FANTASY (3)
 Examination of some philosophical themes in the imaginative writings of C. S. Lewis, J.R.R. Tolkien and others.

215 INTRODUCTION TO EXISTENTIALISM (3)
 Major philosophers of the existential school, philosophical problems and answers as seen by existentialism. Special attention is given to Kierkegaard, Nietzsche and Sartre.

303 PHILOSOPHY OF LANGUAGE (3)
 Prereq: Phil 202. The nature of symbols; notions of synonymy, meaning and reference; semantical and syntactical analysis applied to natural and artificial languages. Normally offered in odd-numbered academic years.

304 HISTORY OF PHILOSOPHY: ANCIENT TO EARLY MIDDLE AGES (4)
 Prereq: one course in philosophy. Great philosophical thinkers from the early Greeks to the early Middle Ages; special attention to Plato and Aristotle. Normally offered in odd-numbered academic years.

305 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.

306 HISTORY OF PHILOSOPHY: RENAISSANCE TO THE AGE OF REASON (4)
 Prereq: one course in philosophy. Great philosophical thinkers including Descartes and the rationalists, Locke and the empiricists. Normally offered in even-numbered academic years.

307 HISTORY OF PHILOSOPHY: THE NINETEENTH CENTURY (4)
 Prereq: one course in philosophy. Kantian 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.

309 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.

310 THEORY OF KNOWLEDGE (3)
 Prereq: one course numbered above 200. The attempt to understand the possibility, nature, origins and limits of knowledge; problems and concepts.

320 SPECIAL TOPICS IN CONTEMPORARY MORAL ISSUES (3)
 Prereq: upper-division standing. A detailed, critical examination of the concepts, claims, assumptions and values of some areas of great current moral importance, e.g., nuclear deterrence, abortion, distribution and use of limited national resources, cloning, etc.

330 SOCIETY, LAW AND MORALITY (3)
 Prereq: one course in philosophy or upper-class standing. Concepts and principles involved in analysis and appraisal of social institutions with attention to freedom, rights, justice, and the relation between laws and morality.

410 METAPHYSICS (3)
 Prereq: Phil 202 and one additional course numbered above 200, or permission of instructor. Philosophical issues surrounding such notions as particular and universal, space, time, existence, substance and attribute; views of contemporary and traditional philosophers. Normally offered in even-numbered academic years.

420 ETHICAL THEORY (3)
 Prereq: Phil 112. Critical analysis of writings of several major theorists in ethics — ancient, modern, and contemporary — and their treatment of ethical problems. Normally offered in even-numbered academic years.

425 PHILOSOPHY OF MIND (3)
 Prereq: Phil 310. Problems relating to the mind-body distinction, knowledge of mental states and the study of mind-body identity theories. Normally offered in odd-numbered academic years.

Physical Education, Health & Recreation

The department offers a variety of major/minor programs for students interested in professions related to physical education, health education and recreation.

FACULTY

The department currently consists of 14 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 the exercise sciences, health and recreation.

FACILITIES

The department is housed in Carver Gymnasium. The facility features four gymnasiums, a gymnastic room, a weight room, swimming pool, racketball and tennis courts, and numerous activity fields. Recently expanded exercise physiology and biomechanics laboratories afford the 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.

PROGRAM

Physical Education

The program in physical education is varied and includes undergraduate and graduate student preparation for careers as professional physical educators, exercise science specialists and fitness instructors. The concentrations offered within the physical education program include the following:

- Secondary and Elementary School Physical Education
- Exercise Science
 - Adult Fitness
 - Biomechanics
 - Exercise Physiology
 - Motor Development
- Health Promotion/Health Management
- Sports Psychology
- Coaching
- Pre-Physical Therapy
- Sports Journalism

Recreation and Parks

The curriculum in recreation and parks offers a generalist preparation for a wide range of career entry-level positions including:

- Urban/Community Recreation
- Therapeutic Recreation
- Outdoor Recreation
- Industrial Recreation/Health Promotion
- Commercial Recreation
- Military Recreation

Health Education

The curriculum in health education prepares professional entry-level health educators in one or more of the following areas of concentration:

- Community Health Education
- School Health Education
- Worksite Health Promotion
- Staff Development/Health Education in Medical Care Settings

In addition to major/minor programs, a broad selection of activities are 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, mountaineering, sailing, horsemanship, hiking and alpine travel.

Western students are generally highly interested in participating in sports, dance and aerobic fitness activities. Classes, intramural sports and aquatic programs sponsor popular activities throughout the year for a large number of students. Extensive intercollegiate athletic and club sports programs also are available.

PHYSICAL EDUCATION, HEALTH AND RECREATION FACULTY

- M. CHAPPELLE ARNETT (1960) Chair.
Professor. BS, Centenary College; MS, Purdue University; EdD, University of Missouri
- EVELYN E. AMES (1964) Associate Professor. BS, University of Nevada; MS, Washington State University; PhD, University of Maryland.
- ROY CLUMPNER (1975) Associate Professor. BS, University of Wisconsin, Lacrosse; MA, San Jose State University; PhD, University of Alberta.
- KATHLEEN KNUTZEN (1977) Associate Professor. BA, MA, Western Washington State College; PhD, University of Oregon.
- BOYDE LONG (1966) Associate Professor. BS, MA, University of New Mexico.
- ROBERT MOFFATT (1981) Assistant Professor. BS, California State College; MS, University of Louisville; MPJ, University of Michigan.
- JAMES E. MOORE (1977) Associate Professor. BA, University of Oregon; MEd, PhD, Oregon State University.
- RONALD D. RIGGINS (1977) Assistant Professor. BA, Laverne College; MS Recreation, ReD, Indiana University.
- CHARLES D. SYLVESTER, (1984) Assistant Professor. BS, MA, University of Maryland; PhD, University of Oregon.
- RALPH A. VERNACCHIA (1973) Associate Professor. BA, Montclair State College; MS, Ohio University; PhD, The University of Utah.
- DON W. WISEMAN (1962) Associate Professor. BA, Idaho State University; MS, Washington State University.

Coaching Associates

- Anthony G. Bartlett (1984) Cross-Country and Track and Field Coach. BA, Western Washington State College.
- Lynda M. Goodrich (1973) Women's Athletic Director. BA in Ed, MA, Western Washington State College.
- Paul O. Hansen (1983) Football Coach. BS, MS, University of Oregon.

BACHELOR OF ARTS

This major provides concentrated study of the concepts and skills of human movement, exercise and sports science, socio-cultural implications of sport in society, and an elective core selected to meet the individual student's professional goals.

The major is career oriented to adult fitness in industry, government agencies, health and sport clubs, cardiac rehabilitation, pre-physical therapy, research and graduate study, sports journalism, physical recreation leadership.

Major — Physical Education

84-90 credits, selected as follows:

- PE 200
- Biol 348

- Professional activities and skill competencies: select 12 credits from PE 200-level courses; 2 credits may be taken at the 100 level upon permission of the adviser
- Exercise and Sport Science: select 25 credits from PE 301, 302, 303, 307, 402, 485, 490
- Socio-cultural aspects of sports and physical education: required — PE 309 or 310, 407. Select one additional course from PE 308, 309, 310, 409
- PE 491 (6 credits)
- H Ed 252 or 352
- Specialization area: select 24-35 credits from one of the following specializations:
 - Business Administration: complete the business administration minor; see Management (College of Business & Economics) section of catalog
 - Recreation and Parks: complete the recreation and parks minor; see Recreation and Parks section listed below
 - Dance: complete dance minor
 - Pre-Physical Therapy: see requirements listed in the Professional Transfer Programs section of catalog. Recommendation: expand to a required set of courses: Biol 345, 348, 349, 371; Phys Sci 131, 132, 133; Chem 115, 251; Psych 201; Math 124; plus one additional psychology class.
 - Journalism: complete the journalism minor; see Journalism (College of Arts and Sciences) section of catalog
- Exercise Science: 30 credits. Select courses under advisement:
 - Biol 349
 - H Ed 350, 450
 - Hux 352a,b, 454
 - Chem 115, 251, 371
 - Math 240, CS 107, 110, 210
 - Psych 326, 357
 - PE 403, 440
- Health Promotion: 25 credits. Open only to Recreation, Health and Physical Education majors (select courses under advisement)
 - PE 208, 302, 303, 403
 - HEd 349, 350, 360, 465
 - Home Econ 250
 - Rec 373, 377

Minor — Physical Education 30 credits

- PE 200
- 8-10 credits from professional activities: PE 208-256
- 8-10 credits from scientific foundations: PE 301, 302, 303, 307, 402, 485, 490
- 8-10 credits from socio-cultural aspects: PE 308, 309, 310, 407, 409
- PE 491
- H Ed 252 or 352

Minor — Sport Psychology 30-32 credits

- Psych 201, 311

Physical Education

- PE 307, 309, 310
- Two courses selected from: Psych 306, 313, 315, 316, 321, 322, 324, 342, 353
- PE 408 (to be taken after all courses in the minor are completed)

RECREATION AND PARKS

As our society becomes increasingly leisure oriented and responsive to needs for recreation activity, career opportunities for professionals in recreation become more numerous and diverse. The Recreation and Parks curriculum prepares students to plan, develop and administer programs and resources in community, outdoor and therapeutic recreation 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	Winter	Spring	Summer
Freshman				
Sophomore			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 and Parks 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.

Students interested in this program should consult Recreation and Parks for current information on admission procedures. The program is popular, and the number of major and minor students is limited.

Major Concentration 66 credits

- Prerequisite: Rec 171
- Phase I: Rec 271, 272, 274, 275, 276
- Phase II: Rec 372, 373, 374, plus 2 of 3: Rec 375, 376, 377
- Phase III: Rec 471
- Phase IV: Rec 444, 446, 450, 476, plus 2 of 3: Rec 421, 474, 475

Support Area

Recreation and Parks 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

- Prerequisite: Rec 171
- Complete Phases I and II

BACHELOR OF ARTS IN EDUCATION

Physical Education Majors

Physical education major programs leading to teaching certification are presently under review by the State Board of Education. It is anticipated that a new K-12 Physical Education Specialist will be endorsed. Refer to the department for information on a new program as well as to any changes related to the secondary or elementary options.

Physical education majors course requirements are drawn from four core areas: Core A — Professional Activities: Pedagogy in Sports, Dance, Aquatics; Core B — Exercise and Sport Sciences; Core C — Curriculum, Pedagogy, Practicum; Core D — Socio-Cultural.

Secondary (Grades 7-12) Option A

- Physical education: 55 credits
- Supporting course: Biol 348
- PE 200
- HEd 352

Core A: PE 200 must be taken prior to this sequence or concurrently

- PE 208, 209, 232, 243, 244, 245, 247, 251, 254, 256. In addition, students must pass PE 113 or 217, or possess a current American Red Cross Intermediate Swimming Certificate

Core B: Exercise and Sport Sciences

- 17 credits: select from PE 301, 302, 303, 307, 485, 490

Core C: Pedagogy and Practicum: 10 credits

- PE 401 and 492 (PE 402 or Rec 376)

Core D: Socio-Cultural: 9 credits

- PE 407
- PE 309 or 310
- 3 credits from PE 308, 309 or 310, 409

Elementary School Physical Education: Option B

This major is under review pending changes in the state certification requirements for teachers. Refer to the department for the current program.

- Physical Education courses: 43 credits
- PE 200
- Health Ed 352

Core A:

- 10 credits: PE 209, 244, 245, 250, 256

Core B: Exercise and Sport Sciences: 17 credits

- Select from PE 301, 302, 303, 307, 485, 490

Core C: Pedagogy and Practicum: 11 credits

- Select from PE 306, 326, 392, 402 or RP 376

Core D: Socio-Cultural: 3 credits

- Select from PE 308, 309, 310, 407
- Supporting course: Biol 348

Eligibility for Student Teaching

- Complete Educational Curriculum and Instruction Department requirements as appropriate for secondary or elementary level
- Earned in university accumulative grade point average of 2.75 or better
- Complete PE 401, Secondary, or PE 306, Elementary, with a C or better. A minimum of 14 credits (secondary or 8 credits elementary) in Core A; 14 credits in Core B; and 6 credits in Core D
- Complete a faculty review

Recommendation for teaching endorsement for physical education normally requires a completion of a major or an augmented minor (30 credit hours) with a minimum grade average of 2.75. Participation in intramural and/or club sport activities is encouraged for all majors and minors during four quarters of the first two years.

Minor — Physical Education

Secondary 27 credits

(For teaching endorsement 30 credits.)

- PE 200
- 12 credits from the professional activity sequence
- 10-12 credits selected from PE 301, 302, 303, 407, 485
- PE 304 or H Ed 252 or 352
- PE 307

Biol 348 is recommended. Concentrated study in

one sport area is recommended with additional participation in activity classes and inter-collegiate teams in other sports.

Minor — Physical Education

Elementary 25 credits

(For teaching endorsement 30 credits)

- 8 credits: PE 209, 244, 250, 251, 256
- 8 credits: PE 301, 302, 303, 307, 485
- 7-9 credits: PE 306, 326, 392
- H Ed 252 or 352
- 2-4 credits under advisement
- Biol 348 recommended

Minor — Athletic Coaching

(Men and Women) 30 credits

- 7-9 credits selected from PE 360-387
- 4 credits selected from PE 341-347
- PE 208, 304
- 6 credits in PE 491
- 8 credits selected from PE 301, 302, 303, 307, 309, 310, 406, 410, 485

Biol 348 recommended. Concentrated study in one sport area is recommended with additional participation in activity classes and inter-collegiate teams in other sports.

Completion of the athletic coaching minor does not meet requirements for a teaching endorsement in physical education.

Minor — Educational Dance 25 credits

- PE 122, 209, 326
- 16 credits under departmental advisement

Minors must plan, under departmental advisement, to take additional coursework to attain a teaching endorsement.

BACHELOR OF ARTS IN EDUCATION

Major — School Health Education

65 credits

The school health education options prepares students to teach health education in the school setting. School health educators seek to promote healthy lifestyles and provide students with decision-making skills that will foster positive health choices. See Educational Curriculum and Instruction Department for requirements in the professional studies program.

Program Adviser: Dr. Evelyn Ames

- H Ed 4 credits from 150, 151, 152
- H Ed 349, 350, 352, 407, 447, 450, 460, 470 (27 credits)
- Home Econ 250
- Biol 348, 349
- Chem 115

Physical Education

- 16 credits to be taken in the social sciences under departmental advisement

Minor — School Health 30 credits

- H Ed 4 credits from 150, 151, 152
- H Ed 349, 350, 352, 447, 450
- Home Econ 250
- Biol 348
- 2 credits under departmental advisement
- Biol 349 recommended

BACHELOR OF SCIENCE

Major — Community Health

89-90 credits

The community health education major prepares students to design and introduce educational programs to stimulate awareness, understanding and practice of behavior that will improve or maintain health. Community health educators develop the educational components of health promotion and disease prevention programs and participate in all aspects of programs that identify and address the health needs of target populations. The practice of health education occurs in various community, industry, business and medical care settings.

Program Adviser: Dr. Evelyn Ames

- H Ed 4 credits from 150, 151, 152
- H Ed 349, 350, 352, 407, 447, 450, 451, 460
- Home Econ 250
- Chem 115, 251
- Biol 345, 348, 349
- Psych 201 and an upper-division course; or
- Soc 202 and an upper-division course
- PE 303
- Speech/Broadcasting: select one course from Spch 204, 309; Journ 405

Minor — Health Education 25 credits

- H Ed 349, 350, 352, 447, 450
- Home Econ 250
- 2 credits selected under advisement
- Biol 348
- Biol 349 recommended

COURSES IN PHYSICAL EDUCATION

Courses numbered X37, X97, 300, 400, 417, 445 are described on page 28 of this catalog.

Activities Courses

Activities courses, with the exception of varsity sports and those so noted, may not be repeated for credit.

100-level classes: Courses numbered 179 or below are S/U graded.

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
- 120-129 DANCE (1 ea)

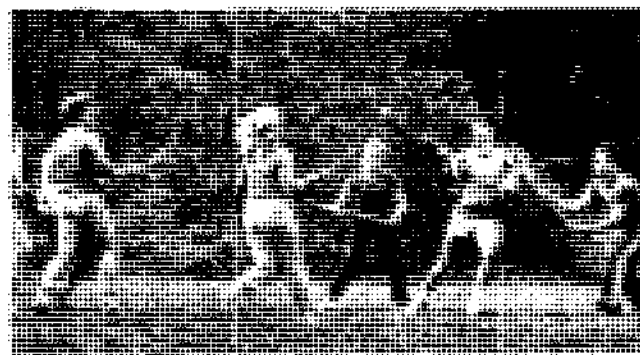
(See Theatre/Dance Department for additional dance offerings.)

- 120 Social Dance
- 122 Folk and Square Dance

130-139 DUAL SPORTS (1 ea)

- 132 Beginning Badminton
- 133 Intermediate Badminton
- 134 Fencing
- 136 Beginning Tennis
- 137 Intermediate Tennis
- 139 Racquetball

The student furnishes equipment for PE 132, 133, 136, 137, 139.



140-149 TEAM SPORTS (1 ea)

- 142 Basketball
- 144 Soccer
- 145 Volleyball
- 148 Lacrosse
- 149 Rugby

150-173 INDIVIDUAL SPORTS (1 ea)

- 150 Archery
- 151 Gymnastics
- 154 Golf
- 156 Track and Field
- 157 Beginning Skiing
- 158 Intermediate Skiing
- 159 Advanced Skiing
- 160 Sailing and Canoeing
Prereq: swimming test.
- 161 Board Sailing
- 162 Horsemanship
- 167 Bicycling
- 168 Karate
- 170 Hiking and Alpine Travel (2)
- 173 Riflery

The student enrolling in 157, 158, 159, 160, 161, 162, 163, 166, 170 and 173 pays cost of transportation and individual instruction. Students in 157, 158, 159, 161 also furnish own equipment.

180-193 INTERCOLLEGIATE SPORTS (2 ea)

- 180m Intercollegiate Football
- 181 Intercollegiate Basketball
- 183 Intercollegiate Track and Field
- 185 Intercollegiate Golf
- 189 Intercollegiate Cross Country
- 190 Intercollegiate Crew
- 192w Intercollegiate Volleyball
- 193m,w Intercollegiate Soccer

Professional Courses

200 INTRODUCTION TO PHYSICAL EDUCATION (2)

Required for acceptance into the program. Career orientation, professional organization, research, physical fitness and skill competency testing, relationship between physical education and athletics.

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).

208-256 PROFESSIONAL ACTIVITIES (2 ea)

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

209 Recreational Dance

232 Badminton/Tennis

243 Contemporary Recreational Activities

244 Soccer/Speed Ball/Speedway

245 Volleyball/Basketball

247 Football Activities/Combatives

Methods of teaching football activities and combatives in a school physical education program.

250 Educational Gymnastics

251 Gymnastics

254 Golf/Archery

256 Track and Field

216 ADVANCED LIFESAVING AND WATER SAFETY (2)

Prereq: advanced level in swimming proficiency test. Instruction leading to qualification for the American Red Cross Lifesaving Certificate.

217 WATER SAFETY INSTRUCTORS' COURSE (2)

Prereq: current American Red Cross Advanced Lifesaving Certificate. Stroke analysis and methods of teaching lifesaving and aquatic skills; instruction leading to qualification as an American Red Cross Water Safety Instructor.



301 BIOMECHANICS (4)

Prereq: Math 104 or 105. 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.

305 MICROCOMPUTER APPLICATIONS IN HEALTH, PHYSICAL EDUCATION AND RECREATION (3)

Prereq: junior status; students must be health, physical education or recreation majors. Survey of currently available microcomputer software within the areas of health, physical education and recreation. Programs will be reviewed and analyzed in areas such as fitness evaluation, scheduling and organization, sport statistics, record keeping, data acquisition, nutritional evaluation and word processing.

306 PHYSICAL EDUCATION FOR ELEMENTARY SCHOOL (3)

Prereq: Psych 352. Physical activities in dance, games and agilities for elementary age. Methods of teaching and developmental characteristics of children.

307 MOTOR LEARNING (3)

Prereq: PE 200 and ten credits from PE 208-256. Principles of motor skills acquisition as it relates to teaching methodology and coaching techniques.

308 INTERNATIONAL PHYSICAL EDUCATION AND SPORT (3)

Prereq: PE 200. An analysis of various physical education and sport programs throughout the world, with an emphasis on socialist countries, Western European countries, and Canada.

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.

326 DANCE FOR CHILDREN (3)

Creative movement activities in dance, drama and physical activity. Suitable for classroom teachers and physical education majors.

341-347 SPORTS OFFICIATING (2 ea)

Officiating techniques for individual and team sports.

342m Basketball

342w Basketball

343 Track and Field

345 Volleyball

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)

382 Baseball (2)

383 Track (3)

385 Volleyball (2)

387 Tennis (2)

392 PHYSICAL EDUCATION OBSERVATION/TEACHING EXPERIENCE WITH CHILDREN (2-4)

Prereq: PE 306. Observation and micro-teaching experience in school settings.

Physical Education

- 401 SECONDARY SCHOOL METHODS AND PROFESSIONAL PRACTICUM (5)**
Prereq: junior status and completion of 20 hours in the major program. Seminar, observation, and practical experience in teaching physical education in secondary schools.
- 402 CORRECTIVE PHYSICAL EDUCATION (3)**
Prereq: Biol 348 or equivalent; PE 302. Implications of growth patterns, coordinations and postural deviations relating to the physical education program; conditioning techniques, corrective procedures.
- 403 PHYSICAL FITNESS ASSESSMENT AND EXERCISE PRESCRIPTION (4)**
Prereq: PE 302, 303. Examine techniques of evaluation for physical fitness with an emphasis on aerobic capacity, flexibility, strength and body composition; design, implement and administer exercise programs for developing physical fitness.
- 406 THE ADMINISTRATION OF ATHLETICS (3)**
Prereq: senior status. Organization and administration of policies and procedures for interschool athletic programs with special emphasis on management of contests, financing, care and maintenance of facilities and equipment.
- 407 HISTORY AND PHILOSOPHY OF PHYSICAL EDUCATION (3)**
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 & MANAGEMENT (3)**
Prereq: PE 200; 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.
- 410 INTRAMURAL AND INTERSCHOOL PROGRAMS (2)**
Program content and planning for athletic events in secondary schools.
- 440 PHYSICAL ACTIVITY AND NUTRITION (3)**
Prereq: Home Econ 250 or Hux 352. Current topics on exercise and nutrition; weight control, obesity, dietary supplementation and performance, fluid regulation, atherosclerosis, diabetes and exercise.
- 480 TEACHING PHYSICAL EDUCATION IN ELEMENTARY SCHOOL: INSTRUCTIONAL MODULES PROVIDING FOR EQUAL OPPORTUNITIES (1-4)**
Prereq: PE 250 or 306 or equivalent and teaching experience. Utilizing of self-instructional materials, group seminars and conferences for development of teaching competency in elementary school physical education; incorporate a wide variety of strategies and activities in providing equal opportunities for all children and provide for compliance with provision of Title IX.
- 481 MOVEMENT EDUCATION (3)**
Prereq: PE 250 or 306. History, philosophy and rationale for a movement education approach in the teaching of physical skills. A study of the potential application and influence of movement education in current physical education curricula. Uses and abuses of existing movement education programs. Principles of movement education for the development of future physical education curricula.
- 482 GAMES AND SPORTS: STRATEGIES FOR TEACHING IN ELEMENTARY AND MIDDLE SCHOOLS (3)**
Prereq: PE 306 or equivalent. Developing problem-solving strategies, modified games/sports, creative games in cooperative and competitive activities. Use of learning centers/station.
- 485 HUMAN GROWTH AND MOTOR DEVELOPMENT (3)**
Growth characteristics and sequence of motor development to maturity; implications for motor performance.
- 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 and college physical education programs.
- 491 FIELD EXPERIENCE IN PHYSICAL EDUCATION ACTIVITIES (3)**
Prereq: senior standing and permission of department. Practical experience in local public schools and voluntary agencies in conducting activity programs. Course may be repeated once. S/U grading.
- 492 PRACTICUM IN PHYSICAL EDUCATION (2)**
Prereq: upper-division status, permission of department. Individualized practicum in teaching physical education activities. The course may be repeated. S/U grading.
- 496 PHYSICAL EDUCATION FOR THE EXCEPTIONAL CHILD (3)**
Prereq: permission of instructor. Use of movement experiences for child-centered education for exceptional children; methods, activities in gymnastics, games and sports, body competencies and creative movement.

Graduate Courses in Physical Education

Courses numbered 500, 517, 545, 597 are described on page 28 of this catalog.

Admission to Graduate School or special permission required. See Graduate 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.
- 505 ADVANCED PEDAGOGY (4)**
Prereq: PE 401 or equivalent, access to a teaching situation, previous teaching experience. Exploration of the past and current research in the area of teaching physical education. The study of current measurement of physical education teaching effectiveness. The design of a teaching effectiveness instrument and its implementation in a school setting.

- 506 RESEARCH DESIGN IN PHYSICAL EDUCATION (4)
Prereq: graduate status or Ed 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.
- 508 SEMINAR IN HISTORICAL PERSPECTIVES OF SPORT (3)
Prereq: graduate status; PE 407 or equivalent. Understanding of research in Sport History and analysis of forces that historically have affected sport and the roles various groups, individuals and institutions have had on sport.
- 509 ADMINISTRATION OF PHYSICAL EDUCATION, SPORTS. PHYSICAL ACTIVITY CENTERS (3)
Prereq: Ed 541a. Phys Ed 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 will be given to budgets, legal liability, purchase and maintenance of equipment, facilities, public relations.
- 510 TECHNIQUES AND APPLICATION OF FITNESS EVALUATION PROCEDURES (4)
Prereq: PE 303 or equivalent. Cardiopulmonary and anthropometric evaluation of the human. Emphasis is placed on electrocardiography, exercise stress testing techniques, pulmonary function tests and body composition analysis.
- 511 PHYSICAL ACTIVITY AND AGING/CARDIAC REHABILITATION (3)
Prereq: PE 510. Aging process and relationship to activity and health planning. Design a safe, effective, and enjoyable activity for older populations. Education and exercise planning for cardiac rehabilitation.
- 513 EXERCISE PRESCRIPTION AND IMPLEMENTATION OF EXERCISE PROGRAMS (3)
Prereq: PE 302, 303. Administration and implementation of fitness programs will be examined. Fitness modalities will be examined, evaluated and applied.
- 520 READINGS IN PHYSICAL EDUCATION (2-4)
Prereq: graduate status. Directed readings, analysis, discussion of current literature on physical education culminating in a colloquium of a chosen topic.
- 531 SEMINAR: 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 (3)
Prereq: exercise physiology. Selected topics in exercise physiology: special aids to performance, thermoregulation, altitude training, metabolism, hormonal control of exercise, muscle physiology, lecture and recitation.
- 541 SEMINAR: SPORT PSYCHOLOGY (3)
Prereq: PE 309 or equivalent. Application of data from psychology to sport activity, athletics, performance and coaches.
- 542 SEMINAR: SOCIOLOGY OF SPORT (3)
Prereq: PE 310 or equivalent. Role and nature of sport in society; affluence and sport, urban life and leisure, amateur and professional sport, politics and sport.
- 543 SEMINAR: BIOMECHANICS (3)
Prereq: PE 301, 302 or equivalent. Application of mechanical principles to analysis of motor skills and athletic events.
- 544 BIOMECHANICS OF THE MUSCULO-SKELETAL SYSTEM (4)
Prereq: PE 301, 302 or equivalent and permission of instructor. Selected topics relating to biomechanics of the musculoskeletal system, muscular and skeletal system characteristics, biomechanics of the hip, knee, shoulder, foot, ankle and vertebral column.
- 546 INSTRUMENTATION IN BIOMECHANICS (4)
Prereq: PE 301 or equivalent and permission of instructor. Selected topics relating to current research techniques in biomechanics: computerized data acquisition, electrogoniometry, cinematography, smoothing and filtering techniques, anthropometrics, force platforms, EMG and surface topography.
- 584 HUMAN GROWTH AND MOTOR DEVELOPMENT (3)
Prereq: PE 485. Selected topics in biophysical aspects of development and psychosocial perspective of children's sports; developmental kinesiology.
- 592 FIELD EXPERIENCE IN ADULT FITNESS/CARDIAC REHABILITATION (2-6)
Prereq: completion of coursework. Supervised field experiences in developing, designing, managing and evaluating cardiac rehabilitation/adult fitness/health management programs. S/U grading.
- 690 THESIS OR FIELD PROJECT (6-9)
Prereq: formal advancement to candidacy for the master's degree.

COURSES IN HEALTH EDUCATION

Courses numbered X37; X97; 300, 400, 417; 445 are described on page 28 of this catalog.

- 150 CONSUMER HEALTH (2)
Analysis and evaluation of health products, services, and information; selection of health care providers and programs; consumer protection agencies.
- 151 SOCIETY AND DRUGS (2)
Physical and psychological effects of mood altering drugs; societal use and misuse of legal and illegal drugs, including OTC drugs.
- 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 cancer, its forms of development and prevention. Environmental carcinogens, methods of cancer treatment and community resources available to patients and family members will be discussed.



252 FIRST AID AND PERSONAL SAFETY (2)

Aid for common injuries and illnesses based on the American Red Cross Standard First Aid and Personal Safety course. ARC certificate issued on completion of course requirements.

349 CONTEMPORARY HEALTH ISSUES (3)

Prereq: H Ed 150, 151, and 152 recommended. Contemporary issues relating to weight management, consumer health, human sexuality and substance use and abuse. Application of computer software.

350 WELLNESS AND ILLNESS (3)

Prereq: junior status. Topics covered: stress-relationship to wellness/illness; chronic/degenerative diseases; communicable diseases; respiratory, allergies and internal disorders; high-level wellness.

351 FIRST AID AND CARDIO-PULMONARY RESUSCITATION (1)

First aid using a multi-media program including units on cardio-pulmonary resuscitation.

352 ADVANCED FIRST AID AND EMERGENCY CARE (3)

The development of first aid skills required of persons who are responsible for providing emergency care as part of job and/or recreation. ARC certificates are issued on completion of course requirements.

360 HEALTH ASSESSMENT/RISK APPRAISAL (3)

Prereq: 19 credits in the health promotion option and a major in physical education, health education, or recreation and parks. Health assessment and screening instru-

ments; computerized risk appraisal programs; interpretation of results and utilization within the workplace and health promotion programs.

407 HISTORICAL PERSPECTIVES OF HEALTH EDUCATION (3)

Prereq: H Ed 349, 350 and 447. Historical perspectives of health and health education; principles and practices of health education. Writing intensive course. Normally offered in alternate years.

447 COMMUNITY HEALTH (3)

Prereq: 10 credits in health education or permission of instructor. Definition of community health, organization and administration of community health issues, program evaluation and direct involvement with health-related agencies.

450 METHODS AND MATERIALS IN HEALTH EDUCATION (4)

Prereq: H Ed 349 and 350 or permission of instructor. Basic principles and application of the process of health education in school and/or community health settings. Identification, examination, development and evaluation of resource materials.

451 FIELD EXPERIENCE IN COMMUNITY HEALTH (15)

Prereq: H Ed 450, 460 and Community Health major. Practicum in health-related community agencies. S/U grading.

452 FIRST AID INSTRUCTOR'S COURSE (2)

Prereq: current ARC certificate. Instructional methods, skills, resource materials for teaching first aid. ARC certificates issued on completion of requirements.

- 460 CURRICULUM DESIGN AND EVALUATION IN HEALTH EDUCATION (5)
Prereq: senior status. Application of concepts of curriculum design and evaluation of health education programs for school and community settings; models of health behavior; analysis of implementation process.
- 465 HEALTH PROMOTION/WELLNESS PROGRAMS (3)
Prereq: H Ed 360 and a major in Physical Education, Health Education or Recreation and Parks. Approaches to developing comprehensive employee health and fitness programs in occupational settings. Model programs for business and industry will be assessed.
- 470 SCHOOL HEALTH PROGRAM (3)
Prereq: senior status, teaching experience, or permission of instructor. Analysis of the philosophical, organizational, and legal aspects of the school health program.

COURSES IN RECREATION AND PARKS

Courses numbered X37; X97; 300, 400, 417; 445 are described on page 28 of this catalog.

- 171 FOUNDATIONS OF RECREATION AND LEISURE (3)
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 171; 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 171; 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 171; 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 171; majors and minors only. Participation in a recreation and park agency in the delivery of recreation services.
- 276 RECREATION PROGRAMMING I (2)
Prereq: Rec 171; majors and minors only. Leading and processing recreation experiences in community, outdoor and therapeutic recreation settings: individual, group and environmental factors.
- 372 RECREATION AND PARK ADMINISTRATION (3)
Prereq: Phase I. Entry-level administrative skills associated with managing personnel and organizational resources within parks and recreation systems.
- 373 RECREATION PROGRAMMING II (4)
Prereq: Phase I. Systems approach to programming methods for individual and group program planning in all parks and recreation settings.
- 374 SUPERVISED FIELDWORK (3)
Prereq: Phase I. Supervised laboratory experience in the recreation service professions. S/U grading.
- 375 INTERPRETATION IN RECREATION SETTINGS (3)
Prereq: Phase I or appropriate experience and written permission. Philosophy, organization, content and process of interpretation in human and natural environments. Equal emphasis placed on classroom instruction and field technique.
- 376 THERAPEUTIC RECREATION PROGRAM DESIGN (3)
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 COMMERCIAL AND INDUSTRIAL RECREATION (3)
Prereq: Phase I or appropriate experience and written permission. Analysis of process of providing recreation services and/or products in business or industrial settings: planning, organization, marketing, leadership and evaluation.
- 421 PRINCIPLES AND PRACTICES OF THERAPEUTIC RECREATION (3)
Prereq: Phase III or appropriate experience and written permission. Principles and practices of therapeutic recreation in relation to a variety of special populations served by recreation professionals.
- 444 RECREATION BUDGETING AND FINANCE (3)
Prereq: Phase III. Principles and techniques of obtaining, budgeting and managing financial resources in parks and recreation agencies.
- 446 ISSUES IN RECREATION AND PARKS (1)
Prereq: Phase III. An in-depth examination of issues affecting the provision of recreation services.
- 450 RESEARCH DESIGNS (3)
Prereq: Phase III. Research techniques in leisure settings: questionnaire development, surveys, interviews, experimental designs, report writing, computer familiarization and grant writing.
- 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.
- 475 PARK AND FACILITY DESIGN AND OPERATION (3)
Prereq: Phase III or appropriate experience and written permission. Design and operations considerations for the park and recreation administrator: program development, site analysis, unit relationships, site plans, plan evaluation, master plans, functional considerations, scheduling and maintenance.
- 476 LEISURE FACILITATION (3)
Prereq: Phase III or appropriate experience and written permission. Exploration of the concepts and skills required of the recreation professional as a facilitator of meaningful leisure experiences. Leisure facilitation is approached from a systems reference, emphasizing individual, interpersonal, social, political and economic factors.

Physics & Astronomy

The undergraduate major provides a broad coverage of basic physical topics and principles and combines both lecture and laboratory work. Students may choose from one of a number of programs which allow different relative emphasis on physics, math-physics, physics-computer science, optics or astronomy. Combined with the general educational program, students are well prepared for a varied career choice, e.g. high school teaching, graduate study and research/development work in governmental and industrial laboratories. Admission requirements are flexible enough to accommodate students who are beginning university-level work in mathematics and physics as well as those who can be granted advanced placement and credit for service-related experience or accelerated high school science and mathematics programs. Similarly, community college students with technical and academic credit in general physics and calculus can enter these programs without undue loss of credit and time.

The department has always given first priority to instruction and has acquired facilities, faculty and technical staff to support a strong curriculum including master's degree programs. Students have opportunity to participate in research projects involving nuclear, solid-state and theoretical physics, lasers, optics, acoustics, electronics or microcomputer interfacing.

The department provides an extensive program of student employment in laboratory instruction and technical work which provides valuable experience and financial support and promotes close association of faculty and students.

PHYSICS AND ASTRONOMY FACULTY

AJIT S. RUPAAL (1964) Chair.
Professor. BSc, MSc, Punjab University; PhD, University of British Columbia.

- 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.
- WILLARD A. BROWN (1956) Professor. BS, University of Washington; MAT, Washington State University; EdD, University of Florida.
- MELVIN DAVIDSON (1967) Professor of Physics and Director of the Computer Center. AB, Whitman College; PhD, Rensselaer Polytechnic Institute.
- WILLIAM J. DITTRICH (1951) Associate Professor. BS, MS, University of Washington.
- RICHARD FEINBERG (1930) Assistant Professor. BS, State University of New York; MS, PhD, Stanford University.
- RICHARD H. LINDSAY (1961) Professor. BS, University of Portland; MA, Stanford University; PhD, Washington State University.
- RAYMOND R. McLEOD (1961) Professor. BA, MA, University of British Columbia; PhD, Purdue University.
- ROBERT J. QUIGLEY (1970) Professor. BS, MS, California Institute of Technology; MA, PhD, University of California, Riverside.
- 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.
- RICHARD D. YAWTER (1938) 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 Associate

Roy F. Potter (1977) BS, University of Washington; MS, University of Maryland; PhD, University of Rhode Island.

BACHELOR OF ARTS

Major 86 credits

Core Courses (required of all BA majors)

- Physics 241, 242, 279; Math 124, 125, 226, 205
- Physics 341, 342, 343, 351, 352, 353; Math 224, 331, 332
- Physics 381, 382, 383, 391, 392, 393

It is recommended that each of the above groups be taken in the first, second and third year, respectively.

In addition every major must complete one of the following concentrations:

Physics Concentration

- 11 credits of upper-division courses

Astronomy Concentration

- Astron 315, 316, 317

Chem 121 and Computer Science 210 are recommended for both concentrations.

Minor 25 credits plus supporting courses

- Physics 241, 242, 341, 342, 343, 351, 352, 353
- Math 124, 125, 126

BACHELOR OF SCIENCE

Major 110 credits

Core Courses (required of all BS majors)

- Physics 241, 242, 279; Math 124, 125, 126, 205; Chem 121
- Physics 341, 342, 343, 351, 352, 353, 371; Math 224, 331, 332; Comp Sci 210
- Physics 381, 382, 383, 391, 392, 393
- Physics 421, 422

It is recommended that each of the above groups be taken in the first, second, third and fourth years, respectively.

In addition every major must complete one of the following concentrations:

Physics Concentration

- Physics 355, 356
- Plus 6 credits of 400-level courses

Math-Physics Concentration

- Math 404, 430, 431
- Plus one 400-level course in physics or mathematics

Optics Concentration

- Physics 355, 405, 409, 411

Physics/Computer Science 110 Credits

- Physics 241, 242; Math 124, 125, 126, 205
- Physics 341, 342, 351, 352, 355, 356, 357; Math 331, 332; Comp Sci 210, 310
- Physics 381, 382; Comp Sci 331, 332; Math/CS 301, 375; plus 6 to 8 credits of upper division electives in computer science or math/computer science
- Physics 14 to 16 credits of upper division electives of which up to 6 credits may be in computer science or math/computer science

BACHELOR OF ARTS IN EDUCATION

Teaching Endorsement

Recommendation for teaching endorsement

normally requires completion of the appropriate major with a minimum cumulative grade point average of 2.75.

Each of the major concentrations below provides endorsement in two related areas. Students wishing to combine physics with some other teaching major should refer to the BA minor in physics.

Major Concentration — Physics/ Mathematics 90 credits

- Physics 241, 242, 279; Math 124, 125, 126; Comp Sci 210
- Physics 341, 342, 343, 351, 352, 353; Math 205, 224, 241
- Physics 355; Math 305, 360, 483
- Physics: 15 credits under advisement

Major Concentration — Chemistry/ Physics

See Chemistry Department section of catalog for details.

COURSES IN PHYSICS

Courses numbered X37; X97; 300, 400, 417; 445 are described on page 28 of this catalog.

101 PHYSICS FOR THE LIBERAL ARTS (4) F,W,S

Basic concepts of physics. Some sections emphasize special topics such as household physics; environmental physics; light, sound, color and music; etc. For students with no previous physics background. Laboratory.

131 PRINCIPLES OF PHYSICS I (5) F,S

Prereq: high school algebra and geometry, or equivalent; knowledge of elementary trigonometric functions recommended. 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.

132 PRINCIPLES OF PHYSICS II (5) F,W

Prereq: Physics 131. Kinetic theory; heat and thermodynamics; principles of electricity and magnetism. Laboratory.

133 PRINCIPLES OF PHYSICS III (5) S

Prereq: Physics 132. Geometrical and wave optics; relativity; atomic and nuclear physics. Laboratory.

201 THE SCIENCE OF HIGH FIDELITY (3) F,S

High-fidelity audio components. Basic principles applied to the recording and reproduction of music. Operation and evaluation of tape recorders, turntables, phonocassettes, amplifiers, loudspeakers, etc. Laboratory.

202 SOUND SYSTEMS (3) W

Prereq: Physics 201. Electronic reinforcement and alteration of sound; room acoustics and reverberations; electronic and computer-generated music; digital computers and digital sound.

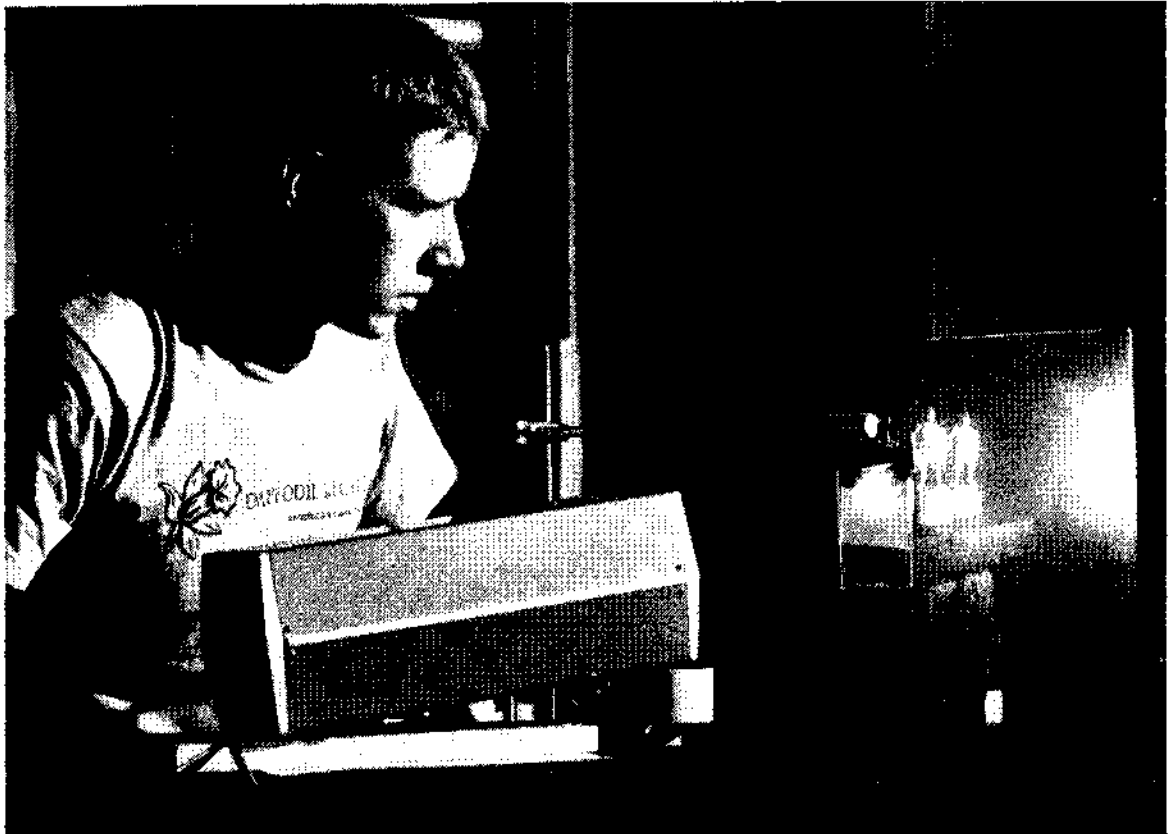
203 MUSICAL ACOUSTICS (3) S

Physical and subjective characteristics of sound; analysis of musical sounds; musical instruments; scales and room acoustics. Laboratory. Not intended for physics majors.



- 205 **LASERS AND HOLOGRAPHY (3) S**
Introduction to lasers, laser light and holography. Laboratory. Not intended for physics majors.
- 207 **SOLAR ENERGY (3) F**
Prereq: high school algebra and geometry, or completion of Astron 103. Practical utilization of the solar resource. Natural processes and solar motion as a function of latitude; collection of light energy; storage of thermal energy and heat transfer. Working details and performance data for passive and active solar buildings.
- 241 **PHYSICS WITH CALCULUS I (5) F,W**
Prereq: Math 124. Kinematics and dynamics of particles; work and energy; collisions and conservation of momentum; rotational kinematics and dynamics. Laboratory.
- 242 **PHYSICS WITH CALCULUS II (5) W,S**
Prereq: Physics 241 and Math 125. Oscillation; gravitation; fluid statics and dynamics; waves and sound; thermo-dynamics. Laboratory.
- 271 **STATICS FOR ENGINEERS (4) W**
Prereq: Math 125 (or concurrent) and Physics 241. Principles of statics, basic concepts, parallelogram law, Newton's law, 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 126. 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.
- 279 **INTRODUCTION TO SPECIAL RELATIVITY (3) F**
Prereq: Math 124 or concurrent. The relationship of space and time; the Michelson-Morely experiment; the Lorentz-Einstein transformations; time dilation and the Lorentz contraction; space-time events and the world lines; relativistic dynamics.
- 341 **ELECTRICITY AND MAGNETISM (4) F,S**
Prereq: Physics 242 and Math 126. Concurrent enrollment in Physics 351 required for physics majors. Electrostatics; magnetic fields of steady currents; time-varying electric and magnetic fields; DC and AC circuits; electromagnetic waves.
- 342 **OPTICS (4) W**
Prereq: Physics 242 and Math 126. Concurrent enrollment in Physics 352 required for physics majors. Reflection and refraction at plane and spherical surfaces; lenses and aberrations; optical instruments; interference and interferometers; diffraction; polarization.
- 343 **THERMAL PHYSICS (4) S**
Prereq: Physics 242 and Math 126. Concurrent enrollment in Physics 353 required for physics majors. Thermal properties of matter; kinetic theory; laws of thermodynamics; thermodynamic potentials and Maxwell's relations.
- 351 **E AND M LABORATORY (1) F,S**
Prereq: concurrent enrollment in Physics 341.
- 352 **OPTICS LABORATORY (1) W**
Prereq: concurrent enrollment in Physics 342.
- 353 **THERMAL LABORATORY (1) S**
Prereq: concurrent enrollment in Physics 343.
- 355 **FUNDAMENTALS OF ELECTRONICS (4) F**
Prereq: Physics 341 (or 133 with permission). Principles of DC and AC circuit theory; diodes; bipolar and FET transistors; transistor amplifiers; opto-electronic devices and waveform generators. Laboratory.
- 356 **ANALOG AND DIGITAL ELECTRONICS (4) W**
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 355. Self-paced study in advanced digital electronics using the Bug Books; gating, counters, decoders, multiplexers, shift registers and semiconductor memories.
- 371 **ELECTRIC AND MAGNETIC FIELDS (4) W**
Prereq: Physics 341; Math 224, 331 (may be taken concurrently). 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.
- 381 **QUANTUM PHYSICS (4) F**
Prereq: Physics 279, 341, 342 and Math 332. Concurrent enrollment in Physics 391 required for physics majors. Dual nature of radiation and matter; the Bohr atom; Schroedinger'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.
- 395 **FRONTIERS IN PHYSICS AND ASTRONOMY (3)**
 Prereq: one college-level physics course. Important developments in physics and astronomy during the 20th century. Not intended for physics majors. (Summers only.)
- 399 **SOLAR ENERGY PHYSICS (3) W**
 Prereq: Physics 101 or 131 or Astron 103. Solar, atmospheric and blackbody physics. Solar heat collection, transfer and storage with applications to solar space heating. Design criteria; solar measurements; resource studies. Research into large-scale solar systems.
- 401 **ACOUSTICS (3) F**
 Prereq: Physics 341, 342 and Math 331. Generation, transmission and reception of acoustic waves. Applications to selected areas of practical acoustics.
- 405 **LASERS (3) S**
 Prereq: Physics 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 (4) F**
 Prereq: Physics 382. Concurrent enrollment in Physics 485 is recommended. Fresnel diffraction, 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. Laboratory.
- 411 **ELECTRO-OPTICS (3) W**
 Prereq: Physics 382 (or concurrent enrollment). 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 fiber optic communications and sensors; light sources and detectors; imaging devices. Applications.
- 415 **HOLOGRAPHY (3) S**
 Prereq: Physics 342 and 352. Basic concepts of holography in thin and thick recording media; theory of elementary holograms (sinusoidal gratings and Gabor zone plates); major hologram types; interferometric holography. Laboratory. Normally offered alternate years.
- 421, 422 **QUANTUM MECHANICS (4 ea) F,W**
 Prereq: Physics 383. Review of Schrodinger's theory; eigenfunctions and eigenvalues; operator methods; angular momentum and spin; stationary-state and time-dependent perturbations; multiparticle systems.
- 431 **SOLID-STATE PHYSICS (4) W**
 Prereq: Physics 382. Phonons and lattice vibrations; free electron theory of metals; electrical conductivity; thermal properties; energy-band theory; diamagnetism and paramagnetism.



Physics/Astronomy

- 451 NUCLEAR PHYSICS (3) S
Prereq: Physics 383. Basic nuclear properties; nuclear models; interaction of radiation with matter; radioactive decay; elementary nuclear reactions.
- 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 491.
- 475, 476 CLASSICAL DYNAMICS (3 ea) W, S
Prereq: Physics 341 and Math 332. Lagrangian mechanics; perturbation techniques for dynamical systems; theory of oscillations; central forces and scattering theory.
- 479 RELATIVITY THEORY (3) S
Prereq: Physics 279 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. Normally offered alternate years; alternates with Astronomy 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 331. Applications of linear vector spaces, complex variables, group theory, etc.
- 491 STATISTICAL PHYSICS (3) S
Prereq: Physics 382. Probabilistic interpretation of entropy; relationships between statistical mechanics and thermodynamics; Fermi-Dirac and Bose-Einstein statistics with applications. Normally offered alternate years; alternates with 471.
- 499 CURRICULUM DEVELOPMENT FOR PHYSICS TEACHERS (1-6)
Prereq: permission of instructor.

Graduate Courses

Courses numbered 500, 517, 545, 597 are described on page 28 of this catalog.

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

- 531, 532 SOLID STATE PHYSICS (3 ea)
Prereq: Physics 431 or equivalent. Physics 531 prerequisite to 532. Crystal structure and reciprocal lattice space; dielectric properties; ferroelectric crystals; magnetism and superconductivity.
- 541 HAMILTONIAN DYNAMICS (3)
Prereq: 45 credits in physics including Physics 476. Variational principles; Hamilton's equations; canonical transformation theory.
- 542 SPECIAL TOPICS IN MECHANICS (3)
Prereq: Physics 541.
- 551, 552 NUCLEAR THEORY (3 ea)
Prereq: 45 credits in physics including Physics 451 or equivalent. Physics 551 prerequisite to 552. Theory and experimental basis for the structure of the atomic nucleus and nuclear properties and reactions.

- 571 ELECTRODYNAMICS (3)
Prereq: 45 credits in physics including Physics 471. Electromagnetic waves; wave guides and resonant cavities; radiation.
- 572 SPECIAL TOPICS IN ELECTROMAGNETIC THEORY (3)
Prereq: Physics 571.
- 581 QUANTUM THEORY (3)
Prereq: 45 credits in physics including Physics 422 or equivalent. Interaction of radiation with matter; approximation methods in quantum theory; scattering theory.
- 582 SPECIAL TOPICS IN QUANTUM THEORY (3)
Prereq: Physics 581
- 598 GRADUATE SEMINAR (1-3)

COURSES IN ASTRONOMY

- 103 ASTRONOMY FOR THE LIBERAL ARTS (4) F,W,S
A survey of astronomy including the solar system, galactic structure and cosmology. Not recommended for science, math or computer science majors.
- 105 COSMOLOGY (3) S
Prereq: Astron 103 or equivalent. Investigates questions such as: how did the universe begin, how is the universe evolving and how will the universe end? Curved space; black holes; the Big Bang; the expanding universe. Offered alternate years; alternates with Astronomy 333.
- 315 GENERAL ASTRONOMY: SOLAR SYSTEM (4) F
Prereq: Physics 131 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 (4) W
Prereq: Physics 131 or equivalent. Origin, structure and evolution of stars. Binary stars; magnitudes and spectra; variable stars and supernovae; neutron stars and black holes. Intended for science, math and computer science majors.
- 317 GENERAL ASTRONOMY: GALAXIES AND BEYOND (4) S
Prereq: Astronomy 316 (or Astronomy 103). The Milky Way, interstellar medium, and nebulae; structure of galaxies and galaxy types; exploding galaxies; radio galaxies; Seyfert galaxies; clusters of galaxies and "superclusters"; quasars. Origin and evolution of the universe (cosmology). Intended for science, math, and computer science majors.
- 333 SEARCH FOR LIFE IN THE UNIVERSE (3) S
Prereq: three credits of college physics or astronomy. Life in and beyond the solar system; interstellar intelligence and communication; radio search for extraterrestrial life; life detection experiments; problems of interstellar travel. Offered alternate years; alternates with Astronomy 135.
- 404 TELESCOPE DESIGN AND CONSTRUCTION (1-3) F,W,S
Prereq: Astron 103 and upper-division standing. Optical design and lens grinding applied to constructing a telescope.
- 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 and 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 can also 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 with secondary education endorsement and the Master of Arts. These curricula are listed below, and their details are set forth following the list of the department faculty.

Bachelor of Arts

Majors and Concentrations: political science, public policy and administration, political science for secondary education.

Minors: political science, Canadian-American studies, East Asian studies.

Master of Arts in Political Science

Master of Arts in Political Science (Public Policy and Administration)

POLITICAL SCIENCE FACULTY

- RALPH E. MINER (1970) Chair.
Associate Professor. BA, San Jose State College; MA, PhD, University of Oregon.
- DONALD K. ALPER (1971) Associate Professor. BA, MA, California State University, Long Beach; PhD, University of British Columbia.
- DAVID E. CLARKE (1966) Associate Professor. BA, MA, Trinity (Cambridge); PhD, Stanford University.
- JAMES W. DAVIS (1974) Professor. BA/Ed, Valley City State; MA, PhD, University of Minnesota.
- MAURICE H. FOISY (1970) Associate Professor. BA, Gonzaga University; MA, Georgetown University; PhD, University of Oregon.
- CHARLES J. FOX (1977) Assistant Professor. BA, University of California, Santa Barbara; PhD, Claremont Graduate School.
- JOHN J. HEBAL (1962) Associate Professor. PhD, University of Wisconsin; MA, University of Alabama; PhD, University of Minnesota.
- EUGENE J. HOGAN (1969) Assistant Professor. BA, Gonzaga University; MA, Georgetown University; PhD, University of Oregon.
- ELLIS S. KRAUSS (1970) Professor. AB, Brooklyn College of the City University of New York; MA, PhD, Stanford University.
- GERARD F. RUTAN (1969) Professor. BA, MA, University of Montana; PhD, University of North Carolina at Chapel Hill.
- DAVID W. ZIEGLER (1967) Associate Professor. BA, Oberlin College; MA, PhD, Harvard University.

The department's faculty and staff invite questions about the program and its career potential.

Persons seeking more information should visit the department in Arntzen Hall, or telephone (206) 676-3469. Written inquiries should be directed to the Department of Political Science, Western Washington University, Bellingham, Washington 98225.

BACHELOR OF ARTS

Major 65 credits

- Pol Sci 250
- Additional credits selected from not fewer than four of the areas listed below; at least 20 credits in one area; at least 10 credits in another 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.

Comparative Politics: Pol Sci 291, 301, 302, 303, 304, 307, 309, 343, 365 or 366; 402, 406, 416, 418a, 418b, 418c, 418g, 430, 431, 471

Politics and Government: Pol Sci 202 or Speech 202, 340, 343, 345, 346, 353, 364, 365 or 366, 418d, 423, 426, 427, 429, 440, 441, 443, 445b, 446, 449, 450, 454, 471, 480, 481, 490

Public Policy and Administration: Pol Sci 202 or Speech 202, 320, 345, 346, 353, 365 or 366, 413, 414, 415, 418f, 420, 421, 422, 423, 424, 425, 426, 427, 429, 444a,b, 454, 481

Public Law: Pol Sci 202 or Speech 202, 311, 313, 365 or 366, 410, 411, 413, 414, 415, 416

Political Theory: Pol Sci 360, 364, 365, 366, 418e, 424, 460, 461, 462, 463, 464, 465, 467, 480, 481

International Relations: Pol Sci 270, 305, 365 or 366, 376, 411, 418a, 418b, 470, 471, 476

Minor 25 credits

- Pol Sci 250
- Remaining credits from at least 2 areas

Minor — Canadian/American Studies

30 credits

Program Advisers: Dr. Donald Alper, Dr. Gerard Rutan

See the College of Arts and Sciences Interdisciplinary Programs section for specification and description of Canadian/American Studies minor. A Canadian/American Studies major may be taken as a joint major with political science.

Minor — East Asian Studies 30 credits

Program Adviser: Dr. Ellis Krauss

This may be added to the major for a major concentration.

See the College of Arts and Sciences Interdisciplinary Programs section for specifications.

Major-Minor Concentration — Public Policy and Administration*

99 credits, minimum

Program Adviser: Dr. Ralph E. Miner

Students majoring in political science having a particular interest in the making and implementation of government policy in the United States or Canada may choose a concentration in public policy and administration as an alternative to the 65-credit major. This option entails a major program with preparation relevant to problems and techniques of policy and administration in public agencies.

The total course requirement of 99-119 credits, depending upon course options selected, satisfies both a major and a minor in political science.

- Eng 101 (subject to waiver, see General University Requirements), and 301 or 302 or 401
- Speech 204 or 488
- Anth 201 or Soc 202
- Psych 201, and 320 or 315
- Econ 203 or 204
- Math 155 (Math 103 or qualifying exam a prerequisite)
- Acctg 241, 242, 367
- Pol Sci 250, 414, 415 or 410, 320, 353, 365, 413 or 423, 424, 427, 429 or 465, and 463
- Plus one course from each of the following groups:
 - (1) Mgmt 322 (Mgmt 301 a prerequisite), Pol Sci 418f or 422
 - (2) Pol Sci 345, 346, 420, 421, 467, Hux 430 (Pol Sci 250 or Hux 202 or permission of instructor as a prerequisite), or one course from the Ethnic Studies program
 - (3) Pol Sci 425, 426, Econ 410 (Econ 204 prerequisite), 442 (Econ 302 or 306 prerequisite)
 - (4) Pol Sci 440, 441, 443, 444a

Students choosing the public policy and administration concentration are encouraged to complete Math 156 as an elective within their total programs.

Modifications in the above program can be made through the public policy and administration adviser for those individual students having previous credit or work experience in areas covered by the listed courses.

Legislative internships are awarded on a competitive basis. See Pol Sci 443 catalog description.

Where possible, students choosing the public policy and administration concentration will serve in administrative internships in federal, state, or local government agencies. Credit toward the concentration for such internships is limited to a maximum of 10 credits with 5 of these in lieu of 5 credits from certain political science 300-400 courses. These arrangements must be

**This program is not currently available. Please check with department about future availability.*

made one quarter in advance on an individual basis through the public policy and administration adviser in the Political Science Department. See Pol Sci 444a,b catalog description.

Combined Major — Political Science/Economics 100 credits

Students interested in the relationships between politics and the economy and those considering government, law, or related careers may choose a combined major with Economics. This concentration is also available to Economics students and is cross-listed in that part of this catalog devoted to the Economics curriculum.

- Pol Sci 250, 270 or 291, 360, 365, 427
- A minimum of one course from three of these areas: Pol Sci 320; Pol Sci 346 or 345; Pol Sci 420 or 467; Pol Sci 425 or 426; Pol Sci 462 or 465; Pol Sci 470; Pol Sci 490
- 8-13 additional credits in upper-division political science electives, to complete the total required 100 credits of this program
- Econ 203, 204, 301, 302, 303, 311
- Econ 271 or Math 341
- Econ 410 or 415
- Econ 442 or 485
- 12 additional credits in upper-division economics courses, under departmental advisement
- Econ/Pol Sci 491

BACHELOR OF ARTS IN EDUCATION

Major 60 credits

Program Adviser: Dr. Ralph E. Miner

In order to receive an endorsement as a teacher in secondary education, students must complete an academic degree program. For this career goal, the Political Science Department offers the following degree program.

- Pol Sci 101, 250, 270, 291, 311 or 313, 320
- 30 credits *under advisement* from the following courses: Pol Sci 343, 345, 346, 353, 360, 365, 376, 420, 421, 427, 440, 446, 449, 450, 462, 464, 465, 467, 470, 481
- Students must also complete the specific program requirements for social studies education, including the social studies minor, as outlined in the College of Arts and Sciences Interdisciplinary section.

Completion of this major/minor program leads to a teaching endorsement in political science/social studies at the secondary level.

Minor — Political Science 35 credits

- Pol Sci 101, 250, 270, 481 or any other 400-level course (under advisement)

- Electives under departmental advisement to total 12 credits
- Soc St Ed 426

(Completion of this minor with a minimum 2.5 grade point leads to a supporting teaching endorsement in political science.)

Minor — East Asian Studies 30 credits

See College of Arts and Sciences Interdisciplinary Programs section.

Minor — Canadian/American Studies

30 credits

See College of Arts and Sciences Interdisciplinary Programs section.

DEPARTMENTAL HONORS

A political science major who wishes to graduate with honors in Political Science must complete: Political Science 496 with the advice of the departmental honors adviser and two years of foreign language (or a satisfactory reading knowledge of a foreign language or two years of participation in college debate). He/she must also submit a senior thesis and have a grade average of 3.5 in upper-division political science courses.

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. The academic relevance and adequacy must be determined by the department through a written evaluative report.

GRADUATE STUDY

For concentrations in political science and public policy and administration leading to the Master of Arts degree, see Graduate section of catalog.

COURSES IN POLITICAL SCIENCE

Courses numbered X37; X97; 300, 400, 417; 445 are described on page 28 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.
- 202 PARLIAMENTARY PROCEDURE (2)
Theory and practice of parliamentary law. Also offered as Speech 202.

Political Science

- 250 **THE AMERICAN POLITICAL SYSTEM (5)**
Consideration of the system and process of American politics and government with primary focus on the national level.
- 270 **INTRODUCTION TO INTERNATIONAL POLITICS (5)**
Interaction of states and other factors in the international system in terms of basic relationships of war and peace.
- 291 **INTRODUCTION TO COMPARATIVE POLITICS (5)**
Basic structures, functions, and socio-cultural environments of foreign political systems; methods of comparative study.
- 301 **BRITISH MODEL PARLIAMENTARY SYSTEMS (5)**
Prereq: Pol Sci 101 or 250 or 291. Introduction to parliamentary political systems; analysis of selected structures; examination and comparison of selected parliamentary polities.
- 302 **WESTERN EUROPE (5)**
Prereq: Pol Sci 101 or 291. Governments and politics of selected western European states.
- 303 **SOVIET UNION AND EASTERN EUROPE (5)**
Prereq: Pol Sci 101 or 291. The political system of the Soviet Union and other communist states in Eastern Europe.
- 304 **LATIN AMERICA (5)**
Prereq: Pol Sci 101 or 291. Government and society in contemporary Latin America.
- 305 **INTERNATIONAL POLITICS IN THE MIDDLE EAST (3)**
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 nineteenth century.
- 309 **SOUTHEAST ASIA (5)**
Prereq: Pol Sci 101 or 291. Political development and politics in Thailand, Indonesia, Vietnam and Burma.
- 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.
- 320 **PUBLIC ADMINISTRATION (5)**
Prereq: Pol Sci 250 or one course from Psych 201, Econ 204. Organizational structure and behavior, administrative processes and procedures, and individual behavior in complex public organizations.
- 340 **POLITICAL PARTIES (5)**
Prereq: Pol Sci 250. The origin, development, structure, organization, and activities of political parties. Various party theories in the light of current political conditions and changing patterns of political participation and political leadership.
- 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 (3)**
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. Not offered every year.
- 346 **POVERTY, MINORITIES, AND GOVERNMENT (5)**
Prereq: Pol Sci 250. Federal, state and local programs affecting minorities and the poor especially in large city ghettos; some emphasis on Washington State.



- 353 STATE AND LOCAL POLITICAL SYSTEMS (5)
Prereq: Pol Sci 250. Sub-national levels of government and intergovernmental relations; developing and administering policies for problems of race, population, pollution, crime, poverty, housing, resource depletion.
- 360 INTRODUCTION TO POLITICAL THEORY (5)
Prereq: Pol Sci 101 or 250. Origin and evolution of major concepts of political theory.
- 364 POLITICS AND FILM (5)
Prereq: Pol Sci 101 or 250. Basic political concepts of authority, ideology, revolution and democracy as portrayed in film. How cinematic images and techniques can be used to propagate types of political values and to clarify the moral choices involved in political action. Approximately seven feature films shown. Themes emphasized and films shown may vary each year.
- 365 POLITICAL INQUIRY (5)
Prereq: Pol Sci 101 or 250. Introduction to methods of political analysis with emphasis upon the contribution of science and philosophy to political knowledge and political action. Techniques for identifying and defining problems for analysis.
- 366 RESEARCH IN POLITICS (5)
Prereq: Pol Sci 101 or 250. Fundamentals of research design, including basic methods for the collection and analysis of political data.
- 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.
- 402 REGIONAL EUROPEAN SOCIETY AND POLITICS (3)
Prereq: Pol Sci 101 or 291. Government and society in selected countries from the Scandinavian, Alpine, Benelux and Iberian European regions.
- 406 CANADA (5)
Prereq: Pol Sci 250 or 291. Canadian social and political systems; governmental structures and functions; social, political, economic problems and foreign relations.
- 410 LAW AND SOCIETY (5)
Prereq: Pol Sci 250. A comparative study and analysis of public policy on outstanding contemporary socio-political issues.
- 411 INTERNATIONAL LAW (5)
Prereq: Pol Sci 270. Origin, principles and problems. Not offered every year.
- 413 LAW AND PUBLIC ADMINISTRATION (5)
Prereq: Pol Sci 320 and 414. Law, organizational behavior, and the public administrative process; law in relation to agency mission, agency interests and strategies of program implementation. Not offered every year.
- 414 AMERICAN CONSTITUTIONAL LAW: NATIONAL POWERS (5)
Prereq: Pol Sci 250 and upper-division standing. Supreme Court decisions interpreting major parts of the Constitution: judicial power; separation of powers; and federalism.
- 415 AMERICAN CONSTITUTIONAL LAW: INDIVIDUAL RIGHTS (5)
Prereq: Pol Sci 250, 414 and upper-division standing. Supreme Court decisions interpreting major parts of the Constitution: Bill of Rights and Fourteenth Amendment.
- 416 COMPARATIVE LEGAL CULTURES (3)
Prereq: Pol Sci 311 or 313. Contemporary representative legal cultures/systems, including the United States, Great Britain, western European states, the Soviet Union, and one or more Asian countries.
- 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 Selected Problems in East Asian Politics (3)
Prereq: Pol Sci 307.
- 418d Electoral Politics Workshop (2)
- 418e Political and Social Simulations (3)
- 418f Modern Bureaucratic Politics (3)
Prereq: Pol Sci 320
- 418g Contemporary Canadian Politics (3)
- 418h Presidential Politics Workshop (2)
Prereq: Pol Sci 250 or equivalent.
- 420 POLITICS, ADMINISTRATION, AND ENVIRONMENT (4)
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 Huxley 420.
- 421 METROPOLITAN AREA GOVERNMENT (5)
Prereq: Pol Sci 353. Decision-making structures of central city and suburban political systems; regional interaction, federal-state-local relations; problems related to minorities, poverty, and growth.
- 422 STAFFING THE PUBLIC BUREAUCRACY (5)
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 (5)
Prereq: Pol Sci 320. Organization theory as related to public organizations and the political system.
- 425 THE BUDGETARY PROCESS (5)
Prereq: Pol Sci 320. Public budgeting as both a political and administrative process.
- 426 POLITICS AND PUBLIC FINANCE (5)
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 (5)
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 (5)
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.



- 420 **MODERN CHINESE POLITICS (5)**
 Prereq: Pol Sci 307. Governments and political movements in the twentieth century.
- 431 **MODERN JAPANESE POLITICS (5)**
 Prereq: Pol Sci 291 or 307. Japanese political development, 1868-present; political culture, government-opposition relations; policy-making in contemporary Japan.
- 440 **STATE LEGISLATURES (5)**
 Prereq: Pol Sci 353. Interaction of elected executives, legislators, administrators, political parties, pressure groups, the press, and public in the legislative process at the state level, with some emphasis on Washington State.
- 441 **CONGRESS: PEOPLE AND POLITICS (5)**
 Prereq: Pol Sci 250. The politics and policies of the National Congress in the internal organization of the U.S. Senate and House of Representatives and in their external relations with the President, the bureaucracy, interest groups, and the voters. Not offered every year.
- 443 **LEGISLATIVE INTERNSHIP (5-15)**
 Prereq: permission of department. Internship in the Washington State Legislature during winter quarter; assignment is primarily as research assistant to a legislator. Enrollment limited to the number of internships allocated by the Legislature. Open only to juniors and seniors, competitively selected.
- 444a,b **ADMINISTRATIVE INTERNSHIPS (5,5)**
 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.
- 446 **CURRENT PROBLEMS IN AMERICAN GOVERNMENT AND POLITICS (3)**
 Prereq: upper-division standing. Discussion and assessment of current changes in the laws, institutions, policies and political processes of American government. Issues and problems, drawn from scholarly journals, journals of opinion, magazines and newspapers, will provide focus. This course will study current changes and contemporary issues and problems from both a scholarly and journalistic perspective.
- 449 **POLITICS AND SOCIAL CHANGE (5)**
 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 **POLITICS, CAMPAIGNS AND ELECTIONS (5)**
 Prereq: Pol Sci 250. Voters and voting behavior; candidates and campaign strategy; the resources of politics—workers, money, and mass media. Not offered every year.
- 454 **POLITICS OF HOUSING (5)**
 Prereq: Pol Sci 250. The role of government in housing and historic preservation; interface with the private sector; availability of affordable housing, public housing, urban renewal, historic preservation, displacement, and New Towns; Canadian, European, and other examples. Not offered every year.
- 460 **POLITICAL THEORY ANCIENT AND MEDIEVAL (5)**
 Prereq: Lib St 121 or Pol Sci 360. Origin and evolution of major concepts in Western political thought from Pericles to Machiavelli. Not offered every year.
- 461 **POLITICAL THEORY RENAISSANCE AND MODERN (5)**
 Prereq: Lib St 122 or Pol Sci 360. Origin and evolution of major concepts in Western political thought from Machiavelli to Edmund Burke. Not offered every year.
- 463 **AMERICAN POLITICAL THOUGHT (5)**
 Prereq: Hist 103, 104, or equivalent, or Pol Sci 101 or 250. Major concepts in American political thought from the Colonial period to the present.
- 464 **CONTEMPORARY POLITICAL THEORY (5)**
 Prereq: Pol Sci 360. Recent developments in formal theory, including contributions from behaviorism, modern political economy, holistic or system theories, and normative theory.

- 465 THEORIES OF DEMOCRACY (5)
Prereq: Pol Sci 380. Survey and analysis of theories of democracy, from ancient to modern. Normative and empirical theories with emphasis on contemporary theory and research findings. Not offered every year.
- 466 SYSTEMS THINKING, GOVERNMENT AND ENVIRONMENT (4)
Prereq: Pol Sci 101 or 360. Systems thinking as an emerging world-view. Origins in biology, neurology, operational research, cybernetics, ecology, etc. Applications to environmental control and political process. The promise and dangers of an "information society." Also offered as Huxley 466.
- 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 Huxley 467.)
- 470 NATIONAL DEFENSE POLICY (5)
Prereq: Pol Sci 270. Causes of military competition; weapons and strategy; defense spending; arms control, disarmament and other alternatives to arms races.
- 471 STATE POLICY, ESPIONAGE, AND INTELLIGENCE UTILIZATION (3)
Prereq: permission of instructor.
- 476 CHINA, JAPAN AND THE U.S.: WAR AND PEACE IN EAST ASIA (5)
Prereq: Pol Sci 270 or 307. Cultural images, foreign policy decision making; political, military and economic issues in American-East Asian relations. Not offered every year.
- 480 POLITICS, GOVERNMENT AND RELIGION (3)
Prereq: permission of instructor. How political activity and government structures relate to religious perceptions and organizations. Not offered every year.
- 481 POLITICAL SOCIALIZATION (5)
The role of the family, school and adult agencies in the learning of political beliefs and behavior. Not offered every year.
- 490 SENIOR SEMINAR IN AMERICAN GOVERNMENT AND POLITICS (5)
Prereq: senior standing, 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 standing in the Pol Sci/Econ combined major or a Pol Sci major and Econ minor. Discussion and analysis of selected issues of significant political and economic content. Listed jointly as Political Science/Econ 491.
- 496a,b,c HONORS TUTORIAL (2-5 ea)
- 502 RESEARCH TECHNIQUES IN POLITICAL SCIENCE (5)
- 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.
- 505a,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.
- 523 SEMINAR IN POLITICS AND PUBLIC FINANCE (3)
Advanced problems in politics and public finance.
- 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 is also given to various exchange theories of collective decision making in democratic systems.
- 526a,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.
- 542a,b PUBLIC SERVICE INTERNSHIP (5, 5)
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.
- 550a,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.
- 690 THESIS/THESIS RESEARCH (6-9)

Graduate Courses

Courses numbered 500, 517, 545, 597 are described on page 28 of this catalog.

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

- 501 POLITICAL SCIENCE AS A DISCIPLINE (5)
Study of political science as an academic field; description and critique of subfields; trends and challenges.

Psychology

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 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 insure 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: awareness and reasoning, biopsychology, human development, humanistic psychology, industrial/organizational psychology, mental health, and social psy-

chology. 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 is also 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 are also specialized concentrations in counseling psychology, measurement, evaluation and statistical analysis and behavioral toxicology (with Huxley College of Environmental Studies). Complete descriptions of the master's program are included in the Graduate section of this catalog.

PSYCHOLOGY FACULTY

- RICHARD W. THOMPSON (1967) Chair.
Professor. BA, MA, PhD, Michigan State University.
- DON F. BLOOD (1951) Professor of Psychology and Director of Testing; BA in Ed, Central Washington State College; MA, PhD, State University of Iowa.
- STEPHEN L. CARMEAN (1964) Professor. BA, MA, PhD, University of Illinois.
- LOWELL T. CROW (1968) Professor. BS, MA, University of South Carolina; PhD, University of Illinois.
- GEORGET. CVETKOVICH (1969) Professor. BA, Youngstown State University; MA, Akron State University; PhD, Kansas State University.
- CAROL J. DIERS (1983) Professor. BA, BA in Ed, Western Washington State College; MA, University of British Columbia; PhD, University of Washington.
- PETER J. ELICH (1961) Professor. 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.
- B. L. KINTZ (1965) Professor. AB, MA, PhD, University of Iowa.

- RONALD A. KLEINKNECHT (1970) Professor. BA, MS, PhD, Washington State University.
- 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.
- WILLIAM R. MacKAY (1962) Associate Professor. AB, Brown University; MA, EdD, University of California, Berkeley.
- ROBERT D. MEADE (1965) Professor. BA, Indiana University; MA, PhD, University of Pennsylvania.
- LAURENCE P. MILLER (1968) Professor. BA, University of California, Los Angeles; MA, San Fernando Valley State College; PhD, Ohio State University.
- FRANK A. NUGENT (1961) Professor. BS, New Jersey State Teachers College; MA, Columbia University; PhD, University of California, Berkeley.
- DAVID M. PANEK (1965) Associate Professor. BA, Beloit College; MS, University of Wisconsin; PhD, Washington State University.
- NORVAL L. PIELSTICK (1973) Associate Professor. BA, Linfield College; MA, Washington State University; PhD, University of Illinois.
- MERLE M. PRIM (1969) Associate Professor. BA, University of Washington; MS, San Diego State College; PhD, Washington State University.
- EARL R. REES (1970) Associate Professor. BA, Southern Illinois University; MA, PhD, Brown University.
- RONALD W. SHAFFER (1970) Associate Professor. BA, California State College, Los Angeles; MA, PhD, University of New Mexico.
- CHRISTOPHER J. TAYLOR (1968) Professor. AB, Wittenberg University; MS, PhD, Ohio University.
- SAUNDRA J. TAYLOR (1968) Associate Professor. BA, DePauw University; MA, Bowling Green State University; PhD, Ohio 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.

BACHELOR OF ARTS

Major 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 311-316
- Two courses from Psych 321-326
- One course from Psych 402-403
- 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 insure 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. Several concentrations of elective courses have

been developed to guide students in the selection of their elective credits.

General: Adviser — R. Thompson

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 311, 312; 313, 314; 315, 316; 321, 322; 323, 324; 325, 326
- Two courses from both of the following groups: Psych 402-403, 404-406

Awareness and Reasoning: Advisers — R. Shaffer, R. Rees, L. Miller, S. Carmean.

- Core program to include Psych 324 and 405
- Psych 342 and 344

Biopsychology: Advisers — R. Thompson, L. Crow and M. Prim

- Core program to include: Psych 312, 316, 325, 326, 403, 406
- Electives from Psych 321-324, 335
- Suggested biology courses: Biol 310, 312, 348, 349, 370, 403, 408, 424, 460, 465, 490.

Human Development: Adviser - F. Grote

- Core program in psychology plus 15 credits from the following courses: Psych 353, 355, 357, 456 (repeatable for credit). Psych 357 does not count toward the 15 credits in the Human Development concentration for those students who are taking the psychology major along with an elementary education minor.

Humanistic-Phenomenological Psychology:

Adviser - R. Shaffer

- Core program to include: Psych 313, 314, 322, 324, 402 or 403, 404
- Psych 347, 418
- Electives from Psych 344, 346, 357 and additional credits under advisement.

Industrial/Organizational Psychology: Advisers -B. L. Kintz and C. Taylor

- Core program to include Psych 311 or 313, 315, 321, 322 or 324
- Psych 320 and 420
- Electives under advisement

Mental Health Services: Advisers - D. Panek 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
- Two of the following: Psych 335, 420, 440, 441, 449

See Sociology section for related course offerings.

Psychology

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 24 credits

- Psych 201
- One course from Psych 311-316
- 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; PE 307, 309, 310
- PE 408 (to be taken after all courses in the minor are completed)
- Select two courses under advisement from Psych 306, 313, 315, 316, 321, 322, 324, 342, 353

BACHELOR OF ARTS IN EDUCATION

Major — Elementary 60 credits

Prospective elementary teachers are advised to complete the Human Development concentration as outlined under the Bachelor of Arts curriculum.

Major — Secondary 60 credits

Prospective secondary teachers are advised to complete the core program in psychology as outlined under the Bachelor of Arts curriculum, plus electives under advisement from Dr. Tyler.

Students must also complete the specific program requirements for social studies education, including the social studies minor, as outlined in the College of Arts and Sciences Interdisciplinary Program section. Completion of this major/minor program leads to a teaching endorsement in psychology/social studies at the secondary level. New certification proposals were being considered by the State Board of Education as this catalog went to press. Check with the Office of Admissions and Advisement (Miller Hall 204) to determine those majors currently acceptable for primary and supporting endorsement.

Minor 24 credits

- Psych 201
- One course from Psych 311-316

- One course from Psych 321-326
- Electives under advisement (Psych 306, 307 are recommended)

DEPARTMENTAL HONORS

C. Diers, Adviser

In addition to the general requirements for all honors students, a psychology major who wishes to graduate "with honors" will develop a program of studies with the department honors adviser, complete Psychology 425 and prepare a thesis which will be defended before a faculty committee.

GRADUATE STUDY

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

COURSES IN PSYCHOLOGY

Courses numbered X37; X97; 300, 400, 417; 445 are described on page 28 of this catalog

Courses in educational psychology include Psych 316, 351, 352, 353, 371, 372, 451. Psych 371, 372 and 451 are not applicable to the Arts and Sciences major or minor. Note that credit may not be earned for both Psych 321 and 351 or 316 and 352.

100 INTRODUCTION TO COLLEGE LEARNING (1)

Basic skills in effective study habits. Major topics are time management and motivation, reading improvement, classroom notetaking, studying a textbook, writing papers, using the library, studying for exams, taking exams. Emphasis is on practical application. S/U grading.

201 INTRODUCTION TO PSYCHOLOGY (5)

Examination of basic psychological processes utilizing results of research investigations: participation in at least two experiments or equivalent activities.

217 PSYCHOLOGY OF HUMAN SEXUALITY (3)

Human sexual behavior, attitudes, customs, practices and relationships, from historical to present times; sex research; sexual communication and miscommunication; and treatment for sex problems will be emphasized. Reproduction and physical aspects will be considered insofar as they are basic to the psychology of sex.

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

220 HUMAN ADJUSTMENT (3)

Prereq: Psych 201. Psychological perspectives on the experiences and problems human individuals encounter in daily living, self-understanding in terms of love, work, interpersonal relations, meaning and values, stages, and content of the course: of human life experience from birth to death.

306 EXPERIMENTAL PSYCHOLOGY AND STATISTICS I (5)

Prereq: Psych 201. Introduction to experimental methodology in psychology and statistical treatment of results. Lectures and laboratory.

- 307 **EXPERIMENTAL PSYCHOLOGY AND STATISTICS II (5)**
Prereq: Psych 306. Design and conduct of psychological research investigations and statistical treatment of results; individual research project; lectures and laboratory.
- 311 **PSYCHOLOGICAL TESTS AND MEASUREMENT (5)**
Prereq: Psych 201. Philosophy, history and development of psychological measurement. Reliability, validity, standardization and norms; tests of intelligence, special abilities, personality, interests and values. Students will review non-restricted instruments of various types in small groups.
- 312 **PSYCHOLOGY OF INDIVIDUAL DIFFERENCES (5)**
Prereq: Psych 201. 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 or Lib St 105. 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.
- 318 **PSYCHOLOGY AND CULTURE (3)**
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.
- 320 **INDUSTRIAL/ORGANIZATIONAL PSYCHOLOGY (4)**
Prereq: Psych 201 or Lib St 105. Application of psychological principles to industrial problems of personnel selection and appraisal, human relations, marketing, training, and engineering psychology.
- 321 **LEARNING (5)**
Prereq: Psych 201. A survey of the major principles of learning, with special emphasis upon the sources of, evidence for, and theoretical implications of these principles. 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 man 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 are 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.
- 335 **SOCIAL BEHAVIOR IN ANIMALS (4)**
Prereq: Psych 201. Comparative social behavior, aggression, altruism, variability and adaptive strategies. Normally offered alternate years.
- 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.
- 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.
- 346 **PSYCHOLOGY OF RELIGION (3)**
Prereq: Psych 201 or Lib St 105. A study of certain major works in the psychology of religion. Works by James, Freud and Jung will be included.
- 347 **HUMANISTIC PSYCHOLOGY (5)**
Prereq: Psych 313. Course will review the 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 IN LITERATURE (3)**
Prereq: Psych 201. Approximately ten works of contemporary Western literature with psychological content will be examined primarily through class discussion. Analysis in terms of appropriate psychological theories and concepts.
- 351 **PSYCHOLOGY OF HUMAN LEARNING, COGNITION, AND INSTRUCTION (3)**
Prereq: Lib St 105 or Psych 201; not open to those with credit in 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 (3)**
Prereq: Psych 351 (may be taken concurrently). 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.

Psychology

- 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. Models of early experience; bonding and attachment; day care; discipline; parental influence on social and cognitive development; child abuse; cultural variations.
- 357 **ADULT DEVELOPMENT AND AGING (4)**
Prereq: Psych 201. Development during adulthood, aging and the life-span perspective on development; biology and aging; perception, learning, and memory; intelligence and problem-solving ability; personality and aging — crisis and challenge at different life stages; careers; psychopathology; and death and dying.
- 371 **EVALUATION IN THE SECONDARY SCHOOL (3)**
Evaluation of student achievement in secondary school with particular emphasis upon teacher-made tests and application of statistical procedures to test results. Does not count for credit for a psychology major or minor.
- 372 **EVALUATION IN THE ELEMENTARY SCHOOL (2)**
Evaluation of student performance in elementary school including emphasis on systematic observational techniques, teacher-made tests and standardized tests. Does not count for credit for a psychology major or minor.
- 396a,b,c **HONORS TUTORIAL (2-5)**
- 402 **SEMINAR IN PERSONALITY AND ABNORMAL PSYCHOLOGY (3)**
Prereq: Psych 307 (may be taken concurrently with permission of instructor), 313 or 314. Major issues and methods in the study of personality and abnormal psychology. Laboratory and library research.
- 403 **SEMINAR IN SOCIAL PSYCHOLOGY AND DEVELOPMENTAL PSYCHOLOGY (3)**
Prereq: Psych 307 (may be taken concurrently with permission of instructor), 315 or 316. Major issues and methods in the study of social and developmental psychology. Laboratory and library research.
- 404 **SEMINAR IN LEARNING AND MOTIVATION (3)**
Prereq: Psych 307 (may be taken concurrently with permission of instructor), 321 or 322. Major issues and methods in the study of learning and motivation. Laboratory and library research.
- 405 **SEMINAR IN SENSORY, PERCEPTUAL AND THOUGHT PROCESSES (3)**
Prereq: Psych 307 (may be taken concurrently with permission of instructor) and 323, 324 or 342. Major issues and methods in the study of perception and sensation. Laboratory and library research.
- 406 **SEMINAR IN COMPARATIVE AND PHYSIOLOGICAL PSYCHOLOGY (3)**
Prereq: Psych 307 (may be taken concurrently with permission of instructor), 325 or 326. Major issues and methods in the study of comparative and physiological psychology. Laboratory and library research.
- 411 **SEMINAR IN HISTORY AND SYSTEMS OF PSYCHOLOGY (4)**
Prereq: junior standing. 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: junior standing and written permission of instructor. A seminar examining the philosophical assumptions of science in general and psychology in particular.
- 418 **SEMINAR IN HUMANISTIC PSYCHOLOGY (3)**
Prereq: Psych 307 (may be taken concurrently), Psych 347. Major issues and methods in the study of existential phenomenology, ontology and hermeneutics. Laboratory and research.
- 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: 15 credits in psychology, junior status. 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.
- 440 **ENVIRONMENTAL PSYCHOLOGY (3)**
Prereq: Psych 306, 315. Theoretical, methodological and empirical problems and issues relating to behavior in constructed and natural environments.
- 441 **SEMINAR IN CROSS CULTURAL PSYCHOLOGY (3)**
Prereq: Psych 306 and written permission of instructor. Theoretical and methodological problems and issues relating to cross-cultural research in psychology. Normally offered alternate years.
- 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. This course 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 credit.
- 451 **SCHOOL MOTIVATION (5)**
Prereq: Psych 201 or 351. To acquaint teachers and prospective teachers with principles of human motivation as they apply to the school and learning environment. To develop skills in the teacher for promoting individual and group motivation. Does not count for credit for a psychology major or minor.

456 ADVANCED TOPICS IN DEVELOPMENTAL PSYCHOLOGY (5)

Prereq: Psych 306 and 316. Topics vary and include: cognitive development; personality and social development; psycholinguistics; and youth and social issues. Two of these seminars will be offered during a given academic year. Check the class schedule to determine which topic is covered in a given quarter. Repeatable for credit.

471 STANDARDIZED TESTS (3)

Prereq: Psych 311 or 371. Standardized group tests commonly used in the public schools; selection and administration of tests; interpretation of norms.

Graduate Courses

Courses numbered 500, 517, 545, 597 are described on page 28 of this catalog.

Note: 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.

501 PSYCHOLOGICAL FOUNDATIONS

Prereq: admission to M.S. program.

501a Perceiving, Knowing and Acting (4)

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 will be used to develop these issues.

501b Personality, Pathology and Human Development (4)

Consideration of major models which attempt to explain the development of personality (such as psychodynamics, behaviorism and humanism) and human maladaptation, or psychopathology. Social psychological perspectives (e.g., attribution processes, person by situation interactionism) will also be examined. Developmental considerations, such as typical challenges that one faces throughout the life span and the role of family and peers in the socialization process, will also receive attention. Included throughout will be a consideration of contemporary research done within the context of these major perspectives and theoretical frameworks.

501c Systems of Psychology (3)

Provides the student with a basic understanding of the processes of science including theory construction, scientific explanation, operationism, etc. Second, to provide the student with an historical perspective for modern psychology by examining various systems which have preceded current views; for example, gestalt psychology, behaviorism, psychoanalysis.

502 MEASUREMENT AND TESTING (3)

Prereq: admission to M.S. Program and Psych 306 or equivalent. Introduction to statistics, measurement and research methods. Topics include logic of research, principles of scientific and statistical inference, bivariate correlation and regression, and the principles of psychological measurement.

503 RESEARCH DESIGN AND ANALYSIS (3)

Prereq: Psych 502. Intermediate correlational methods and introduction to the analysis of variance. Topics include fundamentals of test and questionnaire construction, correlational methods through multiple regression, non-parametric statistics, one- and two-way analysis of variance by partitioning and the general linear model.

504 COMPUTER APPLICATIONS AND DATA ANALYSIS (3)

Prereq: Psych 503. Analysis of variance designs that stress the understanding of multiple interactions. The correlated measures designs (matched, related, paired, repeated). Post-hoc procedures used in interpreting interacting effects. Analysis of covariance analogues for each of the analysis of variance models, stressing the use of correlational concepts in the design and interpretation of covariance research.

505 MULTIVARIATE ANALYSIS (3)

Prereq: Psych 504. 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 of research results are stressed.

506 ADVANCED RESEARCH AND EVALUATION DESIGN AND DATA ANALYSIS (3)

Prereq: Psych 504. Multivariable designs, multiple interaction analysis, computer programs and operation. Research designs that involve several criterion measures.

507 TOPICS IN QUANTITATIVE PSYCHOLOGY (1-6)

Prereq: Psych 505 or 506 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 a maximum of 6 credits. S/U grading.

508 CONTEMPORARY PSYCHOLOGY (2)

A review of psychology as a profession, current research activities, thesis development, and related legal and ethical considerations. S/U grading.

511 INSTRUMENTATION FOR PSYCHOLOGICAL RESEARCH (2)

Typical technological solutions to problems encountered in original research; lecture and laboratory.

512 CONSTRUCTION OF PSYCHOLOGICAL MEASURING DEVICES (2)

Prereq: Psych 311 or equivalent. Course content varies with the interest of the students, but will include material on scaling, domain specification, item writing, test format and reproduction of instruments. Students, as a group, conceive, construct and pretest 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.



Miller Hall, Red Square

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| <p>528 SEMINAR IN SOCIAL PSYCHOLOGY (3)
Prereq: permission of instructor.</p> <p>529 SEMINAR IN BEHAVIOR PATHOLOGY (3)
Prereq: permission of instructor.</p> <p>530 SEMINAR IN ADVANCED MEASUREMENT THEORY (3)
Prereq: permission of instructor.</p> <p>531 SEMINAR IN EDUCATIONAL PSYCHOLOGY (3)
Prereq: permission of instructor.</p> <p>538 INTERDISCIPLINARY SEMINAR IN BEHAVIORAL TOXICOLOGY (2)
Prereq: graduate standing, Hux 456/556, or Psych 501a, or permission of instructor. Assessment of the impacts of toxic environmental chemicals on various behavioral processes.</p> | <p>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.</p> <p>553 COUNSELING THEORIES (3)
Prereq: admission to M.S. counseling psychology or school psychology curriculum, or to M.Ed. school counseling program. Basic orientation to counseling theories and relationship of theories to counseling goals, process, methods, evaluation and research. Some consideration of consultation strategies, systemic skills and psychological education models used by psychological counselors.</p> <p>555 PSYCHOLOGY OF OCCUPATIONS (4)
Prereq: admission to M.S. counseling psychology curriculum or to M.Ed. school counseling program; Psych 553 and Psych 431 or 508. 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.</p> |
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- 556 **PROBLEMS AND ISSUES IN PSYCHOLOGICAL ASSESSMENT (4)**
 Prereq: admission to M.S. counseling psychology or school psychology curriculum. Problems and issues related to the technical aspects of assessment, the concepts of personality and intelligence, and the use of assessment procedures in evaluating personality, intelligence and school achievement.
- 557 **TESTING AND APPRAISAL IN COUNSELING (4)**
 Prereq: admission to M.S. counseling psychology curriculum or M.Ed. school counseling program, and Psych 504 or Ed 473; Psych 471 or 556. Collection, evaluation, application and interpretation of case data available to the practicing counselor. Particular consideration of vocational interest, vocational aptitude and individually administered intelligence tests.
- 558 **FAMILY COUNSELING (3)**
 Prereq: admission to M.S. counseling psychology 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 will be involved in limited supervised family counseling experiences.
- 559 **PSYCHOLOGICAL ASSESSMENT (4)**
 Prereq: Psych 556 and permission of instructor. Development of skill in administering and interpreting the results of individually administered intelligence tests and in reporting results.
- 561 **SEMINAR: PROFESSIONAL, LEGAL AND CULTURAL ISSUES (3)**
 Prereq: admission to M.S. counseling psychology or school psychology 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.
- 562 **PRACTICUM IN PSYCHOLOGICAL EVALUATION (4)**
 Prereq: Psych 559 and permission of instructor. Development of skill in making behavioral analyses and incorporating the results with those of other assessment procedures in formulating treatment decisions and plans.
- 564 **INDIVIDUAL COUNSELING TECHNIQUES (5)**
 Prereq: admission to M.S. counseling psychology or school psychology curriculum or M.Ed. school counseling program. Skill development in individual counseling, psychotherapy and behavior modification techniques using actual interviews, simulations, video tape and other laboratory procedures. Prerequisite to practicum in individual counseling and psychotherapy.
- 565 **GROUP PROCESSES IN COUNSELING (3)**
 Prereq: admission to M.S. counseling psychology or school psychology curriculum or M.Ed. school counseling program. Current group counseling and psychotherapy techniques, task directed, encounter, decision-making and communication techniques will be covered. Prerequisite to practicum in group psychotherapy and counseling.
- 566 **SEMINAR: CROSS-CULTURAL COUNSELING (3)**
 Prereq: admission to M.S. counseling psychology, school psychology, or M.Ed. school counseling program. 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.
- 570 **PRACTICUM (1-10, not to exceed a total of 15 credits)**
 Prereq: admission to M.S. counseling psychology or school psychology curriculum or M.Ed. school counseling program. Professional practice under assigned departmental supervision. Repeatable. 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.
- 648 **PROFESSIONAL INTERNSHIP (1-6)**
 Prereq: admission to M.S. counseling psychology or school psychology curriculum or M.Ed. school counseling program. Supervision during employment in professional practice after completion of academic work for master's degree. Thesis may be taken concurrently with approval. S/U grading.
- 649 **SEMINAR IN COUNSELOR SUPERVISION AND CONSULTATION (4)**
 Prereq: state certification in counseling or college certificate of completion of a graduate program in counseling. Development of supervisory competencies in counselor preparation. Planning, organizing and implementing counseling experiences for trainees in counseling in the public schools or counseling agencies. Development of effective assessment techniques of counseling competencies. S/U grading.
- 653 **ADVANCED SEMINAR IN COUNSELING THEORY (3)**
 Prereq: admission to M.S. counseling psychology curriculum, M.Ed. school counseling program, initial certification in school counseling or permission of instructor. Selected counseling theories and techniques in current use, including counseling with children and families. Evaluation of research on counseling process and counseling outcome. Take concurrently with Psych 570 or 670.
- 655 **ADVANCED SEMINAR IN VOCATIONAL COUNSELING (4)**
 Prereq: admission to M.S. counseling psychology curriculum, M.Ed. school counseling program, initial certification in school counseling or permission of instructor. An advanced seminar regarding major theories, trends and research in vocational counseling and career awareness programs. For students who are in internships or for counselors with a year of practical experience.
- 661 **ADVANCED SEMINAR IN PROFESSIONAL ISSUES IN COUNSELING PRACTICE (4)**
 Prereq: admission to M.S. counseling psychology 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.
- 670 **INTERNSHIP (1-10)**
 Prereq: admission to M.S. counseling psychology or school psychology 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. S/U grading.
- 690 **THESIS (1-6)**
 S/U grading.

Sociology

In common with the other branches of science, sociology is not simply a point of view but rather a method for discovery and a body of information specifically about social organization and behavior. Sociology begins with the simple assumption that organization and behavior are not random events. Its fundamental purpose is to discover the patterns which underlie social events and to describe these patterns in a parsimonious and concise manner.

The programs leading to degrees in sociology at Western are designed to provide the student with a strong academic and practical training. Through formal class work and seminars, the student is introduced to the method and theory of sociological inquiry. This preparation may be extended if the student chooses to become involved in one of many research projects in the department. Working under faculty supervision, the student may choose to pursue more thoroughly such areas as demography, human ecology, social psychology, criminology, gerontology, or applied sociology. Opportunities for field experience are also provided as a part of the student's training.

The department currently houses a number of facilities for sociological research. The Demographic Research Laboratory contains complete U.S. Census Bureau data, local surveys, collections of vital statistics and census maps. The department also maintains National Survey data for student research and training. The department also houses a computer laboratory, funded by the National Science Foundation; it contains cathode ray terminals, a hard-copy terminal, a graphic display unit, and a hard-copy plotter. Additionally, several members of the faculty are involved in field research, employing the local community and region as a laboratory.

With a faculty of nine members, all holding the doctoral degree, the department is able to offer specific degree concentrations. In addition, students interested in pre-professional training in

social services will find an adviser and two curricular options in the department.

The department has programs leading to the B.A., B.A. in education, and B.S. in sociology. The Bachelor of Arts degree is designed to provide students with a liberal arts education, with individual specialization in sociology under advisement. While employment prospects are difficult to identify with precision for a general liberal arts degree, it has been the case for most of this century that such degree holders remain more likely to be employed, to be employed throughout their lifetimes as market conditions change, and to report higher lifetime incomes and job satisfaction throughout their working life than any other general category in the labor force. The department offers career advising and information in sociology and encourages students to make use of these services. Former graduates holding the B.A. currently fill numerous positions in both the public and private sectors; many have pursued advanced studies in sociology and other related fields. The B.S. degree is designed to provide students with a theoretical and substantive background in sociology, together with accessory skills in mathematics and computer science.

SOCIOLOGY FACULTY

- E. R. MAHONEY (1970) Chair.
Professor. BA, Chico State College; PhD, University of Oregon.
- DONALD J. CALL (1958) Associate Professor. BA, MA, PhD, University of Oregon.
- GEORGE F. DRAKE (1966) Associate Professor. BA, MA University of California, Berkeley; PhD, University of Wisconsin.
- CHARLES GOSSMAN (1968) Associate Professor. BA, University of Puget Sound; MA, PhD, University of Washington.
- D. PETER MAZUR (1960) Professor of Sociology and Demography. BA, Stetson University; MA, University of Colorado; PhD, University of Washington.
- INGEBORG L. E. PAULUS (1971) Associate Professor. BA, MA, University of British Columbia; PhD, University of London.

- JOHN G. RICHARDSON (1974) Professor. BA, University of the Pacific, Stockton; MA, PhD, University of California, Davis.
- CARL H. SIMPSON (1978) Assistant Professor. BA, PhD, Stanford University.
- G. EDWARD STEPHAN (1970) Professor. BA, San Francisco State College; PhD, University of Oregon.

BACHELOR OF ARTS

Major 70 credits

Elective Concentrations

The following concentrations are offered to assist students in selecting an undergraduate program which meets specific needs and interests while at the same time guaranteeing sufficient breadth to avoid over-specialization. Courses listed as being taught through other departments will count toward the 70-credit major in sociology; non-departmental courses must be approved by the department in order to count toward the major.

Students are advised to select the general sociology concentration unless they have a particular concentration interest.

Students should obtain a copy of the undergraduate "Student Guide to Sociology" available in the Sociology office.

Core Program

- Soc 202, 302, 310, 315

General Sociology: Adviser — Mahoney

- Core program
- Soc 303, 321, 330
- Additional sociology electives to total 70 credits

Criminology: Advisers — Paulus, Call

- Core program
- Soc 351, 352, 353, 354, 380, 452, 454
- Additional sociology electives to total 70 credits

Demography/Ecology: Advisers — Gossman, Mazur

- Core program
- Soc 321, 322, 323, 415, 421, 422
- Math 105
- Comp Sci 110
- Geog 440
- Additional sociology or mathematics electives to total 70 credits

Social Psychology: Adviser — Mahoney

- Core program
- Soc 330, 331, 430, 431, 432, 433
- Psych 403
- Additional sociology, psychology or mathematics electives to total 70 credits.

Minor 25 credits

- Soc 202, 302, 321, or 330
- Electives under departmental advisement

BACHELOR OF ARTS IN EDUCATION

Major 45 credits

- Soc 202, 302, 310, 315
- Recommended elective courses to total 45 credits
- Psych 330, 361, 363, 364, 373

Students must also complete the specific program requirements for social studies education, including the social studies minor, as outlined in the College of Arts and Sciences Interdisciplinary Program section.

BACHELOR OF SCIENCE

Major 90 credits. Adviser — Stephan

- Math 105, 241, 341, 342
- Comp Sci 110, 211
- Soc 202, 302, 303, 310, 321, 330, 415, 421, 430, 492
- Additional credits under advisement in mathematics, computer science, sociology or cognate areas

DEPARTMENTAL HONORS

In addition to the general requirements for all honors students, a sociology major who wishes to graduate "with honors" must demonstrate a reading knowledge of a foreign language and submit a senior thesis.

GRADUATE STUDY

For concentration leading to a Master of Arts degree, see Graduate section of the catalog.

COURSES IN SOCIOLOGY

Courses numbered X37; X97; 300, 400, 417, 445 are described on page 28 of this catalog.

202 INTRODUCTION TO 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.

251 SOCIOLOGY OF SOCIAL PROBLEMS (5)

Prereq: Soc 202 or equivalent. A survey of selected social problems, defined as circumstances or conditions which attract and hold public attention, which are historically or politically "controversial" and which both demand and defy solutions. The course is primarily concerned with the application of sociological concepts and techniques to the understanding of the sources of social problems and the prospects for their "solutions."

Sociology

- 261 SOCIAL WELFARE IN AMERICA (5)
Prereq: Soc 202. The social work profession in modern society; professional and social scientific elements of social work; social work and social welfare.
- 302 HISTORY OF SOCIAL THOUGHT (5)
Prereq: Soc 202. The emergence of sociology; sociology as response to the Industrial Revolution and as an attempt to develop a scientific understanding of social organization, behavior and change; the development of social thought; Comte, Spencer, Marx, Durkheim and Weber.
- 303 CONTEMPORARY SOCIOLOGICAL THEORY (5)
Prereq: Soc 302. Major contemporary perspectives in sociology.
- 310 INTRODUCTION TO RESEARCH METHODS (5)
Prereq: Soc 202. The nature of scientific theory; the development of social research; the basic methods and techniques of data gathering, processing and analysis.
- 311 EVALUATION RESEARCH (5)
Prereq: Soc 202, 310. Logic and methods of evaluating the effectiveness and efficiency of social service programs.
- 315 SOCIAL STATISTICS (5)
Prereq: Soc 202. Application of statistical reasoning and methods in sociological research.
- 321 INTRODUCTION TO DEMOGRAPHY (5)
Prereq: Soc 202. Provides a 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.
- 322 SOCIAL ECOLOGY (5)
Prereq: Soc 202. Human social organization as response to changes in population, technology and environment; development of the field of social ecology from plant and animal ecology; research methods in social ecology.
- 323 URBAN SOCIETY (5)
Prereq: Soc 202. The city in history, the ecology of urban areas, social classes in the city, the city lifestyle, effects of crowding on human behavior, crime in cities, and other urban social problems; urban politics and urban planning.
- 324 DEMOGRAPHY OF AGING (5)
Prereq: Soc 202, 333. Basic demographic analysis of distribution of the elderly population in America; distribution of income, health care availability, places of residence, migration, marital status and living arrangements; causes of death among the older population. Past patterns studied and future patterns projected.
- 330 INTRODUCTION TO SOCIAL PSYCHOLOGY (5)
Prereq: Soc 202. 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.
- 331 EXPERIMENTAL SOCIAL PSYCHOLOGY (5)
Prereq: Soc 202, 310, 315. The application of scientific methods to the study of social behavior using experimental designs primarily as derived from the analysis of variance. Lecture and laboratory.
- 333 AGING IN AMERICA (5)
Prereq: Soc 202. Introduction to basic concepts, theories, and issues of aging. Social history of aging; perception, status and responsibilities of the elderly from prehistory to the present; development of gerontology and social theories of aging.
- 335 SOCIOLOGY OF MEDICINE, HEALTH AND ILLNESS (5)
Prereq: Soc 202. How health, illness and disease in American society differ by age, sex, race, social class, and ethnicity; social-psychological factors in health and illness, interpersonal relationships among patients and health personnel; health care system in the United States and modern medical technology; death and dying.
- 338 SOCIOLOGY OF SEXUAL BEHAVIOR (5)
Prereq: Soc 202. Human sexuality, with an emphasis on western cultures and the United States in particular, is studied from a scientific perspective. Emphasis is placed 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 COMMUNITY ORGANIZATION (5)
Prereq: Soc 202. Development, structure, and interrelationships of social systems that address the definition and solution of problems facing people within specified geographical areas.
- 341 SOCIOLOGY OF ORGANIZATIONS (5)
Prereq: Soc 202. Sociology of organization is an introduction to the study of organizational systems. The structure and function of organizations, their environments, resources and goals will be analyzed as they interact with each other in a system of interrelated variables.
- 351 SOCIOLOGY OF DEVIANT BEHAVIOR (5)
Prereq: Soc 202. Examination of labeling and behavior processes in deviance. Analysis of labeling by both the public and formal agencies such as the police and courts; effects of labeling and the behavioral characteristics of deviant lifestyles.
- 352 CRIMINOLOGY (5)
Prereq: Soc 202. The study of adult crime, defined as violation of legal norms. The course focuses on problems of measurement and attempts to explain crime as a social phenomenon and a cultural product. It includes an in-depth analysis of various forms and classes of crimes and their victims.
- 353 JUVENILE DELINQUENCY (5)
Prereq: Soc 202. Juvenile delinquency as a socially created phenomenon distinct from adult criminality; the juvenile court; extent and correlates of delinquency; group and gang delinquency; explanations for juvenile misbehavior.
- 354 TREATMENT AND CORRECTIONS (5)
Prereq: Soc 202. Analysis of the structure and processes of law enforcement and corrections. Treated as an input-output system, police practices, sentencing practices and correctional treatment includes correction institutions, community corrections and probation and parole and the future of corrections.
- 360 SOCIOLOGY OF THE FAMILY (5)
Prereq: Soc 202. Analysis of the family as an institution and network of relationships in American life.
- 361 SOCIETY AND EDUCATION (5)
Prereq: Soc 202. Analysis of the historical origins and spread of public education; schooling as a major form of socialization and status placement; the political and legal bases of education, the analysis of nonformal schooling, the relation between educational traditions and nation-state formation.
- 362 POLITICAL SOCIOLOGY (5)
Prereq: Soc 202. 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: Soc 202. Religion in society. Religion as a force for change or stability; the social causes of religious beliefs; religion and the search for meaning. An examination of the structure and organization of religious groups and a special emphasis on recent experimentation with Eastern and charismatic religions.

364 SOCIAL CLASS IN AMERICA (5)

Prereq: Soc 202. Social causes and consequences of inequality in America. Social distribution of wealth, power, and status; emphasis on poverty and racial social inequality.

365 PUBLIC OPINION (5)

Prereq: Soc 202. Factors involved in the formation of public opinion; the role of mass media of communication and propaganda in a contemporary society. Offered in alternate years.

367 SOCIOLOGY OF WORK AND OCCUPATIONS (5)

Prereq: Soc 202. Sociological and social-psychological significance of work; factors affecting contemporary occupational structures and associated with typical career patterns/life cycle changes; sex, race, ethnic and social class differences; structural characteristics of selected occupational areas.

368 SEX ROLES AND SOCIAL STRUCTURE (5)

Prereq: Soc 202. Socially constructed differences between the sexes; socialization into sex roles; reactions to sexual deviation; sex role differentiation and socialization in family and social institutions; the effect on life changes of sex socialization.

369 MINORITIES IN AMERICA (5)

Prereq: Soc 202. Sociological and socio-psychological 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: Soc 202. 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 is elaborated to this end.

372 APPLIED SOCIOLOGY (5)

Prereq: Soc 202. A practical approach to the major issues and techniques in applied social research. Includes detailed critical analysis of past research and experience working on a current research project.

373 SOCIAL SERVICES PLANNING (5)

Prereq: Soc 202. Principles, problems and techniques of applying sociological knowledge to the planning process.

374 INDUSTRIAL SOCIETY - A COMPARATIVE LOOK AT AMERICAN-CANADIAN INDUSTRIAL ORGANIZATION (5)

Prereq: Soc 202. Comparative analysis of Canadian and American social organization in the area of industrial production.

380 SOCIOLOGY OF CHILDHOOD AND ADOLESCENCE (5)

Prereq: Soc 202. 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)

410 RESEARCH (3-5)

Prereq: permission of instructor. Investigation of a problem through field or library research.

415 ADVANCED QUANTITATIVE METHODS (3)

Prereq: Soc 315 or equivalent. Experimentation and tests of significance applied to research problems.

421 DEMOGRAPHIC ANALYSIS (3)

Prereq: Soc 315, 321, or equivalents. Theory and method of population analysis; measures of mortality, fertility and migration; population forecasting techniques.

430 ADVANCED SOCIAL PSYCHOLOGY (3)

Prereq: Soc 330 or Psych 315, Soc 310, 315 or Psych 306. Specific course content is determined by student's previous course work and interests in social psychology; design, methods, measurement and analysis in social psychological research.

Sociology

- 431 THEORIES IN SOCIAL PSYCHOLOGY (3)
Prereq: Soc 310, 315 (or Psych 306), Soc 330. Selected theoretical orientations in social psychology, emphasizing related research literature as it bears upon evaluation of theories. Offered in alternate years.
- 432 SOCIALIZATION (3)
Prereq: Soc 202, 330 (or Psych 315). Factors and conditions which facilitate or retard the development of social behavior over the life cycle.
- 433 SMALL GROUP BEHAVIOR (3)
Prereq: Soc 202 and 330. Classical and current theory and research on small group interaction, with a focus on the structures and processes of consensus, cooperation-conflict, interdependency, leadership, and cohesion.
- 435 SOCIAL MOVEMENTS AND COLLECTIVE BEHAVIOR (3)
Prereq: Soc 202 and 330. Study of processes whereby social movements are formed to attempt to bring about major social changes, organizational structure and social psychological dynamics of social movements; the consequences of social movements for society in general and for the members themselves. Offered in alternate years.
- 452 ADVANCED CRIMINOLOGY (3)
Prereq: Soc 202, 352, 353, 354. An in-depth examination of selected areas in sociological criminology.
- 454 SOCIOLOGY OF THE CRIMINAL JUSTICE SYSTEM (3)
Prereq: Soc 202, 352, 353, 354. The criminal law as an aspect of formal social control. The criminal law in action through police enforcement, prosecutorial and judicial decisions and their impact on defendants in the criminal courts.
- 455 WOMEN AND THE LAW (3)
Prereq: Soc 202. Historical aspects of women's drive for equality and civil and criminal matters affecting women's daily lives: 14 video tapes used as discussion topics. All topics are illustrated by the state laws of Washington.
- 471 DIRECTED INTERNSHIP (3-15)
Prereq: junior status; completion of Soc 302, 310; and permission of instructor. Participant observation in research and applications in human services agencies and organizations.
- 473 SOCIAL INDICATORS AND FORECASTING (3)
Prereq: Soc 202, 315, 321. Introduction to social indicators and examination of the logical and methodological problems associated with use of social indicators to predict future social patterns; population forecasting and social implications of knowledge gained from forecasting.
- 492 SENIOR THESIS (5)
Prereq: Bachelor of Science major. Supervised independent research in partial completion of the requirements for the Bachelor of Science in sociology degree. The student will normally undertake such research upon completion of all other courses required for the degree.
- 496a,b,c HONORS TUTORIAL (3-5 ea)
- Admission to Graduate School or special permission required. See Graduate section of this catalog.*
- 501 ADVANCED GENERAL SOCIOLOGY (2)
Prereq: graduate status in sociology and permission of instructor. Review of major substantive areas of sociology. Overview of fundamental concepts, research methods and findings. Introduction to research interests of faculty, designed to familiarize students with examples of research and attendant problems.
- 502 SEMINAR: HISTORY OF SOCIAL THOUGHT (3)
Review and evaluation of major nineteenth and early twentieth century theories of social organization and change.
- 503 SEMINAR: CONTEMPORARY SOCIOLOGICAL THEORY (3)
Review and evaluation of major contemporary perspectives in sociology.
- 505 COMPUTER APPLICATIONS IN SOCIOLOGY (3)
Prereq: admission to graduate standing; concurrent enrollment in Soc 515. Emphasis on computer applications in the analysis of large-scale data sets; training in the use of SPSS and other library statistical routines.
- 510 SEMINAR: METHODOLOGY (3)
Prereq: Soc 310 and 315 or equivalent. Analysis and evaluation of the procedures, assumptions and modes of explanation employed in sociological research.
- 515 SEMINAR: QUANTITATIVE TECHNIQUES (3)
Prereq: course in Social Stats. Regression, path analysis and related techniques as applied to sociological research.
- 521 SEMINAR: DEMOGRAPHY (3)
Prereq: Soc 321 and 315 or equivalent, or permission of instructor. Critical review of demographic theory, methods and applications in the light of contemporary world population problems.
- 530 SEMINAR: SOCIAL PSYCHOLOGY (3)
Theoretical approaches, research methods and findings concerning identity, communications, task, performance, deviation, sanctioning, leadership and other processes occurring in face-to-face and extended social interaction contexts.
- 535 SEMINAR: CURRENT SUBSTANTIVE RESEARCH (1-3)
Prereq: graduate status. Topics to vary. Repeatable with different subject area. Examines current research in a selected substantive field of sociology.
- 540 COMPLEX ORGANIZATIONS (3)
Theory and research on structure and processes of large-scale formal organizations in Western society; industrial-commercial, governmental, religious, military, political and educational organizations.
- 551 SEMINAR: SOCIAL CONTROL AND DEVIANCE (3)
Critical review of theories and concepts of deviance, analytic and philosophic problems of attempts at programmed social control.
- 566 SOCIOLOGY OF HIGHER EDUCATION (3)
Prereq: graduate status and permission of instructor. A sociological study of students in the academic community with particular reference to residential colleges and universities. Historical and contemporary determinants of student subculture and its relationship to faculty, college administration and society.
- 690 THESIS (3-12)
Prereq: formal advancement to candidacy for the M.A. in sociology. S/U grading.

Graduate Courses

Courses numbered 500, 517, 545, 597 are described on page 28 of this catalog.

Speech and Broadcast

The Speech and Broadcast Department provides the focus for a strong liberal arts education and professional preparation. Students develop additional depth in other academic disciplines.

The department offers degree programs in Broadcast Communication, Speech Communication and Speech 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 departments.

Four degrees are granted: the Bachelor of Arts, the Bachelor of Arts in Education, the Master of Arts, and the Master of Education. The Bachelor of Arts degree can lead to placement in industry, government, or one of the professions. The Bachelor of Education degree gives certification for elementary or secondary school teaching. A master's degree is ordinarily the requirement for community college teaching and other professional work.

Students of broadcasting gain practical experience on Western's prize-winning student media, and majors additionally take field internships with broadcast stations, production houses or other media organizations. 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.

BROADCAST COMMUNICATION

A major in broadcast communication allows the student to develop specific skills which may be applied to future vocational opportunities in broadcasting and other fields which utilize mass communication media.

In radio and television classes students participate in a regular series of radio and television broadcasts. The student-operated campus station KUGS-FM offers further opportunities for the development of radio broadcasting skills.

SPEECH COMMUNICATION

A major in speech communication at the bachelor level is useful as a basis for such professions as law or the ministry, or careers in advertising, personnel, sales, the diplomatic corps, and public relations. Speech consultants are employed by labor unions, elected officials, and as communication specialists by various industries.

Undergraduates are offered a wide variety of communication opportunities including an extensive program of forensic activities in which students may participate regardless of their chosen major.

SPEECH EDUCATION

Speech graduates with the Bachelor of Arts in Education at the secondary level find that the most common assignment is one involving not only speech but English as well. An interdisciplinary major in Speech/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 select a speech program to accompany an elementary major or minor.

Programs leading to Master of Arts and Master of Education degrees are also available. See the Graduate section.

The Department of Speech and Broadcast offers broad opportunities for learning. Further information and guidance may be obtained by contacting the department chairman, College Hall.

SPEECH AND BROADCAST FACULTY

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

Speech/Broadcast

- MARVIN L. OLMSTEAD (1969) Associate Professor. BS in Ed, Black Hills Teachers College; MA, Washington State University; PhD, University of Washington (Speech Communication).
- J. CANROTHWELL (1980) Assistant Professor. BA, University of Portland; MA, PhD, University of Oregon (Speech Communication).
- ALDEN C. SMITH (1966) Associate Professor. BS, Florida Southern College; MS, Syracuse University; PhD, University of Illinois (Broadcast Communication).
- ARTHUR L. SOLOMON (1969) Professor. BA, Antioch College; MA, University of North Carolina; PhD, Stanford University (Speech Pathology and Audiology, Interpersonal Communication).

DECLARATION OF MAJOR

All students who wish to major in speech communication or broadcast communication must:

- File an application (which includes a planned program of study) with the Speech and Broadcast Department (see departmental secretary for forms/instructions).
- For Speech Communication:* Have completed Speech 101, 204, 205, and English 101.
- For Broadcast Communication:* Have completed Speech 101 and Broadcast 240.
- Have a minimum cumulative GPA (all college work) of 2.5.

BACHELOR OF ARTS

Major — Broadcast Communication

77 credits

- Satisfy departmental requirements for declaration of major (see above)
- Broadcast 241, 340, 341, 342, 343, 441 or 443, and 449
- 10 credits from Broadcast 244, 344, 442 taken under departmental advisement (a combined total of six credits of Broadcast 244 and 344 may be applied to the major)
- 15 credits from Speech 204, 205, 304, 309, 319, 404, 405, 407, 409
- Journ 104, 350 and 15 credits of additional supporting courses taken outside the department under departmental advisement.

Minor — Broadcast Communication

30 credits

- One of the following: Speech 101, 302
- Broadcast 240, 241, 340, 342, 343
- Journ 104, 350
- Electives under departmental advisement

Major — Speech Communication

79 credits

- Satisfy departmental requirements for declaration of major (see above)
- Speech 309, 490

- 7 credits from the following: Speech 304, 319, 206/406
- 8 credits from the following: Speech 404, 405, 409
- 20 credits in the department under advisement — no more than 12 credits total in 300, 400, and 499
- Minor in an approved field — 25-41 credits

(Program approval must be obtained during the quarter in which the major is declared. Any changes or deletions must be approved by the departmental adviser.)

Minor — Speech Communication

28 credits

- One of the following: Speech 101, 302
- Speech 304, 309, 319, 340
- 12 credits in speech communication under departmental advisement

BACHELOR OF ARTS IN EDUCATION

Major — Speech (General Classroom for Elementary Teachers) 45 credits

- One of the following: Speech 101, 302
- Speech 203, 304, 319
- Speech 373, 484
- Speech Path/Aud 351, 354
- Recommend Th/D 101, 350, 450
- Electives under departmental advisement

Minor — Speech (General Classroom for Elementary Teachers) 25 credits

- One of the following: Speech 101, 302
- Speech 484
- One of the following communication skills courses taken under departmental advisement: Speech 203, 204, 304, 319
- Two courses from Speech 373, Speech Path/Aud 351, 354
- Recommend Th/D 101, 350, 450
- Electives under departmental advisement

Major — Speech (Secondary Teachers)

60 credits

- One of the following: Speech 101, 302
- Speech 202, 204, 304, 319, 407, 485
- Completion of six courses, three from each of two of the following modules:
 - Broadcasting: Broadcast 240, 241, 340, 342, 343
 - Communication Theory: Speech 309, 315, 404, 405, and 409
 - Forensics: Speech 205, 206 (4 credits), 406 (4 credits), 486
 - Th/D 101, 212, 322, 360, 370
 - Electives under departmental advisement

Minor — Speech (Secondary Teachers)

30 credits

- One of the following: Speech 101, 302
- Speech 202, 204, 205, 304, 319, 485
- Recommend Th/D 212, 370
- Electives under departmental advisement

Interdisciplinary Speech/English**Major Concentration 93 credits**

(Speech 45 credits & English 48 credits)

(Satisfies both major and minor and leads to teaching endorsement in both Speech and English.)

Speech 45 credits

- One of the following: Speech 101, 302
- Speech 204, 304, 319, 407, 485, 490
- Completion of six courses, three from each of two of the following modules:
 - Broadcasting: Broadcast 240, 241, 340, 342
 - Communication Theory: Speech 309, 315, 405
 - Forensics: Speech 205, 206 (4 credits), 406 (4 credits)
 - Theatre: Th/D 101, 212, 360, 370
- Electives in speech under departmental advisement

English (see listings under English)

48 credits

GRADUATE STUDY

For concentration in speech leading to the Master of Arts degree, see Graduate section of the catalog.

COURSES IN BROADCAST

Courses numbered X37; X97: 300, 400, 417; 445 are described on page 28 of this catalog.

- 240 **INTRODUCTION TO BROADCASTING** (3)
Theory and technique of basic broadcast procedure; use of recording and transmitting equipment; fundamentals of broadcast speech; contemporary broadcast facilities and practice.
- 241 **BROADCAST COMMUNICATION I** (3)
Prerequisite or concurrent: Broadcast 240. Laboratory practice in applying communication skills to broadcast media; gathering, preparation and delivery of radio news.
- 244 **RADIO NEWS STAFF I** (2)
Prereq: Journ 104, Broadcast 240 and written permission. Participation on the news staff of the university radio station KUGS. Practicum in reporting, writing, production and announcing. A maximum of six credits may be earned.

- 340 **INTRODUCTION TO MASS COMMUNICATION MEDIA** (3)
Prereq: junior standing. Development of mass media; newspapers, films, radio and television; their contemporary role in society.
- 341 **BROADCAST COMMUNICATION II** (3)
Prereq: Broadcast 241, 340. Laboratory practice in production of radio news and public service programs.
- 342 **T/V PRODUCTION I** (3)
Prereq: Broadcast 340 and written permission of the broadcast adviser. Theory and technique of basic television production. Laboratory practice utilizing instructional media facilities.
- 343 **BROADCAST WRITING** (3)
Prereq: Broadcast 240 and Journ 104. The preparation of news, advertising and public service copy for radio and television.
- 344 **RADIO NEWS STAFF II** (2)
Prereq: Broadcast 244, 343 and written permission. Participation on the news staff of the University radio station KUGS. Practicum in reporting, writing, production and announcing. A maximum of six credits may be earned. A maximum combined total of six credits from Broadcast 244 and Broadcast 344 may be applied to a major in broadcast communication.
- 441 **PRODUCING AND DIRECTING THE BROADCAST PROGRAM** (4)
Prereq: Broadcast 341, 342. Production and direction for radio and closed circuit instructional television; preparation and execution of scripts; studio practice with radio and television equipment. Normally offered in alternate years.
- 442a,b,c **TELEVISION NEWS PRODUCTION** (2)
Prereq: Broadcast 342, 343 and written permission of instructor. Development of broadcast communication skills. Practice in preparation and presentation of televised news. (Concurrent enrollment in Journ 431, 432 or 433, or Tech 442a,b,c recommended.)
- 443 **T/V PRODUCTION II** (3)
Prereq: Broadcast 342 and written permission of the broadcast adviser. Advanced theory and technique of television production. Laboratory experience utilizing instructional media facilities.
- 449 **FIELD INTERNSHIP IN MASS COMMUNICATION** (3-12)
Prereq: senior standing and written permission of instructor. Supervised work in mass communication for a broadcast station, educational institution, or other appropriate governmental agency or private enterprise. A paper on an approved topic related to the internship is required. S/U grading.

COURSES IN SPEECH

Courses numbered X37; X97: 300, 400, 417; 445 are described on page 28 of this catalog.

- 101 **FUNDAMENTALS OF SPEECH** (3)
Functional approach to effective communication; application of principles to practical problems in speech. Teacher education sophomores (or above) are advised to take Speech 302 unless Speech 101 is needed to satisfy their GUR requirements.

Speech/Broadcast

202 PARLIAMENTARY PROCEDURE (2)

Parliamentary principles and procedures. Theoretical and practical techniques of effective organizational leadership; agenda setting; developing consensus; informational methods; and committee processes. Also offered as Pol Sci 202.

203 VOICE AND ARTICULATION IMPROVEMENT (3)

Background in the speaking process; theory and practice designed to improve articulation, projection, and vocal quality. S/U grading.

204 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.

205 EXPOSITION AND ARGUMENTATION (4)

Theory and practice of principles of reasoned discourse as applied to public discussion of controversial issues.

206 INTERCOLLEGIATE FORENSICS (1-3)

Debate, extemporaneous, and impromptu speaking, and interpretive reading and other phases of forensics. A maximum of 6 credits may be earned.

207 INTRODUCTION TO INTERPERSONAL COMMUNICATION (3)

Basic theory and practice in the art of communicating in dyads and small groups with more ease, confidence and accuracy; enabling the student to overcome communication barriers, to assert ideas and feelings more readily, and to listen more actively in both academic and social settings.

302 SPEECH FOR THE TEACHER (3)

Prereq: junior standing. Intended for teacher education students who do not need Speech 101 to satisfy their GUR requirement. 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.

304 PUBLIC SPEAKING (3)

Prereq: Speech 101 or 302. Theory and practice in the art of public discourse.

309 HUMAN COMMUNICATION I (4)

Prereq: junior standing. Survey of human communication by levels: intrapersonal, interpersonal, small groups, public, mass media and intercultural.

311 CONFLICT AND COMMUNICATION (3)

Prereq: junior standing. Verbal and nonverbal communication strategies and behaviors that promote conflict in human interactions.

315 LANGUAGE AND COMMUNICATION (3)

Prereq: junior standing. Language as an instrument of communication. The effects of language misuse and malpractice on our perception and behavior.

319 ORAL INTERPRETATION (4)

Prereq: junior standing. Art and techniques of oral interpretation as method of literary criticism and means of communicating total meaning of a literary work to an audience. Reading aloud of dramatic monologues and soliloquies; activities in Readers Theatre.

373 PHONETICS (3)

Prereq: junior standing. Training in recognition and production of sounds of spoken English through use of the International Phonetic Alphabet.



- 404 **SMALL GROUP LEADERSHIP (4)**
Prereq: Speech 204. Open only to departmental majors. Exploration of concepts of leadership of small groups in both formal and informal settings. Development of leadership skills.
- 405 **PERSUASION (4)**
Prereq: Speech 205. Open only to departmental majors. Study of principles that influence attitudes and opinions in persuasive situations
- 406 **ADVANCED FORENSICS AND DEBATE (1-3)**
Prereq: 6 credits in Speech 205 and/or Speech 206. Emphasis on intercollegiate debate with opportunity for experience in extempore, impromptu, and persuasive speaking. A maximum of six credits may be earned in Speech 406; a combined total of six credits from Speech 206 and Speech 406 may be applied to a major
- 407 **INTERPERSONAL COMMUNICATION (4)**
Prereq: junior standing. Experiences and skill training in small group settings to promote interpersonal relationships and to overcome communication barriers.
- 407w **WORKSHOP IN INTERPERSONAL COMMUNICATION (1-3)**
Prereq: upper-division standing or equivalent experience. For individuals engaged in the helping professions who wish to enhance their self understanding, self expression, and to improve communication and relationship skills relevant to all human interaction. Variable credit depending on the amount of contact hours. S/U grading.
- 409 **HUMAN COMMUNICATION II (4)**
Prereq: Speech 309. Open only to departmental majors. Special topics in human communication including systems theory, information theory, theories of signs, and theories of meaning and thinking.
- 416 **ADVANCED FORENSICS: ANALYSIS OF PUBLIC POLICY ISSUES (4)**
Prereq: experience debating a recent national resolution or as a high school or college debate teacher. Application of models from argumentation theory and field or fields pertaining to the national resolution. Presentation of research papers, seminars and public presentations involving guest faculty from appropriate disciplines.
- 480 **HISTORY AND CRITICISM OF AMERICAN PUBLIC ADDRESS: 1740-1890 (3)**
Prereq: junior standing. Relationship of prominent speakers to American political, social and intellectual life, from Jonathan Edwards through Booker T. Washington. Normally offered in alternate years.
- 481 **HISTORY AND CRITICISM OF AMERICAN PUBLIC ADDRESS: 1890-PRESENT (3)**
Prereq: junior standing. Relationship of prominent speakers to American political, social, and intellectual life: William Jennings Bryan to contemporary speakers. Normally offered in alternate years.
- 484 **SPEECH FOR THE ELEMENTARY TEACHER (3)**
Prereq: junior standing. Methods of utilization of the speech arts in the elementary classroom. Normally offered alternate years.
- 485 **TEACHING SPEECH IN THE SENIOR HIGH SCHOOL (3)**
Prereq: 15 credits in Speech. 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.
- 486 **DIRECTING THE FORENSICS PROGRAM (4)**
Prereq: Speech 205 or 206 (taken for 4 credits). Conducting tournaments, criticizing debates and individual events, budgeting. Normally offered alternate years.
- 486s **HIGH SCHOOL DEBATE COACH WORKSHOP (2)**
Prereq: one year 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.)
- 488 **BUSINESS AND ORGANIZATIONAL COMMUNICATION (3)**
Prereq: junior standing. Recommended for non-speech majors. Theory and practice in job interview, small group problem solving discussion, public discussion and public speaking.
- 490 **RHETORICAL THEORY AND PRACTICE — GREEK AND ROMAN (4)**
Prereq: junior standing. Rhetorical principles and practices from the early Greek to the fall of the Roman Empire.
- 492 **THE RHETORIC OF SOCIAL MOVEMENTS (4)**
Prereq: junior standing. Analysis of contemporary social movements from a rhetorical perspective. Critical methodologies developed by contemporary theorists applied to persuasive activities of specific movements. The subject of each individual class will be announced in the class schedule. Repeatable to 8 credits.
- 499 **FIELD INTERNSHIP IN SPEECH COMMUNICATION (3-12)**
Prereq: senior standing. Supervised work in speech communication for an educational institution, public agency or private enterprise. A paper on an approved topic related to the internship is required. S/U grading.

Graduate Courses in Speech

Courses numbered 500, 517, 545, 597 are described on page 28 of this catalog.

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

- 501 **THEORY CONSTRUCTION AND RESEARCH IN SPEECH (4)**
Detailed application of research and approaches to theory construction in communication.
- 502 **BEHAVIORAL RESEARCH IN SPEECH (4)**
Introduction to empirical research; basic methodology applied to current research in communication and speech.
- 505 **SEMINAR IN PERSUASION (3)**
Prereq: Speech 405. Readings in persuasion, logical and psychological modes of proof
- 506 **SEMINAR IN ARGUMENTATION (3)**
Study of current issues, practices and trends in the field of argumentation, including argumentation theory, educational debate, debate in real world settings and pedagogical issues in argumentation
- 507 **SEMINAR IN INTERPERSONAL COMMUNICATION (4)**
Advanced study and practice through readings, discussion and exercises in the various aspects of interpersonal communication and communicative relationships



515 SEMINAR: LANGUAGE AND COMMUNICATION (3)

General semantics and sociolinguistics approach to the study of language as an instrument of human communication. Emphasis on effects of language misuse on perception and behavior.

540a,b,c SEMINAR IN MASS COMMUNICATIONS (3 ea)

540a Seminar in Commercial Mass Communications (3)
Prereq: permission of instructor. Critical issues in the development, structure and function of commercial mass communications in the United States; theories of control, governmental regulations, new technologies; consumer activism in public policy.

540b Seminar in Public Broadcasting Systems (3)
Prereq: permission of instructor. The development, structuring and financing of nonprofit television and radio broadcasting. Critical assessment of Carnegie Corporation models; programming issues.

540c Seminar in Foreign Broadcasting (3)
Prereq: permission of instructor. Comparative analysis of selected European and other broadcasting systems. Analysis of broadcasting needs and potentialities in under-developed countries. International cooperation in programming.

573 ADVANCED PHONETICS (3)

Prereq: Speech 373. The phonetic structure and symbolization of principal American and other English dialects and certain European languages.

585 INTERNSHIP IN THE TEACHING OF COLLEGE SPEECH (3)

Prereq: permission of instructor. Supervised teaching of the basic speech course

586 HIGH SCHOOL DEBATE COACH SEMINAR (2-3)

Prereq: one year teaching experience or graduate status and permission of instructor. An intensive lecture, semi-

nar and workshop program in pedagogy related to teaching of argumentation, debate and forensics. Purpose is improvement of instruction.

588 SPEECH COMMUNICATION FOR EDUCATIONAL ADMINISTRATORS (3)

Application of the principles of effective communication to educational settings. Experience in conducting meetings, interviewing, speaking in public and similar activities.

590a,b,c SEMINAR IN RHETORICAL STUDIES (3)

Study of rhetorical literature of three historical periods:
590a Medieval/Renaissance period (450-1500 A.D.)
590b Early modern period (1500-1900 A.D.)
590c Twentieth Century (1900-Present)

593 INTERNSHIP IN SPEECH COMMUNICATIONS (3)

Prereq: permission of instructor. Supervised teaching of courses and/or units within courses in the area of speech communication and, where appropriate, assistance in the co-curricular programs of this area. A field project report will be required of those taking the course to fulfill the M.A., Option II requirement

595 SEMINAR IN RHETORICAL CRITICISM (4)

Prereq: Speech 501. Literature of rhetorical criticism and the application of rhetorical theory so gleaned in the criticism of significant speeches

690a THESIS (6-9)

690b WRITING SEMINAR: THE RESEARCH MONOGRAPH IN SPEECH (3)

Prereq: Speech 501 or 502 and written permission of instructor. Writing a scholarly article based on research and suitable in subject, content and style for a communication journal.

Speech Pathology & 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 coursework and a variety of clinical practicum opportunities working with the infant through geriatric populations.

Students intending to enter this profession, whether in a public school, clinical rehabilitation or hospital setting, are advised that clinical certification (CCC) by the American Speech-Language-Hearing Association requires the completion of the master's degree program or its equivalent. Students who plan to practice in the public schools should follow the certification program for the Communications Disorders Specialist (CDS) through Western's "Program Unit."

The speech/language pathology and audiology major provides the student engaged in another discipline pertinent information in the areas of speech and language development, communication disorders and hearing impairments. Students outside of the major frequently take course work in the speech/language pathology/audiology program and in some instances select speech/language pathology/audiology as a minor.

DEGREE PROGRAMS

The Department of Speech Pathology and Audiology offers two different academic degrees: the Bachelor of Arts and the Master of Arts. The Bachelor of Arts is considered a pre-professional degree, qualifying the student for advanced preparation at the graduate or M.A. equivalent level. The Master of Arts degree is considered a professional degree and facilitates certification at both the state and national level. Also, an equivalency program is available for those not seek-

ing 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 holds ESB accreditation in both speech pathology and audiology from the American Speech-Language Hearing Association.

CERTIFICATION IN SPEECH PATHOLOGY/AUDIOLOGY

Two types of professional certification are available: state certification, which is mandatory for public school employment in Washington State, and national certification, which is necessary for employment in hospitals and clinics. The program leading to certification as a speech/language pathologist and/or audiologist in the public schools has been formulated by a "Program Unit" consisting of Western Washington University, the Washington Speech and Hearing Association and a participating school district. For details regarding academic, clinical and externship requirements, please consult the "WWU Handbook for Speech Pathology and Audiology Majors."

The American Speech-Language-Hearing Association's recommendation for certification of speech/language pathologists or audiologists includes a minimum of 50 quarter hours of academic preparation as well as 300 required supervised clinical hours. Such preparation would extend into an equivalency or graduate degree program. Consult the departmental handbook for details.

CLINICAL COMPETENCY

In addition to meeting academic requirements, students specializing in speech/language pathology and/or audiology must demonstrate satisfactory competency in diagnostic and clinical practicums by completing those practicums with a grade of "C" or better in each course.

For further information, contact the department chair at (206) 676-3885.

SPEECH PATHOLOGY AND AUDIOLOGY FACULTY

MICHAEL T. SEILO (1970) Chair.

Professor. BS, Northern Michigan University; MA, University of Arizona; PhD, Ohio University (Audiology/Aural Rehabilitation/Experimental Phonetics).

CAROL C. McRANDLE (1975) Associate Professor. BS, University of Minnesota, Duluth; MS, PhD, Purdue University (Audiology/Aural Rehabilitation/Hearing Science).

SAMUEL B. POLEN (1972) Associate Professor. BS, Kent State University; MA, PhD, Ohio University (Speech/Language Pathology/Speech Science).

JAMES A. SPEIRS (1978) Assistant Professor. BA, Los Angeles State College; MA, PhD, University of Southern California (Speech/Language Pathology).

LOREN L. WEBB (1965) Professor. BS, University of California, Berkeley; MA, University of Redlands; PhD, University of Washington (Audiology/Aural Rehabilitation).

LINA ZEINE (1983) Assistant Professor. BA, American University of Beirut, Lebanon; MA, University of Colorado; PhD, University of Kansas (Speech/Language Pathology)

Affiliated Clinic Staff

CANDACE K. GANZ (1982) Clinic Coordinator. BA, MA, University of Kansas (Speech/Language Pathology/Infant Behavior and Development).

JILL K. HUNT-THOMPSON (1977) Clinical Supervisor. BA, MA, Western Washington State College (Speech/Language Pathology).

BARBARA J. WELLS-WEEKLY (1979) Extern Coordinator. BS, MS, East Carolina University (Speech/Language Pathology).

BACHELOR OF ARTS

Major — Speech Pathology & Audiology

50 credits

- SPA 351, 352, 353, 354, 356, 361
- SPA 373, 452, 454, 457, 458, 459, 461
- Electives under departmental advisement

GRADUATE STUDY

For concentrations in speech/language pathology and audiology leading to the Master of Arts degree, see Graduate section of catalog.

COURSES IN SPEECH PATHOLOGY AND AUDIOLOGY

Courses numbered X37: X97: 300, 400, 417: 445 are described on page 28 of this catalog.

- 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, cerebration, respiration, phonation, resonance, articulation.
- 353 SPEECH SCIENCE (4)
Required for speech pathology and audiology majors. Acoustic properties of the speech signal and their relation to speech production and perception.
- 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 ARTICULATION DISORDERS AND THERAPY (3)
Prereq: SPA 351, 352. Symptomatology, etiology, and therapy for articulation disorders.
- 361 LANGUAGE LEARNING DISABILITIES IN CHILDREN (3)
Prereq: SPA 351, 354. Etiologies of language learning disabilities in children; diagnosis and treatment procedures.
- 373 PHONETICS (3)
Training in recognition and production of sounds of spoken English through use of the International Phonetic Alphabet. Lab required.
- 452 DIAGNOSTIC METHODS IN SPEECH/LANGUAGE PATHOLOGY (4)
Prereq: SPA 351, 352, 353, 354, 356, 373 or written permission of instructor. Methods, procedures, techniques and instruments: observation and lab required.
- 454 INTRODUCTION TO STUTTERING: THEORY AND THERAPY (3)
Prereq: SPA 351. Characteristics of stuttering behavior; current theories of etiology of stuttering; principles and practices of therapy; cluttering as a related disorder.
- 455 SPEECH/LANGUAGE THERAPY IN THE PUBLIC SCHOOLS (3)
Prereq: SPA 351 or permission of instructor. Role of the clinician in organizing and directing a speech therapy program in the public school setting.
- 456 ORGANIC SPEECH/LANGUAGE DISORDERS (3)
Prereq: SPA 457. Symptomatology, etiology and therapy for cerebral palsy, cleft palate, aphasia, dysarthria and laryngectomy.
- 457 METHODS IN SPEECH/LANGUAGE THERAPY (5)
Prereq: SPA 356. Directed observation and evaluation of the methods, materials and techniques used in treating a variety of communication disorders.

- 458 **BEGINNING CLINICAL PRACTICE IN SPEECH/LANGUAGE THERAPY (3)**
 Prereq: SPA 351, 352, 353, 354, 356, 373, 457 or written permission of instructor. Clinical observation, assistant clinician experience, procedures in therapy planning and implementation.
- 459, 460 **CLINICAL PRACTICE IN SPEECH/LANGUAGE THERAPY (3 ea)**
 Prereq: written permission of instructor. Continuation of SPA 458.
- 461 **INTRODUCTION TO AUDIOLOGY (5)**
 Introduction to the acoustic properties of simple and complex sounds; the structure and function of the auditory mechanism; the nature and causes of hearing impairment and a general survey of audiology as a discipline.
- 462 **AUDIOMETRIC TESTING (4)**
 Prereq: SPA 461 or permission of instructor. Introduction to the theory and application of pure tone, impedance and speech audiometry to assessment of hearing function; implications for rehabilitation covered.

- 467a,b,c **CLINICAL PRACTICE IN AURAL REHABILITATION (2 ea)**
 Prereq: SPA 463 or permission of instructor. Supervised practice in the rehabilitation of the hard of hearing.
- 468 **CLINICAL PRACTICUM IN AUDIOLOGY (2)**
 Prereq: SPA 461, 462. Supervised clinical practice in audiological evaluation.
- 469, 470 **CLINICAL PRACTICUM IN AUDIOLOGY (2 ea)**
 Prereq: SPA 468. Supervised clinical practice in audiological evaluation.
- 499a,b **UNDERGRADUATE EXTERNSHIP IN SPEECH/LANGUAGE PATHOLOGY AND AUDIOLOGY (8 ea)**
 Prereq: completion of the undergraduate major requirements and permission of department. Supervised off-campus experience providing opportunities to develop and demonstrate clinical competence in the management of children with communication disorders. S/U grading.

Graduate Courses

Courses numbered 500, 517, 545, 597 are described on page 28 of this catalog.

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

- 502 **BEHAVIORAL RESEARCH IN SPEECH (4)**
 Introduction to empirical research; basic methodology applied to current research in communication and speech.
- 550 **VOICE DISORDERS AND THERAPY (3)**
 Prereq: SPA 351, 352 or their equivalent. 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.
- 551 **ADVANCED SPEECH PATHOLOGY (3)**
 Prereq: permission of instructor. Analysis and evaluation of recent concepts, issues, techniques and methods applicable to speech disorders.
- 552 **ADVANCED DIAGNOSTIC METHODS IN SPEECH AND LANGUAGE PATHOLOGY (5)**
 Prereq: SPA 452 or written permission of instructor. Specialized methods, tests and instruments used in diagnosis of more complex morphological and neuropathological disorders; supervised practice; discussion of current diagnostic literature.
- 553 **SEMINAR: LANGUAGE DISORDERS (3)**
 Prereq: SPA 354, 361, or written permission of instructor. Atypical speech and language acquisition with special focus on current research findings and management techniques.
- 554 **SEMINAR: 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 **ADVANCED STUDIES IN LANGUAGE DEVELOPMENT IN CHILDREN (3)**
 Experimental findings and theoretical interpretations of normal speech and language acquisition with an emphasis on studies in phonology, syntax, semantics and pragmatics; origins and growth of cognitive and social processes; factors influencing learning of speech and language.



- 463 **AURAL REHABILITATION (4)**
 Prereq: SPA 461; SPA 467a may be taken concurrently. Auditory training, speech reading and language training for the aurally handicapped.
- 465 **SIGN LANGUAGE OF THE DEAF (3)**
 Prereq: SPA 354 or permission of instructor. Theory and practice in use of the manual language methods for communication with the deaf.
- 465a **INTERMEDIATE SIGNING (2)**
 Prereq: SPA 465. An introduction to the philosophy of total communication and the basic idea of Ameslan (sign language used by deaf people).
- 466 **MEDICAL AUDIOLOGY (3)**
 Prereq: SPA 461. The medical pathologies of the hearing mechanism and their auditory manifestations. Problems of diagnosis, referral and report writing.

Speech Pathology/Audiology

- 556 SEMINAR IN APHASIA (3)
Prereq: SPA 456 or equivalent. Diagnosis and treatment of language-impaired adults with specific brain injury patterns; aphasia, apraxia, dysarthria.
- 557 CEREBRAL PALSY (3)
Prereq: graduate status, SPA 459 or equivalent, or permission of instructor. Survey of speech disorders; identification, classification and the fundamentals of therapy.
- 558 ADVANCED CLINICAL PRACTICE IN SPEECH/LANGUAGE THERAPY (3)
Prereq: SPA 458, 459 or written permission. Supervised clinical practicum. Must be completed with a grade of "C" or better.
- 559, 560 ADVANCED CLINICAL PRACTICE IN SPEECH/LANGUAGE THERAPY (3)
Prereq: SPA 558 or written permission of instructor. Continuation of 558. Must be completed with a grade of "C" or better.
- 561 SEMINAR IN AUDIOLOGY (3)
Prereq: SPA 461 or permission of instructor. Study of basic auditory correlates and audiometric procedures.
- 562 ADVANCED AUDIOMETRY (3)
Prereq: SPA 462. Theory and application of advanced diagnostic audiometric procedures.
- 563 SEMINAR IN AURAL REHABILITATION (3)
Prereq: SPA 463 or permission of instructor. Issues related to the hearing handicapped.
- 564 ADVANCED CLINICAL PRACTICE IN AURAL REHABILITATION (2)
Prereq: SPA 458, 463, 467 or permission of instructor. Supervised practice in rehabilitation of the hard of hearing. Must be completed with a grade of "C" or better.
- 565 PSYCHOACOUSTICS (3)
Prereq: SPA 561 or permission of instructor. Application of standard psycho-physical 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; electro, physiological and mechanical properties of the ear.
- 567 INDUSTRIAL AUDIOLOGY (3)
Prereq: SPA 461. Problems in noise pollution; federal and state regulations regarding noise; noise-induced hearing loss and the role of audiology in prevention and control.
- 568a,b,c ADVANCED CLINICAL PRACTICUM IN AUDIOLOGY (2 ea)
Prereq: SPA 461, 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. This course is designed to acquaint the classroom teacher with the unique problems of the hearing-impaired child being mainstreamed and to give the teacher some practical methods of dealing with the children.
- 571 HEARING AIDS (4)
Prereq: SPA 462 or permission of instructor. History, development and description of hearing aids. Research into the electroacoustic characteristics of hearing aids. Evaluation procedures and fitting techniques of hearing instruments. Auditory training techniques. Lab required.
- 572 SEMINAR IN ELECTROPHYSIOLOGICAL TESTING (3)
Prereq: SPA 561, 566, 568a or permission of instructor. Current topics and issues in specialized areas of averaged electroencephalic audiometry to be discussed. Major research problems and trends will be identified. Laboratory and clinical experiences will be offered.
- 574 EXPERIMENTAL PHONETICS (3)
Prereq: SPA 353. Study of laboratory investigations of phonetic problems; analysis and measurement of variables in speech production.
- 575 THE PARENT INTERVIEW (3)
A graduate seminar in interviewing parents having children with speech, hearing and/or other behavior problems. The readings, discussions and class activities are focused on the skill, understanding and experience in establishing helping relationships.
- 575a CLINICAL PRACTICUM IN PARENT INTERVIEWING (2)
Prereq: SPA 575 and permission of instructor. A laboratory or supervised interviewing practice with parents whose children attend the clinic or other community agencies.
- 576 SEMINAR IN CLEFT PALATE (3)
Prereq: SPA 351. Description, embryologic history, incidence, diagnosis and therapy of the cleft palate patient.
- 577 PEDIATRIC AUDIOLOGY (3)
Prereq: SPA 461, 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.
- 599a,b,c GRADUATE EXTERNSHIP IN SPEECH/LANGUAGE PATHOLOGY AND AUDIOLOGY (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. Each course prerequisite to the next. Supervised off-campus experience providing opportunities to develop and demonstrate clinical competence in the management of communication disorders. (None of the credits for SPA 599c may be applied toward the M.A. degree.) (Only 3 + 3 credits of SPA 599a,b, respectively, are applicable toward the M.A. degree.) S/U grading.
- 690 THESIS (6-9)
- 691 WRITING SEMINAR (3)
Prereq: SPA 502 and permission of instructor. Writing based on research or clinical projects. This report to be used to help satisfy the non-thesis requirement.
- 692 INTERNSHIP IN ADMINISTRATION OF SPEECH 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 will be required in this course. This report may be used to help satisfy the non-thesis requirement.
- 696 INTERNSHIP IN SUPERVISION OF SPEECH/LANGUAGE PATHOLOGY AND/OR AUDIOLOGY (3)
Prereq: permission of instructor. Implementation of current practices in clinical supervision. Directing and evaluating clinicians. Study of current trends and research in the supervisory process.

Technology

The Department of Technology encompasses engineering technology, graphic communications technology, industrial design and technology, and teacher education. An emphasis on breadth, basic knowledge, and analytic and laboratory skills pervades all levels of these fields. The department has enjoyed one of the highest placement records of any program at Western, and the demand for technology graduates continues to be high.

Located in the department are the Vehicle Research Institute (VRI) and the Western Design Center (WDC). The VRI was formed in 1976 as an on-going program of research in vehicle design, construction and engineering. The VRI has gained international recognition in the areas of fuel economy, aerodynamic design, engine development and auto safety. The direct result of the VRI has been the design and development of the Viking automobiles. Students receive academic credit for their involvement with VRI projects. The WDC provides students with realistic design problems which are drawn from the actual needs of the surrounding community. The WDC is in constant correspondence with various governmental, charitable and non-profit agencies in order to seek out design problems which can be structured into assignments for the design students of technology. These assignments, then, become on-the-job situations and involve students in actual work with design clients.

Students interested in Design Center projects should consult the WDC personnel in technology.

It is strongly recommended that students who intend to major in technology programs be prepared by attaining basic knowledge of algebra, trigonometry, chemistry and physics. This experience may be provided in high school programs or in foundation college courses. Early advisement is essential for effective planning of your curriculum.

TECHNOLOGY FACULTY

- PAUL E. RAINEY (1983) Director.
Associate Professor. BSME, BSMSE, Purdue University; MS, Massachusetts Institute of Technology; PhD, Texas A & M University. Registered Professional Engineer. Texas.
- ELSIM VASSDAL ELLIS (1977) Associate Professor. BS, MEd, Western Washington State College; PhD, University of Washington.
- ROBERT D. EMBREY (1971) Associate Professor. BA, MA, MFA, University of Oregon.
- RICHARD J. FOWLER (1965) Professor. BA, MS, Washington State University; EdD, Texas A & M University.
- KENT A. GOTO (1979) Assistant Professor. BS, Chadron State College; MS, Kearney State College; EdD, University of Northern Colorado.
- CLYDE M. HACKLER (1974) Associate Professor. BS, Eastern Kentucky University; MEd, University of Illinois; EdD, University of Maryland.
- CLAUDE E. HILL (1967) Associate Professor. BA, MA, University of Washington.
- STEVE MOSKOWITZ (1984) Associate Professor. BEE, MEE Rensselaer Polytechnic Institute.
- FRED A. OLSEN (1961) Professor. BA, University of Washington; MS, Stout State University; PhD, The Ohio State University.
- SAM R. PORTER (1962) Professor. BA, Iowa State Teachers College; MA, Teachers College, Columbia University; EdD, University of Missouri.
- RAY A. SCHWALM (1949) Professor. BS, Millersville State College; MS, EdD, Oregon State University.
- MICHAEL SEAL (1968) Professor. BEd, University of British Columbia; MEd, Western Washington State College; EdD, Texas A & M University.
- MARVIN A. SOUTHCOFF (1969) Associate Professor. BA, University of Washington; MFA, Maryland Institute.
- VERNON VAN SANT (1984) Lecturer. P.R.E., Colorado School of Mines.
- RICHARD F. VOGEL (1971) Associate Professor. BA, MAT, Washington State University; EdD, Texas A & M University.

COMPUTER COMPETENCY

Since technology courses stress application of computers, a course in computer programming is an early requirement for all majors in technology.

DECLARATION OF MAJOR

Once each quarter the Technology Department holds a general meeting for prospective majors to provide them with information about the various programs within the department. Math, computer science, communications and other specific department/program/course requirements will be explained. This meeting is held in the evening during the second full week of classes. Prospective majors must contact the Technology Department secretary (Art/Technology 105) for the exact day, time and location. Attendance by prospective majors is required. At this meeting, students may complete an advisee folder, submit a declaration of major and schedule an appointment with their appropriate program adviser.

It is important for the prospective major to know that the catalog in effect when he/she is admitted *into a major* is the applicable one, not an earlier catalog.

PROGRAMS LEADING TO BACHELOR OF SCIENCE

Five undergraduate programs are administered by the department, i.e., industrial arts teacher education, industrial design, industrial technology, manufacturing engineering technology, and visual communication education (a sixth undergraduate program in electronics engineering technology is being proposed). All of these programs lead to the Bachelor of Science degree.

ELECTRONICS ENGINEERING TECHNOLOGY

The Department of Technology expects to begin a program in Electronics Engineering Technology during the 1985/1986 academic year (after the publication date of this catalog). Please contact the departmental office for curriculum details and other information about the major.

Electronic 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 of electronics engineering technologists include microprocessor application, product analysis and development, control systems design, medical electronics, production, installation of electronic equipment, power systems, automation, communication systems, and technical sales and service. Prospective students are encouraged to include physics, chemistry and mathematics in their high school preparation.

Western Washington University will only offer the last two years of this structured program, and

certain community colleges will offer the first two years as direct transfer. Therefore, it is necessary for interested students to seek early advisement.

Western Washington University's baccalaureate degrees require a minimum of 180 credit hours, and students complete an average of 15 credit hours per quarter to graduate in four years. Since the electronics engineering technology major requires a total of 200 credit hours, students should anticipate that they will require more than four years to complete this program.

INDUSTRIAL ARTS TEACHER EDUCATION

The teacher preparation program has been offered for over 80 years and is a traditional strength at Western. The 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. Graduates also meet the academic requirements for Industrial Arts Vocationally Approved Certification.

Major 85 credits minimum

- Breadth Requirement: 36-37 credits from the following: Tech 210, 213, 223, 231, 240, 270, 280, 333
- Depth Requirement: 16 credits from one or more of the following areas under advisement:
 - Graphic Communication Technology (industrial graphics, photography, industrial design)
 - Materials and Manufacturing Technology (woods, metals, materials science, plastics, crafts)
 - Mechanical and Electrical Technology (electricity, electronics, power mechanics)
- Supporting Courses: 19-22 credits
Tech 391, Math 105, one course in each of the following under advisement — computer science, physics, chemistry
- Professional Block: Tech 393, 488, 491, 493, 496, 499
- Electives by advisement to total 85 credits

The professional courses are to be taken concurrently in the junior or senior year and will be scheduled as a "block" during winter quarter. A \$15 materials fee is charged for printing/materials.

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 industrial arts laboratory setting, students demonstrate competency to an acceptable level and will not receive credit for course work until such competence is clearly shown.

Minor 25 credits

Courses selected under departmental advisement. Does not lead to industrial arts teacher certification.

Teaching Endorsement

Completion of the major with an overall GPA of 2.75 or higher leads to a teaching endorsement in industrial arts at the secondary level.

Contact the Office of Admissions and Advisement in Miller Hall 202 for information concerning professional studies programs.

"Retread Program" — Supporting Endorsement

This program is for teachers who are presently certified to teach in a subject area other than industrial arts. Because the background presented by each candidate varies greatly, each transcript and educational background is assessed separately and a "Training Agreement" is written. Upon meeting the terms of the agreement, the candidate will receive a letter indicating the completion of a program "equivalent to the undergraduate major in industrial arts education." A similar letter is sent to the credentials officer of the Superintendent of Public Instruction in Olympia. The content of each "Training Agreement" depends upon the college work completed prior to its writing.

INDUSTRIAL DESIGN

The industrial design program is intended to provide students with a means of expressing creative ideas. It should help each individual develop the expression of attitudes, function and humanitarian aesthetics in terms of industrial tools, techniques, operations and processes.

The design program provides each graduate with a foundation for understanding creative problem solving, for appreciating interrelationships of humanitarian philosophy, technological capabilities and aesthetic expression. The course arrangement is designed to prepare professional graduates to enter the industrial culture as designers, planners, managers, illustrators or specialists in industrial production or marketing. A more complete description of the program and major is offered in the College of Arts & Sciences Interdisciplinary section.

INDUSTRIAL TECHNOLOGY

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 phase or specific

technical industry. Positions taken by recent graduates include the following: tool and production planning, material control, tool illustrator.

Major 110 credits

- Technology Core: 27 credits:
Tech 210, 220, 223, 231, 270, 333
- Technology Emphasis: 30-33 credits from one or more of the following areas:
 - Graphic Communication
 - Materials and Manufacturing
 - Mechanical and Electrical
- Supporting Courses: 50-53 credits:
 - Mathematics 11-14 credits: Math 105, 124, or Math 155, 156; any computer science programming course
 - Science 15 credits: Chem 115 or Chem 121, Physics 131, Chem 251, or Physics 132
 - Management 24 credits: Acctg 241, Mgmt 271, Econ 203, Mgmt 304, plus two courses from the following: Mgmt 302, 322, 401, 425, and FMDS 330, 432

Minor 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 of the manufacturing engineering technologists 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.

Certain community colleges offer the first two years as direct transfer. Therefore, it is necessary for interested students to seek early advisement.

Western Washington University's baccalaureate degrees require a minimum of 180 credit hours, and students complete an average of 15 credit hours per quarter to graduate in four years. Since the manufacturing engineering technology major requires a total of 200 credit hours, students should anticipate that they will require more than four years to complete this program.

Technology

Major 148 credits

- **Manufacturing Core: 95 credits**
Tech 210, 220, 221, 222, 223, 224, 271, 309, 322, 323, 324, 328, 333, 383, 420, 421, 422, 423, 424, 426, 433, 473, 474, Mgmt 463, FMDS 348, technical electives
- **Supporting Courses: 53 credits**
 - Mathematics 18 credits, Math 105, 124, 125, 126
 - Computer Science 4 credits, CS 210
 - Physics 15 credits, Phys 241, 242, 341, 351
 - Chemistry 10 credits, Chem 121, 251
 - English 6 credits, English 401, communications elective

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.

VISUAL COMMUNICATION EDUCATION (VICOED)

Growing out of an earlier graphic arts program, the Ford Foundation funded an innovative and interdisciplinary pilot program called visual communication education (VICOED). This program seeks to develop communicators who understand the processes of communication and who can select and use the appropriate elements (graphic arts, television, film, technical illustrations, photography, etc.). Graduates of this program have been placed in a variety of media-related positions in industry, government and education. Increasingly, schools, colleges and universities have sought VICOED graduates as media specialists in instructional technology. It should be noted that the VICOED program is carefully structured and extensive in nature; it is advantageous, therefore, for interested students to seek advisement and enrollment in VICOED early in their university careers. A complete description of the program is offered in the College of Arts and Sciences Interdisciplinary section.

DIRECT TRANSFER

A technical "block" transfer agreement has been approved at WWU for most of the technology programs except the engineering technology programs, which are still being finalized (see your adviser). The agreement accepts transfer of 90 credits* applicable to most of the other Bachelor of Science degree programs in the Department of Technology for students who have completed an associate degree in technical arts or applied sciences, subject to the following conditions.

The community college degree program must include:

1. Mathematics through an introduction to calculus (to be counted toward WWU general education requirement).
2. One course in physics (to be counted toward WWU general education requirement).
3. At least 50 credits with a GPA of 2.5 in one of the following: electronics, drafting, graphic arts and visual communication, photography, power mechanics, or programs in industrial materials and processes.
4. An approved agreement between the community college and Western.

COURSES IN TECHNOLOGY*

Courses numbered X37; X97: 300, 400, 417; 445 are described on page 28 of this catalog.

- 131 **WOODCRAFTING (3)**
Characteristics and uses of wood as a medium of design, aesthetics and creative expression. Emphasis on hand-crafting: technical information and experience with wood, hand tools and finishes. Innovative and historical use of wood in folk arts, useful objects, furniture, sculpture and art.
- 210 **INDUSTRIAL GRAPHICS I (5)**
Introduction to basic concepts of technical communication in industry through freehand sketching and instrument drawing of three-dimensional objects. Introduction to team dynamics through creative problem solving.
- 210b **INDUSTRIAL GRAPHICS (3)**
Prereq: enrollment limited to VICOED majors. Introduction to basic concepts of technical communication in industry through freehand sketching and instrument drawing of three-dimensional objects.
- 211 **INDUSTRIAL GRAPHICS II (4)**
Prereq: Tech 210 or equivalent. Preparation of working and assembly drawings of machine parts with emphasis on individual creative problem solving through tolerance and positional dimensioning, auxiliary views, sections and use of product catalogs to select and size components.
- 213 **DESIGN DEVELOPMENT FOR INDUSTRIAL ARTS (3)**
Prereq: I. A. teacher education major, or permission of the instructor. Basic design fundamentals applied to industrial arts teaching. Development of creativity with application to school projects and design problems.
- 214 **FUNDAMENTALS OF PRODUCT DESIGN (5)**
Basis aesthetics of form, color and space in variety of media, includes two- and three-dimensional design along with historical expression. Considered preliminary to design courses with graphic media, material sciences and industrial design.

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

**Excluding sub-college and/or remedial courses.*



215 EVOLUTION IN INDUSTRIAL DESIGN (3)

Interrelationship with the arts, sciences, and society; designers, their philosophies and resultant impact on culture.

220 MATERIALS TECHNOLOGY(4)

Prereq: Physics 131, and Chem 115 or 121. The structure and properties of industrial materials: metals, ceramics, polymerics, cements, glasses and composites.

221 WELDING (3)

Basic concepts in welding to include shielded metal arc welding, oxy-acetylene welding, welding symbols, heat treatment, soldering and brazing, survey of processes.

222 PATTERN MAKING AND FOUNDRY (3)

Tools, materials and techniques used to produce foundry patterns and principles and practices employed in the contemporary metal-casting industry.

223 MACHINE METAL PROCESSES (5)

Prereq: Tech 210, Math 105. Basic concepts and skills in machine metal processes: shaping metal by machine tools, chipless machining, automation of machine tools and cold forming processes.

224 APPLIED STATICS (4)

Prereq: Physics 131, and Math 124 or 156. Elementary statics; stress, strain, and deflection of torsional members and beams.

Technology

- 231 GENERAL WOODS (4)
Prereq: Tech 210 recommended. Introduction to basic industrial tools and machines used in processing wood materials. Custom design and fabrication of wood products. Technical information related to processes.
- 240 VISUAL COMMUNICATION (5)
Survey of the visual communication field including visual communication theory, information design, reproduction, presentation, and management; involves the print and non-print media.
- 260 GENERAL PHOTOGRAPHY (4)
Fundamentals of film developing, enlarging, print finishing. Basic elements of black and white composition and visualization.
- 270 BASIC ELECTRICITY (4)
Principles and concepts of electricity; laboratory experiences with electrical components, circuits and measuring equipment.
- 271 CIRCUIT ANALYSIS I (4)
Prereq: Math 125. Electric and magnetic principles of components used in DC and single-frequency AC circuits. OHM's and Kirchhoff's laws, Thevenin's and Norton's theorems, and mesh and nodal equations. Measurement of current, voltage and wave-forms with meter and oscilloscopes.
- 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.
- 301 CRAFTS (3)
Design and construction in a variety of craft materials.
- 303 FINISH PRINCIPLES AND PRACTICE (3)
Introduction to modern finishing materials and processes.
- 309 ENGINEERING DESCRIPTIVE GEOMETRY (4)
Prereq: Tech 210 and/or 211. Practical applications of concepts and principles of engineering descriptive geometry. Application of creative problem solving through term project.
- 310 TECHNICAL ILLUSTRATION (3)
Prereq: Tech 210 or equivalent. Preparation of three-dimensional pictorial drawings including an introduction to rendering techniques.
- 311 APPLIED PERSPECTIVE AND RENDERING (4)
Prereq: Tech 210; recommended Tech 214 and 310. The techniques and skills in rendering of buildings, interiors, and products in perspective. Projects include a comprehensive study of perspective systems and shadow construction in various media. Intended to develop the student's ability to sketch informally and present formally ideas pertaining to the expression of architectural subjects, interiors, and products of industrial design.
- 312 ADVANCED DRAFTING (3)
Prereq: Tech 211. Problems in machine drawing and linkage. Visitations to observe current drafting practices in industry
- 313 ARCHITECTURAL CONCEPTS AND RESIDENTIAL PLANNING (5)
Prereq: Tech 210 Historical development, considerations of design; analysis of needs; utilization of sites, preparation of plans.
- 315 INDUSTRIAL DESIGN PROCESSES (5)
Prereq: Tech 210, 211, 309, 311. Recommend all major requirements at the 200 level. Design as a process of problem solving, problem recognition, definition resolution and presentation, analysis of market and motivational research techniques.
- 316 DIMENSIONAL ANALYSIS IN INDUSTRIAL DESIGN (5)
Prereq: Tech 315 and approval of adviser. Application of multi-view projections pictorials, mock-ups and prototypes to the resolution of human factors design problems.
- 320 ADVANCED MACHINE METAL PROCESSES (4)
Prereq: Tech 223, Tech 222 recommended. Advanced theory and skill development in machine metalworking. Includes product and process design, special tooling and machine tool operator. Lab fee.
- 321 INDUSTRIAL ROBOTICS (4)
Prereq: Tech 221, 222, 223, 333, Math 125, and a course in computer programming. 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
- 322 NUMERICAL CONTROL OPERATIONS (3)
Prereq: Tech 223 and one course in computer programming. This course provides students with the opportunity to actually program parts for NC manufacture and to set up and operate NC equipment using their own programs.
- 323 COMPUTER-AIDED DRAFTING (4)
Prereq: Tech 210 and a course in computer programming. Current applications of computer graphics to produce graphs, orthographic views and pictorials. Use of digitizer boards, CRTs and plotters in conjunction with microcomputers and large computers. Applications of computer languages to computer graphics.
- 324 STRENGTH OF MATERIALS (3)
Prereq: Tech 224. Internal response of structural members to forces; principal stresses and strains; and combined stresses.
- 325 INDUSTRIAL METALLURGY (4)
Prereq: Tech 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.
- 327 WORK METHODS AND MEASUREMENT (3)
Prereq: Tech 210, 221, 222, 223, or 333. Stresses working knowledge of sound time and motion study practices and procedures including application of principles of motion economy, use of flow process charts and diagrams, man-machine charts, micro-motion analysis, simo-charts, time formulas, work sampling, rating, leveling standard data systems and use of equipment related to this work
- 328 INDUSTRIAL 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) will be used.
- 331 ADVANCED WOODS (4)
Prereq: Tech 231 Skill and development in the more complex woodworking processes with related information on the woodworking industry.

- 332 **WOOD TECHNOLOGY (4)**
Prereq: Chem 115 or 121. Basic introduction to the physical and mechanical characteristics of wood, its structure, composition and identification. New developments in the wood products field receive particular attention.
- 333 **PLASTICS (5)**
Prereq: general education chemistry; Tech 231 recommended. Polymer science and analysis of basic plastics materials; experience in product design, tooling, and processing of thermoplastic and thermosetting materials.
- 335 **TOOLING FOR PLASTICS PROCESSING (3)**
Prereq: Tech 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 will be the major units of study.
- 340 **GENERAL GRAPHIC ARTS I (3)**
Prereq: Tech 240. Graphic arts technology as related to reproduction of graphic design techniques.
- 341 **GENERAL GRAPHIC ARTS II (5)**
Prereq: Tech 340. Techniques, processes, and products of the graphic arts industry; designing, reproducing, presenting, and managing graphic materials.
- 344 **FILM ANIMATION (3)**
Prereq: Tech 240, 260 and permission of instructor. The theory and application of animation techniques in Super 8mm film or 16mm film.
- 351 **DIGITAL SYSTEMS (5)**
Prereq: junior classification in electronics engineering technology and basic digital electronics course. Pre- or co-requisite: Math 321. An upper-division course in digital analysis and design ranging from a study of digital signal propagation to special techniques used in large system design. Analysis of calculator and display terminal systems.
- 352 **NETWORK ANALYSIS (4)**
Prereq: junior classification in electronics engineering technology. A course in AC circuit theory and a course in computer programming. Pre- or co-requisite: Math 321. General analysis of linear networks using classical methods. Laplace and Fourier methods, and computer-aided methods. Topics include single element transients, first- and second-order circuits, transfer function analysis and Bode plots.
- 353 **ACTIVE LINEAR & NON-LINEAR CIRCUITS (5)**
Prereq: Tech 352. 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.
- 355 **MICROPROCESSOR APPLICATIONS (5)**
Prereq: Tech 351. Microprocessors and support devices. Design of microprocessor-based systems. Monitor and development systems. Use of logic analyzers.
- 356 **ELECTRICAL POWER AND MACHINERY (5)**
Prereq: junior classification in electronics engineering technology and Math 321. A study of DC and AC motors and generators, transformers, power distribution systems and instrumentation.
- 360 **ADVANCED PHOTOGRAPHY (4)**
Prereq: Tech 260. 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, and historical and contemporary trends in American photography.
- 363 **COLOR PHOTOGRAPHY (4)**
Prereq: Tech 360. Fundamentals of color theory; techniques of producing color transparencies and prints.
- 370 **BASIC ELECTRONIC CIRCUITS (4)**
Prereq: Tech 270. Theory and application of power supplies, amplifiers, oscillators and digital circuits.
- 371 **SEMI-CONDUCTORS (4)**
Prereq: Tech 370. Characteristics of semi-conductor devices and circuits.
- 379 **VISUAL COMMUNICATION ELECTRONICS (3)**
Prereq: Tech 341. Principles and applications of instrumentation, electronic systems and computer graphics technology in the communication industry.
- 380 **ADVANCED POWER MECHANICS (3)**
Prereq: Tech 280. Efficiency determinants, power measurement, development of concepts introduced in Tech 280.
- 381 **ADVANCED POWER TRANSMISSION (3)**
Prereq: Tech 281. Practical application of hydraulic and mechanical theory as applied to automatic transmissions.
- 382 **AUTOMOTIVE ELECTRICITY (2)**
Prereq: Tech 270 or 280. Basic principles of electrical components and systems of the automobile and other engines.
- 383 **HYDRAULICS AND PNEUMATICS (4)**
Prereq: Math 125, Physics 132, Tech 224, 474. A course in the transfer, amplification and control of mechanical power in fluid systems.
- 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.
- 393 **MAINTENANCE OF INDUSTRIAL EQUIPMENT (3)**
Prereq: Tech 223, 231, 270. Includes a survey of industrial maintenance procedures as well as dealing with specific lab problems encountered by instructors in industrial education subjects. Major units of study include industrial maintenance of specific stationary machines and hand tools in the following areas: industrial plastics, industrial wood processing, machine metals, automotive maintenance systems.
- 395 **INDUSTRIAL ARTS FOR THE ELEMENTARY TEACHER (3)**
An activity approach to the study of technology — its tools, materials, products, processes and occupations and integration with the areas of the elementary school curriculum.
- 402 **COOPERATIVE WORK STUDY (1-15)**
Prereq: junior standing; 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.
- 413 **ARCHITECTURAL PROBLEMS (3)**
Prereq: Tech 313. Advanced residential planning, cost estimating; FHA standards, building codes; individual and group research.
- 415 **PRODUCT SYNTHESIS IN INDUSTRIAL DESIGN (5)**
Prereq: Tech 316 and approval of adviser. Preparation of a portfolio of research sketches, working drawings and renderings in the creation of a mock-up or prototype of an original or modified product.

Technology

416 STRUCTURAL-AESTHETIC FACTORS IN INDUSTRIAL DESIGN (5)

Prereq: Tech 415 and approval of adviser. Tectonic principles applied to consumer products, problems related to functional and emotional factors of environmental design involving space, structure, furniture and lighting and geodesics.

418 DESIGN CENTER RESEARCH PROJECT (1-3)

Prereq: Tech 214 or Home Econ 101. Directed research in design under the auspices of the Western Design Center. May be taken three times.

419 DIRECTED RESEARCH IN DRAFTING/DESIGN (1-3)

Prereq: Tech 211. Research problem in drafting or design conducted under supervision. May be taken three times

420 PLANT LAYOUT AND MATERIAL HANDLING (4)

Prereq: Tech 321 and 322. Project course in which, for specified product made according to given sales schedule, student selects equipment, emphasizes automation whenever possible, analyzes and designs plant, constructs layout models, and evaluates the layout.

421 COMPUTER AIDED MANUFACTURING (3)

Prereq: one course in computer programming. Computer integrated manufacturing, numerical control part programming with emphasis on APT, and automation.

422 MANUFACTURING PROJECT DEFINITION (1)

Prereq: Tech 420. Selection, definition and analysis of a problem suitable for senior project, team approach, prior to actual project development. Includes consideration of project parameters and implications, proposal of alternative solutions, and justification of selected solution, including manufacturer and vendor contracts and recommendations. Culminates in writing of formal senior project proposal



423 INDUSTRIAL QUALITY ASSURANCE (3)

Prereq: Math 124 or 156, and a course in computer programming. Quality assurance as applied to industrial manufacturing operations

424 MANUFACTURING IMPLEMENTATION (3)

Prereq: Tech 422. Follow-up to Tech 422. Project team will tool-up and manufacture a product or design an industrial process and develop related management and marketing studies. Project will be completed, evaluated and fully documented with performance specifications, functional description, schematics, cost analysis, parts list, photographs, diagrams and charts.

426 COMMUNICATIONS FOR INDUSTRIAL PERSONNEL (1)

Prereq: senior classification in manufacturing engineering technology. Need, methods and practical application of effective communication techniques used by industrial and technical personnel

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 METALS (1-3)

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

433 ADVANCED PLASTICS (3)

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

434 REINFORCED PLASTICS/COMPOSITES (5)

Prereq: Tech 333. Resin and reinforcement systems; material testing and strength analysis; mold design and development; theory and involvement in reinforced plastics production processes.

435 INJECTION MOLDING (3)

Prereq: Tech 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 INSTRUCTIONAL RESOURCES IN PLASTICS (1-3)

Includes understanding of plastics materials and processes. Development of instructional aids, tooling devices, curricular materials and project ideas for secondary school activities. Offered during summer session or through Continuing Education.

438 DIRECTED RESEARCH IN PLASTICS (1-3)

Prereq: Tech 333, 433 or 434 or 335. Selection, development and research, under supervision, within one of the areas of plastics technology. Repeatable.

439 DIRECTED RESEARCH IN WOODS (1-3)

Prereq: Tech 231, 331. Selection, development and research, under supervision, within one of the areas of wood technology. May be taken three times.

440 GRAPHIC DESIGN (5)

Prereq: Tech 260 and 341. Principles and application of effective visual communication, design, and reproduction.

441 VISUAL COMMUNICATION SERVICES MANAGEMENT (5)

Prereq: Tech 341. Estimating and pricing, simplified cost accounting; organization and administration of visual communication services; production, quality and color control instruments and techniques.

442 ELECTRONIC NEWS GATHERING (2 ea)

Prereq: Broadcast 342 and permission of instructor. Shooting on-location news stories and mini-documentaries. Stories to be aired as part of the "Western View" television newscast. Repeatable to maximum of 6 credits.

443 MULTI-MEDIA PROGRAMMING (5)

Prereq: Tech 240, 260, 340, 341, 440. Concept development and production techniques for multi-media presentations for educational and professional purposes

- 444 COMPUTER PHOTOCOMPOSITION (3)**
Prereq: Tech 240, 340, 341 and Computer Science 110 and permission of instructor. The theory and practical applications of computer-operated photocomposition equipment.
- 445 VICOED INTERNSHIP (1-12)**
Prereq: Tech 341, junior or senior status, and written approval of adviser. Supervised field work in appropriate professional situations in the visual communication industry (printing plants, TV studios, design agencies, film studios, type houses, publication houses, etc.). Credit varies according to individual employment circumstances; during summer session.
- 446 ADVANCED PHOTOCOMPOSITION AND ITS APPLICATIONS (5)**
Prereq: Computer Science 110 or 210, Art 371 or Tech 440, 444 and permission. Current problems and advances in the typesetting industry with advanced applications of computer-operated photocomposition and typography
- 447 PUBLICATIONS PRODUCTION (3)**
Prereq: concurrent enrollment in Tech 448. Experiences in design, layout, and production of publications through printed media, film, television, or other means.
- 448 VISUAL COMMUNICATION (5)**
Prereq: completion of the VICOED sequence. Synthesis of basic concepts, models, and theories, the perceptual, social, cultural, and technological determinants of visual form, style and content.
- 449 DIRECTED RESEARCH IN VISUAL COMMUNICATION (1-9)**
Prereq: Tech 240, 340, 341. Selected problems in visual communication. Repeatable to a maximum of 9 credits.
- 451 PROCESS CONTROL TECHNOLOGY (5)**
Prereq: Tech 351 and 356. Introduction to process control and transducers with analog and digital signal conditioning. Study of final control element, controller operation and modes.
- 452 AUTOMATIC CONTROL SYSTEMS (5)**
Prereq: Tech 352 and 451. Pre- or co-requisite: Tech 355. A study of the methods of analysis of control systems through the use of operational mathematics, including computer modeling, interfacing and control.
- 454 COMMUNICATIONS AND HIGH FREQUENCY TECHNOLOGY (4)**
Prereq: Tech 352. Pre- or co-requisite: Tech 351. A study of communications concepts and systems including modern digital techniques. Use of high frequency components and measurement systems.
- 469 DIRECTED RESEARCH IN PHOTOGRAPHY (1-3)**
Prereq: Tech 260. Research problems in photography chosen and conducted under supervision. May be taken three times.
- 473 DIGITAL ELECTRONICS (4)**
Prereq: Tech 270. Digital integrated circuit devices, applications of digital circuits, construction and testing of digital circuits.
- 474 PROCESS CONTROL AND INSTRUMENTATION (5)**
Prereq: Tech 473. A study of measurement and control techniques and devices used in manufacturing processes. Use of the microprocessor will be emphasized. Laboratory experiences with control devices and systems will be provided.
- 479 DIRECTED RESEARCH IN ELECTRICITY (1-3)**
Prereq: Tech 371. Advanced study in problems chosen and conducted under supervision. May be taken three times.
- 480 ADVANCED EMISSION CONTROL (3)**
Prereq: Tech 280 and 380. Experimental research in emission control on operating laboratory engines. Topics center around temperature control on NOx, new methods of optimizing stoichiometric combustion, and thermal and catalytic exhaust treatment.
- 484 VEHICLE DESIGN (5)**
Prereq: Tech 280, 380 or permission of instructor. Suspension design; chassis design, spring rates, tire design parameters; automobile aerodynamics; brake system. (Offered summer only.)
- 488 SAFETY PRINCIPLES AND PRACTICES FOR INDUSTRIAL EDUCATION TEACHERS (2)**
This is a basic course in safety practices for industrial 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: Tech 280, 381. Advanced study in problems chosen and conducted under supervision. May be taken three times.
- 490 PRACTICUM IN SUPERVISED TEACHING OF INDUSTRIAL AND TECHNICAL EDUCATION PROGRAMS (16)**
Prereq: open to majors in industrial and technical education during their senior year with departmental approval upon completion of Tech 392, 393, 394 and 495. Supervised experience providing opportunity to develop and demonstrate teaching competency at the secondary and post-secondary level in the area of industrial and technical education.
- 490a SEMINAR IN SUPERVISED VOCATIONAL TEACHING (1)**
Prereq: concurrent enrollment in Tech 490. Practicum in Supervised Teaching of Industrial and Technical Educational Programs.
- 491 HISTORY AND PHILOSOPHY OF VOCATIONAL EDUCATION (3)**
Evolving issues, objectives, programs and legislation in vocational education.
- 492 OCCUPATIONAL VERSATILITY (3)**
A class designed for teachers wishing to incorporate the student management and direction system of the "Occupational Versatility" program.
- 493 THE TEACHING OF INDUSTRIAL ARTS (4)**
Prereq: admission to teacher education. Derivation and organization of content for industrial arts; principles, procedures, and problems in the teaching of laboratory courses; prerequisite to directed teaching in 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.
- 498 DIRECTED RESEARCH IN INDUSTRIAL ARTS FOR ELEMENTARY SCHOOL (1-3)**
Prereq: Tech 395. Developing industrial arts content with emphasis on the relationship between industrial arts and the elementary school curriculum. May be taken three times.
- 499 SENIOR PROJECT (1)**
Prereq: junior or senior standing; technology major. 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.

Interdisciplinary Programs

Program in American Culture

The Program in American Culture is intended to serve those students and faculty who are interested in the study of American culture and find that important aspects of our cultural institutions, cultural artifacts or cultural values are not fully revealed by fulfilling the requirements for the major within a single department. Whenever possible, the program takes advantage of the rich curricular offerings of the various departments and colleges in the University. It supplements these with several conference courses and special topics seminars at the upper-division level.

The major in American Culture is of interest to students seeking a liberal arts education of some breadth as well as some depth. It also offers suitable undergraduate background for specialized study in law, social work, business, theology or other professions, for entry into government service, and for graduate work in American Studies or other areas of liberal arts. Students can gain flexibility in career planning by putting the major together with a minor in a vocational area, or gain additional depth within a discipline by putting it together with a minor or the equivalent in one of the participating liberal arts departments.

Further information and advisement is available from Merrill Lewis (HU 303), director of the program, or from members of the Executive Committee: L. Harris (journalism), J. Hiraoka (ethnic studies), R. DeLorme (history), L. Lee (English), and W. Stoeber (liberal studies). Students can also direct general inquiries to the Liberal Studies Department.

BACHELOR OF ARTS

Major 70 credits

General Requirements (36-38 credits)

- Hist 366, 367, or equivalent (10)

- Eng 317, 318, or equivalent (8)
- Two courses in the social sciences, selected under advisement from Anth 201 or Soc 202; Pol Sci 101 or 250; Econ 204 or Hist 360; Geog 201, 345 (8-10)
- Art History 360 or 460 (and prerequisite: one course from Art History 220, 230, 240) (6)
- American Culture 302 — Introduction to American Culture (4)

Individualized Program of Study (32-34 credits)

A program formulated by the student, a member of the American Culture faculty, and the director of the program and approved by the Executive Committee. No program may substantially duplicate an existing department program. And ordinarily final approval of the student's course of study must come before the student reaches senior status.

Possible areas of special interest that students may select to study include the American Character, Myth and Folklore, Religion in America, Science and Technology, or Regional Studies — particularly the Pacific Northwest. Students may complete the individualized program of study with courses from other interdisciplinary programs such as Canadian-American Studies, Women Studies, Ethnic Studies, and Recreation and Parks. A minor from an interdisciplinary area may provide most of the credits necessary to complete the individualized program of study.

COURSES IN AMERICAN CULTURE:

Courses numbered X37; X97; 300, 400, 417; 445 are described on page 28 of this catalog.

302 INTRODUCTION TO AMERICAN CULTURE (4)

Prereq: two other courses from the general requirements for the major.

499 SPECIAL PROBLEMS (4)

Prereq: American Culture 302 and senior status. An approved 417 seminar may be substituted. A research or field project designed to demonstrate the student's competence in working with the tools of the discipline.

Canadian-American Studies Program

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 as such 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 state, federal and local level will find the programs of substantial value, especially in the border states and counties. The major is also 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.

Program advisement is available from R. L. Monahan, director (676-3728 or 676-3284), Canada House or AH 226.

BACHELOR OF ARTS

Canadian-American Studies Major

50 credits

- Core Courses: Canadian-American Studies 200, 400, 401; Eng 334; French 280; Geog 313; Hist 277; Pol Sci 406
- Select 10 credits from French 450 (French-Canadian literature); Hist 477; Pol Sci 418g
- Select credits to complete the major from list above or list following: Anth 361, 411, 461, 462; EdAF 414; French 367 (French-Canadian literature); Geog 310, 345 (Regional Historical Geography-Canada); Hist 468, 477; Pol Sci 301

Minor 30 credits

The minor is applicable to either the Bachelor of Arts or the Bachelor of Arts in Education degree.

- Canadian-American Studies 200; Geog 313; Hist 277; Pol Sci 406
- 12 additional credits under advisement from Canadian-American Studies 400, 401; Eng 334, French 280, 450 (French-Canadian literature); Geog 345 (Regional Historical Geography-Canada); Hist 477; Pol Sci 418g

COURSES IN CANADIAN-AMERICAN STUDIES

Courses numbered X37; X97; 300, 400, 417; 445 are described on page 28 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 AND PAPER WITH TWO INSTRUCTORS (5)

Prereq: Canadian-American Studies 200 and 15 credits from the core courses. Directed interdisciplinary research on a problem or in an area of interest. At least two instructors from two disciplines must be involved with this course.

East Asian Studies

In recognition of the increasing importance of East Asia in human affairs, Western Washington University established the Program in East Asian Studies in September of 1970. In September 1978 the program was renamed the Center for East Asian Studies. The Center 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 that has traditionally been slighted in American education. Second, it prepares students who wish to teach courses on East Asia in community colleges and high schools or who are attracted by the growing job opportunities related to East Asia in business and government. Third, it provides solid undergraduate training for students who plan to enter East Asian graduate studies at Western or elsewhere. Majors have recently been accepted into graduate programs at such schools as Yale, Stanford and Berkeley.

Presently, the Center offers a minor in East Asian Studies. Students interested in majoring in East Asian Studies should consult with the Department of Liberal Studies to set up a student-faculty designed interdisciplinary major.

Such student-faculty designed majors have tended to fall into one of the following optional patterns:

Core courses: (usually taken by all students):

- East Asian 201 and 202 (10 cr); or: Hist 280 or 281 and Lib St 272 or 273 or 274 (9 cr) and

Interdisciplinary

one year of Chinese, Japanese, or Korean language (15 cr)

- 45-46 additional credits distributed according to one of the following options:

Option I

- Second and third year of Chinese, Japanese, or Korean (up to 30 cr)
- Remainder of credits (i.e., at least 13) distributed under advisement among those courses listed below as approved by the Center. Most of these credits should be in courses dealing with the country whose language the student is learning

Option II

- Second year of Chinese, Japanese, or Korean (15 cr)
- Remainder of credits (28-31) should be distributed under advisement among the courses listed below as approved by the Center. Most of these credits should be in courses dealing with the country whose language the student is learning

Option III

- Courses on China, Japan, Korea, and Mongolia from the approved list distributed as follows: four courses on one country; three courses on a second country; two courses on a third and fourth country
- Electives from the approved list to bring total credits (core-plus Option III) to 70 credits

Prospective majors should note that only Options I and II are recommended for those contemplating graduate work in East Asian Studies.

Prospective majors should select a committee of advisers from the list of faculty members associated with the Center appended below. At least three academic disciplines should be represented on the committee, and its chairman should be in the student's primary field of interest.

Minor 30 credits

The following minor is applicable to either the Bachelor of Arts or Bachelor of Arts in Education degree. It 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.

- At least one of the following: East Asian 201, 202; Hist 280, 281; Pol Sci 307
- Remaining credits to be selected from the following list of courses in East Asian Studies and courses from other parts of the University approved by the center faculty.

COURSES IN EAST ASIAN STUDIES

Courses numbered X37, X97, 300, 400, 417, 445 are described on page 28 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 religious, 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.

311 TRADITIONAL KOREA (4)

Prereq: Hist 280 or 281 or one of the East Asian 301-303 sequence. A general survey of Korean history before 1876.

312 CONTEMPORARY KOREA: KOREA AFTER WESTERN CONTACT (4)

Prereq: Hist 280 or 281 or one of the East Asian 301-303 sequence. A general survey of contemporary history of the Korean people since 1876.

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.

Courses from other parts of the University approved by the center faculty for inclusion in East Asian Studies student-faculty interdisciplinary majors and minors: Anth 362, 424, 464; Art Hist 370, 470, 471; Chinese 101, 102, 103, 201, 202, 203, 300, 301, 302, 303; Ethnic Studies 205; Fair 251; Geog 315; Hist 280, 281, 390 (relevant topics), 370, 371, 372, 480, 481, 482, 483, 484, 485, 499 (relevant topics); Japanese 101, 102, 103, 201, 202, 203, 300, 301, 302, 303; Lib St 272, 273, 274, 275, 370, 371; Phil 350; Pol Sci 307, 309, 418c, 430, 431, 476.

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

East Asian Studies students may also spend up to one year at Asia University or Tsuda College, both in Tokyo, as exchange students.

For further information and advisement, consult the director of the Center for East Asian Studies, Dr. George Drake, or one of the following participating faculty: M. Fisher (liberal studies, India), E. H. Kaplan (Chinese history and language), H. C. Kim (education, Korea), L. Kimball (anthropology, Southeast Asia), E. Krauss (political science, Japan), H. Schwarz (China; Mongolia), M. Yusa (Japanese culture and language).

Ethnic Studies

The Program in Ethnic Studies provides a major-minor concentration and individual courses for students interested in the issue of cultural diversity in American society. The American experience as it affects minority groups is the context

for the study of ethnicity and ethnic groups. The boundaries of study include general topics on majority/minority conflicts, cultural pluralism, and comparative studies in community, creative expression and education.

Courses applicable to the major-minor concentration are offered by various academic units. A program of study should be developed with the help of the Ethnic Studies advisory group.

The Ethnic Studies Program can benefit students who will be working with diverse groups, particularly in public service positions and in education.

Further information and advisement about the program is available from Ethnic Studies faculty: Raul Arellano, Jesse Hiraoka, Robert H. Kim.

BACHELOR OF ARTS

Major — Ethnic Studies 55 credits

Required Courses

- Two from ES 201, 202, 203, 205
- 12-18 hours in additional ethnic studies courses, including at least one independent study project

Related Courses

- Additional hours to complete major to be selected from: Anth 361, 462; EdAF 410, EdCI 464; Eng 234; Lib St 371, 372; Hist 275, 361, 387; Pol Sci 313, 346; Soc 261, 340, 367, 369; Fairhaven courses where applicable

Minor — Ethnic Studies 30 credits

Required Courses

- Two from ES 201, 202, 203, 205
- 6-12 hours in additional ethnic studies courses

Related Courses

- Additional hours to complete minor to be selected from courses listed in major related courses.

BACHELOR OF ARTS IN EDUCATION

Major — Secondary 55 credits

Adviser: Robert H. Kim

Prospective secondary teachers are advised to complete the Ethnic Studies major described above.

Students must also complete the specific program requirements for social studies education, including the social studies minor, as outlined in the College of Arts and Sciences Interdisciplinary Program section. Completion of this major/minor program leads to a teaching endorsement in social science at the secondary level.

COURSES IN ETHNIC STUDIES

Courses numbered X37; X97; 300, 400; 417; 445 are described on page 28 of this catalog.

Many courses which are applicable to the major-minor concentration are offered regularly by other academic units; see above "related courses." The following courses are offered specifically through the Ethnic Studies Program:

- 201 AFRO-AMERICAN EXPERIENCE (3)
An introduction to the Afro-American experience; history and culture of Blacks in the USA, the unique nature of their experience and their contributions to American culture.
- 202 INTRODUCTION TO INDIAN STUDIES (3)
The American Indian from earliest times to the present: the origin of American Indians, stereotypes and misconceptions about the American Indian, legislation, education, health and present-day problems.
- 203 HISPANIC PEOPLES OF THE UNITED STATES (3)
The history, society and culture of the Hispanic peoples in the U.S. from the times of exploration and settlement; historic conflicts affecting economic and political institutions; immigration and settlement. Issues in politics, economics and education; the Chicano Movement.
- 205 INTRODUCTION TO ASIAN AMERICAN STUDIES (3)
Survey of the history of Asians in the United States; socio-political problems encountered by Chinese, Japanese, Filipino and Korean communities in America, past and present.
- 301 COMPARATIVE MINORITY STUDIES (3)
Prereq: ES 201, 202, 203, or 205. Foundations of history, culture and the development of the culturally different groups in the United States. Emphasis upon comparative minority relations and the concepts and terminology necessary to ethnic studies.
- 434 STUDIES IN MULTI-ETHNIC LITERATURE (3)
Prereq: ES 201, 202, 203, or 205; or any college course in English or foreign literature. Themes and views of American ethnic literature including Black, Asian American, Native American, Irish American, Chicano and Jewish-American literatures.

Freshwater Studies

Western has had a long-standing interest in the study of water, as well it should in view of its location and tradition of environmental concern. Dozens of streams, hundreds of lakes and an abundance of ground water resources make this University a logical place to study water. The Freshwater Program is inter-college in nature and draws upon faculty and courses offered throughout the University.

More than 30 courses having directly or indirectly to do with the study of water exist in the current catalog, and a major and minor are described below.

For further information and advisement, contact Dr. David F. Brakke, (206) 676-3510.

COURSES IN FRESHWATER STUDIES

Courses having to do with freshwater are held in various parts of the university. (Note: Many have prerequisites. The interested student should study the full course descriptions in the relevant sections of the catalog.)

BACHELOR OF SCIENCE IN FRESHWATER STUDIES

Major 110 credits

- Biol 121, 122, 123
- Chem 121, 122, 123
- Geog 203 or Geol 211
- Mathematics 124
- Biol 325
- Biol 402 or Hux 333
- Geog 331
- Geol 472
- Hux 361

Plus Electivas (under advisement) to complete ~10 credits:

- Biol 204, 305, 310, 311, 312, 340, 345, 403, 425, 456, 462
- Chem 251 or 333, 351, 354
- Fair 415
- Geog 422, 423
- Geol 214, 310, 416, 473
- Hux 432, 433, 446
- Physics 131, 132, 133
- Independent study courses (see individual listings)

Minor 25 credits

- Biol 325
- Biol 402 or Hux 333
- Electives under advisement to total 25 credits

General Science

Recommendation for teaching endorsement in general science normally requires completion of the major in general science.

BACHELOR OF ARTS IN EDUCATION

Major — Elementary 45 credits

- Physics 131; Astron 103 and/or Geog 331
- Chem 115 or 121; Geol 211, 212
- Biol 121
- Electives under advisement*

Major Concentration 75 credits

This concentration satisfies both the major and the minor for junior high school teachers.

- Physical Science — 22 credits under advisement* including Physics 131, 132, 133, and Chem 115 or 121 or equivalent
- Biological and Earth Sciences — 22 credits in one field and 15 in the other selected under advisement, including Astron 315 or equivalent
- Sci Ed 399 and 492
- Gen Sci 405 or equivalent
- Electives under advisement*

COURSES IN GENERAL SCIENCE

Courses numbered X37, X97, 300, 400, 417, 445 are described on page 28 of this catalog.

405 HISTORY OF SCIENCE (5)

Prereq: 30 credits in biological and/or physical science. The nature, methods, and development of science and the role of science in society; recommended for all science majors.

Industrial Design

The Bachelor of Science degree in industrial design provides an interdisciplinary course of studies that develops graduates for professional activities as designers, planners, managers, illustrators, or specialists in the areas of industrial production, design education or marketing.

ADVISEMENT

Early consultation with the adviser of the industrial design program, Mr. Marvin A. Southcott, director of the Western Design Center, Department of Technology, is essential.

Individualized minors in industrial design can be arranged. All minors require prior approval of the program director.

Industrial design majors must complete the usual General University Requirements (GUR). Some of the required courses for the major also satisfy this obligation.

It is possible to complete this degree in four years, but some students take longer. Majors are advised to plan carefully to meet the requirements for graduation.

To graduate, each major must fulfill the GUR, acquire 60 upper-division credits (the major includes approximately 47 upper-division credits depending on options elected) and accumulate a minimum of 180 credits.

*John A. Miller, Department of Chemistry and coordinator for Science Education, is the adviser for this program.

PLAN AHEAD: Industrial design majors should aim to satisfy prerequisites pertinent to the following course options: Art 202; Math 124, 155, 240; BA 330; Soc 315; Physics 131; Tech 333.

Note: The electives recommended are for professional enrichment, identified as a guide, not required for graduation.

PROFESSIONAL SERIES CERTIFICATION

Arranged by the director of the program, a professional review board will determine certification of readiness.

To certify, the final four quarters prior to graduation have special needs. Certification for entry into the Professional Series (Tech 315, 316, 415, 416) involves the following: (1) present an approvable portfolio of progressive accomplishment; (2) maintain a GPA of 3.0 or better in courses required for this program (in particular); (3) have no more than 60 credits left to complete for graduation; and (4) present a course plan for each of these final four quarters in which a manageable load does not exceed 15 credit hours per quarter.

Note: An approvable portfolio will display acquired drawing techniques, design competence and imaginative exploration, and knowledge of materials and production processes.

RECOMMENDED:

Industrial design majors should take special problems (1 credit each) while attending courses in woods, metals and plastics to gain professional design techniques while learning about these materials.

BACHELOR OF SCIENCE

Major 110 credits

Basic Core: Industrial Design/Technology
40 credits

- Tech 210, 214, 215, 221 or 222 or 223, 224, 231 or 270 or 280
- Tech 309, 311, 313, 333

Professional Practice Series: 20 credits

- Tech 315, 316, 415, 416

Supporting Courses: 50 credits

- Mgmt 304, FMDS 330
- Psych 201 or Lib St 105
- Physics 131, 132
- Art 202, 370
- Any art history course except Art Hist 190 (6-10)
- Math 240 or Soc 315
- Math 124 or 155 & 156
- Computer Science — any programming course

Recommended: These courses are suggested for a more comprehensive foundation for professional practice.

- Tech 240, 260, 270, 303, 310, 331, 335, 340, 341, 360, 370, 391, 400, 402, 418, 433, 434, 473
- Mgmt 271
- Home Econ 175, 375
- Art Hist 220
- Chem 115, 208, 209
- Physics 133
- PE 301

Minor 25 credits

Approved courses selected from the industrial design major basic core, under advisement of industrial design program adviser.

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. The following minor is applicable to either the Bachelor of Arts or the Bachelor of Arts in Education degree. A major in Latin American Area Studies is available through the student-faculty designed majors program (see Liberal Studies section of this catalog).

Minor 30 credits

- 15 credits in Spanish 100 and 200 level courses, or demonstration of proficiency
- 15 credits in courses relating to Latin America

For advisement, consult Dr. Harley E. Hiller, Department of History.

Linguistics

Linguistics describes language from different structural perspectives and is useful to students preparing careers in anthropology, psychology, speech, education and language teaching. It can also be useful to those interested in the nature and implications of language.

Minors

These concentrations in general and applied linguistics may be taken by candidates for the Bachelor of Arts or the Bachelor of Arts in Education degrees. Minors are available in the depart-

Interdisciplinary

ments of anthropology, English, foreign languages and speech.

Basic Courses

- Linguistics 201, 301, 302, 303, 314

Additional work according to department chosen:

- English (Arts and Sciences) — add English 370, 471
- English (Teacher Education) — see English minor with Linguistics Emphasis
- Foreign Languages (either degree) — add a minimum of six credits in a foreign language, selected under departmental advisement
- Anthropology (Arts and Sciences) — add Anth 448 and 5 additional credits selected under departmental advisement
- Speech 373 (for other courses consult the director)

For advisement, consult Mr. Vladimir Milicic (Humanities Building 219), director of Interdisciplinary Program in Linguistics.



COURSES IN LINGUISTICS

Courses numbered X37: X97: 300, 400, 417: 445 are described on page 28 of this catalog.

- 201 INTRODUCTION TO LINGUISTICS SCIENCE (5)
Survey of linguistic method and theory.
- 202 COMPARATIVE LINGUISTICS (3)
Prereq: Ling 201. Principles of language, typology, linguistic geography, comparative methods, and historical reconstruction.
- 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, 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 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.
- 404 LINGUISTICS AND LITERATURE (3)
Prereq: Ling 201 or Foreign Languages 410. Importance of linguistic contributions to literary analysis; linguistics and theory of literature; common problems.

Science Education

Students planning to major in a science for elementary or junior high teaching, see majors in general science, physical science or earth science. Students planning a major in science for high school teaching should consult with appropriate science education advisers within departments.

Questions relating to these courses should be directed to John A. Miller, Department of Chemistry, the coordinator of science education.

GRADUATE STUDY

For concentration leading to a Master of Education degree, see Graduate section of catalog

COURSES IN SCIENCE EDUCATION

Courses numbered X37: X97: 300, 400, 417: 445 are described on page 28 of this catalog.

- 380 SCIENCE FOR THE ELEMENTARY SCHOOL (3)
Prereq: general education requirements in science and mathematics. Selected generalizations and processes in science adaptable to the elementary school; an introduction to theory and practice in science education.
- 381 SCIENCE FOR THE ELEMENTARY SCHOOL (3)
Prereq: Sci Ed 380. Classroom-laboratory study of curricula; observation and participation in public schools. Intended for students preparing to teach at the elementary level.
- 382 PHYSICAL SCIENCE FOR THE ELEMENTARY SCHOOL (3)
Prereq: Sci Ed 380; general education requirements in science or equivalent. Philosophy, concepts, learning experiences and materials for the physical sciences suitable to the elementary grades.

- 383 **BIOLOGICAL SCIENCE FOR THE ELEMENTARY SCHOOL (3)**
Prereq: Sci Ed 380; general education requirements in science and mathematics. Philosophy, concepts, learning experiences, and materials for the biological sciences suitable to the elementary grades.
- 384 **EARTH SCIENCE FOR THE ELEMENTARY SCHOOL (3)**
Prereq: Sci Ed 380. Concepts, experiences, and materials from the earth sciences adaptable to the elementary school with emphasis on the elementary grades.
- 399 **SEMINAR IN SECONDARY EDUCATION FOR SCIENCE TEACHERS (1)**
Prereq: admission to the Secondary Teaching Program and a major or concentration in natural sciences. Opportunities and responsibilities of teachers of science in junior and senior high schools. Taken one quarter preceding Sci Ed 492.
- 430 **ENVIRONMENTAL EDUCATION (2-5)**
Prereq: Sci Ed 380 or Sci Ed 492; teaching experience or permission of instructor. Methods of teaching environmental science in selected content areas with related examination of environmental problems.
- 480 **SPECIAL PROJECTS IN SCIENCE FOR THE ELEMENTARY GRADES (2-5)**
Prereq: one course from Sci Ed 381, 382, 383 or 384; permission of instructor. Projects involving science instructional materials and curriculum. Repeatable for credit.
- 490 **SPECIAL PROJECTS IN SCIENCE TEACHING IN THE JUNIOR AND SENIOR HIGH SCHOOL (2-5)**
Prereq: Sci Ed 492 or equivalent; permission of instructor. Projects involving science instructional materials and curriculum. Repeatable for credit.
- 492 **TEACHING SCIENCE FOR THE SECONDARY SCHOOL (8)**
Prereq: Sci Ed 399 and permission of coordinator of science education. Critical study of the goals, curricula and strategies of teaching of the life, earth, physical and general sciences in junior and senior high schools. To be taken one quarter preceding student teaching.
- 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 for credit.
- 582 **SPECIAL TOPICS IN THE PHYSICAL SCIENCES FOR ELEMENTARY SCHOOL TEACHERS (4)**
Prereq: Sci Ed (or Phys Sci) 382 or Sci Ed 380, 381 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 380 and 381 or 383 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 380 and 381 or 384 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 for credit.
- 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.
- 690 **RESEARCH (6)**
Prereq: admission to program, permission of instructor. Restricted to thesis-related research; not more than six credits allowed toward the minimum of 45 credit hours.

Graduate Courses

Courses numbered 500, 517, 545, 597 are described on page 28 of this catalog.

Admission to Graduate School or special permission required. See Graduate 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 preservice elementary school teachers.
- 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. May be repeated for elective credit.

Social Studies Education

Social studies education is an interdisciplinary history and social science program for persons who seek elementary or secondary teaching endorsements. Social studies education courses and curriculum are directed by the Social Studies Program Committee. Questions relating to social studies classes and certification programs should be directed to Dr. Peter J. Hovenier, chairman, and to individual advisers listed below.

Secondary Education

In order to be certified as a secondary social sciences teacher, students must complete the following:

- An approved academic degree program* in:
Anthropology — Adviser: Mr. Howard Harris
Economics — Adviser: Dr. David Nelson
Ethnic Studies — Adviser: Dr. Robert H. Kim
Geography — Adviser: Dr. Thomas A. Terich
History — Advisers: Dr. Harry Jackson;
Dr. Harley E. Hiller
Political Science — Adviser: Dr. Ralph E. Miner
Psychology — Adviser: Dr. Vernon O. Tyler
Sociology — Adviser: Dr. John G. Richardson

or

An interdisciplinary student-designed social studies major that has been approved by the Social Studies Program Committee. — Adviser: Dr. Peter J. Hovenier

- Certification requirements as required by the Educational Curriculum and Instruction Department.
- Soc St 426 and Hist 391
- The Social Studies Minor
- Grade point average of all social science courses needed for certification must be at least 2.75

Completion of this major/minor program leads to a teaching endorsement in social studies at the secondary level. It is not possible to receive an endorsement in social studies on the basis of a minor only.

*See appropriate catalog sections and/or advisers for approved degree programs.

Elementary Education

Students who seek elementary certification may select the social studies major together with the elementary education minor. A 2.75 GPA will be required in all courses taken to satisfy this major. The elementary teaching certificate will carry a supporting endorsement for social studies K-8.

Major — Social Studies

45 credits

Adviser: Dr. Peter J. Hovenier

(For Elementary Education minors only)

- Hist 103, 104; Geog 201, 311
- Anth 201
- Pol Sci 250
- Econ 203 or 446
- 12 credits *under advisement* in one social science, 10 of which must be upper-division

Social Studies 325 is required in addition to the above. History 391 is recommended.

Minor 32 credits

Adviser: Dr. Peter J. Hovenier

Required Courses:

- Hist 103, 104
- Geog 201
- Pol Sci 250
- Econ 203 or 446
- Electives *under advisement* to complete total unit requirement

Elementary students will usually be required to take Hist 391.

Secondary students who major in history, economics, geography or political science may count up to 8 credits of their major toward the completion of the social studies minor.

COURSES IN SOCIAL STUDIES EDUCATION

Courses numbered X37; X97; 300, 400; 417; 445 are described on page 28 of this catalog.

325 SOCIAL STUDIES FOR THE ELEMENTARY SCHOOL (5)

Prereq: junior status or admission to teacher education. Social studies methods, curriculum, objectives and broad exposure to contributing social sciences.

426 SOCIAL STUDIES FOR THE SECONDARY SCHOOL (3)

Structures, materials and strategies for teaching social studies and history at the junior and senior high school levels.

435 USING COMMUNITY RESOURCES IN SOCIAL STUDIES (3)

Prereq: junior standing. Course explores community resources and the incorporation of the resources in the curriculum.

446 LAW FOCUSED TEACHING AND CURRICULUM (1-5)

Prereq: permission of instructor. Course to enable teachers to teach about criminal justice system, police, juvenile justice, consumer law, due process, etc. Course will provide teachers with tested classroom procedures, substantive law and field experience with justice agencies.

Student/Faculty Designed Interdisciplinary 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. This major may include appropriate courses from any department, program or college at Western for which the student is qualified. The student/faculty-designed interdisciplinary major leads to a degree of Bachelor of Arts or Bachelor of Science in the College of Arts and Sciences. For information about this program, contact the Department of Liberal Studies or the Academic Advising Center.

Terrestrial Ecology

BACHELOR OF SCIENCE IN TERRESTRIAL ECOLOGY

Western Washington University 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 the campus. Within this region are three national parks, three national forests, hundreds of miles of shoreline, and numerous other natural features. This ecology program is designed to prepare students for a career taking advantage of this outdoor laboratory. Because of the complex interactions in natural systems, the study of ecology draws on many disciplines. Therefore, to provide students background knowledge, the core program is necessarily broad.

In addition to the plant, animal and freshwater ecology courses identified below, other ecology-oriented courses — terrestrial and marine — are available from Biology, Geography, Huxley and Fairhaven. Most of these latter courses have prerequisites, so interested students should examine the full course descriptions in the relevant sections of the catalog.

Students who choose to major in terrestrial ecology can fulfill the requirements of a Bachelor of

Science degree through the Department of Biology or through Huxley College of Environmental Studies. For additional course and specific degree requirements, see the Biology Department or Huxley College of Environmental Studies.

Major Concentration 110 credits

Required Core Courses

- Biol 121, 122, 123
- Two courses from Biol 310, 311, 312
- Biol 340 or Hux 363
- Biol 379 or 403
- Biol 452, 490
- Ecology Core: Biol 325, 404; Hux 333, 431
- Chem 121, 122, 123, 251
- Chem 333 or Hux 361
- Math 124

Electives — See respective departments.

Advisers: Rich Fonda, Biology; Tom Lacher, Huxley



Visual Communication Education (VICOED)

The Bachelor of Science degree program in VICOED is designed to prepare graduates to

Interdisciplinary

enter industry as production, supervisory, or management personnel in the field of visual communication, and to prepare prospective teachers in the academic background necessary for curriculum development and instruction in secondary schools which are planning on carrying forward programs in visual communication education. Early consultation with the director of VICOED is essential.

BACHELOR OF SCIENCE

VICOED Concentration 110 credits

- Art 101; Art 270 or Tech 214
- Eng 201 or 202 or 301 or 302 or 401 or Journ 104
- Broadcast 340
- Tech 210b, 240, 260, 340, 341, 379, 440, 441, 444, 447, 448
- Take 22 credits from two of the following areas; maximum of 10-12 from one area:
 - Industrial Graphics (technology)
 - Graphic Arts (technology)
 - Photography (technology)
 - Graphic Design (art and technology)
 - Professional Writing (English and journalism)
 - Television (speech and technology)
 - A/Visual (technology)
- Chem 208 and 209
- Acctg 241; FMDS 330
- Math 124 or 240, or Comp Sci 110
- Psych 320
- Take 11 credits selected from art, economics, business administration, accounting, sociology, anthropology, mathematics, physics, chemistry, psychology, computer science or teacher certification.

See departmental sections of the catalog for descriptions of these courses.

Teacher Education Program

Students enrolling in VICOED for teacher certification must complete the requirements for the Bachelor of Science program described above, satisfy the professional education requirements, and complete Technology 391, 488, 491, 493, 496 prior to student teaching. This program might require up to three extra quarters to complete.

Women Studies

The Women Studies Program offers students an interdisciplinary approach to the particularly female dimensions of human experience and thought. It provides: (1) electives for those with a general interest in learning more about women, (2) preparation for those whose career choices

involve working with or for women, and (3) undergraduate training for those who intend to pursue women's issues in their graduate or professional programs.

The minor includes four core courses and 14 hours of electives to be selected according to the individual needs of each student from relevant courses in the various departments.

Students may design an interdisciplinary major through the College of Arts and Sciences or Fairhaven College.

Dr. Kathryn Anderson, Fairhaven College, is the adviser for this program.

Minor 30 credits:

Core: 16 credits.

- WS 111: Introduction to Women Studies (4)
- Anth 353: Sex Roles in Culture (4)
- Eng 338: Women and Literature (4)
- Psych 219: Psychology of Sex Roles (4)
- Electives: 14 credits from Anth 453; Eng 314, 321, 341; Fair 411, 414; Health Ed 152; Hist 390; Pol Sci 345; Psych 217; Soc 455; WS 311, 313, 315.

COURSES IN WOMEN STUDIES

Courses numbered X37; X97; 300, 400, 417; 445 are described on page 28 of this catalog.

111 INTRODUCTION TO WOMEN STUDIES (4)

Introduction to the issues, questions, conceptual frameworks and methods basic to a study of human societies, their institutions and cultural artifacts from a perspective that comprehends women's experience.

311 AMERICAN WOMEN STUDIES: 1620-1850 (5)

Prereq: Hist 103 or 104 or Eng 216 or another WS course. Women's role in American society from colonial times to the mid-nineteenth 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 WS 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 202 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.

COLLEGE OF BUSINESS AND ECONOMICS

Dr. Dennis R. Murphy, Dean

Objective of the College

It is the function of the College of Business and Economics to prepare men and women for positions of leadership and stewardship in the management and administration of complex organizations. The College develops managerial skills, analytic economic skills, and interpersonal sensitivities, as well as quantitative and accounting skills. In addition, the College prepares teachers for high schools and community colleges in the business disciplines.

It is the College's objective that essentially all students in the College will receive sufficient computer instruction, both in specific courses and in the general curriculum, to become computer literate.

The program is primarily upper-division, based upon a broad liberal-arts education in the first two years. Individual skills are developed sufficiently to achieve entry-level employment in many fields, but the College tries to motivate and orient the student for a lifelong learning experience. The College develops sensitivity to environmental aspects of business enterprise, promotes a commitment to ethical behavior, and provides a strong emphasis upon forward-looking, goal-setting behavior in the business world while encouraging an active role of leadership in the community.

The College of Business and Economics, established as a separate unit in 1976, is organized into five departments: Accounting; Economics; Finance, Marketing and Decision Sciences; Management; and Office Administration/Business Education. These departments are interdependent and their programs draw upon the whole College.

Department Chairs

Mr. Ronald N. Savey Accounting
Dr. K. Peter Harder Economics

Dr. Robert C. Meier Finance, Marketing &
Decision Sciences
Dr. Eugene Owens Management
Dr. Hubert N. Thoreson Office Administration/
Business Education

Directors

Dr. Earl D. Benson MBA Program
Mr. Maxwell C. King ... Small Business Development
Center and Small Business Institute
Dr. David M. Nelson Center for Economic
Education

Academic Programs Leading to Undergraduate and Graduate Degrees

Accounting BA
Business Administration BA
Economics BA
Business Education BA/Ed, M/Ed*
Office Administration BS
Master of Business Administration MBA*

Joint Majors

Interdepartmental majors are given in Accounting-Computer Science, Accounting-Economics, Business Administration-Computer Science, Economics-Mathematics and Economics-Political Science. See Departments for details.

Admissions

The College of Business and Economics is currently experiencing such severe enrollment pressure that selective admission procedures are necessary. Consequently, priority for enrollment

*Consult the Graduate School for further details.

College of Business & Economics

in upper-division courses (300 and above) is given to students who have been officially admitted to the College. Early declaration as a "pre-major" in the college is advised for all interested students. Immediately after satisfying departmental requirements for acceptance as a major, the student should complete the official major declaration process to assure registration priority.

For admission, a student must have earned at least 75 quarter hours of college credit. Although work experience and individual circumstances will be considered, at the present time admission is limited to students who meet GPA limits established for each major. See departments for details. Announcements of changes in standards will be published in the Class Schedule.

Students may enroll in lower-division courses without formal admission into the College of Business and Economics.

Applications for admission may be made directly to the appropriate department of the College of Business and Economics. Academic advisement is provided by College of Business and Economics faculty.

See the Admissions section of this catalog for policies and procedures relevant to admission to Western Washington University.



Requirements for Bachelor's Degree

- 180 quarter hours of credit
- No fewer than 60 credits in upper-division study; some majors, however, may exceed 60
- Resident Study: A minimum of the final year's studies (45 hours credit)
- Scholarship standard: A cumulative grade point average which satisfies minimum GPA limits established by the University
- General University Requirements must be completed before a baccalaureate degree is granted
- Majors: major area emphasis and requirements are specified in the departmental sections

- Electives: 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 72 credits in areas other than Accounting, Business Administration and Economics
- 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
- Graduation and degree application: refer to the "General University Requirements" section for procedures to be followed.

Minor

In addition to the majors provided by the five departments, a minor makes an excellent addition to a specialized program in other areas of the University. This gives relevant, realistic, and applicable qualities to those valuable skills developed in other more abstract and theoretic departments. The combination of a minor with a major in Speech, English, Journalism, VICOED, Home Economics, Foreign Languages, or 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.

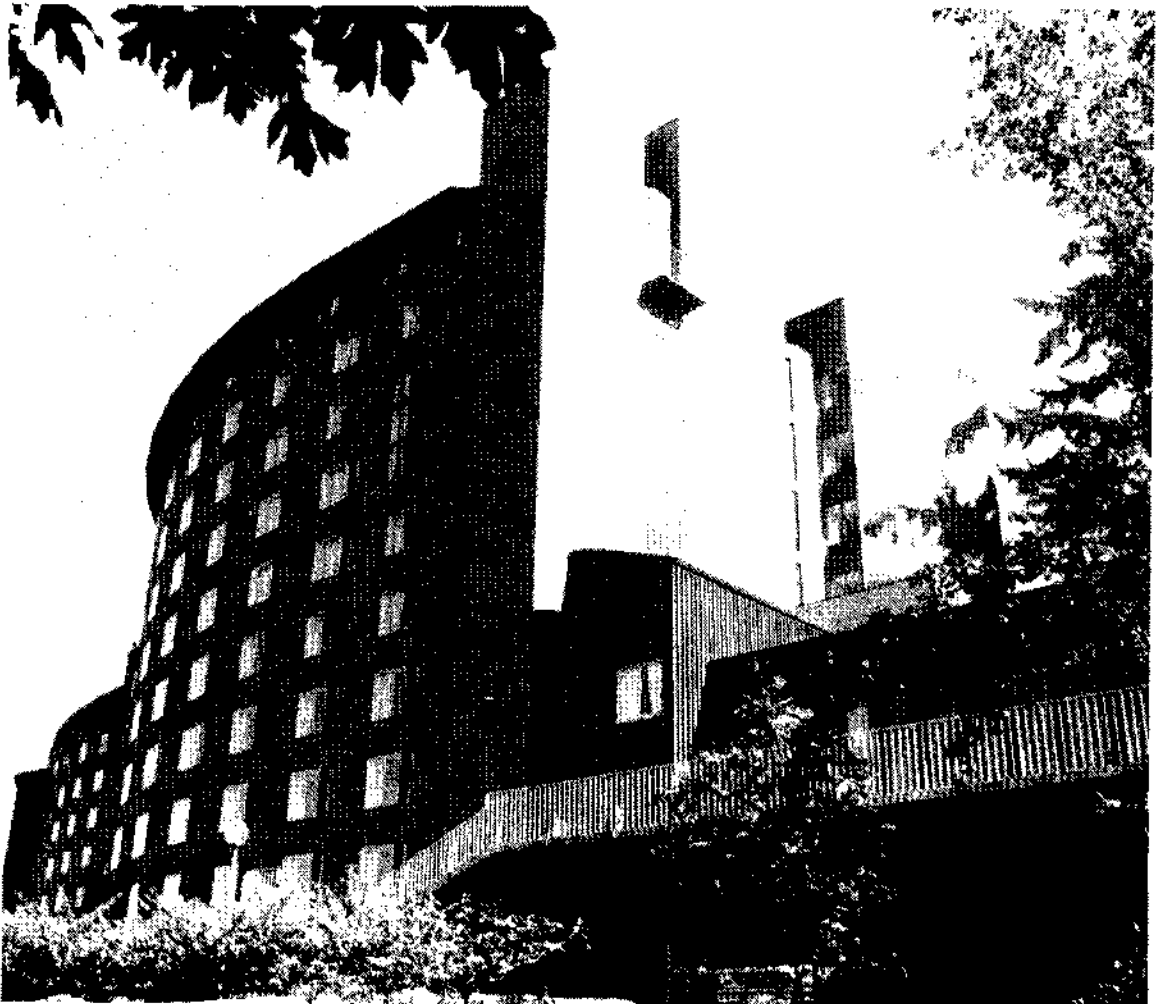
Small Business Institute (SBI). The Small Business Institute provides free advice to small businesses. Students can become involved and earn College credit while studying actual enterprises and helping local businesses solve problems.

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

Departments, Courses & Programs

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 class schedule, the Summer Catalog and bulletins of the Center for Continuing Education.



Mathes, Nash residence halls

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 or governmental service. An accountant in private business will typically work in such positions as cost accountant, tax accountant, treasurer, auditor, budget officer, business manager or controller. The certified public accountant offers services as a professional person to the general public for the purpose of installing accounting systems, providing tax counsel and compliance, and auditing accounting records. For this work the CPA certificate is necessary. Governmental employment also offers varied opportunities analogous to those found in the private sector.

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, we recommend that prospective accounting students take four years of English and at least three years of mathematics in high school.

MAJOR DECLARATION

In addition, the student must have completed the following courses with a minimum grade point

average of 2.75: Accounting 241 and 242, Economics 203 and 204 and Math 156.

To declare a major in accounting, a student must have completed at least 75 credit hours with a minimum cumulative grade point average of 2.75. The minimum grade standard may be adjusted each term; however, any changes in the standards will be published in the class schedule.

A student currently enrolled at Western 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. A student transferring from another institution will be notified prior to enrollment whether he/she has been accepted into the major or has been admitted to the University as a "pre-major."

Students currently enrolled at Western who do not yet satisfy requirements for acceptance as majors in the Department of Accounting are urged to declare as pre-majors in the College of Business and Economics. This process may be completed with the departmental secretary and assures proper advisement and registration priority.

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 to all upper-division courses.

1. Students officially declared as majors in Accounting, Accounting/Computer Science, or Accounting/Economics.
2. Students who are officially declared majors in other departments in the College of Business and Economics.

Accounting

3. Other students who have completed Accounting 241, 242 and 243 (or equivalent at other institutions).

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

ACCOUNTING FACULTY

- RONALD N. SAVEY (1976) Chair
Associate Professor. BA, Western State College (Colo.); MBA, University of Denver; CPA, States of Colorado and Washington.
- BRUCE E. BROWN (1982) Assistant Professor. BS, Iowa State University; MA, University of Iowa; CPA, State of California.
- CODY E. BRYAN (1977) Assistant Professor. BGE, University of Nebraska (Omaha); MBA, University of Puget Sound; CPA, State of Washington.
- JAMES J. JURINSKI (1983) Assistant Professor. BA, Hamilton College; MLS, University of British Columbia; MT, Portland State University; JD, Lewis & Clark Law School; CPA, State of Washington.
- JULIE A. LOCKHART (1982) Assistant Professor. BS, MS, University of Illinois; CPA, State of Illinois.
- LARRY L. LOOKABILL (1985) Associate Professor. BS, Portland State University; MBA, University of Washington; PhD, Stanford University; CPA, State of Oregon.
- JOHN A. RUDE (1981) Assistant Professor. BB and MA, Western Illinois University; ABD, Kent State University; CPA, State of Illinois.
- WILLIAM M. SAILORS (1974) Associate Professor. MBA, MS Engr., University of Southern California; BSME, University of Illinois; CPA, States of Washington and California.
- STEPHEN V. SENGE (1985) Assistant Professor. BA, California Western University; MPA, Denver University; ABD, Kent State University.

BACHELOR OF ARTS

Major 109 credits

- Acctg 241, 242, 243, 321, 341, 342, 343, 365, 367, 370, 371, 441, 461
- 6 upper-division accounting credits under advisement
- FMDS/MGMT 255, 482, 495
- FMDS 330, 341
- MGMT 271, 302, 360
- Econ 203, 204, 409
- Math 156

*Combined Major — Accounting/
Computer Science* 108 credits

- Acctg 241, 242, 243, 341, 342, 441, 461
- 6 upper-division credits under departmental approval
- Comp Sci 210, 217, 310, 331, 332, 415, 430, 471
- MGMT 271, 302, 360



Accounting

- FMDS 330, 341
- FMDS 482, 495
- Econ 203, 204
- Math 156, 240*

*May substitute FMDS/MGMT 255 for Math 240.

An interdepartmental major in Accounting/Economics is also offered. See "Economics" section of Catalog for details.

Minor 26 credits

- Acctg 241, 242, 243, 341, 342
- Additional credits in accounting under advisement

COURSES IN ACCOUNTING

Courses numbered X37, X97, 300, 400, 417, 445 are described on page 28 of this catalog.

- 241 PRINCIPLES OF FINANCIAL ACCOUNTING (4)
Introduction to the theory and practice of accounting, including financial statements.
- 242 PRINCIPLES OF FINANCIAL ACCOUNTING (4)
Prereq: Acctg 241. Emphasis on partnership and corporation accounting.
- 243 PRINCIPLES OF MANAGERIAL ACCOUNTING (4)
Prereq: Acctg 242. Introduction to the procedures and techniques with which managers use accounting information to make decisions and to achieve control in business organizations.
- 321 ACCOUNTING INFORMATION SYSTEMS I (4)
Prereq: Acctg 243 and Comp Sci 117. 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 MANAGERIAL COST ACCOUNTING (4)
Prereq: Acctg 243. 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 243. 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 are also examined.
- 365 INCOME TAXATION I (4)
Prereq: Acctg 242. General income tax requirements; special problems relating to individual tax returns.
- 367 FUND AND GOVERNMENTAL ACCOUNTING (3)
Prereq: Acctg 242. Fund and budgetary accounting as applied to municipalities, governmental units, and non-profit organizations.
- 370 LAW OF COMMERCIAL TRANSACTIONS I (4)
Prereq: MGMT 271. Legal principles underlying the law of Contracts, Sales and Secured Transactions.
- 371 LAW OF COMMERCIAL TRANSACTIONS II (4)
Prereq: MGMT 271. Legal principles underlying the law of Agency, Commercial Paper and Documents of Title, Corporations and Partnerships.
- 372 LAW OF COMMERCIAL TRANSACTIONS III (4)
Prereq: MGMT 271. Legal principles underlying the remaining areas of commercial law. Subjects include accountant's legal responsibility, antitrust, bankruptcy, employment, estates and trusts, insurance, real property and mortgages, securities regulation and suretyship.
- 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 will be studied. Utilizes case studies, selected readings for group discussion and guest lecturers with specialized expertise. Will not involve conventional procedural computer programming.
- 431 ADVANCED MANAGERIAL COST ACCOUNTING (3)
Prereq: Acctg 331. Managerial uses of accounting information for planning and control in complex organizations.
- 441 ADVANCED ACCOUNTING THEORY AND PRACTICE (4)
Prereq: Acctg 343. Accounting for business firms organized as partnerships, and introduction to accounting for business combinations — mergers, acquisitions and consolidations.
- 442 ADVANCED ACCOUNTING THEORY (3)
Prereq: Acctg 343. Theory of accounting related to income measurement, assets and equities; uses and limitations of general purpose financial statements.
- 461 AUDITING THEORY AND PRACTICE (4)
Prereq: Acctg 343. Theory and practice related to the auditing environment, including general audit technology, programmatic applications and reporting obligations.
- 462 ADVANCED AUDITING (3)
Prereq: Acctg 461. For the student intending a career as a professional auditor. Readings in current issues, case simulations and presentations by professional experts.
- 465 INCOME TAXATION II (3)
Prereq: Acctg 365. Special problems of partnerships, corporations and trusts; introduction to tax research.
- 466 ADVANCED TAXATION (3)
Prereq: Acctg 465. Advanced techniques used in tax planning. Emphasis on tax research directed toward the individual and the closely held family business; either sole proprietorship, partnership or corporation.
- 467 CPA EXAMINATION REVIEW (3)
Prereq: Acctg 343, 370, 461. A review of selected areas of law, auditing, accounting theory and accounting practices for students preparing to take the CPA examination. S/U grading.

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

Economics

In a world without scarcity, economics as a field of study would be unnecessary. The most challenging task of economics is the study of how to best use resources in the satisfaction of human wants. Today, more than ever, the problems agitating society are predominantly economic. The problems of inequality, discrimination, pollution, energy, growth and stagnation are heavily economic, as are their solutions. Whether as intelligent citizens or as professional economists, we need the perspective and analysis of economics to understand and deal with the realities of life in the late twentieth century.

With appropriate preparation, particularly in the areas of economic theory, statistical methods and computer-assisted data analysis, the career opportunities for young economists are diverse. Economists are most typically employed as researchers and teachers in the educational system, at all levels of government, in the nation's banking and financial institutions, other business firms, and labor organizations. One of the most dynamic career areas for economists has been in business. Business economists are typically involved in planning, 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.

Options I and II require a foundation in economic theory and quantitative skills. Option I also provides opportunity for intensive quantitative research and additional depth in one of several designated areas of emphasis in economics. Option II requires an outside minor and is, therefore, ideally suited for individuals wishing to incorporate skills and knowledge from another department into their major. Option II is fre-

quently pursued by students with a strong interest in the liberal arts. Both options are suitable preparation for employment in public or private positions, as well as for possible graduate study.

In addition, the department offers combined majors in Economics/Accounting, Economics/Mathematics and Economics/Political Science.

Students must consult with an adviser prior to the selection of Option I or Option II, as well as prior to the selection of an "area of emphasis" under Option I, 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.

MAJOR DECLARATION

To declare a major in economics a student must have completed 75 credit hours; completed a course in college algebra (equivalent of Math 103), and Econ 203 and 204, with a grade of "C" or better; carry a cumulative grade point average of 2.75, or have earned at least a 3.0 grade point in three or more economics courses. Further information and major declaration forms are obtained from the department in Parks Hall 315.

ECONOMICS FACULTY

The economics faculty is distinguished by a high degree of professional dedication. All faculty on on-going appointment hold the Ph.D. degree and are engaged in research and consulting activities of consequence at the local, state, national and even international level. In addition, faculty members have a high commitment to quality teaching, personalized student contact and student advisement.

K. PETER HARDER (1970) Chair. Associate Professor, BA, University of Puget Sound; MA, PhD, University of Nebraska.

Economics

- STEVEN E. HENSON (1985) Assistant Professor. BA, California State University; MS, PhD, University of Oregon.
- ERWIN S. MAYER (1953) Professor. AB, Hunter College; PhD, University of Washington.
- DAVID E. MERRIFIELD (1983) Assistant Professor. BS, Willamette University; MA, PhD, Claremont Graduate School.
- MICHAEL K. MISCHAIKOW (1964) Professor. BA, School of Commerce and Finance, Bulgaria; MBA, Hochschule für Welthandel, Austria; MA, PhD, Indiana University.
- DEVINIS R. MURPHY (1979) Professor and Dean of the College of Business and Economics. BA, MA, Western Washington University; PhD, Indiana University.
- DAVID M. NELSON (1977) Associate Professor. BA, Whitworth College; MA, PhD, University of Oregon.
- ALLAN G. SLEEMAN (1977) Associate Professor. BSc (Econ), London School of Economics; PhD, Simon Fraser University.
- PAMELA S. WHALLEY (1985) Assistant Professor. BA, ABD, Indiana University.

Transfer students should contact the department about their major prior to registering to assure that they enter the sequence correctly and to receive departmental evaluation of coursework completed at other institutions.

BACHELOR OF ARTS

Major 80 credits

Basic Core (required in both Options I and II)

- Econ 203, 204, 271, 301, 302, 303, 311
- Math 341
- A minimum of 12 credits from the following main field courses: Econ 325 or 425; Econ 381 or 385; Econ 410 or 415; Econ 462 or 463; Econ 480 or 482

Option I

- Basic Core
- Econ 406, 407
- An area of emphasis, consisting of a minimum of 12 and a maximum of 20 credits, selected under departmental advisement. At least half of these credits must be in economics
- Electives in the College of Business and Economics, under departmental advisement, to complete the required 80 credits of the major

Option II

- Basic Core
- A minor to be selected by the student under departmental advisement, up to a maximum of 25 credits
- Electives in economics under departmental advisement, to complete the required 80 credits of the major

Minor 25 credits

- Econ 203, 204
- Additional courses selected under departmental advisement; at least 10 credits must be at upper-division level

Combined Major — Economics/ Mathematics 100 credits

This concentration is for students who wish considerable depth in both areas, and is particularly suitable as preparation for graduate study in economics.

- Econ 203, 204, 301, 302, 303, 311
- 14 additional credits in upper-division courses in economics, under departmental advisement
- Acctg 241, 242, 243
- Math 124, 125, 126, 205, 224
- Math/Comp Sci 335
- Math 341, 342; or Math 441, 442, 443
- Comp Sci 210
- 10 additional credits in upper-division mathematics or computer science, under advisement from the departments of Economics and Mathematics.

Combined Major — Economics/ Accounting 104 credits

This concentration is designed for students wishing to combine a strong interest in economics and accounting, and who intend to go into careers in business or finance.

- Econ 203, 204, 271, 301, 302 or 409, 303, 311
- 8 additional credits in upper-division economics courses, under departmental advisement
- Acctg 241, 242, 243, 321, 341, 342, 343
- 8 additional credits in upper-division accounting courses, under departmental advisement
- Math 341 or FMDS/Mgmt 255
- FMDS 330, 341
- Mgmt 271, 302, 360
- FMDS/Mgmt 482, 495

Combined Major — Economics/ Political Science 100 credits

This concentration is available for students who have a strong interest in both of these disciplines and whose career interests might be furthered by this integration; for example, in economic careers in government and the legal profession. This concentration is also available to political science students and is cross-listed in that part of this catalog devoted to the political science curriculum.

- Econ 203, 204, 301, 302, 303, 311
- Econ 271 or Math 341
- Econ 410 or 415
- Econ 442 or 485
- 12 additional credits in upper-division economics courses, under departmental advisement
- Pol Sci 250, 270 or 291, 360, 365, 427
- Econ/Pol Sci 491

- A minimum of one course from three of these areas: Pol Sci 320; Pol Sci 345 or 346; Pol Sci 420 or 467; Pol Sci 425 or 426; Pol Sci 462 or 465; Pol Sci 470; Pol Sci 490
- 8-13 additional credits in upper-division political science electives, to complete the total required 100 credits of this program

BACHELOR OF ARTS IN EDUCATION

Major 90 credits

Adviser: Dr. David M. Nelson

- Complete Option II for the economics major, described above, using the social studies minor (described in the College of Arts & Sciences Interdisciplinary section) for an outside minor
- Soc St 426 and Hist 391
- Additional electives in the College of Business and Economics, under departmental advisement

Completion of this major/minor program leads to

a teaching endorsement in economics/social studies at the secondary level.

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 can readily acquire them, must secure special permission for enrollment from the instructor.

COURSES IN ECONOMICS

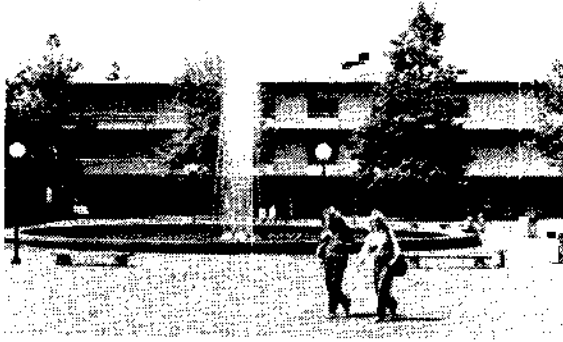
Courses numbered X37, X97, 300, 400, 417, 445 are described on page 28 of this catalog.

203 INTRODUCTION TO MICRO-ECONOMICS (4)

Analysis of the operation and decision making of economic units in a market economy; various competitive conditions: supply, demand, resource allocation, shortages, controls, social costs and social benefits.



Economics

- 204 INTRODUCTION TO MACRO-ECONOMICS (4)**
Prereq: Econ 203. An overview of the modern economy as a system for dealing with the problem of scarcity, with particular emphasis on the market economy. An evaluation of successes, deficiencies and possible alternative futures.
- 205 ISSUES IN ECONOMICS (3)**
Prereq: Econ 203 and 204. Tools and concepts of micro- and macro-economics applied to some of the major policy issues of today.
- 271 QUANTITATIVE METHODS (4)**
Prereq: Econ 203 and 204; Math 103 or equivalent. Enrollment restricted to Economics majors only. Introduction to selected basic mathematical techniques necessary for the study of economics. The emphasis is conceptual and applications oriented. Topics covered will include single variable and multivariate calculus, differentials and elements of matrix algebra as used in economic analysis.
- 301 INTERMEDIATE MACRO-ECONOMICS (4)**
Prereq: Econ 204 and 311. 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.
- 302 INTERMEDIATE MICRO-ECONOMICS (4)**
Prereq: Econ 203 and 271. An analytical approach to the consumer and the firm; the development of market demand and supply schedules; the theory of pricing under conditions of perfect and imperfect market structure; the theory of factor markets.
- 303 THE HISTORY OF ECONOMIC THOUGHT (4)**
Prereq: Econ 203 and 204. Development of economic thought from the Greek philosophers to the present. Emphasis is on the micro, macro and critical traditions in economics following Adam Smith.
- 311 MONEY AND BANKING (4)**
Prereq: Econ 204. Examines the nature and functions of money and the role of commercial 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.
- 325 ECONOMICS OF LABOR (5)**
Prereq: Econ 203, 204. Economics of the labor market; development and functioning of labor unions and collective bargaining.
- 381 AMERICAN ECONOMIC HISTORY (5)**
Prereq: Econ 203 and 204. American economic development from seventeenth century to present; emphasis on resource endowment and evolving social and economic institutions; role of government in this development.
- 383 ENVIRONMENTAL ECONOMICS (4)**
Prereq: Econ 203. Open only to majors in Economics and Huxley College. Economic analysis of environmental quality as a public good. Theory of economic efficiency, the "optimal amount" of pollution; welfare criteria for resource allocation. Implications of the no-growth economy.
- 385 THE ECONOMIC HISTORY OF EUROPE: 800-1800 (4)**
Prereq: Econ 203 or 204. Development of European economies and their economic institutions. Emphasis on the evolution of the major market economies and their most characteristic features.
- 386 COMPARATIVE INDUSTRIALIZATION: 19th CENTURY (4)**
Prereq: Econ 203 or 204. Comparative industrialization in the 19th century. Analysis of the forces, patterns and repercussions of industrialization in several major Western economies.
- 387 THE ECONOMICS OF ENERGY (4)**
Prereq: Econ 203. The role of energy in the modern economy and the key aspects of energy supply and demand. Of special interest are the areas of energy shortages, substitutes, price shifts, and their implications for domestic economic policy, living standards and international trade and finance.
- 401 ADVANCED MACRO-ECONOMICS (4)**
Prereq: Econ 301; Math 341 recommended. Examination of current issues in macro-economic theory and policy. Emphasis on recent U.S. experience, with particular attention given to inflation, unemployment and the balance of payments. Includes selective reading in current professional journals.
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- 402 ADVANCED MICRO-ECONOMICS (4)**
Prereq: Econ 302 and 271 or equivalent; Math 341 and/or Econ 475 recommended. Application of quantitative and theoretical tools in key areas of microeconomics, with emphasis on quantitative models of the consumer, cost and production analysis of the firm, and market analysis. Special topics may include welfare economics and the theory of interest, capital and natural resources.
- 406 ECONOMIC RESEARCH (3)**
Prereq: Econ 301, 302 or 409, and Math 341; Econ 475 recommended. Research methods and methodology with emphasis on those tools needed to develop and complete research projects. S/U grading.
- 407 SENIOR RESEARCH SEMINAR (4)**
Prereq: Econ 406. Research and presentation of an extended paper on an individually chosen topic with guidance given by instructor.
- 409 MANAGERIAL ECONOMICS (4)**
Prereq: Econ 203, Acctg 243; and FMDS/Mgmt 255, or Econ 271 and Math 341. Application of economic principles to the decision-making process. Demand, costs and market structure and their relation to pricing, product choice, capacity and profit level decision making.
- 410 PUBLIC FINANCE (4)**
Prereq: Econ 204. The efficiency, equity and stabilization impacts of public expenditure and revenue programs; emphasis on problems and institutions at the national level.
- 412 BUSINESS FLUCTUATIONS AND FORECASTING (4)**
Prereq: Econ 301, and Math 341 or FMDS/Mgmt 255. Characteristics and major explanations of the prosperity-depression cycle in business, with major emphasis on forecasting. Offered irregularly.

- 415 **STATE AND LOCAL PUBLIC FINANCE PROBLEMS (4)**
Prereq: Econ 204. Exploration of the economic role of state and local government in a market economy and consideration of current issues in state and local government finance. Financial management techniques for state and local government are presented.
- 425 **LABOR MOVEMENTS IN THE UNITED STATES (3)**
Prereq: Econ 203 or 204. Development of labor movements in the United States from 1800.
- 442 **INDUSTRIAL ORGANIZATION AND PUBLIC POLICY (4)**
Prereq: Econ 302 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 economic concepts and information on the operation of the American economy, and methods of economic education in grades K-12. Emphasis on selection, evaluation and use of audiovisual materials, games, simulations and other teaching aids.
- 447 **METHODS FOR TEACHING ABOUT THE NATIONAL ECONOMY IN THE PUBLIC SCHOOLS (3)**
Prereq: Econ 203 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 302 or 409. Theory of international trade and its implications for economic growth and development. Analysis of commercial policies between nations, involving the movement of commodities and factors of production. Included are issues of protectionism, economic integration and the proposals for a New International Economic Order.
- 463 **INTERNATIONAL FINANCE (4)**
Prereq: Econ 311; Econ 301 recommended. Balance of payments, adjustment mechanisms and the international monetary system. Other topics include foreign-exchange markets, international capital markets, foreign-exchange exposure and management of foreign-exchange risk.
- 471 **MATHEMATICAL METHODS IN ECONOMICS (4)**
Prereq: Econ 271 or equivalent, Econ 301, 302. Representation of economic systems in linear and non-linear models. Optimization (extrema of functions of several variables); existence and stability of equilibrium solutions; constrained optimization (Lagrangian methods). Simple dynamic systems.
- 475 **ECONOMETRICS (4)**
Prereq: Econ 203, 204; Math 341 or equivalent. Simple and multiple regression analysis, methods and problems of single equation and simultaneous equation estimation.
- 480 **URBAN ECONOMICS (4)**
Prereq: Econ 203. Economic forces behind urbanization. Economic analysis of urban problems, including land use, transportation and environment. Urban public finance; welfare economics and efficient resource allocation.
- 482 **REGIONAL ECONOMICS (4)**
Prereq: Econ 203 or 204. Problems, resource endowment, and principal policy issues related to economic growth of a region.
- 483 **RESOURCE ECONOMICS (4)**
Prereq: Econ 203; Math 124; one course in statistics. Open only to majors in Economics and Huxley College. Theories for the efficient allocation of natural resources over time. Benefit-cost analysis as a criterion for public choice. Effects of property rights; distributional considerations, social cost.
- 485 **COMPARATIVE ECONOMIC SYSTEMS (4)**
Prereq: Econ 203 or 204. A comparative analysis of the major economic systems; a critical appraisal of underlying philosophies, structures and individual performance.
- 486 **ECONOMIC DEVELOPMENT (4)**
Prereq: Econ 203 or 204. Causes and conditions characterizing the process of economic development. An evaluation of alternative approaches toward development policies.
- 490 **INTERNSHIP IN ECONOMICS (4-10)**
Prereq: eligibility outlined in departmental internship policy statement. Internship in economics.
- 491 **ISSUES IN POLITICAL ECONOMY (4)**
Prereq: senior standing 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.

Graduate Courses

Courses numbered 500, 517, 545, 597 are described on page 28 of this catalog.

Admission to Graduate School or special permission required. See Graduate section of this catalog. These courses are offered irregularly in conjunction with the MBA Program. See the Graduate School section in front of this catalog for a description of the MBA program.

- 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

Principal fields of academic study represented in the department are those of finance, marketing, and management information and decision support systems. The department also provides course work in business policy, business and society, international business, real estate, insurance and quantitative methods.

PROGRAM

Development of the curriculum of the department has been guided by the standards of the American Association of Collegiate Schools of Business. The department provides instruction in academic disciplines which are part of the common body of knowledge in business administration. In addition to offering required foundation and core courses, the department offers electives in upper-division courses which permit students to concentrate in finance, marketing, management information/decision support systems and international business. The department also actively supports professional development programs which meet the educational needs of the regional business and professional community.

THE CURRICULUM

Students normally devote most of the freshman and sophomore years of study to completion of the General University Requirements and the business administration major foundation courses. Several foundation courses may also satisfy General University Requirements, and careful planning may save time for additional elective coursework. Electives which emphasize oral and written communication skills are particularly recommended. The junior and senior years are primarily devoted to business administration core requirements and concentrations.

STUDENT ADVISING

For answers to routine questions students

should consult this catalog and the department's "Planning Guide." Upon acceptance as a declared major, a faculty adviser will be assigned.

FINANCE, MARKETING AND DECISION SCIENCES FACULTY

- ROBERT C. MEIER (1978) Chair, Professor. BS, Indiana University; MA, PhD, University of Minnesota.
- EARL D. BENSON (1980) Associate Professor. BS, University of Idaho; MA, Pennsylvania State University; PhD, University of Oregon.
- L. FLOYD LEWIS (1983) Assistant Professor. BA, California State University, Sacramento; MS, San Jose State University; PhD, University of Louisville.
- JOHN S. MOORE (1970) Associate Professor. BS, University of North Dakota; MSBus, JDLaw, University of Colorado; CPA, State of Colorado; PhD, University of Washington.
- ROBIN E. RIECK (1981) Assistant Professor. BA, MBA, PhD, University of Washington.
- DAVID S. RYSTROM (1983) Assistant Professor. BS, UCLA; MS, California State University, Northridge; PhD, University of Oregon.
- FARROKH SAFAVI (1969) Professor. BA in Journalism, BS in Economics, MBA, University of Teheran; MBA, DBA, University of Southern California.

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. The minimum grade standard may be adjusted each term; however, any changes in the standard will be published.

- Acctg 241, 242, 243
- Econ 203, 204
- FMDS or Mgmt 255
- Mgmt 271
- Math 156

Declaration should be accomplished as early as possible since acceptance as a major provides

priority access to upper-division classes. Applications may be submitted during a "declaration period" each quarter. Transfer students may be considered for admission prior to enrollment at WWU.

ENROLLMENT PRIORITIES

Because of high student demand for business administration program courses the departments must give enrollment priority to students for whom those courses are requirements rather than elective. Priority is given to majors in the College of Business and Economics and other declared majors for whom the classes are required.

BACHELOR OF ARTS

Major — Business Administration (Finance, Marketing and Decision Sciences) 90 credits

- Foundation Courses (32 credits): Math 156; Acctg 241, 242, 243; Econ 203, 204; Mgmt/FMDS 255; Mgmt 271.
- Core Courses (38 credits): Econ 409; Mgmt 302, 304, 360; FMDS 308, 330, 341; Mgmt/FMDS 356, 482, 495 (Mgmt 451 and 452 may be substituted for 495)
- Concentration Courses (20 credits): Students must select one of the concentrations listed below:
 - Finance: FMDS 441, 442, 444, 448 or 449, plus 4 credits under advisement
 - Marketing: FMDS 433; three courses from FMDS 430, 431, 432, 434, 435; plus 4 credits under advisement
 - Management Information Systems/Decision Support Systems: FMDS 409, 414, plus 12 credits under advisement
 - International Business: FMDS 480, 483; Econ 462 or 463; plus 9 credits under advisement
 - General: 20 credits under advisement

Combined Major — Business Administration/Computer Science

94 credits

- Acctg 241, 242, 243
- Mgmt 271, 302, 304, 360
- FMDS 330, 341
- Mgmt/FMDS 255, 482, 495*
- Comp Sci 210, 217, 310, 331, 332, 415, 430, 471
- Econ 203, 204, 409
- Math 156

*May substitute Mgmt 451 and 452 in lieu of Mgmt/FMDS 495.

Minor 40 credits

- Acctg 241, 242
- Mgmt/FMDS 255
- Mgmt 271, 304
- FMDS 330, 341
- Econ 203, 204
- Math 156

COURSES IN FINANCE, MARKETING AND DECISION SCIENCES

Courses numbered X37; X97; 300, 400, 417; 445 are described on page 28 of this catalog.

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 open to CBE 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.

255 BUSINESS STATISTICS (4)

Prereq: Math 156 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.

308 MANAGEMENT INFORMATION SYSTEMS (4)

Structure of management information systems. Application of computers to management information systems in private and public organizations.

330 PRINCIPLES OF MARKETING (4)

Prereq: Mgmt 271, Econ 203. 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 242, Mgmt/FMDS 255. Structure and operation of financial management; problems of internal financial analysis, planning and control, capital structure and investment decisions, valuation, dividend policy, mergers, acquisitions.

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 standing 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.

356 QUANTITATIVE METHODS (2)

Prereq: Mgmt/FMDS 255. Quantitative methods used in research, analysis and decision making in business. Regression, anova, sampling, chi-square analysis and non-parametric statistics.

Finance, Marketing & Decision Sciences

405 ADVANCED MANAGEMENT INFORMATION SYSTEMS (4)

Prereq: FMDS 308. Analysis and design of management information systems and decision support systems. Relationship of MIS to the functional subsystems of the firm. Case studies and group projects will be emphasized.

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 spreadsheet programs and linear programming.



430 MARKETING RESEARCH (4)

Prereq: FMDS 330. 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 ADVERTISING (4)

Prereq: FMDS 330. Promotional objectives and strategies of the firm; organization of advertising function; media selection and evaluation; psychological aspects; new developments such as use of computer and mathematical models.

432 SALES MANAGEMENT (4)

Prereq: FMDS 330. Nature of personal selling with emphasis on industrial sales effort and management of sales personnel.

433 MARKETING MANAGEMENT (4)

Prereq: FMDS 330. Objectives, strategies and organization of marketing departments in large and medium-sized firms. Emphasis upon operating, control and evaluation.

434 MANAGEMENT OF DISTRIBUTION SYSTEMS (4)

Prereq: FMDS 330. 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. 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.

441 INTERMEDIATE FINANCIAL MANAGEMENT (4)

Prereq: FMDS 341. An integrated approach to financial management including study of intermediate-level financial theory and its application to financial decision making under uncertainty.

442 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.

444 FINANCIAL INSTITUTIONS AND MARKETS (4)

Prereq: FMDS 341 or Econ 311. 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.

448 INVESTMENT ANALYSIS AND MANAGEMENT (4)

Prereq: FMDS 442. 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. 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.

480 INTERNATIONAL BUSINESS (4)

Prereq: FMDS 330, 341, or permission of instructor. Special problems and issues which arise in the conduct of international business.

482 BUSINESS, GOVERNMENT AND SOCIETY (4)

Prereq: Mgmt 271 or Acctg 370 and senior standing. A study of the business decision-making process as these decisions interact with the social, technological, political/legal and economic environments. The course will develop the causes and the effects of regulation of business.

483 INTERNATIONAL TRADE OPERATIONS (3)

Prereq: FMDS 480, or permission of instructor. Operations of firms seeking to serve foreign markets from domestic sources. Emphasis on import/export activities and marketing, financial and organizational decisions to support these activities.

485 REAL ESTATE (4)

Prereq: Mgmt 271. Real estate law; government regulation of real estate use; development, marketing and financing of commercial and residential real estate.

486 COMMERCIAL REAL ESTATE INVESTMENT (4)

Prereq: FMDS 485. Investment strategy; selection, financing, appraisal of income properties such as rentals, apartments, condos, office buildings, shopping centers and other secure purpose real estate.

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. May be repeated for a maximum of 12 credits.

495 BUSINESS POLICY (4)

Prereq: Mgmt 302, 360, FMDS 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

The curriculum of the Department of Management reflects the broad and dynamic nature of the field of management. Management is not a narrowly defined specialization but rather it is a pervasive body of knowledge essential to the effective and efficient operation of every organization. The field is still growing and changing with the growth and change in the total environment within which organizations must operate.

PROGRAM OBJECTIVES

The development of the management curriculum 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:

1. To develop competence in analysis, decision making and evaluation in both public and private organizations.
2. To develop and enrich interpersonal skills.
3. To create an understanding of the social, economic and civic environment within which organizations function.
4. 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.
5. To enhance educational opportunity through the theoretical and applied research and business consulting activities of its faculty and students.
6. To encourage intellectual inquiry into the lessons and skills of the past and present so as to be able to select and direct the future.

NOTE: This catalog reflects the division of the former Department of Business Administration into the Departments of Management and of Finance, Marketing and Decision Sciences.

THE CURRICULUM

Students normally devote most of the freshman and sophomore years of study to completion of the General University Requirements and the business administration major foundation courses. Several foundation courses may also satisfy General University Requirements, and careful planning may save time for additional elective coursework. Electives which emphasize oral and written communication skills are particularly recommended. The junior and senior years are primarily devoted to business administration core requirements and elective coursework.

STUDENT ADVISING

For answers to routine questions, students should consult this catalog and the departments' "Planning Guide." For non-routine questions about the business administration major, a Student Advisement Center is maintained. Upon acceptance as a declared major, a faculty adviser will be assigned.

MANAGEMENT FACULTY

- EUGENE OWENS (1975) Chair.
Professor. BA, University of Arizona; MS, Purdue University; MS, George Washington University; PhD, University of California, Los Angeles.
- KENNETH S. KELEMAN (1977) Associate Professor. BA, MS, San Diego State University; PhD, University of Utah.
- MAXWELL C. KING (1978) Assistant Professor. BA, Stanford University; MBA, Harvard Graduate Business School.
- TONGKYU PARK (1983) Assistant Professor. BS, Seoul National University; MS, PhD, Oregon State University.
- E. LEROY PLUMLEE (1976) Associate Professor. BBA, Texas Tech University; MS, Northern Illinois University; DBA, Texas Tech University.
- BRUCE D. WONDER (1981) Associate Professor. BS, University of California; MS, San Francisco State University; PhD, University of Washington.

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. The minimum grade standard may be adjusted each term; however, any changes in the standard will be published.

- Acctg 241, 242, 243
- Econ 203, 204
- FMDS/Mgmt 255
- Mgmt 271
- Math 156

Declaration should be accomplished as early as possible since acceptance as a major provides priority access to upper-division classes. Applications may be submitted during a "declaration period" each quarter. Transfer students may be considered for admission prior to enrollment at WWU.

ENROLLMENT PRIORITIES

Because of high student demand for business administration program courses, the departments must give enrollment priority to students for whom those courses are requirements rather than electives. Priority in 300-level courses is given to majors in the College of Business and Economics and to other declared majors for whom the classes are required. Priority in 400-level courses is given to business administration majors and then to other College of Business and Economics majors.

BACHELOR OF ARTS

Major — Business Administration

Management 90 credits

- Foundation Courses (32 credits):
Acctg 241, 242, 243
Econ 203, 204



FMDS/Mgmt 255

Mgmt 271

Math 156

- Core Courses (42 credits):

Econ 409

FMDS 308, 330, 341

Mgmt 302, 304, 322, 360

Mgmt/FMDS 356, 482, 495*

- Elective Courses (16 credits):

A minimum of 16 hours 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 451 and 452 in lieu of Mgmt/FMDS 495.

Concentrations: Department of Management

General Management

At least one course from at least four of the following five groups:

- Mgmt 401, 402, 404, 405, and 406, 407
- Mgmt 422, 423, 424, 425, 426
- FMDS 430, 431, 432, 433, 434, 435
- FMDS 441, 442, 444, 448 or 449
- Mgmt 365, 460, 463, 467, 469

Production/Operations Management Concentration

- Mgmt 460; and three courses from Mgmt 365, 463, 467, 469; and Acctg 331

Human Resources Management Concentration

- Select four courses from Mgmt 401, 422, 423, 424, 425, 426

Entrepreneurial Management

- Elect Mgmt 451 and 452 in lieu of Mgmt/FMDS 495
- Select four electives from Mgmt 365, 401, 425, 460; FMDS 431, 432, 485

Organization Development and Change

- Mgmt 404, 405 and 406, and select two from Mgmt 401, 402, 407, 424

Combined Major — Business Administration/Computer Science

94 credits

- Math 156
- Mgmt/FMDS 255, 482, 495
- Acctg 241, 242, 243
- Econ 203, 204, 409
- FMDS 330, 341
- Mgmt 271, 302, 304, 360
- Comp Sci 210, 217, 310, 331, 332, 415, 430, 471

Minor 40 credits

- Acctg 241, 242
- Econ 203, 204
- FMDS 330, 341
- Mgmt 271, 304
- Mgmt/FMDS 255
- Math 156

COURSES IN MANAGEMENT

Courses numbered X37, X97, 300, 400, 417, 445 are described on page 28 of this catalog.

- 201 INTRODUCTION TO BUSINESS (4)
A survey of the field particularly directed to the needs of students majoring in office administration and business education. Recommended for students not intending to specialize in the fields of business economics.
- 255 BUSINESS STATISTICS (4)
Prereq: Math 156 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. Also offered as FMDS 255
- 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
- 285 REAL ESTATE I (4)
Prereq: Mgmt 271 or equivalent. Real estate law; government regulation of real estate use; development, marketing and financing of commercial and residential real estate.
- 302 INTRODUCTION TO MANAGEMENT AND ORGANIZATIONAL BEHAVIOR (4)
Prereq: admission to College of Business and Economics major. Introduction to organization theory, behavior and interpersonal communication
- 304 ORGANIZATIONAL THEORY AND BEHAVIOR (4)
Analysis of the process of management; planning organization, leadership, control, communication and decision making. Concepts of power, authority and influence. The role of philosophy and values in organizations.
- 322 HUMAN RESOURCE MANAGEMENT (4)
Prereq: Mgmt 271, 304. Recruitment, selection, utilization, and development of human resources, with emphasis on employee-management relations and relevant behavioral research
- 356 QUANTITATIVE METHODS (2)
Prereq: Mgmt 255. Quantitative methods used in research, analysis and decision making in business. Regression, anova, sampling, chi-square analysis and non-parametric statistics. Also offered as FMDS 356
- 360 OPERATIONS MANAGEMENT (4)
Prereq: Mgmt 255, Acctg 243. Fundamentals of operations management, including tools for analyzing, designing and controlling operating systems
- 365 INDUSTRIAL PURCHASING (4)
Prereq: Mgmt 304, FMDS 330. The interaction of buyer and seller in the industrial environment. Problems met in purchasing by industrial organizations

Management

- 380 BUSINESS HISTORY OF THE UNITED STATES (4)
Prereq: Econ 203. 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 II (4)
Prereq: Mgmt 304 and permission of instructor. Individual and group behavior in organizations. Case problems and experiential learning exercises are utilized.
- 402 SEMINAR IN ORGANIZATIONAL THEORY (4)
Prereq: Mgmt 304. Current research: measuring organizational effectiveness, planning, leadership patterns, and current problems.
- 404 ORGANIZATIONAL DEVELOPMENT (4)
Prereq: Mgmt 304. Current research and application to planned organizational change and internal training techniques.
- 405 INTRODUCTION TO MANAGERIAL BEHAVIOR (2)
Prereq: Mgmt 304. Applied managerial techniques explored in a supervised environment.
- 406 ADVANCED MANAGERIAL BEHAVIOR (4)
Prereq: Mgmt 405. Under supervision, students will be responsible for design of and conduct of BA 405 sessions. Comparison, analysis and critique of relative success of techniques explored.
- 407 ORGANIZATIONAL RESEARCH (4)
Prereq: Mgmt 322, 356. Organizational research related to management functions: evaluation models, measurement techniques, design, analysis and inference for management problems. The course involves problems, cases and research projects with emphasis on human resource management.
- 408 GENDER RELATIONSHIPS IN ORGANIZATIONS (3)
Prereq: Mgmt 304. Expectations and conflicts of managers regarding the changing roles of men and women in organizations and management.
- 422 COMPENSATION ADMINISTRATION (4)
Prereq: Mgmt 322. Examination of theories, models, and procedures required to develop compensation and reward systems in organizations. Economic, psychological and social elements of compensation. Determination of compensation structures and differentials, forms of compensation and reward, compensation levels.
- 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 PERSONNEL TRAINING AND DEVELOPMENT (4)
Prereq: Mgmt 322. Training as related to organizational objectives. Training models, learning theory, evaluation methodologies, industrial instructional techniques and topics of special interest will be emphasized.
- 425 INDUSTRIAL RELATIONS ADMINISTRATION (4)
Prereq: Mgmt 322. Cases, lectures, and collective bargaining simulation are used to develop administrative skill in dealing with union-management relations. Nature of unions, institutional forces conditioning collective bargaining practices, and administrative practices dealing with unions.
- 426 CURRENT ISSUES IN HUMAN RESOURCE MANAGEMENT (4)
Prereq: Mgmt 322. Current problems in policy and practice used in personnel and industrial relations administration.
- 451 SMALL BUSINESS ENTREPRENEURSHIP (4)
Prereq: Mgmt 304, 322, and FMDS 330, 341. Legal, financial, operating and marketing elements associated with creating or acquiring and operating a small business.
- 452 ENTREPRENEURIAL PROBLEMS I (1-4)
Prereq: Mgmt 451 and SBI director approval. Field counseling work and study under faculty supervision with small business entrepreneurs in the local business community, directed towards solving varied small business problems.
- 460 PROBLEMS IN OPERATIONS MANAGEMENT (4)
Prereq: Mgmt 360. Case study of operating problems. Emphasis upon manufacturing or service industries will vary. May be repeated for credit with alternative course content.
- 463 SYSTEMS FOR PLANNING, SCHEDULING AND INVENTORY (4)
Prereq: Mgmt 360. Examination of systems for planning levels of output and work force, scheduling machines and equipment, and maintaining inventories.
- 467 BUSINESS SIMULATION (4)
Prereq: Mgmt 360. Introduction to simulation techniques as they apply to business and economics. Basic concepts, applications and problems associated with use of simulation.
- 469 FIELD STUDY IN OPERATIONS MANAGEMENT (4)
Prereq: Mgmt 360 and permission of instructor. Field-based study of theory applied to current operating problems.
- 482 BUSINESS, GOVERNMENT AND SOCIETY (4)
Prereq: Mgmt 271 or Acctng 370 and senior standing. A study of the business decision-making process as these decisions interact with the social, technological, political/legal and economic environments. The course will develop the causes and the effects of regulation of business. Also offered as FMDS 482.
- 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. May be repeated for a maximum of 12 credits. Also offered as FMDS 490.
- 495 BUSINESS POLICY (4)
Prereq: FMDS 330, 341; Mgmt 304, 322, 360. 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. Also offered as FMDS 495.



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 or 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 18 four-credit courses. Students with a non-business/quantitative background are normally required to take all 18 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, quantitative skills, 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 four 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 nine 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 14 months.

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 resume 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. Well-developed communications skills are also important.
- Foundation Courses (24 hours): MBA 501, 502, 504, 505, 506, 507
- Core Courses (28 hours): MBA 511, 531, 541, 551, 561, 581, 591
- Elective Courses (20 hours): One course from MBA 522, 523, 524. Four elective courses under advisement. (Additional electives will be required if more than three 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 quarter hours of course work to raise their cumulative GPA to 3.00 or better. If, after completing 16 additional quarter hours of credit, a student has failed to achieve good standing, that student will be excluded from the program.

MBA 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.

- 501 FINANCIAL ACCOUNTING AND REPORTING CONCEPTS (4)**
Prereq: permission of the 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 ECONOMIC ANALYSIS FOR BUSINESS (4)**
Prereq: MBA 503. Examines the concepts of scarcity, opportunity cost, competitive market pricing, efficiency and the market system. In addition, the macroeconomic variables that constitute the environment of the firm such as the overall performance of the economy, money and the financial system, and monetary and fiscal policy operations will be discussed.
- 503 QUANTITATIVE METHODS I (4)**
Prereq: permission of the program director. Provides students with an appreciation of the uses of quantitative methods in managerial decision-making. A heuristic approach to the essentials of linear algebra, linear programming, and the determination of minima and maxima as applied to appropriate profit, cost and production functions.
- 504 QUANTITATIVE METHODS II (4)**
Prereq: permission of the 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 the graduate program director. This class will present a review of the current state of computer-based information systems as they relate to the managerial functions. The emphasis in this class will be towards 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.
- 511 MANAGERIAL ACCOUNTING (4)**
Prereq: MBA 501, 504. Conceptual approach to managerial accounting's role in an organization. Emphasis will be 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 are directed at emphasizing the importance of the role of taxation in management decisions.
- 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.
- 531 MARKETING MANAGEMENT (4)**
Prereq: MBA 502, 504. 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.
- 532 MARKETING STRATEGY (4)**
Prereq: MBA 531. 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, 531. 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, capital market efficiency, stock options and mutual funds are discussed.
- 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, 504. Economic analysis provides the framework to consider the problems of resource allocations that confront managers in business, government and non-profit environments. Topics include consumer choice and demand for products, production and cost functions, alternative market structures and the profit criteria for long-run planning and investment decisions.

552 MACROECONOMIC THEORY AND POLICY (4)

Prereq: MBA 502. Examination of current issues in macroeconomic theory and policy. Emphasis on using macroeconomic theory to explain recent U.S. economic performance and the level of income, employment, prices and output in an economic system. Particular attention given to using and interpreting economic indicators for the U.S.

561 PRODUCTION MANAGEMENT (4)

Prereq: MBA 502, 504. Management of production activities from resource procurement through defined and controlled transformation to marketable products.

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.

576 MANAGEMENT SCIENCE (4)

Prereq: MBA 504. Application of quantitative techniques to the analysis of decision problems in organization. Emphasis on the use of computer methods.

581 BUSINESS ENVIRONMENT (4)

Prereq: MBA 507, 531. Study of how business organizations interact with the social and political/legal environments. This course will develop the causes and effects of regulation of business and will explore 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, will be a part of the course.) This course is normally taken in the last quarter of the program.



Office Administration and Business Education

The Department of Office Administration and Business Education is concerned with the development of programs in two major areas.

The office administration program prepares students to assume responsible supervisory and management positions in offices in business, industry and government. A knowledge of the concepts of office organization, systems design and management, the changing trends in office operations, as well as the qualifications for and requirements of office workers are included in the coursework for this major.

Major course requirements are designed to provide a healthy balance of courses from other departments in the College of Business and Economics. Elective options are available under advisement. The Bachelor of Science degree is awarded upon successful completion of the program.

The business teacher education program has the responsibility for the preparation of competent business teachers to meet the demand from secondary and post-secondary schools.

This program consists of a major in business education, with a strong emphasis on methods of teaching business subjects, supported by courses from other areas in the College of Business and Economics. The Bachelor of Arts in Education degree is awarded upon successful completion of the program.

The department also offers a Master of Education degree in business education.

OFFICE ADMINISTRATION AND BUSINESS EDUCATION FACULTY

HUBERT N. THORESON (1971) Chair.
Associate Professor. BS, Valley City State College; MEd, EdD, University of North Dakota.
LOIS E. PETERSEN (1974) Associate Professor. BA, Wartburg College; MEd, Oregon State University; EdD, University of North Dakota.

BACHELOR OF ARTS

Minor — Business Education 25 credits

- Courses to be selected under departmental advisement

BACHELOR OF ARTS IN EDUCATION

Major — Business Education

Secondary 96 credits

- Off Admin 215, 222, 223, 241, 242, 243, 301, 310, 410, 412
- Bus Ed 319, 421, 422, 423, 450, 490
- Econ 203, 204, 409
- Mgmt 271, 302
- FMDS 330, 341
- Acctg 241, 242, 243

The Business Education major must be accompanied by the professional studies program offered by the School of Education. See the Education section of the catalog for detailed information.

BACHELOR OF SCIENCE

Major — Office Administration

100 credits

- Off Admin 215, 222, 223, 224, 241, 242, 243, 301, 310, 410, 412
- Acctg 241, 242, 243
- FMDS/Mgmt 255, 482
- Mgmt 271, 302
- Econ 203, 204, 409
- FMDS 330, 341
- Electives: 14 credits under departmental advisement

Minor — Office Administration

25 credits

- Off Admin 215, 242
- Additional courses selected under departmental advisement

GRADUATE STUDY

For the program in business education leading to the Master of Education degree, see Graduate section of the catalog.

COURSES IN OFFICE ADMINISTRATION

Courses numbered X37; X97; 300, 400, 417; 445 are described on page 28 of this catalog.

- 116 BASIC TYPEWRITING (3)
Development of the basic techniques of keyboarding. Emphasis will be on the use of the keyboard as a communication tool.
- 117 INTERMEDIATE TYPEWRITING (3)
Prereq: Off Admin 116 or equivalent. Continued development of keyboarding techniques with emphasis on applications to a variety of communications activities.
- 120 BEGINNING SHORTHAND (5)
Prereq: Off Admin 116 or equivalent. Mastery of Gregg shorthand theory with development of reading, recording, and transcribing ability.

- 121 INTERMEDIATE SHORTHAND (4)
Prereq: Off Admin 120 or equivalent. Continued development of theory and reading with increased emphasis on recording and transcribing functions.
- 150 BASIC ACCOUNTING PROCEDURES (4)
Theory and practice of bookkeeping and accounting, with emphasis on both cash and accrual systems.
- 215 ADVANCED TYPEWRITING (4)
Prereq: Off Admin 117 or equivalent. Advanced keyboarding development with application to various communication tasks, such as rough drafts, tabulations, statistical reports, business and legal forms.
- 222 ADVANCED SHORTHAND (4)
Prereq: Off Admin 121 or equivalent. Continued emphasis on reading with increased attention to development of accurate transcription ability and development of a comprehensive business vocabulary.
- 223 SHORTHAND TRANSCRIPTION (4)
Prereq: Off Admin 222 or equivalent. Emphasis on transcription for increased production ability.
- 224 OFFICE PROCEDURES (3)
Prereq: Off Admin 117 or equivalent. Development of concepts and procedures for performing administrative support functions.
- 241 BUSINESS MACHINES (3)
Development of proficiency in the operation of electronic business machines, with business mathematics applications.
- 242 MACHINE TRANSCRIPTION (2)
Prereq: Off Admin 117 or equivalent. Development of non-transcription abilities and techniques for producing written communications from recorded media.



Office Administration/Business Education

- 245 INTRODUCTION TO DATA PROCESSING (3)
Prereq: Off Admin 117 or equivalent. Introduction to modern business data processing practices and equipment. Emphasis on the technology and concepts of data processing systems. The impact of computerized data processing on business and society.
- 301 BUSINESS COMMUNICATIONS (4)
Prereq: Eng 101 or equivalent. Business writing principles, organizational plans for different types of communications. Solutions for case problem situations must be submitted in typewritten form.
- 310 RECORDS MANAGEMENT (3)
Organization, implementation, maintenance, and management of office records systems. Project approach is used.
- 410 INTEGRATED WORD PROCESSING SYSTEMS (4)
Prereq: keyboarding ability. Minimum of 35 wpm recommended. Study of word and information processing, applications, design and management of word/information processing systems. "Hands-on" experience on WP equipment. Lecture/lab format.
- 412 OFFICE ADMINISTRATION POLICY (4)
Prereq: Off Admin 310, Mgmt 302. Off Admin 224 and Mgmt 322 are recommended. General office administration including policy making and development of objectives. Use of cases for problem solving, decision making, planning and control of office functions.
- 490 INTERNSHIP IN OFFICE ADMINISTRATION (4-12)
Prereq: Off Admin 412. Practical application in a field setting of theories learned in the classroom. Seminars will be required on a regular basis.

COURSES IN BUSINESS EDUCATION

- 319 BUSINESS EDUCATION IN THE SECONDARY SCHOOL (3)
Prereq: junior standing. Curriculum planning with consideration of philosophy, scope and objectives.
- 421 METHODS OF TEACHING BOOKKEEPING AND BASIC BUSINESS SUBJECTS (4)
Prereq: Acctg 241, 242. Objectives, methods, materials and evaluation procedures for teaching in these areas.
- 422 METHODS OF TEACHING TYPEWRITING (4)
Prereq: completion of advanced course in typewriting and departmental permission. Methods, materials and objectives involved in developing keyboarding ability, with emphasis on psychological principles of motor skill development.
- 423 METHODS OF TEACHING SHORTHAND AND TRANSCRIPTION (4)
Prereq: completion of advanced shorthand and departmental permission. Preparation for teaching shorthand and transcription with emphasis on methodologies, objectives, materials, equipment, and micro-teaching.
- 450 COORDINATION OF VOCATIONAL PROGRAMS (3)
Prereq: Bus Ed 319 or equivalent. Objectives, content and techniques applicable to administration of work-experience programs in vocational education.
- 490 PRINCIPLES OF VOCATIONAL EDUCATION (3)
Prereq: Bus Ed 319 or a similar principles course in the major concentration. The historical and philosophical development of vocational education in the common schools in the U.S. The effect of vocational education philosophies and legislation upon school curricula. The treatment will cross disciplinary lines and meet state certification requirements.

Graduate Courses

Courses numbered 500, 517, 545, 597 are described on page 28 of this catalog.

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

- 503 PRINCIPLES AND PRACTICES IN BUSINESS EDUCATION (3)
Prereq: graduate status and teaching experience. Philosophies and role of business education at secondary and post-secondary levels will be examined, with focus on curriculum, course content and current trends.
- 504 ORGANIZATION AND ADMINISTRATION OF VOCATIONAL PROGRAMS (3)
Prereq: undergraduate major in vocational area or departmental permission. Principles of effective organization and administration of cooperative and other vocational programs. Philosophies, current practices, trends and research in the area will be analyzed.
- 551 EVALUATION AND MEASUREMENT IN BUSINESS EDUCATION (3)
Prereq: graduate status and/or departmental permission. A study of the principles of evaluation methods, programs and test construction for business education subjects with statistical interpretation of test results.
- 571 IMPROVEMENT OF INSTRUCTION IN TYPEWRITING (3)
Prereq: graduate status and undergraduate major in business education and/or departmental permission. The course is designed to present methods, materials and principles underlying successful teaching of typewriting at the secondary and post-secondary levels. A study of current research, the contributions of research to teaching methodology, and needed research in the area of typewriting will be included in this course.
- 572 IMPROVEMENT OF INSTRUCTION IN BOOKKEEPING AND ACCOUNTING (3)
Prereq: graduate status and/or departmental permission. Approaches to teaching bookkeeping, recordkeeping and accounting on the secondary and post-secondary levels with emphasis on critical evaluation of methodology, course content and materials. Research studies and areas needing investigation will be examined.
- 573 IMPROVEMENT OF INSTRUCTION IN THE BASIC BUSINESS SUBJECTS (3)
Prereq: graduate status and/or departmental permission. A study of current trends and research in the methodology of teaching and in the course content of business subjects. Consumer education issues will be an integral part of the course.
- 574 IMPROVEMENT OF INSTRUCTION IN SHORTHAND AND TRANSCRIPTION (3)
Prereq: graduate status and/or proficiency in a symbol shorthand system. Evaluation of methods of teaching shorthand and transcription with emphasis on research findings and their application to skill development.
- 595 RESEARCH SEMINAR (3)
Prereq: admission to the graduate program.
- 690 THESIS (6)
Prereq: approval of student's graduate committee. Field project or a research study under the direction of a faculty committee. The field project or thesis may be done off-campus between periods of residence work.

SCHOOL OF EDUCATION

Dr. Lawrence W. Marrs, Dean

The School 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 School of Education is responsible for coordinating programs which involve a wide variety of departments throughout the University. The School 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 School 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 and special education.

The Department of Educational Administration and Foundations is comprised of those programs which extend and complement the experiences offered in teacher education programs. This department offers programs in Educational Administration, Foundations of Education, Educational 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 at the time this catalog was being prepared. Students or applicants should check with the program office as curricula, admissions requirements and other important factors may change from what is pub-

lished in this catalog. 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
Professional concentration	
in elementary education	BA/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, Speech	
Pathology & Audiology, and School	
Psychology	M/Ed, MA
Reading Resource Specialist	
certificate related	
program	M/Ed

Teacher Certification Requirements

See the Department of Educational Curriculum and Instruction section of this catalog.

Department Chairs

Dr. John F. Utendale	Educational Administration & Foundations
Dr. Marie D. Eaton	Educational Curriculum & Instruction

Departments, Courses & Programs

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 class schedule, the Summer Catalog and bulle-

tins of the Center for Continuing Education.

The following programs are listed alphabetically in the "Interdisciplinary" section following the departments listings:

English as a Second Language
Library Science
Reading



Educational Administration & Foundations

EDUCATIONAL ADMINISTRATION & FOUNDATIONS FACULTY

- JOHN F. UTENDALE (1972) Chair, Associate Professor. BS, University of Alberta; MEd, Eastern Washington State College; EdD, Washington State University.
- THOMAS BILLINGS (1964) Professor. BS, PhD, University of Oregon.
- RICHARD T. BISHOP (1966) Assistant Professor. PhB, University of Chicago; MA, Michigan State University.
- LESLIE BLACKWELL (1968) Associate Professor. BA, Washington State University; MEd, EdD, University of Washington.
- FLORA FENNIMORE (1969) Professor. BA, Mt. Angel College; MA, EdD, Washington State University.
- F. RICHARD FERINGER (1962) Associate Professor of Education. BS, University of Minnesota; EdD, University of California, Los Angeles.
- PAUL FORD (1970) Professor and Vice President for Academic Affairs. AB, Dartmouth College; MEd, EdD, Harvard University.
- BURTON L. GROVER (1969) Associate Professor. BS, MA, PhD, University of Minnesota.
- ANTHONY JONGEJAN (1983) Assistant Professor. BA, Western Washington University; MS, Western Washington University and University of Oregon.
- LORRAINE KASPRISIN (1979) Associate Professor. BSEd, MA, The College of the City of New York; MPhil, PhD, Teachers College, Columbia University.
- SAMUEL P. KELLY (1965) Professor of Education and Dean of Graduate Affairs and Research. BA, BA in Ed, MEd, Western Washington State College; PhD, University of Chicago.
- ROBERT H. KIM (1971) Professor of Education/Ethnic Studies. BA, Hanguk University for Foreign Studies; BA, MA, EdD, George Peabody College.
- MORGAN LIVINGSTON (1977) Lecturer. BA, MA, University of Oregon.
- LAWRENCE W. MARRS (1984) Professor and Dean, School of Education. BS, MS, University of Utah; PhD, University of Texas.
- G. ROBERT ROSS (1983) Professor and President of the University. BS, MS, Texas A&M, PhD, University of Denver.
- SY SCHWARTZ (1967) Associate Professor. BS, MS, EdD, Wayne State University.
- CILLA TRAGESSER (1982), Lecturer. BA, MEd, Western Washington University; PhD, University of Texas at Austin.
- JOSEPH E. TRIMBLE (1978) Associate Professor. BA, Waynesburg College; MA, University of New Hampshire; PhD, University of Oklahoma.
- PHILIP B. VANDER VELDE (1967) Assistant Professor. BA, Calvin College; MA, PhD, Michigan State University.
- LINDA ZURFLUH (1984) Associate Professor. BA, MA, Pacific Lutheran University; EdD, University of Washington.

OVERVIEW

The Department of Educational Administration and Foundations is comprised of those programs which extend and complement the education experiences offered to teacher education program certification students.

Computer Competence: Students admitted to programs in the Department of Educational Administration and Foundations are required to possess minimum computer 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 206).

Please note: Due to a review and revision process which may affect School of Education programs and courses, the information contained in the Educational Administration and Foundations section of this 1985-87 General Catalog is subject to change.

EDUCATIONAL FOUNDATIONS

The Foundations program provides a sequence of transition courses between a student's general education at Western and the areas of professional specialization in the School 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; (4) to acquaint the student with the moral, ethical and political challenges faced by the profession.

SCHOOL ADMINISTRATION

The School Administration program is designed to prepare elementary and secondary school teachers to assume the leadership role of the 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 curricular areas in school finance, school law, staff/community relations and collective bargaining. The requirements for principal certification include a master's degree, Washington State teaching certificate and three years of certified experience, to include one year of teaching experience. Candidates are directed to the Graduate section of this catalog for more information; the program area office is located in Miller Hall 206.

HUMAN RESOURCES DEVELOPMENT

This area consists of three programs: Human Services Program, 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 two 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.

EDUCATIONAL TECHNOLOGY

The Educational Technology program provides instruction and research to the education profession in the areas of audio-visual instruction, television, library science and computer education, including interactive computer systems, infor-

mation storage and retrieval and databases and instruction design involving technology.

Educational Technology programs include: a Library Science minor, a fifth-year program for the Learning Resource Specialist, a master's degree program in School Administration (Learning Resources), and a Computer Education supporting endorsement (minor). The Admission and Advisement Office is located in Miller Hall 363.

EDUCATIONAL COMPUTERS MINOR

This program is designed for students in teacher preparation programs or teachers of elementary, secondary or special education students who wish to improve or develop their abilities to select, use, adapt and create learning materials incorporating microcomputers. This program will provide teachers with the background necessary to integrate computers into their lesson plans.

Minor (supporting endorsement)

24 credits

Required Courses 15-18 Credits

- EdAF 444 Computers in the Classroom (3)
- CS 391 Introduction to CAI Programming (5)
or
EdAF 457a Computer Programming Procedures (3)
- EdAF 457b Educational Uses of Microcomputers (3)
- EdAF 457d Practicum in Educational Microcomputers (3)

One course from the following:

- EdCI 422 The Elementary Curriculum (3)
- EdCI 424cd Language Arts in the Secondary Curriculum (3)
- EdCI 426cd Social Studies in the Secondary Curriculum (3)
- EdCI 462 Curriculum for the Exceptional Child (4)

Elective Courses 6-9 Credits

- EdAF 450 Introduction to Learning Resources (3)
- Music 420 Electronic Music Laboratory (2)
- Comp Sci 110 Introduction to Programming (4)
- Off Admin 243 Introduction to Data Processing (3)
- Off Admin 410 Integrated Word Processing Systems (4)
- EdAF 457c Instructional Games and Simulations (3)
- EdAF 457e Interactive Systems (3)

It is recommended that students have keyboard proficiency or take:

- Off Admin 116 Basic Typewriting (3)

COURSES IN EDUCATIONAL ADMINISTRATION & FOUNDATIONS

Courses numbered X37, X97, 300, 400, 417, 445 are described on page 28 of this catalog.

- 109 EXPLORATIONS IN EDUCATION (3)
Provides preprofessional students an opportunity to explore the profession of teaching, professional teacher education programs and citizen participation in the process of education.
- 310 THE TEACHER AND THE SOCIAL ORDER (3)
Prereq: sophomore status. 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.
- 340 PARAPROFESSIONAL ADVISEMENT (4)
Prereq: employment or anticipated employment in campus-based student services and permission of instructor. Course work emphasizes the nature of the helping relationship; an overview of philosophical and theoretical issues which confront paraprofessionals; and the development of specific job requirement skills.
- 341 PRACTICUM IN PARAPROFESSIONAL ADVISEMENT (1)
Prereq: EdAF 340 and permission of instructor. Supervised practicum for students to work in university student services programs. May be repeated with varied experiences to a total of six credits. S/U grading.
- 350 OPERATION OF LEARNING RESOURCE EQUIPMENT (1)
Instruction in the operation of Learning Resource equipment including: video tape recorders, 16 mm 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 the culturally different child, of his family, community and values, and of school curricula provisions for cultural identity
- 411 FOUNDATIONS OF EDUCATION (4)
Prereq: admission to a professional studies program. 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 COMPARATIVE EDUCATION (3)
Educational systems in the major countries, including Canada; backgrounds, aims, types and present functions; comparison with the American system.
- 416 PERSISTENT PROBLEMS IN EDUCATION (3)
Seminars in socio-philosophical problems relating to education; different seminars deal with different problems and related sociological and philosophical theory.
- 427 ADULT EDUCATION: AN EMERGING FIELD (4)
Prereq: permission of instructor. An examination of current social problems and strategies/solutions developed by adult educators.
- 444 COMPUTERS IN THE CLASSROOM (3)
A study of computers in the classroom including Computer-Managed Instruction Systems (CMI) and Computer-Assisted Instructional Systems (CAI).
- 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.
- 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 COMPUTER PROGRAMMING PROCEDURES (3)
Prereq: EdAF 444 or permission of instructor. An introduction to the basic elements of computer program design, including beginning BASIC and LOGO.
- 457b EDUCATIONAL USES OF MICROCOMPUTERS (3)
Prereq: EdAF 444 or permission of instructor. A study of computer education software and PILOT language. Planning strategies for the integration of computers into schools and classrooms will be introduced.
- 457c INSTRUCTIONAL GAMES AND SIMULATIONS (3)
Prereq: EdAF 444 or permission of instructor. Critiquing commercially developed games and simulation programs; programming & evaluation of instructional games and/or simulations.
- 457d PRACTICUM IN EDUCATIONAL MICROCOMPUTERS (3)
Prereq: EdAF 444 or permission of instructor. The designing and evaluation of microcomputer programs for teaching course objectives. Evaluation to assess students' cognitive and affective responses to microcomputer programs.
- 457e INTERACTIVE SYSTEMS (3)
Prereq: EdAF 444 or permission of instructor. An introductory study of interactive systems in educational settings, includes videodiscs/microcomputer interface and database services.
- 458 MANAGING CONFLICT AND STRESS (3)
Prereq: Upper-division standing or permission of instructor. Examines the relationships among conflict, stress and health. Coping and managing techniques are emphasized. Self assessment methods necessary to diagnose stressors in the work setting, etc., are also included.

Educational Administration & Foundations

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 28 of this catalog.

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

501 INTRODUCTION TO EDUCATIONAL RESEARCH (4)

Prereq: graduate status. Experimental documentary, case study, survey and other methods of educational research.

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 will 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: (a) adult education; (b) educational administration; (d) foundations; (e) learning resources/library science; (h) personnel administration; (n) community education; (p) interprogram topics. Repeatable.

535 SEMINAR IN PUBLIC SCHOOL FINANCE (4)

Local-state fiscal arrangements; current school budgets; related educational finance procedures

538a, CASE STUDIES IN SCHOOL ADMINISTRATION b,c,d (2-3)

Prereq: graduate status. Studies to assist students in understanding school administration. (May repeat to a maximum of 6 credits.)

539 EDUCATIONAL LEADERSHIP (4)

Prereq: teaching experience. 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, FIELD STUDY IN EDUCATIONAL ADMINISTRATION b,c,d (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 COMPUTER TECHNOLOGY AND EDUCATION (4)

Prereq: permission of instructor. A seminar in the study of computers in education: Computer-Managed Instruction (CMI), Computer-Assisted Instruction (CAI), Data processing in schools and classroom management.

544c PLANNING FOR INSTRUCTIONAL INNOVATION (4)

Prereq: graduate status. Planning and decision-making process as related to successful adoption of educational innovations.

Educational Administration & Foundations

546a. ADMINISTRATIVE RESEARCH TOPICS
b,c,d (2-3)

Prereq: graduate status. Identification, study and evaluation of research topics appropriate for building level administrators. (May repeat to a maximum of 6 credits.)

547a. READINGS IN SCHOOL ADMINISTRATION
b,c,d (2-5)

Prereq: permission of instructor. Supervised study focusing on one or more selected topics. (May repeat 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 ADMINISTRATION OF EDUCATIONAL MEDIA PROGRAMS (3)

Prereq: EdAF 450 or permission of instructor. Problems and principles in establishing, staffing, financing, coordinating, housing and evaluating an audio-visual center.

551 SEMINAR IN LEARNING RESOURCES (3)

Prereq: graduate status and 35 credit hours in the program. Analysis of factors affecting communication utilizing learning resources.

556a STUDENT PERSONNEL ADMINISTRATION (4)

Prereq: admission to the program in Student Personnel Administration 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.

556b 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. SEMINARS: COLLEGE STUDENT PERSONNEL
b,c 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 placed on human development and organization behavior.

558 STUDENT DEVELOPMENT COUNSELING FOR STUDENT PERSONNEL ADMINISTRATORS (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 MEd 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.

570 COMMUNITY EDUCATION (4)

Prereq: graduate status or permission of instructor. The development of the skills and understandings necessary in the organization, programming, curriculum, financing, administration and staffing of community education programs and schools.

571 SEMINAR IN COMMUNITY EDUCATION (4)

Prereq: EdAF 570 or permission of instructor. Advanced study of community education programs; critical review of current and emergent problems and theories.

575 ASSESSING EDUCATIONAL QUALITY (3)

Prereq: EdAF 501 or permission of instructor. Developing criteria and designing procedures for measuring in-put 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.

576 ADULT EDUCATION ADMINISTRATION (4)

Prereq: upper-division course in administration theory, or equivalent; e.g., administrative experience. Planning, organizing, budgeting, staffing adult educational programs in higher educational institutions, museums, libraries and churches.

577 LEARNING PROBLEMS OF ADULTS (4)

Prereq: permission of instructor. The problems related to structuring learning and instruction for adults in most types of teaching situations are examined. Case studies utilized.

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.

590 SEMINAR IN DEMONSTRATION TEACHING AND SUPERVISION (3)

Prereq: EdCI 442 or permission of department. Advanced studies in the principles of supervision, and the utilization of instructional resources and the evaluation and improvement of teaching.

592a. FIELD EXPERIENCE IN ADMINISTRATION FOR
b,c THE PRINCIPAL (2-6)

Prereq: permission of instructor. Applicants for the Washington State Administrative Credentials. 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 will intern in various offices and programs of college student services or related activities. Repeatable to a maximum of 13 credits. S/U grading.

Educational Administration & Foundations

592g FIELD EXPERIENCE IN COMMUNITY EDUCATION LEADERSHIP (2-6)

Prereq: admission to candidacy and assignment by an educational agency to a role within a community education setting in the public schools, or permission of instructor. Supervised field experiences in developing leadership and management skills and competencies in community education through the public schools. Students will work with teachers, other educators, and community personnel and resources in designing, implementing and evaluating the community school concept and programs appropriate for the designated community.

592h FIELD EXPERIENCE IN ADULT EDUCATION j,k (2-6; total 8)

Prereq: permission of instructor. Supervised field experience in developing, directing or evaluating adult education programs relating to: (h) administration; (j) learning problems; (k) curriculum planning.

594j PRACTICA IN ACTION RESEARCH k,m (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.

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; (j) elementary education; (k) early childhood education; (n) community education; (p) interprogram topics.

642a FIELD PROJECT IN EDUCATIONAL b,c,d 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: M.A. or M.Ed. 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 SEMINARS IN EDUCATIONAL MANAGEMENT: b,c 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 SEMINARS FOR SCHOOL PRINCIPALS b,c,d (4 ea)

Prereq: master's degree, applicant for a Washington State Principal's Credential 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 will plan, write and evaluate a short competency-based program for an instructional problem in their own area of teaching.

690a THESIS (6-9)

Prereq: approval of the student's graduate committee. Research study under the direction of a faculty committee; the thesis may be done off campus between periods of residence work. S/U grading.

690b FIELD PROJECT (6-9)

Prereq: approval of the student's graduate committee. Field project under the direction of a faculty committee; the field project may be done off campus between periods of residence work. S/U grading.

692a FIELD EXPERIENCE IN ADMINISTRATION FOR b,c THE PRINCIPAL (2-6)

Prereq: master's degree and permission of instructor. Applicants for the Washington State Administrative Credential. S/U grading.

HUMAN SERVICES

Human Services, as a field of study and practice, is concerned with both voluntary and organized efforts to aid persons in fulfilling their needs for physical and mental health, education, employment, nutrition, shelter and recreation. Human Services has become a growing employment and educational area since personal and group services are increasingly in demand both in human development and rehabilitation.

The Human Services Major

This major is an upper-division learning program within the Department of Educational Administration and Foundations leading to a BA degree. The curriculum is interdisciplinary, systems oriented and based on concepts from the social and management sciences. Curricular goals stress the continual interaction between theory and practice through purposeful integration of classroom concepts and field placement experiences.

The curriculum design uses field experience as a learning laboratory. Students must work for 16 or more hours per week in a human service organization. This work environment provides context in which students can apply and assess knowledge acquired in the classroom through reading and related workshop experiences. The field placement also provides a context in which career opportunities and interests can be clarified.

Eligibility

Applicants to the Human Services Program include:

- (a) Salaried employees who work in agencies and institutions which fit the human services category.
- (b) Persons who have, or can obtain, volunteer fellowships (paid by the agency) or work-study placements with agencies and institutions which fit the human services category. Students are responsible for finding their own placements subject to program approval.

Preference will be given to applicants who have completed two years of college or university study, including the General University Requirements (sciences, mathematics, communications, social sciences, humanities, non-western and minority cultural studies).

Academic Program

The academic program in Human Services is interdisciplinary in nature and focuses on both knowledge acquisition and skills development. These two aspects of learning — conceptual development and practical application — are emphasized throughout the entire curriculum. The Human Services curriculum consists of five forms of study: the CORE courses, the Seminar courses, Theory Practice Integration, the Practicum Seminar course, and Independent Study. CORE, Theory Practice Integration, and Practicum Seminar are taken together as a nine-credit package each quarter for six quarters as a field-based learning sequence. Seminars, Independent Study, and additional seminars and electives from other departments, complete the student's program in additional specific topic areas. Courses are scheduled to minimize conflict with work schedules. Most classes meet in the evening, with some meetings taking place in the afternoon or on weekends. The required pattern of credits for graduation with a Human Services major is as follows:

- Core (6 quarters): 24 credits HS 301, 303, 305, 402, 404, 406
- Theory Practice Integration (6 quarters): 24 credits HS 390a,b,c.; 490a,b,c
- Practicum Seminars (6 quarters): 6 credits HS 320a,b,c; 420a,b,c
- HS 482: 5 credits
- Seminars: 18 credits
- Electives (seminars, independent study, related course work in other departments): 18 credits

Total: 90 credits

Core classes serve an integrating function and emphasize system interdependence in human service delivery. The Seminar classes provide opportunities for examination of human service

issues, as well as development of specific helping skills. Theory/Practice Integration and Practicum seminar courses complete the important link between the field practice and the content gained in the classroom and must be taken concurrently with the appropriate Core course.

Computer Competency: Students admitted to programs in the Department of Educational Administration and Foundations are required to possess minimum computer 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 206).

Application

Students should apply for admission to the Human Services program at Miller Hall 305.

COURSES IN HUMAN SERVICES

Courses numbered X37; X97: 300, 400; 417; 445 are described on page 28 of this catalog.

301 INDIVIDUAL SYSTEMS (4)

Basic elements of systems study are introduced and the effects of interactions studied. Values, management of personal growth and change through problem solving and the development of personality are emphasized.

303 INTERPERSONAL SYSTEMS (4)

The interactions of two individuals are viewed as separate but interacting sub-systems of a larger interpersonal system. First-quarter themes are examined in the context of personal interactions, with emphasis on interpersonal communications theory and skills and the management and resolution of interpersonal problems and conflicts

305 GROUP SYSTEMS (4)

The dynamics of group interaction are examined in the context of small groups as systems. Focus is on the examination of small group behavior, including leadership, decision making, controversy, power, norms and problem solving.

320a,b,c PRACTICUM SEMINAR—FIRST YEAR (1 ea)

Prereq: must be taken concurrently with HS 390a,b,c, and first year Core — HS 301, 303, 305. Readings and discussion on the application of Human Services concepts, with emphasis on individuals and groups.

331 DEVELOPMENTAL PATTERNS: CHILDREN/ADOLESCENTS (3)

Examination of the developmental stages and tasks of infancy, childhood and adolescence, with emphasis on the problems of services.

335 DEVELOPMENTAL PATTERNS: ADULTS/SENIORS (3)

Developmental patterns of the aging process including changes in learning ability, and learning needs. Also covered are three models which measure stages of social, intellectual and moral development.



337 DEVELOPMENTAL PATTERNS: FAMILY (3)

Study of the development of the family within the context of historical, organizational, communication and change patterns. Methods for understanding and changing family dynamics are introduced.

341 HELPING RELATIONSHIP I: INDIVIDUAL (3)

Basic concepts and skills for counseling in one-to-one settings are examined, with emphasis on the basic procedures for helping clients. Opportunities provided for the practice of specific skills.

343 HELPING RELATIONSHIP II: INDIVIDUAL (3)

Issues include critique of basic skills application, analysis of alternative interventions, the limits of responsible intervention, referral resources and ethics. Opportunities provided for the practice of specific skills.

345 HELPING RELATIONSHIP: GROUP (3)

Attention is given to stages of group development, techniques for beginning a group, analysis of members' styles, and practice with interventions appropriate for specific client groups.

347 DYNAMICS OF PERSONAL GROWTH (3)

Research and clinical findings in humanistic psychology are used to assess personal potential and to explore participants' skills and potential for growth and change.

371 ISSUES AND CONCEPTS IN HUMAN SERVICES SYSTEMS (3)

Current issues and concepts are considered, with emphasis on providers, recipients of services and the cultural influences.

- 373 **LAW AND HUMAN SERVICES (3)**
 Examination of legal processes and their effect on human services client populations and delivery systems. Legislative, judicial, administrative, and policy and procedural processes are examined.
- 377 **MINORITIES AND HUMAN SERVICES (3)**
 Examination of culturally different groups and their interaction with human services systems. Emphasis upon comparative ethnic issues, conflicts and institutional practices.
- 381 **PROGRAM PLANNING AND ADMINISTRATION (3)**
 Study and application of concepts and skills for planning, budget, fiscal management, personnel administration, public relations and management information systems.
- 383 **MANAGEMENT AND SUPERVISION (3)**
 Study and application of concepts and skills for supervising others in a human services setting, including motivation, productivity, leadership and performance evaluation.
- 390a, b, c **THEORY/PRACTICE INTEGRATION — FIRST YEAR (4)**
 Prereq: must be taken concurrently with HS 320a, b, c, and first year Core — HS 301, 303, 305. Field experience and project course for first-year students in human services. The theory/practice integration provides the problems and issues for academic study projects relating primarily to individual and groups, both as clients and staff. Staff and agency supervision. S/U grading.
- 402 **ORGANIZATIONAL SYSTEMS (4)**
 Organizational characteristics and the organization's ability to attain objectives are examined with emphasis on the systems structure, values, technology, and degree of interdependence. Applied skills include data gathering on behavior of the agency system, ability to arrange the data for analysis and to draw conclusions for alternative plans.
- 404 **COMMUNITY SYSTEMS (4)**
 Community systems and the relationship of the community systems to other sub-systems within the human services (individual, interpersonal, family, group and organization) are examined. Applied skills include community analysis, problem identification and research at the community level.
- 406 **SOCIETAL SYSTEMS (4)**
 Social forces, social change and their effects on the human services worker are examined. A social change system model and methods of social/cultural research are studied to provide integration and synthesis of the human services Core sequence.
- 420a, b, c **PRACTICUM SEMINAR—SECOND YEAR (1 ea)**
 Prereq: HS 320a, b, c. Must be taken concurrently with HS 490a, b, c, and second year Core — HS 402, 404, 406. Readings and discussion on the application of Human Services concepts with emphasis on agencies and organizations.
- 432 **CONTEMPORARY PERSONALITY THEORY (3)**
 Examination of contemporary theories and theorists of personality development, such as existentialism, and the emergence of humanistic psychology, including Peris, Berne and Schutz.
- 434 **WOMEN AND MEN IN TRANSITION**
 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 **ALCOHOLISM AND SUBSTANCE ABUSE: 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 **ALCOHOLISM AND SUBSTANCE ABUSE: THE HELPING RELATIONSHIP (4)**
 Prereq: HS 440 or permission. Development and application of basic skills, analysis of alternative interventions, referral resources and professional ethics relating to the alcohol or substance abuser.
- 442 **ALCOHOLISM AND SUBSTANCE ABUSE: RECOVERY AND REHABILITATION (2)**
 Prereq: HS 440 or 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 **ALCOHOLISM AND SUBSTANCE ABUSE: 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.
- 474 **WORK AND HUMAN SERVICES (3)**
 Work and career patterns in contemporary culture, with a focus on manpower 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.
- 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.
- 482 **APPLIED RESEARCH METHODS (5)**
 Study of theory and techniques involved in evaluating the effectiveness of human services agencies including the application of techniques that lead to direct social action and agency intervention. Topics include research design, statistical treatment of results and analysis of evaluation findings.
- 484 **PROGRAM FUNDING (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 are covered.
- 486 **HUMAN RESOURCES DEVELOPMENT (3)**
 Examination of adult learning theory and design, and skill development in the design and conduct of adult learning and training programs.
- 490a, b, c **THEORY/PRACTICE INTEGRATION—SECOND YEAR (4)**
 Prereq: must be taken concurrently with HS 420a, b, c, and second year Core — HS 402, 404, 406. Field experience and project course for second-year students in human services. The theory/practice integration provides problems and issues and academic study and for projects relating to agencies and organizations. Staff and agency supervision. S/U grading.

Educational Curriculum & Instruction

EDUCATIONAL CURRICULUM & INSTRUCTION FACULTY

MARIE D. EATON (1975) Chair
Professor. BA, Pomona College. MEd. PhD, University of Washington.

CHARLES M. ATKINSON (1975) Associate Professor. BA in Ed. MEd. Central Washington State College. EdD. Utah State University.

HORACE O. BELDIN (1965) Professor. BS, MS, University of Oregon; PhD, Syracuse University.

ROBERTA A. BOUVERAT (1970) Assistant Professor. BA, MEd. Western Washington State College; PhD, The Ohio State University.

RICHARD J. L. COVINGTON (1970) Associate Professor. BA, Doane College. MEd. Whittier College; EdD. University of California, Los Angeles.

LEE A. DALLAS (1968) Associate Professor. AB, Gettysburg College. MEd, EdD. Temple University.

HELEN F. DARROW (1969) Professor. BS, Wilson Teachers College; MA, Northwestern University; MA, University of California, Los Angeles; EdD, Teachers College, Columbia University.

HOWARD M. EVANS (1972) Associate Professor. BS, Eastern Oregon College; MA, EdD, University of Illinois.

FLORA FENNIMORE (1969) Professor. BA, Mt. Angel College; MA, EdD, Washington State University.

SHEILA FOX (1977) Associate Professor. BA, Western Washington State College; MEd, PhD, University of Washington.

C. MAX HIGBEE (1962) Professor. BA, Simpson College; MS, Washington State University; PhD, University of Iowa.

PETER J. HOVENIER (1970) Associate Professor. BA, University of California, Santa Barbara; MA, Brigham Young University; MA, PhD, Stanford University.

MARVIN L. KLEIN (1978) Professor. BS, MS, Southern Illinois University; PhD, University of Wisconsin, Madison.

GEORGE S. LAMB (1965) Professor. AB, Macalester College; MA, University of Washington; PhD, University of Minnesota.

LAWRENCE W. MARRS (1984) Professor and Dean, School of Education. BS, MS, University of Utah; PhD, University of Texas.

ROBERT A. McCracken (1963) Professor. BA, MA, PhD, Syracuse University.

THEODORE A. MORK (1971) Associate Professor. BA, MEd, Western Washington State College; PhD, Syracuse University.

ALDEN L. NICKELSON (1962) Professor of Education and Biology. BS, MA, PhD, University of Washington.

ROBERT H. PINNEY (1971) Associate Professor. BA, University of Washington; EdD, Stanford University.

MAURICE L. SCHWARTZ (1968) Professor of Geology and Education. BS, MA, PhD, Columbia University.

SY SCHWARTZ (1967) Associate Professor. BS, MS, EdD, Wayne State University.

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

The School of Education has the responsibility for providing the professional studies necessary to become a competent teacher. The Department of Educational Curriculum and Instruction is responsible for screening students for admission and for evaluating their progress in teacher education programs. Programs leading to certification and primary or supporting endorsement include:

- Elementary Education
- Secondary Education
- Special Education
- English as a Second Language*
- Library Science*
- Reading at the Elementary Level*
- Reading at the Secondary Level*
- Social Science - Ethnic Studies*
- General Science*
- Learning Resource Specialist*
- Science Education*
- Social Studies Education*
- Humanities (Liberal Studies)

All programs were under review at the time this catalog was being prepared. Students or applicants should check with the program office as curricula, admissions requirements and other important factors may change from what is published in this catalog. Program office materials will be final in these matters.

*See *School of Education Interdisciplinary Program Section*

BACHELOR OF ARTS IN EDUCATION WITH CERTIFICATION

Teacher education programs are designed to lead to the Bachelor of Arts in Education degree with a recommendation to the State of Washington that an Initial Teaching Certificate be granted. Students not holding U.S. citizenship must declare "intent" prior to being recommended for State of Washington certification.

CERTIFICATION ONLY

Programs are available which lead to the Initial Teaching Certificate for students who already have bachelor's degrees in academic majors approved by the State of Washington. Students applying for *Certification Only* programs must register for student teaching at the time of application to the School of Education.

BACHELOR OF ARTS IN EDUCATION WITHOUT CERTIFICATION

Students may obtain a Bachelor of Arts in Education degree without certification by meeting the following criteria:

- (a) Complete all requirements in the professional studies except student teaching.
- (b) Complete an academic major or its equivalent.
- (c) Complete additional course work approved by the Department of Educational Curriculum and Instruction in lieu of student teaching.

Application for the Bachelor of Arts in Education degree without certification should be made to the chairperson of the Department of Educational Curriculum and Instruction upon completion of the prerequisites for student teaching.

ADMISSION TO TEACHER EDUCATION

The University shares with the profession as a whole the important responsibility for the selection of potential teachers. Admission to the University does not automatically admit the student to teacher education programs.

All applicants for the Bachelor of Arts in Education degree are required to meet the General University Requirements outlined under "Requirements for Bachelors Degrees, General University Requirements."

APPLICATION

Students should apply for admission to the ele-

mentary, secondary or special education program after they have earned a total of 45 credits and before taking a *second* professional course in the Department of Educational Curriculum and Instruction. Students **may not** take courses numbered 399 or higher without first obtaining full or provisional admittance to a teacher certification program or obtaining written permission from the instructor. Application is to be made at the Admissions and Advisement Office in the School of Education, Miller Hall 202.

The applicant should confirm the certification guidelines and specific program requirements with the admissions office and the program adviser at the time of admission. The guidelines and requirements in effect at the time of admission will be required as long as the student remains in good standing within the teacher education program.

Students with prior records involving a felony must report to the certification officer prior to registering for any course work in the School of Education (as required by WAC 180-80-200 (4); RCW 28A.70.140).

ADMISSION STANDARDS

All Educational Curriculum and Instruction students are required to meet the admission standards in effect at the time they are admitted to a teacher education program. Students should apply for admission to the Admissions and Advisement Office, Miller Hall 202.

English Competence: Prior to admission, all applicants will be required to pass a course in English composition with a grade of "B" or better and to take and pass a common English competency examination administered by the Testing Center.

Speech Competence: All candidates for admission to teacher education programs are expected to demonstrate competent speaking ability. A grade of "B" or better in Speech 101, or a "C" or better in Speech 205 or 302, will be deemed evidence of minimal competence.

Mathematics Competence: Prior to admission all students will be required to fulfill *one* of the following: (1) suitable score on the Intermediate Algebra Placement Exam for enrollment in Math 281; or (2) grade of "C" or better in Math 102; or (3) grade of "C" or better in any course named Pre-calculus Mathematics or College Algebra at any two-year or four-year college.

Scholarship: A cumulative grade point average of 2.75 is required for admission to all teacher education programs.

Washington Pre-College Test: Any candidates admitted to a professional education program must achieve a minimum composite standard score of 80 on the verbal and quantitative sub tests of the Washington Pre-College Test (WPC)

or an equivalent score on the comparable portions of the Scholastic Aptitude Test (SAT) or American College Test (ACT).

ADMISSION CLASSIFICATIONS

On the basis of standards listed above, students will be **admitted** or **admitted with provisions** or **not admitted**. Students who have applied for admission and have not been admitted may not continue to take professional education courses toward certification.

PROGRAM STANDARDS

Educational Curriculum and Instruction students must maintain a 2.75 GPA in work taken at Western. If a student's grade point average falls below 2.75, that student will be dropped from the teacher education program. A student may petition the program for reinstatement, and faculty action of the program area may deny or grant reinstatement or grant reinstatement with conditions. (Check academic departments for major, minor grade point average requirements.)

In certain situations a case conference may be called by the program head with faculty acquainted with the student and/or the student's work to determine the student's qualification for admission or retention.

Credit is given in courses graded "A," "B," "C," "D," "S" and "P." However, the grades of "D," "U" and "F" represent poor work which is not acceptable in the major, minor or professional studies courses.

COURSES COMMON TO ALL PROGRAMS

- EdAF 310 The Teacher and the Social Order
- EdCI 363 Survey of Exceptional Children, or EdCI 360 Introduction to Exceptional Children
- Psych 351 Psychology of Human Learning and Instruction
- Computer Competence: Students admitted to teacher education programs in the Department of Educational Curriculum and Instruction are required to possess minimum computer competency prior to completion of their program and prior to being recommended for certification. Procedures for demonstrating or developing competence are available from the School of Education Office of Admissions and Advisement (Miller Hall 202).

Students in Teacher Certification programs generally exceed 180 credit hours and they should anticipate that they may require more than four years to complete this program.

To this common core students will add courses in either elementary education or secondary education. Special education students will complete additional special education courses. Students will choose either the campus-based or field-centered option to complete their student teaching requirements.

STUDENT TEACHING

Office—Miller Hall 206

The student teaching procedure was under review at the time of this printing. Students should check with the Office of Student Teaching for current options, procedures and requirements.

All teacher education programs leading to certification require student teaching. The requirement in student teaching for the initial certificate is generally 16 credits, with the exception of special education which requires 32 credits. Student teaching will be either campus-based or field-centered.

The **Campus-Based Option** requires one quarter of student teaching preceded by additional course work on campus.

The **Field-Centered Option** requires two consecutive quarters in a school classroom. The first quarter replaces several courses in the campus-based program. See description under Secondary Education and/or Elementary Education for more specific information.

Students are urged to make an early choice of options. Careful advanced planning is essential to avoid delays in student teaching placement and to expedite completion of programs. Consult the Office of Student Teaching, Miller Hall 204, for assistance.

Students, under advisement, may seek to develop teaching competence in two fields if they have adequate academic background. They may also obtain recommendations for both secondary and elementary levels if they have an appropriate major field and the elementary teaching minor and undertake student teaching at both levels.

PREREQUISITES FOR STUDENT TEACHING

- (a) Admission and continued good standing in the elementary, secondary or special education programs.
- (b) Completion of at least 128 credits.
- (c) A chest x-ray or T.B. skin test in compliance with state law.
- (d) Payment of a lab fee, payable to the cashier *prior* to reporting to the student teaching assignment. This fee includes payment for the student teaching manual and other

materials used during the student teaching experience.

- (e) See descriptions of secondary, elementary and special education for specific course requirements.

Application for Student Teaching

Application for student teaching must be filed in January preceding the academic year in which the student intends to do the work. Students will indicate a first, second and third choice as to when they wish to begin their field work and as to geographic areas in which placement is acceptable. It is necessary that the students keep the Office of Student Teaching, Miller Hall 204, informed of any changes or cancellations so that openings may be made available to other students.

Students planning to enroll in student teaching fall quarter are advised that eligibility should be established by the close of spring quarter. Students intending to student teach winter quarter must have eligibility established by the close of summer quarter, and students intending to student teach spring quarter should have eligibility established by the end of fall quarter. Fall quarter student teachers are expected to begin their work with the fall opening of the public school. These students may register for EdCI 490 in addition to the 16 credit student teaching course.

Time Involvement

All work in student teaching is considered full-time and normally requires seven clock hours plus class preparation time and seminars. Students may not register for other course work during this time period without permission of the director of student teaching. Outside work or other demanding commitments, which could affect the quality of work in teaching, must be approved by both the director of student teaching and the appropriate program area head.

Placement Locations

Field-centered and campus-based student teaching programs are available in school districts in Whatcom and Skagit counties, in the greater Seattle area and in other participating school districts in Washington State and British Columbia. Students are not guaranteed placement within the local area.

SECONDARY EDUCATION

(Grades 7-12)

Program Office—Miller Hall 306

The Secondary Education Program offers alternative routes toward Washington State certifica-

tion. The program is competency-based and students are required to demonstrate teaching competence according to established criteria.

Admission to Secondary Education

Application should be made at the School of Education Admissions and Advisement Office in Miller Hall 202.

Students holding a bachelor's degree with a certifiable major may be admitted to the Secondary Education Program.

Program Standards

Students who have been admitted with provisions must remove any deficiencies prior to taking 400-level curriculum and instruction courses.

Students admitted must maintain a 2.75 GPA in the professional studies program and successfully complete a minimum of one professional studies course each calendar year. Those who do not meet this requirement will be dropped and must reapply to Secondary Education before continuing with professional studies courses.

Secondary Certification—Grades 7-12

Students completing the Secondary Education Program may receive a recommendation to the State of Washington that the initial teaching certificate, grades 7-12, be granted upon completion of the following:

1. The professional studies program in secondary education with a 2.75 GPA.
2. A baccalaureate degree with a certifiable major.
3. Declaration of intent to become a U.S. citizen or U.S. citizenship.
4. Demonstrating minimum computer competency.

Teaching Major

The academic majors listed below are accepted by the State of Washington for secondary teaching (grades 7-12). New certification proposals were being considered by the State Board of Education as this catalog went to press. Check with the Office of Admissions and Advisement (Miller Hall 204) to determine those majors currently acceptable for primary and supporting endorsement. Students are directed to contact the appropriate academic department for advisement. Departmental sections of the catalog describe the requirements for each major.

Anthropology
Art
Biology
Biology/Chemistry
Biology/Physical Science
Business Education

Educational Curriculum & Instruction

Chemistry
Chemistry/Mathematics
Chemistry/Physics
Earth Science
Earth Science/Physical Science
Economics
English
English/Speech
Ethnic Studies/Social Studies
Foreign Language
General Science
Geography/Social Studies
Health Education
History/Social Studies
Home Economics
Industrial Arts
Mathematics
Music Education
Physical Education
Physical Science
Physics
Physics/Mathematics
Political Science/Social Studies
Psychology
Social Studies
Sociology/Social Studies
Speech
Visual Communications Education

Student-designed majors may be acceptable if developed according to established policies and procedures.

A supporting endorsement is often desirable. Check departmental offerings for availability and requirements. Also see Ethnic Studies, English as a Second Language, General Science, Library Science, and Reading in the School of Education Interdisciplinary Programs section, and Educational Computers in the Educational Administration and Foundations section of this catalog.

Professional Studies

The professional studies program normally requires three quarters of resident study including student teaching. All students in secondary education are required to complete:

- EdAF 310, The Teacher and the Social Order (3)
- EdCI 363, Survey of Exceptional Children (3), or EdCI 360, Introduction to Exceptional Children (3)
- EdCI 398, Instruction in Secondary Schools I (2)
- Psych 351, Human Learning and Instruction (3)
- Psych 353, Adolescent Psychology (4)

Thereafter students must choose either the campus-based option or the field-centered option.

A. Campus-based option

(One quarter of student teaching)

- Psych 371, Evaluation of the Secondary Schools (3)

- EdAF 411, Foundations of Education (4)
- EdCI 420, Instruction in Secondary Schools II (4)
- EdCI 495, Student Teaching—Secondary (8-16) (One quarter of student teaching).

B. Field-centered option

(A laboratory quarter and one quarter of student teaching in the public schools supplemented by seminars)

- EdCI 492, Laboratory in Secondary Teaching (16)
- EdCI 495, Student Teaching—Secondary (8-16)

Prerequisites for Secondary Student Teaching

- (a) Completion of at least 45 credits of the proposed teaching major with a grade point average of 2.75 or better in all courses taken in the teaching major or a recommendation of the major department.
- (b) Completion of all education courses with the exception of EdAF 411.
- (c) See the general description listed previously.

ELEMENTARY EDUCATION

(Grades K-8)

Program Office—Miller Hall 251

The professional concentration for the elementary teacher (elementary major) and the elementary teaching minor both lead to certification for elementary teachers.

Admission and Retention

Application should be made at the School of Education Admissions and Advisement Office in Miller Hall 202.

No more than 15 credits of course work in professional studies and teaching methods taken prior to admission may be counted toward program requirements.

In certain situations a case conference may be called by the program head with faculty acquainted with the student and/or the student's work to determine qualification for admission or retention.

To be fully admitted into the professional concentration in elementary education, students must meet the admission standards and, in addition, furnish: (1) evidence of at least ten days of full-time observation and participation in an elementary school classroom; (2) at least two letters of recommendation; and (3) successful completion of one quarter of EdCI 399. Application forms and initial advisement are available in the Admissions and Advisement Office, Miller Hall 202.

**Professional Concentration
in Elementary Education —
Elementary Education Major**

This 85-credit concentration fulfills all professional requirements for certification with recommendation for general classroom teaching in the elementary grades (K-8) when accompanied by a 40-credit "Academic Study in Depth."

PROFESSIONAL EDUCATION COURSES

Plan with an elementary adviser for 85 credits of work from the following four blocks within the specified minimum and maximum credits and for a 40-credit "Academic Study in Depth" as described at the end of this section. It is always the student's prerogative to propose alternative ways to meet requirements.

BLOCK A (Professional Studies Component)

Requirements for Block A vary depending upon whether the student chooses a two-quarter student teaching or a one-quarter student teaching program.

Field-Centered Option (two quarters of student teaching)

- EdAF 310; EdCI 363, 399; Psych 351, 352 or 316; EdCI 491

Campus-Based Option (one quarter of student teaching)

- EdAF 310; EdCI 363, 399; EdAF 411
- Psych 351, 352, 372
- Plus 10 credits, chosen from at least two of these three groups of courses:
 - EdCI 131, 390, 431, 490
 - EdAF 391, Speech 407, EdCI 438
 - EdCI 421, 429, 433, EdAF 450

BLOCK B (Methods I)

Minimum of 28 credits from this block; no more than 36 credits from this block may be applied toward the 85-credit minimum.

(The following courses meet minimum requirements in these areas.)

- Reading: EdCI 385, 485, or EdCI 485/486
- Language Arts: Eng 440 or EdCI 424
- Social Studies Education: Soc St 325 or EdCI 426
- Mathematics: Math 281, 481
- Science Education: Sci Ed 380 plus one course from Sci Ed 381, 382, 383, 384

Additional courses may be taken in these areas under advisement.

BLOCK C (Methods II)

Minimum of 6 credits from this block; no more than 20 credits from this block may be applied toward the 85-credit minimum.

At least two courses from the following:

- Physical Education: PE 306
- Art Education: Art 380
- Music Education: Music 350
- Industrial Arts Education: Tech 350

Additional courses may be taken in this area under advisement.

BLOCK D (Student Teaching)

Minimum of 16 credits, maximum, 32 credits

- Student Teaching (EdCI 491, 494)

ACADEMIC STUDY IN DEPTH

The student will develop an academic study of 40 credits by extending one of the following areas with prior approval of the elementary adviser (and consultation with appropriate departments):

- Art
- Child Development and Learning (ECE)
- Humanities
- Language Arts
- Mathematics
- Music
- Physical Education
- Science
- Social Studies
- Technology (Industrial Arts)

Some overlap of courses is possible between those taken as part of the academic concentration and those taken to satisfy General University Requirements.

The student is expected to identify a central theme or focus for the academic study and select courses appropriate to the development of that theme. At least 20 of the 40 credits must be in courses in which the main emphasis is not teaching strategies; at least 20 credits must be taken in departments outside the School of Education.

Work in the Academic Study in Depth should be initiated early in the student's program, preferably when a sophomore, before seeking formal admittance to the professional concentration in elementary education.

Elementary Education Minor

(To be accompanied by an academic major)

**PROFESSIONAL STUDIES COMPONENT
(36-42 credits)**

Campus-Based Option (One quarter of student teaching)

- EdAF 310, EdCI 363 (or 360), 385
- One course from EdCI 421, 433, or EdAF 450
- EdAF 411, EdCI 494 (student teaching)
- Psych 351, 352 (or 316), 372

Field-Centered Option (Two quarters of work in

Educational Curriculum & Instruction

an elementary classroom in place of one-quarter student teaching)

- EdAF 310, EdCI 363 (or 360), 491 (laboratory quarter)
- EdCI 494 (practicum quarter)
- Psych 351 and 352 (or 316)

BASIC CORE (25-26 credits)

- EdCI 485 Basic Reading Instruction (4)
- Eng 440 English for the Elementary School (4) or EdCI 424 Language Arts in the Elementary Curriculum (4)
- Math 281 Theory of Arithmetic (4)
- Math 481 Mathematics in Grades 1 through 8 (4)
- Soc St Ed 325 Social Science for the Elementary School (5) or EdCI 426a,b Social Studies in the Elementary Curriculum (4)
- Sci Ed 380 Science for the Elementary School (3), plus one other Sci Ed course

ELECTIVES (12 credits)

Twelve credits to be approved in advance by adviser. These courses may not be from the student's major. No more than one elective course may be taken from any one department. Courses most often used as electives include PE 306, Art 380, Music 350, Tech 350, Lib Sci 405. Many others are acceptable. See elementary adviser.

ACADEMIC MAJOR

The following departments offer majors which have been approved to accompany the elementary education minor. New certification proposals were being considered by the State Board of Education as this catalog went to press. Check with the Office of Admissions and Advisement for those majors currently approved.

Anthropology
Art
English
Environmental Studies
Foreign Languages
General Science
Geography
Geology (Earth Science)
History
Home Economics (Child Development)
Humanities
Mathematics
Music
Physical Education
Psychology (Human Development)
Science Education/Environmental Studies
Social Studies
Sociology
Speech

Student Teaching — Elementary

The minimum requirement for elementary student teaching is a one-quarter, 16-credit student teaching course (EdCI 494). Many students

choose the two-quarter field-centered option (EdCI 491-16 and EdCI 494-16).

Prerequisites for elementary student teaching

- (a) Completion of EdAF 310, EdCI 363 (or 360), 385, Psych 351, 352 and courses in four areas of the elementary curriculum including EdCI 485 and Math 481; recommendation of readiness for student teaching by the elementary adviser.
- (b) See the general description previously listed.

READING

Contingent upon approval from the State Board of Education, supporting endorsements will be offered in reading at the secondary level and reading at the elementary level. Students interested in these endorsements should see the School of Education Interdisciplinary Programs Section.

SPECIAL EDUCATION

Program Office—Miller Hall 318

Major — Elementary Special Education

Professional Education Core - Elementary Special Education

- EdAF 310, 411
- Psych 316, 351, 372
- EdCI 360, 361, 461, 462, 462a, 466
- Elementary Methods I
 - EdCI 385, 485
 - EdCI 424 or Eng 440
 - EdCI 426 or Soc St Ed 325
 - Math 281 and 481
 - Sci Ed 380
- Electives: To make a total of 47 credits or more selected under advisement from the following: EdCI 261 (1) (may be repeated for a maximum of 3 credits); Mental Retardation: EdCI 465; Emotionally Disturbed: EdCI 463; Learning Disability: EdCI 460a,b,c; Gifted and Talented: EdCI 468; Elementary Education: EdCI 439, 438, Lib Sci 405, a third course in math education or a second course in science education.

Major — Early Childhood Handicapped Education 75-78 credits

This program is designed for students preparing to teach young children from nursery to school age with special needs. At the time this catalog went to press this area was being considered as a primary endorsement area by the State Board of Education. Decisions by the State may change the requirements from what is published in this catalog. See Program Advisers for current status.

Professional Education Core 14 credits

- EdAF 310
- EdCI 390
- Psych 316, 351

Special Education Core 34 credits

- EdCI 360, 361, 460b, 460c, 461, 462a, 462b, 466
- PE 496

Early Childhood Education Core 19 credits

- EdCI 431, 432
- Home Econ 122
- PE 485
- SP/A 351, 354

Electives 8-11 credits

- EdCI 331, 433, 435, 438, 463, 465
- Home Econ 322, 422
- Music 350
- PE 326
- Psych 355, 451
- SP/A 465, 465a

Minor

The above majors must be accompanied by an academic minor in an area approved by the adviser; see department section of the catalog and departmental advisers for specifications.

Major — Secondary Special Education

The student will complete a teaching major from the approved list of teaching majors in secondary education.

Professional Education Core — Secondary Special Education

- EdAF 310, 411
- EdCI 398, 420
- Psych 351, 353, 371

Minor

The student will complete a Special Education minor:

- Special Education courses: EdCI 360, 361, 461, 462, 462a, 466
- Elementary Education courses: EdCI 485, plus at least one course from EdCI 424, 426, 439; Eng 440; Lib Sci 405; Math 281, 481; Soc St Ed 325; Sci Ed 380, 381

Student Teaching

- Complete the campus-based or the field-centered option for either the early childhood, elementary or secondary level. Depending on level of preparations for endorsement in special education, add EdCI 494 or 495 as appropriate and EdCI 498, Supervised Student Teaching —Special Education

TEACHER CERTIFICATION

*School of Education
Admissions and Advisement
Miller Hall 202/204*

Requirements for the Initial Certificate

Special Notice: The State of Washington has drafted proposals of new teacher certification guidelines which will change the program requirements and endorsement areas offered by Western. Check with the Office of Admissions and Advisement (Miller Hall 202) for standards in effect at the time of your admission to the School of Education.

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 the Certification Office of the School of Education. Candidates for the secondary certificate shall have completed a major from those listed under Secondary Education. Candidates for the elementary certificate shall have completed an academic major from those listed under Elementary Education or a major in Elementary Education.

The Initial Certificate is valid for four years and is endorsed for both grade level and subject matter area. The certificate may be renewed once for a three-year period provided the following criteria can be met:

1. No more than ten years have elapsed since completion of the original preparation program.
2. The candidate is formally enrolled in a planned continuing level preparation program.
3. The candidate has completed 15 or more quarter hours of course work relevant to that program.
4. The credits must have been earned in the last seven years immediately preceding the date of application for renewal, unless the individual has completed at least 30 days of teaching in any one of those seven years. (In that event, older hours may be used for renewal purposes.)

The certificate will again be endorsed for both grade level and subject matter area.

Initial Certification of Degree Holders

U.S. citizens or persons declaring citizenship intent who hold a bachelor of arts or bachelor of science degree from an accredited institution may be admitted to a program leading to the Initial Teaching Certificate. This individually prescribed program normally entails three to five

quarters of residence study, including student teaching.

Persons selected for this program must have demonstrated academic ability, a broad liberal arts preparation, a major field acceptable for public school teaching and realistic career plans.

Fifth Year of Study Under the 1962 Standards

Students completing their "Fifth Year" under the 1962 Standards should consult with the Admission and Advisement Office, MH 202/204, for regulations and requirements.

Requirements for the Continuing Certificate (1978 Standards)

The Continuing Certificate is awarded to candidates who have (a) completed at least 45 quarter hours of upper-division and/or graduate study subsequent to the baccalaureate degree of which 30 quarter hours must be taken after the first year of teaching, and (b) who have completed at least three years of service in an educational setting (540 days at a minimum of five hours a day), at least two years of which shall be as a classroom teacher in grades K-12.

The Continuing Certificate is valid while the teacher is in educational service but will lapse if the holder does not serve at least 30 school days in an educational setting during one of seven consecutive school years.

A candidate who will be completing the 45 quarter hours inside the state should apply to the teacher education institution of his/her choice. Such institution shall be responsible for verifying completion of the continuing level preparation program.

A candidate who will be completing the continuing level preparation program outside the state should apply to the Office of Certification and Licensing (Old Capitol Bldg., FG-11, Olympia, WA 98504) for approval and verification of program completion.

If an applicant has not served in an educational setting or has not completed a preparation program within the seven-year period preceding application for the certificate or has not completed 15 quarter hours of course work within the seven-year period immediately preceding application for the certificate, he/she will be required to complete refresher study consisting of 15 quarter hours of course work applicable to his/her field of study in order to be eligible for continuing certification.

Requirements for Continuing Level Certification at Western

1. An approved plan of study must be filed with the School of Education, Office of Admissions and Advisement. Endorsement of the plan of study by the candidate's supervisory principal or administrator is required.
2. *Continuing level course work must be approved prior to registration.*
3. Coursework must be post-baccalaureate and upper-division (300-400) or graduate level.
4. Correspondence study is limited to five quarter or three semester hours.
5. A minimum of one-half the program (23 quarter hours) shall be earned through Western; the remaining 22 credits may be earned under WWU advisement through other approved four-year institutions.
6. A maximum of 15 postbaccalaureate credits may be earned prior to completion of one year (180 days) of teaching experience.
7. All course work is to be taken through approved four-year institutions. Out-of-state institutions seeking to offer professional education courses within the State of Washington must have approval from the State Board of Education within the Office of the Superintendent of Public Instruction.
8. No grades below "C" are acceptable for certification purposes. If a course is taken Pass/Fail, the candidate must provide a statement from the instructor that Pass represents a "C" or better.
9. Persons interested in pursuing a master's degree and the Continuing Certificate concurrently should also contact the Graduate School for information on graduate programs available.
10. When all requirements have been met, formal application for the Continuing Certificate is made through the School of Education, Office of Admissions and Advisement, Miller Hall 202/204 (206-676-3378/88).

Within the continuing level preparation program the candidates must demonstrate knowledge and skill in five areas as specified in the State Standards. The courses (plan of study) at Western for meeting these requirements are described below:

Plan of Study for the Continuing Certificate for Teachers

- A. Demonstration of Competencies — minimum of 24 credits.

State Generic Standards (WAC 180-79-130)

- (1) Staff development and supervision.
- (2) Research and evaluation.
- (3) Referral agencies and resource personnel.
- (4) Knowledge of alternate grade level.
- (5) Professional development and scholarship

- B. Electives to complete 45 required quarter hours — minimum of 21 credits.

- (1) Includes courses recommended by principal/supervisor.

Courses Meeting Standards

See School of Education Office of Admissions and Advisement, Miller Hall 202/204, regarding course options.

- Minimum of 3 credits.
- Minimum of 3 credits.
- Minimum of 3 credits.
- Minimum of 3 credits.
- Minimum 12 approved credits in area of concentration (e.g., major, minor, teaching specialty).

- (2) Must be approved by faculty adviser and School of Education Office of Admissions and Advisement.

COURSES IN EDUCATIONAL CURRICULUM & INSTRUCTION

Courses numbered X37; X97; 300, 400; 417; 445 are described on page 28 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 and the Disadvantaged
- 8 Reading
- 9 Supervised Teaching or Practicums

(See *Psychology* section 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.
- 221 TEACHER AIDE CONSULTATION (3)
Provides specific training and consultation in the field to teacher aides who work with Native American students. S/U grading.
- 222 ISSUES IN INDIAN EDUCATION FOR TEACHER AIDES (3)
Provides a perspective of various approaches and models to Indian education. Reviews educational materials and current trends in policies and regulations in Indian education at the national and state levels.
- 261 PRACTICUM ORIENTATION TO SPECIAL EDUCATION (1)
Guided observation and career exploration in special education; may be repeated for a maximum of 3 credits. S/U grading.
- 331 CREATIVE LEARNING EXPERIENCES IN EARLY CHILDHOOD EDUCATION (3)
Materials and teaching strategies designed to elicit creative responses in young children through storytelling, art, music, body movement, puppetry, creative dramatics, etc.

- 360 INTRODUCTION TO EXCEPTIONAL CHILDREN (3)
Prereq: sophomore status. The characteristics and treatment of handicapped and gifted children.
- 361 PRACTICUM IN SPECIAL EDUCATION (4)
Prereq: EdCI 360 or permission of instructor. Observations and participation in recreational and educational activities of exceptional persons.
- 363 EXCEPTIONAL CHILDREN IN THE CLASSROOM (3)
Prereq: sophomore status. Introduction to the characteristics and needs of exceptional learners; pertinent federal and state laws; the regular classroom teacher's responsibility; assessment of learning problems; instructional techniques; behavior modification and collection and interpretation of educational data.
- 385 FOUNDATIONS OF READING INSTRUCTION (2)
Exploration of the reading process; principles underlying the teaching of reading.
- 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.
- 398 INSTRUCTION IN SECONDARY SCHOOLS I (2)
Professional career development, observation of students, secondary curricula, planning for instruction, school law.
- 399 SEMINAR IN ELEMENTARY EDUCATION (1)
Prereq: permission of adviser; completion of 10 days of full-time observation and participation in an elementary school; open only to students in the Professional Concentration for the Elementary Teacher. Teaching as a profession, methods of instruction, human relations in the classroom, self-evaluation of candidates as potential teachers; observation and field experiences. Repeatable for a maximum of 5 credits. S/U grading.
- 401 TEACHING WORD ATTACK SKILLS IN READING (2)
Prereq: teaching experience or permission of instructor. Techniques and materials for teaching word identification and recognition.

Educational Curriculum & Instruction

- 402 AIDING SECONDARY DISABLED READERS (2)
Prereq: teaching experience or permission of instructor. Teaching techniques and materials proven to be useful in aiding disabled teenage readers. Both reading in the content areas and developmental reading skills will be considered.
- 418 METHODS AND MATERIALS FOR TEACHING ENGLISH AS A SECOND LANGUAGE (4)
The development of basic skills in teaching English as a second language to speakers of other language(s).
- 420 INSTRUCTION IN SECONDARY SCHOOLS II (4)
Prereq: EdCI 398 and admission to secondary education. To be taken one or two quarters prior to student teaching. Teaching methods including diagnostic techniques, models of instruction, questioning skills, discipline, time management and peer teaching.
- 421 INSTRUCTION IN THE ELEMENTARY SCHOOL (3-5)
Organizing learning experiences, selecting methods or processes and materials appropriate to the maturation and rate of development of children.
- 422 THE ELEMENTARY CURRICULUM (3)
Prereq: student teaching, teaching experience, or permission of department. 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.
- 424a,b,x LANGUAGE ARTS IN THE ELEMENTARY CURRICULUM (4)
Functions and programs of language arts in the curriculum including reading, writing, speaking, listening. Letters indicate grade level of emphasis in various sections of the course:
(a) Primary
(b) Intermediate
(x) Early Childhood
- 424c,d LANGUAGE ARTS IN THE SECONDARY CURRICULUM (3)
Functions and programs of language arts in the secondary curriculum.
(c) Junior High - Middle School
(d) Senior High
- 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
- 427 ADULT EDUCATION: AN EMERGING FIELD (4)
Prereq: permission of instructor. An examination of current social problems and strategies/solutions developed by adult educators.
- 429 DISCIPLINE IN THE ELEMENTARY SCHOOL (3)
Prereq: student teaching (or concurrent), teaching experience, or permission of instructor. Development of teaching strategies designed to prevent and/or solve behavior problems; analysis of related child development and learning theory.
- 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 NURSERY EDUCATION (3)
Prereq: EdCI 431 or permission of instructor. Development of curriculum for nursery school age children, emphasizing experiences which develop language, perceptual, motor, creative and interpersonal competencies.
- 433 KINDERGARTEN AND PRIMARY EDUCATION (3)
Prereq: 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 (2)
Development of skills for working with children from abusive or neglectful home environments. Content will deal with helping educators help children increase their self esteem and cope with their environments.
- 438 SCHOOL-HOME-COMMUNITY RELATIONSHIPS (3)
Problems of communication and interaction among teachers, parents, and paraprofessionals, administrators, and community; conferencing, planning meeting, 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 (3)
Prereq: upper-division standing or permission of instructor. Examines the relationships among conflict, stress and health. Coping and managing techniques are emphasized. Self assessment methods necessary to diagnose stressors in the work setting, etc., are also included.
- 460a LEARNING DISABILITIES (3)
Prereq: EdCI 360 or permission of instructor. Theoretical background assessment and instructional procedures for the learning disabled student.
- 460b CURRICULUM AND ACTIVITIES FOR PRESCHOOL HANDICAPPED CHILDREN (4)
Prereq: EdCI 360 or permission of instructor. Curriculum development and adaptation and selection of methods and materials for the preschool handicapped child.
- 460c DIAGNOSTIC TEACHING OF PRIMARY CHILDREN (4)
Formal and informal testing procedures for identifying learning problems and selecting teaching procedures for exceptional children.

- 461 **PRECISION TEACHING — A METHOD FOR THE EXCEPTIONAL PERSON (5)**
 Prereq: EdCI 360 or permission of instructor. Background and practice in identifying and assessing deficient classroom behavior, selecting appropriate interventions and determining their effect. One hour per day at same time required for school practicum.
- 462 **CURRICULUM FOR THE EXCEPTIONAL CHILD (4)**
 Prereq: EdCI 461 or teaching experience and concurrent enrollment in EdCI 462a. Curriculum selection and adaptation of methods and materials for exceptional children.
- 462a **CURRICULUM FOR THE EXCEPTIONAL CHILD: PRACTICUM (3)**
 Prereq: EdCI 461 and concurrent enrollment in EdCI 462. Assessment, instruction, evaluation of pupil progress and writing the IEP for the exceptional child. One hour per day at same time required for school practicum. S/U grading.
- 462b **PROGRAM DEVELOPMENT FOR EARLY CHILDHOOD SPECIAL EDUCATION (4)**
 Prereq: EdCI 461 and concurrent enrollment in EdCI 462a. Curriculum, selection and adaptation of methods, materials and teaching techniques for the exceptional preschool child. Includes classroom/instructional management and writing the IEP.
- 463 **EDUCATION OF BEHAVIOR DISORDER CHILDREN (4)**
 Prereq: EdCI 360. Definition, diagnosis and treatment of disturbed children in school settings. An in-depth analysis of the major theoretical models of disturbance.
- 464 **THE EDUCATIONALLY DISADVANTAGED (4)**
 Prereq: junior standing. Methods for teachers of children who are underachieving in school due to differences in their cultural/experiential backgrounds.
- 465 **ACTIVITIES FOR THE EXCEPTIONAL CHILD (3)**
 Prereq: EdCI 360 or permission of instructor. Experiences with inexpensive materials and methods which can be used in teaching arts and crafts to exceptional children. S/U grading.
- 466 **GUIDANCE FOR THE HANDICAPPED CHILD (4)**
 Prereq: EdCI 360 and 361. Techniques for communicating with and counseling exceptional children, their parents and others influential in satisfying their needs.
- 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.
- 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 IN THE SECONDARY SCHOOL (4)**
 For pre-service and experienced classroom teachers, grades 6-12. Developmental reading skills, reading skills specific to content areas, and basic study skills. Not a course in remedial reading.
- 484 **THE TEACHING OF READING IN CONTENT FIELDS (4)**
 Techniques of teaching reading and applying reading to studying in social sciences, mathematics, English and other content areas in upper intermediate and secondary grades.
- 485 **BASIC READING INSTRUCTION (3-4)**
 Prereq: EdCI 385 or teaching experience. Basic reading instruction in grades K-8; methods and materials for teaching reading, reading readiness; word attack skills, word reading skills, comprehension skills; grouping; lesson planning.
- 486 **PROBLEMS IN CORRECTIVE READING INSTRUCTION (4)**
 Prereq: permission of instructor. Analysis, correction, and prevention of reading problems; refinement of group and informal testing, supervised practicum with pupils having mild disabilities in reading.
- 488 **INDIVIDUALIZED READING INSTRUCTION (4)**
 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)**
 Prereq: EdCI 385. 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 498 offer varied opportunities for laboratory study in the classroom and for student teaching. Practice in the classroom is an integral part of professional preparation. See "Supervised Teaching" section for prerequisites, time of application, etc.**
- 490 **OBSERVATION AND PARTICIPATION (2-3)**
 Prereq: permission of department. Guided observation of experienced teachers and limited participation in teaching situations. S/U grading.
- 491 **LABORATORY FOR ELEMENTARY TEACHING (16)**
 Prereq: recommended for supervised teaching. Supervised observation and practice of elementary teaching to precede EdCI 494. A field assignment in the public schools is coordinated with seminar and conference instruction. Supervision is provided by selected public school personnel and university faculty. S/U grading.
- 492 **LABORATORY FOR SECONDARY TEACHING (16)**
 Prereq: recommended for supervised teaching. Supervised observation and participation in teaching related roles. A field assignment in the secondary public schools is coordinated with seminar instruction in secondary education. Individual guidance and supervision are provided by public school personnel and university faculty. 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 **STUDENT TEACHING — ELEMENTARY (8 or 16)**
 Prereq: permission of department. (See student teaching prerequisites above.) Supervised experience providing opportunities to develop and demonstrate teaching competence at the primary and/or intermediate grades. May be repeated with varied assignment. S/U grading.
- 495 **STUDENT TEACHING — SECONDARY (8 or 16)**
 Prereq: permission of department. (See student teaching prerequisites above.) Supervised experience providing opportunities to develop and demonstrate teaching competence at the junior high (middle school) or senior high school level. May be repeated with varied assignment. S/U grading.

Educational Curriculum & Instruction

- 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. May be repeated with varied content to a total of nine credits.
- 498 STUDENT TEACHING — EXCEPTIONAL CHILDREN (8 or 16)
Prereq: EdCI 360 and 462 and student teaching or teaching experience and permission of department. Supervised teaching experience providing opportunities to develop and demonstrate teaching competence for exceptional children. S/U grading.
- 499 ELEMENTARY STUDY IN ENGLAND (4,8)
Practicum and theory of elementary education in England; e and f must be taken in sequence. Offered summers in England.
499e Teaching Practicum in an English Elementary School (4)
499f Workshop in Philosophy, Curricula, Methods and Materials of English Elementary Education (8)
- 523 TEACHING ADOLESCENTS (4)
Prereq: EdAF 501. Advanced study of adolescents, especially in educational settings. Use of case studies. Emphasis upon recent research.
- 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.
- 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.
- 531b ADVANCED SEMINAR IN EARLY CHILDHOOD EDUCATION (3)
Prereq: EdCI 531, 596a. Specific problems will be drawn from the field and content organized according to student need.
- 532 TEACHING AND LEARNING OF ELEMENTARY SCHOOL SUBJECTS (4)
Prereq: teaching experience or permission of instructor. Advanced study of research findings and theoretical developments affecting the teaching of various basic elementary school subjects.

Graduate Courses

Courses numbered 500, 517, 545, 597 are described on page 28 of this catalog.

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

- 502a,b,c COMPETENCIES FOR CONTINUING CERTIFICATION (3 ea)
Prereq: teaching experience. Demonstrations of minimum generic competencies required for Continuing Certification of teachers.
a. Staff development and supervision.
b. Referral agencies and resource personnel.
c. Knowledge of grade level alternate to that endorsed for initial certification.
(Some MEd programs include one or more of the required generic competencies. Candidates should check with advisers.) S/U grading.
- 515 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: (c) reading; (f) secondary education; (g) special education; (j) elementary education; (k) early childhood education.
- 52 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 will be expected.
- 522a CURRICULUM IN THE SECONDARY SCHOOLS (3)
Prereq: admission to graduate program or permission of program adviser. Historical and philosophical perspectives on school curriculum as these relate to modern curricula. This course is designed for candidates for M.Ed. degrees in secondary school curriculum. Recommended for candidates in School Administration.
- 522b SEMINAR IN SECONDARY CURRICULUM (4)
Prereq: EdCI 522a or 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.
- 533 SEMINAR: THE ELEMENTARY SCHOOL CHILD (4)
Prereq: teaching experience or permission of instructor. Critical review of current life in elementary school classrooms in relation to individual differences and general growth patterns of children, ages 5-12, research findings in psychological impact of schooling upon child growth and development as bases for examining specific educational practices and determining implications for improving classroom and school practices.
- 533b ADVANCED SEMINAR IN ELEMENTARY EDUCATION (4)
Prereq: advancement to candidacy. Advanced study of topics in elementary education. Serves as a program capstone seminar.
- 534 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 is given to the educative functions of play and implications of those functions for curriculum and instruction.
- 555 MIDDLE SCHOOL CURRICULUM DESIGNS AND INSTRUCTIONAL STRATEGIES (2-6)
Prereq: teaching experience. Current curriculum designs in middle school programs will be surveyed and selected elements analyzed. Appropriate instructional strategies necessary to facilitate these designs will be studied. The individual class member will select the study of some special major middle school development appropriate to his school curriculum and/or program (May be repeated to a maximum of 6 credits.)
- 560 SEMINARS IN SPECIAL EDUCATION (2-5)
Prereq: graduate status or permission of instructor. Specific problems and methods for serving exceptional children. Content will vary from summer to summer; hence the course may be repeated for credit.
- 560a SEMINAR IN EDUCATION OF LEARNING DISABLED STUDENTS (4)
Prereq: EdCI 460a or permission of instructor. Study of instructional and behavioral interventions with learning disabled students and application in the classroom. Procedures for successfully mainstreaming learning disabled students.

- 561 **ADVANCED PROBLEMS IN SPECIAL EDUCATION (3-5)**
Prereq: permission of instructor. Intensive study of problems in a selected area of special education.
- 562 **ETIOLOGY OF MENTAL RETARDATION (3)**
Prereq: teaching experience or permission of instructor. Mental retardation: major clinical types whose principle feature is retardation; causes, on-going research into this problem.
- 563 **CURRICULUM AND METHODS OF INSTRUCTION FOR THE MILDLY HANDICAPPED (3)**
Prereq: EdCI 562. Class organization, selection of curriculum content and instructional aids for teaching children having a wide range of mental retardation.
- 564 **EDUCATIONAL TECHNIQUES FOR MALADJUSTED CHILDREN (4)**
Prereq: teaching experience or permission of instructor. The use of applied behavior analysis techniques with the emotionally disturbed child in the classroom.
- 565 **CONSULTATIVE TEACHING IN SPECIAL EDUCATION (4)**
Prereq: admission to the program or permission of the instructor; concurrent enrollment in 565a. The consultative teacher's role in providing special education services to mainstreamed exceptional children with emphasis on skills needed to achieve that role.
- 565a **PRACTICUM IN CONSULTATIVE TEACHING (3)**
Prereq: concurrent enrollment in EdCI 565. Students will participate in a practicum with a master teacher or consultant who is operating in the specialist role.
- 566 **COUNSELING AND GUIDANCE FOR THE HANDICAPPED CHILD (4)**
Prereq: EdCI 360, 361. Application of techniques in guiding and counseling exceptional children and communicating their characteristics to parents and others influential in meeting their needs.
- 583 **READING AND CHILDREN'S LITERATURE (4)**
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 **PSYCHOLOGY OF READING (4)**
Perceptual and cognitive processes in reading and their implications for reading instruction. Study and interpretation of reading research literature and the application of psychological principles to the design of reading research problems.
- 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. Selected readings of a minimum of eight books concerned with issues in reading education.
- 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.
- 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 **PRACTICUM IN READING DIAGNOSIS AND REMEDIATION (4 ea)**
Prereq: graduate status or permission of instructor: e, f, g, or e, f, h must be taken in sequence. Reading consultant candidates will have consultant opportunities approved by instructor (h).
- (e) Standard diagnostic tests in reading; supervised practice in their use
 - (f) Individual case study; diagnosis and remedial instruction of children with reading problems.
 - (g) Advanced practicum in remedial reading.
 - (h) Practicum in reading consultant work.
- 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 will select an area of concentration, develop plans and procedures for improvement of instruction, and submit a plan for classroom implementation and evaluation.
- 596c **ADVANCED PRACTICUM: SECONDARY EDUCATION (2-6)**
Prereq: graduate status and 20 quarter hours of approved course work. Supervised experience for the improvement of teaching in the secondary school. Participants will develop plans and procedures designed for the improvement of instruction and submit a plan to the course instructor and appropriate public school authority for classroom implementation and evaluation.
- 598 **PRACTICUM IN SPECIAL EDUCATION (4)**
Individualized experience in programs for exceptional children for students having had teaching experience with handicapped children.
- 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) 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.

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. This seminar is a requirement for those seeking the Continuing Certificate as an ESA reading resource specialist. Emphasis will be on problems faced by the reading specialist/consultant in working with children, parents, teachers, other specialists and administrators.

690a THESIS (6-9)

Prereq: approval of the student's graduate committee. Research study under the direction of a faculty committee; the thesis may be done off campus between periods of residence work. S/U grading.

690b FIELD PROJECT (6-9)

Prereq: approval of the student's graduate committee. Field project under the direction of a faculty committee; the field project may be done off campus between periods of residence work. S/U grading.



Interdisciplinary Programs

English as a Second Language

The supporting endorsement program for teaching English as a Second Language (ESL) is intended for: (a) students who wish to develop skills, methods and techniques in teaching English as a second language; (b) teachers who are finding a wider range of diversity in the cultural and linguistic backgrounds of their students; (c) those who provide, through formal or informal classes in family and community settings, instruction in the English language to newly arrived residents who need to learn English as a survival skill.

This program assumes that there will be an increasing demand for those able to teach ESL here and in other countries, that an increasing number of foreign students can be trained in English through enrollment in universities like Western which can provide courses in English for foreign students, with instruction supplemented by a corps of native speakers of English enrolled in the endorsement program in ESL. For advisement or approval of courses, students should consult Dr. Robert Kim, Department of Educational Administration and Foundations, Miller Hall 324D.

Approval of this endorsement area is under consideration by the State Board of Education as this catalog went to press. Students are advised to check with the Office of Admissions and Advisement (Miller Hall 202) regarding the status of this endorsement area.

BACHELOR OF ARTS IN EDUCATION

Minor 30 credits

Required Courses: (19-22 credits)

- EdAF 410, Teaching the Culturally Different Child (4)

- EdCI 418, Methods and Materials for Teaching ESL (4)
- Eng 370, Introduction to American English (4)
- Foreign Lang 410, Introduction to Applied Linguistics for Foreign Language Majors (4)
- Foreign Lang 425, Practicum in Teaching English as a Second Language (3-6) (minimum of 3 credits required)
- Electives: (8-11 credits)
 - Anth 247, Language in Culture and Society (3)
 - EdAF 414, Comparative Education (3)
 - Eng 474, English Usage (4)
 - Ethnic Studies 301, Comparative Minority Studies (3); 434, Multi-Ethnic Literature (3)
 - Linguistics 301, Phonology (5); 302, Morphology (3); 303, Syntax (3)
 - Speech 373, Phonetics (3)

Prerequisites:

Those planning to enroll in the endorsement program must have studied a second language through the second year college level, or have had the equivalent through bilingual experience. The program also requires completion of Linguistics 201 or its equivalent as a prerequisite.

Practicum arrangements will be completed prior to enrollment in Foreign Lang 425. Arrangements can be made for program enrollees to work with those learning English as a second language in a variety of settings: community, family, classroom. Supervision and discussion of problems on a regularly scheduled basis are required.

The endorsement program in ESL is available to liberal arts students and teacher education students as an area of study supporting the major field.

Attempts will be made to provide teacher education students with placements for both the primary endorsement and this supporting endorsement in ESL.

Library Science

Program Adviser: Dr. Les Blackwell

Library Science is a professional education program leading to a recommendation for certification as a public school librarian in the State of

Washington. Certification requirements include holding an Initial Teaching Certificate as well as meeting the minimum state standards set forth in the library science minor. It should be noted that the program includes courses which emphasize traditional printed material, film, video and audio recording, and the use of micro-computers as media for storing, transmitting or retrieving information.



Minor — Library Science Elementary

- 24 credits selected under advisement from the following:
- Lib Sci 309, 401, 402, 403, 404, 405, 407, 410
 - EdCI 422, EdAF 444, 450, 451, 457b

Minor — Library Science Secondary

- 24 credits selected under advisement from the following:
- Lib Sci 401, 402, 403, 404, 407, 410
 - EdCI 424c,d, EdAF 444, 450, 451, 457b

Fifth-Year Program for Learning Resources Specialists

The following program is recommended for teachers preparing to become specialists in learning resources:

A. Common Core

- Lib Sci 401
- EdAF 450, 451
- Tech 240

B. One concentration from the following

- Library Science:* Lib Sci 402, 403, 404, 405, 407; EdCI 422, 424c,d, 425
- Administration:* EdCI 422, 424c,d, 475, EdAF 543a, 550
- Graphics:* Tech 419, 440, 449, 469, 540, 544

Students interested in the above areas should seek advisement in Miller Hall 363.

COURSES IN LIBRARY SCIENCE

Courses numbered X37; X97: 300, 400, 500; 417; 445, 517, 545 are described on page 28 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.
- 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 the adolescent and his curriculum; multicultural, 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.
- 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.

Reading

Program Office — Miller Hall 251/306

Concentrations in secondary and elementary reading are available to students.

Reading Minor, Secondary Education

24 credits (Supporting Endorsement: Reading)*

- EdCI 481, 484, 486, 488, 489
- Lib Sci 407 or
- Eng 444

Reading Minor, Elementary Education

26 credits (Supporting Endorsement: Reading)*

- EdCI 385, 484, 485, 486, 488, 489
- Lib Sci 495 or
- Eng 441

*At the time of publication, application for approval of these minors as a supporting endorsement for the Elementary/Secondary Teaching Certificate is pending with the State Board of Education. These programs are designed to provide competency as a reading teacher in the elementary/secondary school. It is completed in **addition** to the academic study-in-depth or academic major or the academic minor.

FAIRHAVEN COLLEGE

Dr. Daniel M. Lerner, Dean

THE COLLEGE WITHIN THE UNIVERSITY

Founded in 1966, Fairhaven college is an undergraduate division of Western Washington University. Its purpose is to offer students the opportunity to take an uncommon degree of responsibility for the structure and content of their own educations. The College offers training in writing and research, critical thought and creative expression, independent judgment and scholarship, and self evaluation and assessment.

At Fairhaven, students are challenged to bring what they learn to bear on human concerns and crucial real world problems, to experiment, to discover, and to act. This style of education supports the development of certain values and practical skills: discipline, resourcefulness, initiative, flexibility and adaptability. 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.

WWU students can choose to enroll in Fairhaven's integrated degree program, or, if affiliated with Western's other colleges, take Fairhaven classes to augment their selected course of study. Fairhaven students take, on the average, about half their classes from departments within Western, they have full University status and access to all the educational, cultural and social resources of WWU.

A STRUCTURE FOR LEARNING

A close working relationship between the teacher and the student is a continuing commitment at Fairhaven College. Classes are small and the emphasis is on open discussion and exchange of ideas. Independent study, field work, internships and practica are encouraged. In any given quarter, students may select classes offered across the University and/or design

study projects in consultation with faculty.

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.

Requirements for bachelor's degrees awarded by Fairhaven College are as follows:

- The Fairhaven Core Program, including an established WWU major or a Fairhaven Interdisciplinary Concentration
- Minimum of 180 quarter hours of credit, including 60 credits at the upper-division level and 45 credits in residence
- Completion of WWU writing proficiency requirements (Fairhaven 101 and Fairhaven 118 partially fulfill this requirement.)
- Scholarship and credit standards as prescribed in the Fairhaven College *Community Handbook*

Note: Requirements common to all undergraduate divisions of WWU are listed elsewhere in this *Catalog*.

THE EXPERIENCE OF GRADUATES

Fairhaven graduates have obtained positions in virtually all fields, including: Business & Industry; Communications, Journalism & Research; Community Service, Counseling & Health; Education — all levels; Fine & Performing Arts; Government — local, state, national; Medicine, Law, Ministry — and other professions; Public & International Relations.

Graduates have independently ventured into the private sector, have started their own businesses, have created new jobs in established organizations and have distinguished research and publication records.

Many graduates have pursued advanced studies. The following are some of the schools which have accepted Fairhaven graduates: Boston Uni-

versity; Columbia University; Fuller Theological Seminary; Harvard University; The Juilliard School; Northwestern University; Princeton University; The San Francisco Art Institute; Camphill-Rudolph Steiner School (Scotland); Canterbury University (England); Ecole du Louvre (France); Leuven-Kortrijk University (Belgium); University of Paris (France); Waseda University (Japan).

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 forms, objects and range of knowledge, and practical applications found in the given area of study.

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
- 103 Social Perspectives
- 105 Historical Perspectives
- 107 Scientific Perspectives
- 109 Artistic Perspectives
- 111 Personal Perspectives
- 113 Cross-Cultural Perspectives
- 118 Writing Competency
- 119 Transition Conference

STAGE 2: CONCENTRATED STUDIES

Studies to sharpen, deepen and integrate knowledge, to learn approaches to scholarship, methodological skills and research techniques; framing questions and developing ways in which to answer them.

Complete one of the following options:

Option A: The Fairhaven Individually Designed Major — The "Interdisciplinary Concentration"

303 Concentration Seminar

Components of Concentration:
 Proposal of study
 Completion of courses
 Senior project
 Student summary and evaluation
 Committee review and approval

OR

Option B: A major in one of the departments of Western Washington University
 Departmental requirements pertain
 — see particular *Catalog* section

STAGE 3: ADVANCED STUDIES

Studies to demonstrate understanding of knowledge gained and to assimilate and synthesize what has been learned; discovering ways in which one's specialization may be generalized to other fields and applied to society.

- 401 Senior Project (Option A students only)
- 403 Advanced Seminar (Both Option A and Option B students)

THE INDIVIDUALLY DESIGNED MAJOR

The Fairhaven Interdisciplinary Concentration provides an opportunity for developing an individually designed major. 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:

- The Ethics of Science
- American Social Structures: A Critical Perspective of Women in History
- Art as Sign and Ritual in Society
- The Narrative Image: Writing, Film and Photography
- Poetics of Cultural Change
- Poverty, Minorities and Mental Health
- Kaleidoscope: Future Design in Education
- The Human Condition: A Socio-Psychological Interpretation
- Ecological Parameters of Human Culture
- Folklore Studies: Myth and Folktales
- Performing Arts Management and Production

Affirmative Options in Aging
The Intersection of Science, Law and People

Further information pertaining to the concentration, its possibilities and prospects, may be found in the Fairhaven College *Community Handbook*.

SPECIAL PROGRAMS

THEMATIC AND INTENSIVE STUDIES. The College may offer several classes in a single quarter which focus on particular topics, issues or themes. For example: "Explore 84" concentrated on Orwell's and others' predictions and visions. A class, "American Indian Law and History," was taken exclusively by a group of students for an entire term. Independent field studies abroad or community internships might consume a full quarter registration.

PROFESSIONAL EDUCATION. For students wishing to acquire teaching credentials, Western's *School 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 *School of Education* in helping the student to complete requirements.

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* and are assigned a faculty adviser. The faculty and staff then meet with the students throughout their course of study.

GRADING AND EVALUATION

A: 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.

The official transcript, held in the University's *Registrar's Office*, lists all Fairhaven and 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

Western's tuition and fee structure applies to Fairhaven students. See other sections of this *Catalog* for specific details. Information regarding federal, state and private financial assistance and application procedures should be addressed to: *Financial Aid Office*, Western Washington University, Bellingham, WA 98225. Fairhaven's *Entrance Scholarship* fund provides awards to selected students who are new to both Fairhaven and Western. Write to *Fairhaven College* for separate brochure and qualification guidelines.

APPLYING FOR ADMISSION, VISITING FAIRHAVEN

Students currently attending 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.

We encourage you to pay us a visit! If you call first (206/676-3677) or write to us, we can arrange appointments with the Dean, an admissions adviser, faculty, students or other WWU staff.

FAIRHAVEN COLLEGE FACULTY

DANIEL M. LARNER (1968) Professor and Dean of the College. AB. Harvard College. MS, PhD. University of Wisconsin, Madison.

KATHRYN L. ANDERSON (1972) Associate Professor. BA, MA. University of Iowa. PhD. University of Washington.

JOSEPH BETTIS (1975) Professor. BA. Southern Methodist. BD. Drew. MA, PhD. Princeton.

MICHAEL J. BURNETT (1969) Associate Professor. BA, University of Illinois; MA, PhD, Claremont Graduate School.

LESLIE CONTON (1980) Assistant Professor. BA, Oberlin College; MA, PhD, University of Oregon.

CONSTANCE P. FAULKNER (1965) Associate Professor. BS, PhD, University of Utah.

KENYTH D. FREEMAN (1971) Professor. AA, Mars Hill Jr. College; BA, Wake Forest University; MA, Emory University; PhD, Columbia University.

PAUL C. GLENN (1969) Associate Professor. BA, University of Washington; MA, Stanford University.

WILLIAM H. HEID (1968) Associate Professor. BA, Denison University; MS, PhD, University of Washington.

RAND F. JACK (1971) Professor. AB, Princeton University; LLB, Yale University Law School.

ROBERT H. KELLER (1968) Professor. AB, University of Puget Sound; BD, MA, PhD, University of Chicago.

DAVID T. MASON (1966) Professor. BA, Reed College; MA, PhD, University of California, Davis.

JOHN C. McCLENDON (1971) Associate Professor. BA, MA, San Francisco State College; PhD Candidate, University of California, Davis.

DONALD B. McLEOD (1963) Professor. BA, Whitman College; MA, University of Montana.

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, 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. Fair-



haven's courses and studies are open to all WWU students.

THE FAIRHAVEN COLLEGE QUARTERLY. The *Quarterly* — available prior to registration in the fall, winter and spring — announces schedule changes and additions and it describes in detail Fairhaven's offerings each term. Students are advised to consult the *Quarterly* before finalizing their programs.

FAIRHAVEN COLLEGE COURSES AND STUDIES

FAIRHAVEN'S 85-87 CURRICULUM. The courses and studies listed in this *Catalog* will be offered during the 85-87 academic years. Additional classes will be announced and described in the Fairhaven College *Quarterly* as they are scheduled.

CORE STUDIES

- 101 **CORE: FOUNDATIONS SEMINAR (5)**
Required of Fairhaven College students the quarter of admission. An introduction to critical learning skills, aspects of educational theory, curricular structures and individualized learning. Provides an introduction to the resources of the College and the University. Emphasis on communication skills (writing, seminar discussion, listening), designing and critiquing independent study programs, discovery and use of resources, research techniques and self-evaluation. Partially satisfies the all-University writing proficiency requirement.
- 103 **CORE: SOCIAL PERSPECTIVES (5)**
The nature and principles of social organization; the role of the individual in relation to social, economic, religious and political institutions; impact of ideas, values, ideologies and symbols on the social fabric.
- 105 **CORE: HISTORICAL PERSPECTIVES (5)**
Various approaches to historical methodology and ways in which information is interpreted to reveal relationships between past and present.
- 107 **CORE: SCIENTIFIC PERSPECTIVES (5)**
The nature of scientific truths, sources and manipulation of data, and the philosophic and cultural limits of science.
- 109 **CORE: ARTISTIC PERSPECTIVES (5)**
The nature of artistic expression and its relation to society. How artists/writers create and how others experience, analyze and judge the creation.
- 111 **CORE: PERSONAL PERSPECTIVES (5)**
What knowledge is possible about the unique individual? Various methodologies and resources for such investigation; exploration of ways toward personal growth.
- 113 **CORE: CROSS-CULTURAL PERSPECTIVES (5)**
The variation, function, structures of human culture, the dynamics of enculturation. A look at other cultures in part as a means to gain perspective on life in the United States.
- 113 **CORE: WRITING COMPETENCY (3)**
Development and demonstration of writing competency in consultation with faculty. See the Fairhaven College *Community Handbook* for procedure. Partially satisfies the all-University writing proficiency requirement.
- 113 **CORE: TRANSITION CONFERENCE (1)**
Demonstration of breadth of knowledge in consultation with faculty. See the Fairhaven College *Community Handbook* for procedure.
- 303 **CORE: INTERDISCIPLINARY CONCENTRATION SEMINAR (5)**
Required of students undertaking an Interdisciplinary Concentration. Review of procedures and assistance in ordering one's course of study into an effective concentration proposal. Credit awarded upon filing the proposal.
- 401 **CORE: SENIOR PROJECT (Variable)**
Independent study required of students undertaking an Interdisciplinary Concentration. See the Fairhaven College *Community Handbook* for guidelines.
- 403 **CORE: ADVANCED SEMINAR (5)**
Required of all Fairhaven College students. An opportunity for seniors to share their understanding of the concentration or major, to consider its place in the world, and to explore its possible uses, interactions and continuities after graduation.

CONCENTRATED STUDIES

- 210/310/410 a-z **HISTORY, CULTURE AND SOCIETY ('-6)**
Analysis of social institutions: theories or issues with reference to their history, structure or meaning; cultural unity and diversity. Some of the offerings in this section are listed below. Additional topics will be listed in the Fairhaven College Quarterly as they are offered. Repeatable with different topics.
- 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.
- 212 **INTRODUCTION TO POLITICAL ECONOMY (5)**
A study of the American economic system from two perspectives, orthodox (Keynesian/neo-Keynesian) and critical; application of both theoretical frameworks to problems in modern American society.
- 213 **MAKING ANTHROPOLOGY PERSONAL: RESEARCHING AMERICAN CULTURE (4)**
Through the collection of data and analysis of local cultural phenomena, students examine the unity and diversity of American culture, and learn the methods and perspectives of cultural anthropology. Focus on popular culture, mass media, social dynamics, national rituals, symbols and myths.
- 214 **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.
- 215 **RAILROAD IN AMERICA (4)**
Multi-disciplinary study of the history and effects of the railroad on American society and culture.
- 216 **WORLD RELIGIONS (4)**
Study of the history, mythology and cultural context of various world religions. Repeatable with different topics.
- 217 **HISTORIAN AS DETECTIVE (5)**
Introduction to the challenges of investigation. Assignments develop specific research skills and an understanding of evidence. Use of reference tools, historical fiction, essays and readings in classical historians: Herodotus, Thucydides, Tacitus, Gibbon.
- 218 **NUCLEAR WAR, NUCLEAR PEACE (4)**
Nuclear war, anti-nuke movements, nuclear ideology, nuclear power and nuclear politics.
- 219 **CONTEMPORARY THIRD WORLD (4)**
The history and dynamics of contemporary political movements in Africa, Asia and Latin America. Use of case study approaches.
- 311 **FOOD AND CULTURE: SYMBOLIC AND SOCIAL MEANINGS OF FOOD (4)**
Prereq. introductory cultural anthropology, Fair 103 or 113, or permission of instructor. A cross-cultural survey of the socio-cultural significance of food habits, focusing on eating as patterned ideological and symbolic behavior.
- 312 **RELIGION AND POLITICS (3)**
Prereq. background in political science or law. The interaction between American religious life and the American political order. Issues related to education and the courts, the meaning of the First Amendment, the separation of church and state, the social function of religion in society.

- 313 **CONTEMPORARY ASIA (4)**
Prereq: background in history or political science. A critical analysis of political, cultural and social movements and trends in various countries of Asia, including Japan and Communist China. Repeatable with different topics.
- 314 **THIRD AND FOURTH WORLD RESPONSES TO CULTURE CHANGE AND MODERNIZATION (3)**
Prereq: Fair 113 or Anth 201. The impact of modernization on "traditional" societies and implications of westernization for Third and Fourth World peoples is explored by means of case studies; various theoretical approaches to socio-cultural change will be addressed.
- 315 **MULTINATIONAL CORPORATIONS AND THE THIRD WORLD (4)**
Prereq: Fair 103, 105 or equivalent. Development of underdevelopment. Nature and functions of multinational corporations in the Third World and their influence on the U.S. Theoretical approaches and case studies of countries and corporations.
- 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 **THE ART OF FIELDWORK (5)**
Prereq: Fair 113 or instructor permission. The methods and techniques of ethnographic fieldwork through direct experience in projects in the local community.
- 318 **THE AMERICAN LABOR MOVEMENT (4)**
Prereq: some college-level background in American history, economics or political science. The American labor movement from the Knights of Labor to the Taft-Hartley Act with particular emphasis on its place in social, political, economic history.
- 319 **THE IMPORTING OF EUROPE (4)**
Prereq: courses in the social sciences. A study of European immigration to the U.S. with emphasis on ethnic identity, social movements, intellectual trends and scientific advances.
- 411 **POLITICAL ECONOMY AND THE STATUS OF WOMEN (5)**
Prereq: Fair 212 or Econ 203 or 204 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; etc. Writing intensive.
- 412 **CRITIQUE OF AMERICAN CAPITALISM (5)**
Prereq: Econ 204, Fair 212 or equivalent plus upper-division standing. 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 (3)**
Prereq: cross-cultural studies or instructor permission. 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 **RHETORIC OF FEMINISM (4)**
Prereq: background in rhetorical theory or women studies. Survey of ideas and modes of persuasion with emphasis on changes in the form and content of arguments and counter-arguments in the context of social and intellectual history. Detailed rhetorical and historical analysis of selected individuals and particular movements. Writing intensive.
- 415 **GOVERNMENT POWER UNDER THE CONSTITUTION (6)**
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 (6)**
Recommended preparation: Fair 415. Study of constitutional law and the way in which the Supreme Court construes the constitution in addressing major social and political questions. Critical reading and analysis of court opinions. Questions of individual rights in conflict with government regulation.
- 417 **SOCIAL THEORY: SEARCH FOR A METHOD (4)**
Prereq: Fair 212 or equivalent or studies in political theory or other social science. Views of social theorists from mid-19th century to the present, particularly as they react to the contradiction between liberal ideology and the reality of life in industrialized society. Emphasis on method, i.e., how to seek and evaluate answers to social questions.
- 418 **WOMEN OF THE WORLD: CROSS-CULTURAL PERSPECTIVES (3)**
Prereq: Fair 113 or Anth 353. A survey of women's economic, political, religious and domestic roles in various cultures, focusing on cross-cultural variations in the relations of power between the sexes. Writing intensive.
- 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. Some of the offerings in this section are listed below. Additional topics will be listed in the Fairhaven College Quarterly. Repeatable with different topics.
- 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 critique and discuss student manuscripts
- 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.
- 224 **DYLAN THOMAS: POETRY AND PROSE (4)**
Reading and discussion of selected poetry and prose of the Welsh poet, as an introduction to careful literary analysis, as well as to Thomas' work.
- 225 **EXPLORING THE DICTIONARY (4)**
Building vocabulary and understanding of etymology and usage through extensive analysis of words, their roots and meanings.
- 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. Since issues and approach will vary from year to year, course is repeatable.
- 321 **THE COMIC ROUTINE (4)**
Prereq: Fair 109 or introductory literature course. Studies in oral comedy from Twain and the Southwestern humorists to the routines of stand-up comics today. Analysis and comparison of humorous technique, recurrent themes and social/political impact.

Fairhaven College

- 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 STUDIES IN EUROPEAN AND RUSSIAN LITERATURE (4)
Prereq: Fair 109 or course in literature. Readings and discussion of great 19th or 20th century imaginative writers. Possible authors: Pushkin, Gogol, Turgenev, Dostoevski, Tolstoy, Chekhov, Gorky, Kafka. Repeatable with different topics.
- 324 AMERICAN VOICES (4)
Prereq: course in American literature. Readings in works by authors not generally included in standard anthologies. Works by women, Native Americans, Blacks, Mexican Americans, Chinese Americans, gays and other underrepresented writers may be discussed. Specific authors and focus will vary from quarter to quarter, so course is repeatable.
- 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 different topics.
- 421 NONFICTION 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. Conversations with experienced writers in both the arts and sciences will regularly occur. Writing intensive.
- 422 ART AND POLITICS (4)
Prereq: Fair 105 or 109, or literature courses. Approaching various works of art or literature from the perspective of social, economic or political issues, with an emphasis on the literature and art of protest. Themes and works studied will vary from year to year, so course is repeatable.
- 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. Some of the offerings in this section are listed below. Additional topics will be listed in the Fairhaven College Quarterly. Repeatable with different topics.
- 231 INTRODUCTION TO THE HISTORY OF SCIENCE (4)
An introduction to the development of scientific investigation, methodology and theory-making. Includes the problems, limitations and powers of various approaches to knowledge that have been called "scientific." Intended for both scientists and non-scientists.
- 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 different topics.
- 233 PARANORMAL PHENOMENA AND SCIENTIFIC EVIDENCE (4)
Examination of the latest in psychic research and the surrounding controversies as a self-conscious study of open-mindedness, closed-mindedness, critical thinking, prejudice, skepticism, gullibility, and the nature of evidence, proof, authority and faith.
- 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 different topics.
- 331 PATTERNS OF NATURE (4)
Prereq: background in the sciences or literature or instructor permission. Noting, measuring and recording recurring patterns in the environment. May include nature writing, fieldwork, and the design and execution of research projects. Repeatable with different topics. Writing intensive.
- 332 NATURAL HISTORY OF INLAND WATERS (4)
Prereq: Fair 107 or other background in science. Biological indicators of wetlands, community structure, sensitivity and resilience. Field observations and identification of creatures large and small, measurements of biotic activity and environmental variables, observational and experimental design, data processing and reduction, and analysis of results.
- 333 HUMANS' CREATURES (4)
Prereq: Biol 101. Explores the lives of organisms that interact with humans: domestics and cultivars, pests and pathogens, the engineered and the feral. Investigates profit or loss to humans or their associates, and seeks ways to establish common values for the trade-offs we make with them.
- 334 REGIONAL ECOLOGIES (3)
Lectures emphasizing the ecology of a large global region; e.g., tropics, arctic/antarctic, deserts or temperate zone. Science background not assumed.
- 335 SCIENCE, TECHNOLOGY AND VALUES (4)
Prereq: Fair 103 or 107 or equivalent. Examines the past and present and possible future impacts of science and technology on each other and on social values, and of social values upon science and technology. Writing intensive.
- 431 ENVIRONMENTAL LAW (5)
Prereq: environmental studies or law or government or economics. Survey study of major areas of environmental law with emphasis on legal and policy conflicts which have gone to court for resolution.
- 432 TIME, SPACE, MEASUREMENT AND REALITY (4)
Prereq: upper-division standing. A study of assumptions underlying various conceptions and descriptions of space, time, measurement and reality. May include discussion of classical and modern physics, art, child development, non-Western cultures. Appropriate for the artist, liberal artist, or scientist. Repeatable with different topics.
- 433 FRONTIERS (4)
Prereq: Fair 107 or other science courses. Questions, trends, theories and important figures at the leading edge of physics, biology, chemistry, or mathematics. Repeatable with different 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. Some of the offerings in this section are listed below. Additional topics will be listed in the Fairhaven College Quarterly. Repeatable with different topics.
- 241 EDUCATION IN AMERICA (3)
A critique of the American mass educational system and its impact on the individual, including a critical analysis of educational alternatives which may involve practice with young children.

- 242 **SEXUAL MINORITIES (3)**
Historical, sociological, political, psychological and cultural aspects of people who prefer modes of sexual expression other than exclusive heterosexuality.
- 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.
- 244 **UNDERSTANDING HUMAN DEVELOPMENT (5)**
Human development through everyday processes of family, sexuality, work, community and friendship. Includes introduction to basic theories and research from psychology, anthropology, sociology and health.
- 341 **EDUCATION IN AMERICA: THEORY AND PRACTICE (3)**
Prereq: Fair 241 or education course. Education: theory and practice. Directed experience in daycare or co-op school.
- 342 **TOPICS IN CONTEMPORARY RELIGION (3)**
Prereq: background in philosophy or psychology. Studies in modern religious movements; phenomenology of religion; psychology of religion, the relationship of religion to secular culture and the individual. Repeatable with different topics.
- 343 **AWARENESS THROUGH THE BODY: PHASE II (4)**
Prereq: Fair 243. A continuation of Fair 243 with increased emphasis upon psychophysical integration; development of definitions of "good use" and a study of leading theoretical constructs of the field.
- 344 **HUMAN EMOTIONS (4)**
Prereq: Fair 243 or other experiential learning (consult instructor). Theoretical frameworks for understanding the emotional life will be introduced, along with techniques for self-observation.
- 345 **THERAPY, ARTS AND THE COMMUNITY (5)**
Prereq: courses in human development or personality theory. Therapies which use music, dance and the other arts in a variety of settings. The nature of social relations in therapy for various cultures. The role of professional and lay healers.
- 346 **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.
- 347 **WOMEN AND IDENTITY: CONVERGENCE OF INNER AND OUTER WORLDS (4)**
Prereq: courses in psychology. An examination of research and theory describing the outer realities of women's lives and their cognitive/emotional responses to those realities. Women's sense of self and identity as it derives from the interplay of these inner and outer worlds. Focus on women's moral thinking, identification with role, and depression.
- 441 **FREUD AND PSYCHOANALYSIS (4)**
Prereq: psychology or human development courses. The writings of Freud and his major followers and critics. Attention to the historical context of the writings and the relationship of psychoanalysis to critical social theory. Writing intensive.
- 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. Some of the offerings in this section are listed below. Additional topics will be listed in the Fairhaven College Quarterly. Repeatable with different topics.
- 251 **ORIENTAL ART AND RELIGION (4)**
An introduction to oriental art and aspects of oriental religions that are related to art. The painting of the Tang and Sung period of China; the "I Ching" and the "Tao Te Ching." The temple sculpture in India which drew its inspiration from the Tantric religion; the religious scripture of Tantra, Hinduism and Buddhism.
- 252 **STAINED GLASS WORKSHOP (3)**
Techniques for Tiffany-style stained glass-cutting, foiling, soldering. The elements of design peculiar to this art medium will be introduced through a study of traditional and contemporary stained glass.
- 253 **CHORAL SINGING (2)**
Open to all without audition who wish to sing mixed choral music. A wide range of choral literature will be rehearsed and performed with emphasis on individual vocal development and ensemble singing. Repeatable to 6 credits.
- 254 **ART AND IDEOLOGY (4)**
Exploration of the relationship of art to its culture. Examination of the relationship of Rubens to the Council of Trent, Michelangelo to Martin Luther, the Russian Avant-Garde to the Russian Revolution, Picasso to Einstein, the sculpture of the Age of Pericles to Pythagoras, Chinese landscape painting to Zen Buddhism, David to the French Revolution.
- 255 **MUSIC LISTENING: AN AURAL APPROACH (3)**
The principles of repetition and contrast in music; the elements of melody, harmony, rhythm, texture and timbre and their organization into formal structures with primary emphasis on how to hear these elements in a broad range of musical styles including contemporary jazz.
- 256 **PORTRAIT DRAWING (2)**
Pencil, pen and ink wash study of the head, working from the model. Instruction and practice in layout, details, expression, likeness and viewpoint.
- 257 **MUSICAL/DRAMATIC PRODUCTION (1-5)**
Prereq: permission of instructor. Rehearse, stage and perform a musical/dramatic theatre production. Repeatable with different 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 6 credits.





- 259 **AMERICAN SONG (4)**
Study of the American experience through its songs, with special emphasis on social, historical and literary analysis of songs by and about minorities and other non-elites. Repeatable with different topics.
- 351 **THE SPIRITUAL PATH (4)**
Prereq: courses in the humanities. A study of the literature of spiritual journey, with references to classical and modern texts. Examples of spiritual autobiography and instruction and psychological and philosophical descriptions of religious experience.
- 352 **BACKGROUNDS OF CONTEMPORARY ART (3)**
Prereq: courses in history or art history. Exploration of the current debate on post-modern art by viewing art of the past ten years and reading the critics who are attempting a definition of post-modernism. Study of significant painters of the first 50 years of this century.
- 353 **VOCAL ENSEMBLE (2)**
Prereq: audition and instructor permission. A select vocal chamber group, performing music for mixed voices in a variety of musical styles ranging from madrigals to the popular and jazz idioms. Repeatable to 6 credits.
- 354 **PAPER ART (4)**
Traditional and modern experimental techniques of papermaking in our own and other cultures; attention given to preparing paper for watercolor, printmaking and modern mixed media. Class projects will include three-dimensional sculpture with paper and two-dimensional pictorial art.
- 355 **THE ART OF IMPROVISATION (4)**
Prereq: dance, movement or body awareness classes. A study of modern improvisational art and artists. Combining dance, music, visual and spoken arts within a performing ensemble. Attention to individual creativity and performing skills, and the development of intuitive communication. Repeatable with different topics.
- 356 **DREAMS, IMAGINATION AND CREATIVITY (4)**
Prereq: Fair 111, or Fair 243, or instructor permission. 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 **TAOISM (4)**
Prereq: Fair 243, or courses in philosophy, or instructor permission. A study of the ancient Chinese philosophy of Taoism using key texts, practices and rituals associated with Taoism. The focus of the course is upon the relevance of Taoism to contemporary life.
- 451 **SYMBOLS IN ART, CULTURE AND THE UNCONSCIOUS (4)**
Prereq: courses in the humanities or social sciences. The nature of symbols and symbol systems as expressed in art, psychology and historical myth. Developing dictionaries of personal symbols through reference to dreams and personal reaction to universal symbols. Writing intensive.
- 452 **SHAMANISM: HEALERS, VISIONARIES AND DREAMERS (3)**
Prereq: Fair 113 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.

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 special interest small study groups formed around particular topics, themes, issues or activities. Topics will be listed in the Fairhaven College Quarterly as they are offered. Repeatable with different topics.

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 (1-6)

Courses which give flexibility to the curriculum by allowing faculty to offer unusual or timely classes. Topics will be listed in the Fairhaven College Quarterly as they are offered. Repeatable with different topics.

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 (1-16)

Prereq: upper-division standing. Investigation of problems and issues through advanced interdisciplinary study. Topics will be listed in the Fairhaven College Quarterly as they are offered. Repeatable with different topics.

COLLEGE OF FINE AND PERFORMING ARTS

Dr. William A. Gregory, Dean

The College of Fine and Performing Arts is dedicated to excellence in teaching and learning. Creativity in process and analysis form the objectives of course work: *doing* music, theater, dance, painting, sculpture, ceramics, fabrics, while *thinking* about their theory, criticism and history.

The primary supposition of the College remains that only through encouraging and promoting new ways of seeing and thinking can we hope to provide educated individuals with the tools necessary to enjoy, *and change*, a world increasingly beset with the problems of modern civilization.

Academic Programs Leading to Undergraduate and Graduate Degrees

Art	BA, BA/Ed, BFA, M/Ed
Art History	BA
Dance	BA
Music	B/Mus, M/Mus, BA/Ed
Theatre	BA

Admission

A student is admitted to the College of Fine and Performing Arts when he or she has been admitted to Western Washington University and has officially declared and been accepted as a major in any one of the three departments of the College. Advisement is carried on through the department and through the office of the Dean of the College of Fine and Performing Arts.

Requirements for Bachelor's Degree

- 180 quarter hours of credit (Music—192 quarter hours); no fewer than 60 credits in

upper-division study

- Residence study: one full year (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
- Scholarship standard: a cumulative grade average of 2.00 (C), or better, with no grades of less than C- acceptable in the major, minor, supporting courses for major or minor, professional education courses, or in English composition. Admission to, and continuation in, the teacher education curriculum requires a minimum average of 2.50. Some departments have minimum grade point requirements in the major for graduation. Please check the departmental major requirements for specific information
- General University Requirements must be completed before a baccalaureate degree is granted. They may be satisfied in one or a combination of the following alternatives:
 - (1) Demonstrating proficiency through appropriate examinations
 - (2) Through challenge in the manner described under the "Academic Policies" section of this catalog (see "Advanced Placement and Course Challenge")
 - (3) Completion of the General University Requirements as outlined in the section on All-University Graduation Requirements or an approved associate of arts degree from certain community colleges that satisfy those requirements
- Major area emphasis as specified in departmental sections under Bachelor of Arts, Bachelor of Arts in Education, Bachelor of Fine Arts and Bachelor of Music
- Electives as needed for the 180 quarter hours total credit

Majors/Minors

In addition to the General University Requirements and other common degree requirements,

Art

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.

Interdisciplinary Arts Major

A nine-quarter program which leads to a Bachelor of Arts degree in Fine and Performing Arts, the program is a 108 credit major comprised of 36 credits in Interdisciplinary Arts courses, a 36 credit concentration within a department of the College and a 36 credit University concentration, taken under advisement. Courses and other details can be found in this catalog under Arts, Interdisciplinary.

Students interested in this major should consult with the Director of the Interdisciplinary Arts program or the Dean of the College of Fine and Performing Arts.

A minor in Interdisciplinary Arts is also offered.

Department Chairmen

Gene Vike Art
C. Bruce Pullan Music
Dennis Catrell Theatre/Dance

Departments, Courses & Programs

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 class schedule, the Summer Catalog and bulletins of the Center for Continuing Education.

The following program is listed in the "Interdisciplinary" section following the departments listings:

Interdisciplinary Arts

Art

The Art Department offers a number of degree programs with major and minor concentrations in art history, art education, graphic design and illustration, painting, drawing, printmaking, sculpture, ceramics, fibers and metals. 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 are also 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 into patterns of day-to-day experience.

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 learn the skills and concepts of the studio. It is important to experience contemporary art and the work of the avant garde as well as learn the traditional. A grasp of the dynamic nature of a culture and the continuing extension of its language is a fundamental objective.

This integrated pattern of experience does not come about by a long series of required courses but is achieved through coordinated scheduling, cooperation of faculty and student interest and commitment. Through a contract system students may, in conjunction with faculty of the Art Department, develop majors to meet their particular backgrounds, needs and interests. Through arrangement with instructors, innovative programs may be planned. Programs may also be developed involving art and other disciplines. While there are certain required courses in each of the majors, the Art Department has attempted to give the greatest possible degree of flexibility in its programs congruent with student involvement and concerted faculty advisement. Students should seek advisement from faculty members in the department regularly.

ART FACULTY

GENE E. VIKE (1962) Chair.
Professor. BA in Ed. BA, Western Washington State College; MS, Pratt Institute.
MADGE GLEESON (1983) Assistant Prof. BA, MAT, Brown University; MFA, Washington State University.
LAWRENCE HANSON (1953) Professor. BA, MFA, 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. McNTYRE (1968) Professor. AB, MFA, Indiana University.

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. LRSO (1969) Professor. AB, MA, University of Notre Dame, Ind.

HOMER A. WEINER (1964) Professor. BFA, Bradley University; MFA, University of Iowa.

Adjunct Faculty:

John Olbrantz, Director, Bellevue Art Museum.

George Thomas, Director, Whatcom Museum of History and Art.

BACHELOR OF ARTS

Studio Major 80-85 credits

- Art 101 or equivalent, 120 or 130
- Art History 201, 301, 401
- Art History 220, 230, 240

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 must be written before the student has completed 24 credits in art. Concentrations may be developed in printmaking, painting, sculpture, ceramics, metals, fibers, graphic design, or in a combination of these areas as determined by the student's contractual agreement. Courses outside the Art Department 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 the studio major will submit 10-15 slides of their work as verification of competency.

Studio Minor 30-35 credits

- Art 101 or equivalent, 120 or 130
- Art History 240
- Electives under advisement

Art History Major 70 credits

- Art History 201, 301, 401
- Art History 220, 230, 240, 340, 440, 490
- Three areas from:
 - (a) Art History 310, 410
 - (b) Art History 320, 420
 - (c) Art History 430, 431

(d) Art History 360, 460

(e) Art History 370, 470

- 12 elective credits in art history
- 12 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 or German

Art History Minor 30-35 credits

- Art History 220, 230, 240
- Two courses selected under advisement from each of two areas: Primitive, Ancient, Renaissance, Modern, or American; one course from any single area may be a directed studies in that area

BACHELOR OF ARTS IN EDUCATION

Major Elementary or Secondary 50 credits

- Required of all majors:
 - (a) Art 101 or 201 and 120
 - (b) Art History 201, 220, 230, 240
 - (c) Art 280, 381, 382
- One course from each of the following: drawing, painting, sculpture, ceramics, metals and fibers.
- At least 5 credits in one advanced division studio area
- Courses outside the department may be required as part of the major

Satisfactory completion 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, a student must write a contract with the faculty committee for completion of the major. Transfer students with more than 18 credits should do this prior to completion of their second quarter at the University. Revisions and amendments may be made by the student and the faculty committee upon request.

Minor 30 credits

- Art 101 or equivalent, and 130
- Art 280, 381, 382
- Art History 240
- Electives under advisement

Major — Art Specialist 45 credits

- Complete the 45 credit art education major described above
- Complete the elementary education minor described in the Education Department section of this catalog
- Complete the professional studies program as outlined in the Education Department section of this catalog, including two quar-

Art

ters of student teaching — Elementary General Classroom and Secondary Art

Completion of this major/minor concentration leads to a teaching endorsement in K-12 art.

BACHELOR OF FINE ARTS

Studio Major 140-150 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 quarter credit hours. 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 70-75 hour primary concentration in one specific studio area. The areas are: drawing, painting, printmaking, sculpture, graphic design, ceramics, fibers and metals. Certain areas may be combined to create an area of concentration on consultation with faculty
- A 25-30 hour secondary concentration in a studio area other than that covered in primary concentration. Certain areas may be combined to create an area of concentration on consultation with faculty
- A 30-35 hour Art History minor
- A minimum of 10 free elective hours outside of the Art Department in addition to general university requirements
- Passage to BFA candidacy after completion of 50 hours of art credit
- Passage to BFA status upon completion of contract before granting of the degree

Each student BFA program is arranged through the Art Department's contract system. That contract must be established between the student and the primary and secondary area advisers at the completion of 24 credits in art. After the completion of 50 credit hours, each student must 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 each committee separately and judged in relationship to established traditional esthetic criteria in a manner designated by the department. At the completion of all hour requirements each student must submit work for BFA degree consideration. This will be a public exhibition or presentation in an appropriate professional milieu. Transfer students with more than 18 credits of previous art work should seek advisement before entering the BFA program. All incoming students contemplating the BFA degree are urged to seek departmental advisement during the first quarter at Western.

DEPARTMENTAL HONORS

In addition to the general requirements for all honors students, an art major who wishes to graduate "with honors" must complete an Honors Senior Project in art.

MUSEUM TRAINING

The Art Department, along with the Whatcom Museum of History and Art and the Bellevue Art Museum, provides a museum training program for qualified students from Western Washington University. Students wishing such training will enroll in Art History 302 — Museology I, or Art History 402 — Advanced Museology. The students will receive their training with the staff of the appropriate museum.

INTERNSHIP

The Art Department offers a field internship program for qualified students concentrating in the Graphic Design area. Interns receive instruction and practical experience under the supervision of professional designers.

THE WESTERN GALLERY

The Western Art Gallery has a well established reputation in the Northwest and it features a thoughtful, high quality exhibition program throughout the year. The program includes regional, national and international exhibitions. Visiting artists, critics and curators are a regular part of the activity of the department and the gallery.

FIRST YEAR STUDENTS

Freshmen may elect courses of their choice at the 100 and 200 level which will become the basis for subsequent work.

All students should notice the Art History core requirements and prerequisites for 300 and 400 level courses and plan their academic program accordingly.

Transfer students with more than 18 hours of previous work should seek advisement concerning transfer of credit during the first quarter at the University. Transfer students are required to complete a minimum of 15 art credits in residence for an art major and 5 credits for a minor.

GRADUATE STUDY

For a concentration leading to the Master of Education degree, see the Graduate Section of the Catalog.

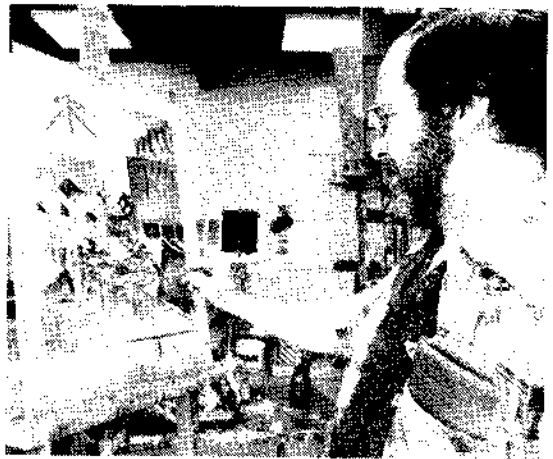
COURSES IN ART

(See also Art History section, which follows.)

Courses numbered X37; X97; 300, 400, 417; 445 are described on page 28 of this catalog.

NOTE: The Art Department 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)
Prereq: Art 101 or equivalent. Introductory level problems involving the elements and principles of two-dimensional design.
- 130 THREE-DIMENSIONAL DESIGN (3)
Prereq: Art 101 or equivalent. Introductory level problems involving three-dimensional form.
- 201 DRAWING CONCEPTS & 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.
- 210 PRINTMAKING I (3)
Prereq: Art 101 or equivalent. A lecture/lab course covering history, methods and practice of printmaking concepts. Introduction to the monoprint, intaglio (etching) and planographic (lithography) printmaking processes.
- 220 PAINTING (3)
Prereq: Art 101 or equivalent. Introduction to contemporary painting.
- 230 SCULPTURE I (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 handbuilt using coil, slab, and molded techniques. Introduction to glaze formulation, kiln loading, and firing.
- 250 METALS I (3)
Introduction to metal fabrication techniques which may be applied toward a jewelry, sculptural or mixed media approach in creative expression.
- 260 FIBERS/FABRICS I (3)
Prereq: Art 101 or equivalent. A studio course designed to explore the character of soft materials by application of thread/paint/dye to a surface and the structuring of fiber forms.
- 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.
- 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.
- 310 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 is placed on students becoming self-directed as to assignments. Weekly group criticisms; field trips to museums and galleries. Repeatable to 15 credits.
- 311 PRINTMAKING — LITHOGRAPHY (3)
Prereq: Art 201, 210. Planographic processes; emphasis on stone lithography.
- 312 PRINTMAKING — INTAGLIO (3)
Prereq: Art 201, 210. 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.
- 320 PRINCIPLES OF COLOR (3)
Prereq: Art 120. Advanced theory and principles of color as applied in painting or design. Studio problems in a variety of media.



- 321a,b PAINTING WORKSHOP (3,5)
Prereq: Art 220, AH 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.
- 328a,b LIFE PAINTING (3,5)
Prereq: Art 202 and 220. Painting from the nude or draped model. Repeatable to 15 credits.
- 331a,b SCULPTURE WORKSHOP (3,5)
Prereq: Art 230. Problems in three-dimensional form and expression employing a variety of media and materials. Students will set their own problems in consultation with the instructor. Repeatable to 15 credits.
- 341a,b CERAMICS II (3,5)
Prereq: Art 240 Introduction to the potter's wheel as a tool; handbuilding, glaze formulation and kiln firing. Emphasis on functional ware forms. Weekly seminars. Repeatable to 15 credits.

Art

- 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.
- 350 METALS II (3)
Prereq: Art 250. Problems in form and expression using more advanced metal techniques such as casting, forging, plating and enameling. Repeatable to 15 credits.
- 361 FABRICS (5)
Prereq: Art 120 and 260. Fabrics as a creative mode of expression. Use of silk-screening techniques and dyeing processes. Consideration of repeat patterning, color and space. Repeatable to 15 credits.
- 367 FIBERS (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 LETTERING (3)
Prereq: Art 101 or equivalent. Anatomy of letter forms, alphabets and calligraphy; problems in pen and brush lettering.
- 371 GRAPHIC DESIGN (3)
Prereq: Art 101 or equivalent. 370. Introduction to visual communication in trademark, poster, brochure and advertising design.
- 372 ADVERTISING DESIGN (5)
Prereq: Art 371 or permission of instructor. The theory and design of advertising both for print and TV. Developing the concept, preparing the roughs and preparation of comprehensives. Repeatable to 10 credits.
- 373 COMPUTER GRAPHICS WORKSHOP (1-5)
Prereq: Permission of instructor. Directed studies in Computer Graphic as it relates to its use in art and design.
- 375 GRAPHIC DESIGN GROUP (1-3)
Prereq: Graphic Design 371 and permission of instructor. Directed field experience in Graphic Design.
- 376 CARTOONING (3)
Prereq: Art 101 or equivalent. Basic course covering character development, movement and panel composition. Repeatable to 12 credits
- 377 CALLIGRAPHY (2)
Prereq: Art 101 or equivalent or permission of instructor. A studio course committed to the pursuit and development of calligraphy as a creative and practical mode of expression. Repeatable for different alphabets to a maximum of 12 credits.
- 378 BLACK AND WHITE ILLUSTRATION (3)
Prereq: Art 101 or equivalent. 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 101 or equivalent. Concepts and techniques of color illustration, text, editorial and advertising illustration. Media include watercolor, airbrush, markers, colored pencils and shading film. Repeatable to 9 credits.
- 380 ART IN ELEMENTARY EDUCATION (4)
For non-majors. Child development in art for the elementary school; problems in design, drawing, painting and printmaking as they relate to the school.
- 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)
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.
- 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
- 404 BFA DRAWING WORKSHOP (2-5)
Prereq: admittance to BFA program. Repeatable to 20 credits. For students in the BFA program, to pursue their individual directions in drawing.
- 410 ADVANCED DRAWING WORKSHOP (5)
Prereq: Art 302 or 310. Class is for the pursuit of individual creativity in drawing media. Repeatable to 15 credits.
- 411a,b ADVANCED PRINTMAKING WORKSHOP (3,5)
Prereq: Art 313. Continuation of problems in traditional printmaking processes as well as more recent innovations. Repeatable to 15 credits.
- 414 BFA PRINTMAKING WORKSHOP (2-5)
Prereq: admittance to BFA program; repeatable to 20 credits. For students in the BFA program to pursue their individual directions in printmaking.
- 421a,b PAINTING WORKSHOP II (3,5)
Prereq: Art 101 or equivalent; Art 321, Art 301, and Art History 240; repeatable to 15 credits. Continuation of individually motivated search and research into form and expression with an emphasis on current issues within the field of painting as related to the making of art.
- 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 WATER COLOR 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. Advanced problems in three-dimensional form and expression employing a variety of media and materials. Students will set their own problems in consultation with the instructor. Repeatable to 15 credits.
- 432a,b DIRECT METAL SCULPTURE (3,5)
Prereq: Art 331. Direct metal sculpture, emphasis on the welding process. Repeatable to 15 credits.
- 433a,b BRONZE CASTING (3,5)
Prereq: Art 331. Bronze casting by the lost wax process, modeling in clay, wax and plaster; mold-making and other techniques for making cast metal sculpture. Repeatable to 15 credits.

- 434 BFA SCULPTURE WORKSHOP (2-5)
Prereq: admittance to BFA program. For students in the BFA program to pursue their individual directions in sculpture. Repeatable to 20 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.
- 444 BFA CERAMICS WORKSHOP (2-5)
Prereq: admittance to BFA program. For students in the BFA program to pursue their individual directions in ceramics. Repeatable to 20 credits.
- 450a,b METALS III (3,5)
Prereq: Art 350. Focus on individual expression in metal fabrication with seminar discussions on the relations of one's work to current and historic artistic directions. Repeatable to 15 credits.
- 452a,b ADVANCED METALS WORKSHOP (3,5)
Prereq: Art 450. Self directed problems in metal fabrication. Repeatable to 15 credits.
- 454 BFA METALS WORKSHOP (2-5)
Prereq: admittance to BFA program. For students in BFA program to pursue their individual directions in metals. Repeatable to 20 credits.
- 461 ADVANCED FABRICS (5)
Prereq: Art 361. Continuation of individual problems in fabric-related areas employing a variety of materials. Repeatable to 15 credits.
- 464 BFA FABRIC DESIGN WORKSHOP (2-5)
Prereq: admittance to BFA program. For students in the BFA program to pursue their individual directions in fabric design. Repeatable to 20 credits.
- 467 ADVANCED FIBERS (5)
Prereq: Art 367. Continuation of individual problems in woven/constructed fiber-related areas employing a variety of materials. Repeatable to 15 credits.
- 471 ADVANCED GRAPHIC DESIGN (5)
Prereq: Art 371. Advanced work in corporate identity and in brochure design. Repeatable to 15 credits.
- 472 TYPOGRAPHY (5)
Prereq: Art 371 or permission of instructor. Emphasis on letter forms as design and illustrative elements. Advanced work in periodical design. Repeatable to 15 credits.
- 473 ADVANCED COMPUTER WORKSHOP (3-5)
Prereq: permission of instructor. Directed studies in computer animation and paint programs.
- 474 BFA GRAPHICS WORKSHOP (2-5)
Prereq: admittance to BFA program. For students in the BFA program to pursue their individual directions in graphics. Repeatable to 20 credits.
- 475 ADVANCED ILLUSTRATION (5)
Prereq: Art 378, 379. Advanced problems, concepts and techniques of black and white and color illustrations. Development of personal style and professional portfolio. Repeatable to 15 credits.
- 476 GRAPHIC DESIGN PORTFOLIO (1-3)
Prereq: senior standing, permission of instructor. For advanced students to prepare a professional portfolio presentation.

- 477 FIELD INTERNSHIP IN GRAPHIC DESIGN (3-15)
Prereq: senior standing, art major, permission of instructor. Enrollment by portfolio review. Supervised field work in appropriate professional situations.
- 481 ADVANCED ART EDUCATION (3)
Prereq: previous work in art education; teaching experience. Lectures and studio work in art education as related to materials and evaluation of process, product and individual growth.
- 482 ART EDUCATION WORKSHOP (2-5)
Prereq: teaching experience. Explorations in art media and their adaptation to use in the school; may be repeated with different topics.

Graduate Courses

Courses numbered 500, 517, 545, 597 are described on page 28 of this catalog.

Admission to Graduate School or special permission required. See Graduate section of the 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.
- 511 GRADUATE DRAWING AND PRINTMAKING (2-6)
Prereq: graduate status or completion of an art major or equivalent. Individual problems. Repeatable to 15 credits.
- 521 GRADUATE PAINTING (2-6)
Prereq: graduate status or completion of an art major or equivalent. Individual problems in painting. Repeatable to 15 credits.
- 522 GRADUATE SEMINAR (3)
Prereq: graduate status; undergraduate art major or equivalent, permission of instructor. Repeatable to 15 credits.
- 531 GRADUATE SCULPTURE (2-6)
Prereq: graduate status or completion of an art major or equivalent. Individual problems in sculpture. Repeatable to 15 credits.
- 541 GRADUATE CERAMICS (2-6)
Prereq: graduate status or completion of an art major or equivalent. Individual problems in ceramics. Repeatable to 15 credits.
- 551 GRADUATE JEWELRY (2-4)
Prereq: graduate status or completion of an art major or equivalent. Individual problems in jewelry. Repeatable to 15 credits.
- 555 GRADUATE STUDIO I (3-5)
Prereq: graduate status with a B.A., B.S. in art, or B.F.A. and permission of instructor. Repeatable to 20 credits.
- 556 GRADUATE STUDIO II (3-5)
Prereq: Art 555 and permission of instructor.
- 561 GRADUATE FABRIC DESIGN (2-6)
Individual problems in fabric design. Repeatable to 15 credits.
- 580 SPECIAL PROBLEMS IN ART EDUCATION (2-4)
Prereq: teaching experience and 27 credits in art. Special problems in art education as announced.

Art

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.

690a THESIS (5)

Prereq: advancement to candidacy.

690b FIELD PROJECT (6)

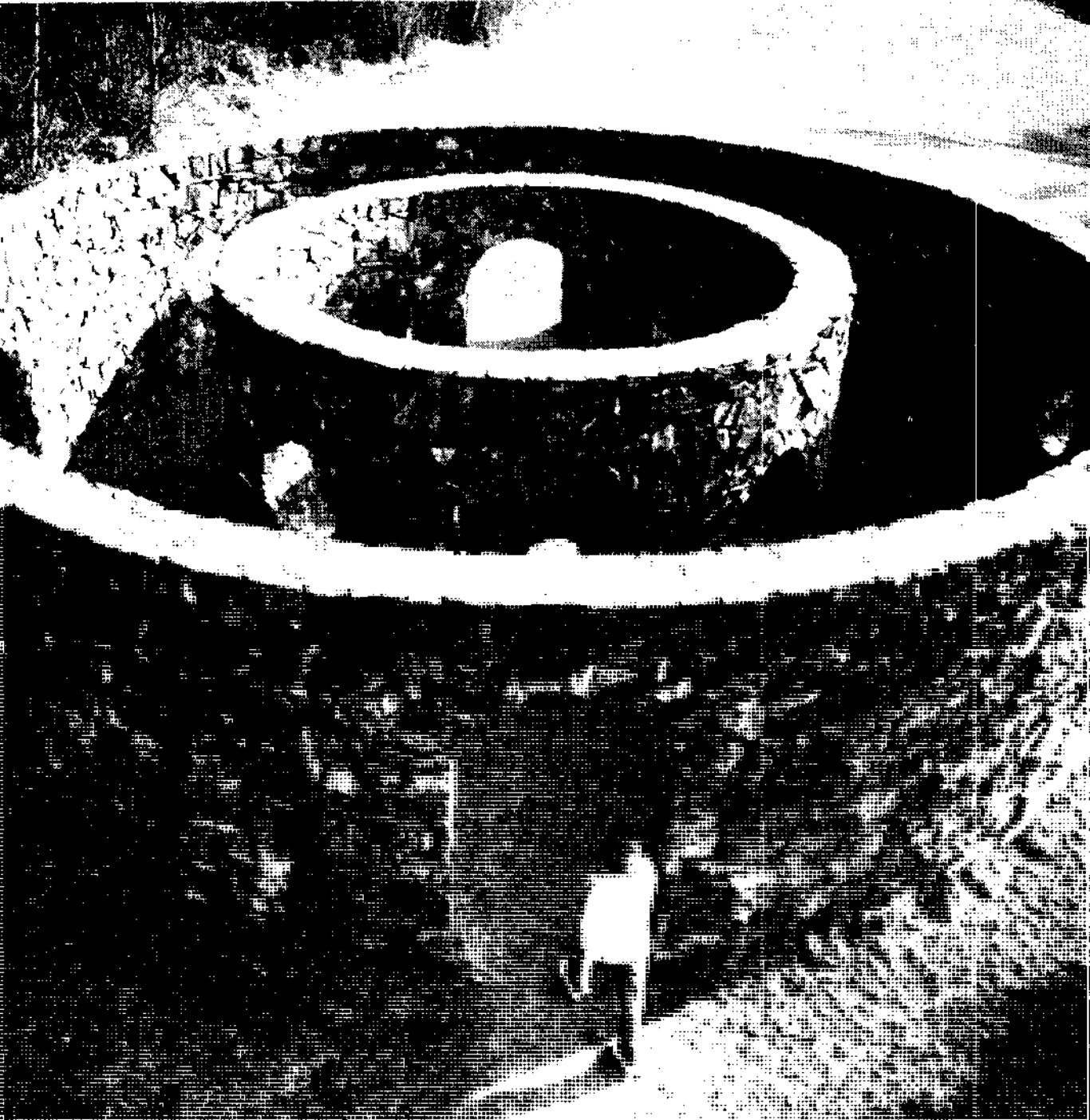
COURSES IN ART HISTORY

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.

201 THEORY AND CRITICISM SURVEY (3)

Survey of the theories of art from the earliest times to the present from world cultures. Historical survey of the major art critics and their writings.



Rock Rings, outdoor sculpture

- 220 SURVEY OF ART HISTORY I (5)
Ancient and medieval art.
- 230 SURVEY OF ART HISTORY II (5)
Renaissance art, 13th-18th centuries.
- 240 SURVEY OF ART HISTORY III (5)
Modern art in 19th, 20th centuries.
- 270 SURVEY OF ASIAN ART, INDIA, CHINA, JAPAN (5)
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 ART AND CRITICISM SINCE 1945 (3)
Prereq: Art History 240 and 9 credits in studio. A survey of recent ideas in the visual arts. The course will incorporate a history of art since 1945 but will not be limited to historical analysis. Study of major artists and critics of this period.
- 302 MUSEOLOGY I (2-5)
Prereq: background in art history, art, history, or anthropology; permission of instructor. Training in the methods and processes of museum work. Students work with and under the guidance of the staff of the Whatcom Museum of History and Art. Part of the training is an apprenticeship program of work directly in the museum. Repeatable to 15 credits.
- 305 GALLERY MANAGEMENT (3)
Prereq: 3 credits of art history, 3 credits studio and tool skills or concurrent. Training in methods and processes of gallery management and preparation of exhibitions. Repeatable to 6 credits.
- 310 PREHISTORIC AND PRIMITIVE ART I (3)
Prereq: Art History 220 or 230 or 240; Anth 215 or 361 prerequisite or concurrent. Art of the Paleolithic and Neolithic cultures and Western hemisphere primitive cultures.
- 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.
- 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 ORIENTAL 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.
- 401 SEMINAR IN ART (2)
Prereq: Art History 301, 9 additional credits in art history, 9 credits in studio courses. Development of criteria for mature artistic judgement. Repeatable to 6 credits.
- 402 ADVANCED MUSEOLOGY (2-5)
Prereq: Art History 302 and permission of instructor. The course concentrates on preparing the student for a career in museum curatorship. Repeatable to 15 credits.
- 405 ADVANCED GALLERY MANAGEMENT (3)
Prereq: Art History 305, 301 or concurrent or Art History 302 or permission of instructor. Management of permanent collection: record keeping, archival preparation and exhibition development. Repeatable to 9 credits.
- 410 PREHISTORIC AND PRIMITIVE ART II (3)
Prereq: Art History 220 or 230 or 240; permission of instructor; Anth 215 or 363 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.
- 430 RENAISSANCE ART I (3)
Prereq: Art History 220 and 230. Art of the Renaissance in Southern Europe.
- 431 RENAISSANCE ART II (3)
Prereq: Art History 430 or 220 or 230 and permission of instructor. Art of the Renaissance in Northern Europe.
- 432 BAROQUE ART (3)
Prereq: Art History 230 or 430 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 and 340. Art of the 20th century Western world.
- 460 AMERICAN ART, 1900 TO THE PRESENT (3)
Prereq: Art History 220, 230, 240.
- 470 ORIENTAL ART II (3)
The art of China and Korea from the Shang Dynasty (1523 B.C.) to the end of the 18th century.
- 471 ORIENTAL ART III (3)
The art of Japan from the prehistoric Archaeological Age to the end of the 18th century.
- 490 SEMINAR IN ART HISTORY (3)
Prereq: 12 credits in art history including Art History 300, or senior standing, 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.

Graduate Courses

Courses numbered 500, 517, 545, 597 are described on page 28 of this catalog.

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

- 590 DIRECTED STUDIES IN ART HISTORY (1-4)
Prereq: art major or minor status, senior or graduate level; 12 credits in art history with at least one field concentration.
Independent art historical research:
a. Prehistoric and Primitive Art History
b. American Art History
c. Modern Art History
d. 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.

Here at Western Washington University we believe in the personalization of music education and the need for ongoing counseling 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.

Five undergraduate professional degree programs are offered by the Department of Music. The Bachelor of Music (B.Mus.) degree with majors in music performance, music history and literature, music composition and jazz studies is offered for those who wish to continue advanced musical study in graduate school, enter private studio teaching, or launch a professional career in music. The B.Mus. with a music education major with concentrations in choral music, instrumental music or elementary classroom music is offered for those who plan to teach in the public schools. 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. The Department of Music is a member of, and is accredited by, the National Association of Schools of Music (NASM).

Job placement in public school music teaching

has remained excellent at Western in spite of the general overall decline in the availability of teaching positions. While most other professional degree holders continue in graduate programs, those who do not usually secure positions in studio teaching, church music, professional performance, and allied fields such as radio, television and the music industry.

The Department of Music provides individual advisement and program planning for all music majors. This takes place officially during the registration period at the beginning of each academic quarter. The department also provides individual advisement at any time prior to entrance by appointment. Many students prefer to spend a day on campus in the spring prior to transfer, at which time they may receive advisement and visit the various departmental performance groups and classes and meet with instructors. Write or phone for an appointment if interested (206/676-3130).

Many music courses and activities are open to non-majors as well as majors. Students may select from among University Choir, Concert Choir, Chamber Choirs, Symphonic Band, Wind Ensemble, Jazz Ensembles, University Symphony Orchestra, Chamber Music, Opera, Collegium Musicum, and numerous smaller ensembles.

MUSIC FACULTY

- C. BRUCE PULLAN (1975) Chair.
Associate Professor, BA, MA, Cambridge; Diploma of Ed, Oxford University.
- PHILLIP R. AGER (1965) Associate Professor, BAEd, Western Washington State College; MA, University of Washington.
- BARTON FRANK (1969) Professor, Curtis Institute of Music; BM, MM, Tulsa University.
- WAYNE D. GORDER (1980) Associate Professor, BS, University of Wisconsin, Milwaukee; MS, EdD, University of Illinois.
- FREDERICK HALGEDAHL (1983) Associate Professor, BM, Eastman School of Music; MM, Emporia State University.

- FORD D. HILL (1975) Associate Professor. AB, Wisconsin State University; MA, Indiana University.
- EDWIN M. LABOUNTY (1968) Associate Professor. AB, Yankton College; BM, MM, MusD, Indiana University.
- SYDNEY H. POTTER (1981) Lecturer. BM, Boston Conservatory of Music; MA, Adelphi 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.
- ROBERT L. SCANDRETT (1967) Professor. BA, Seattle Pacific College; MA, PhD, University of Washington.
- ALBERT C. SHAW (1978) Professor. BME, Wheaton College; MME, Drake University; DME, Indiana University.
- MARY TEREY-SMITH (1967) Associate Professor. BA, Liszt Academy of Music, Budapest; MA, University of Vermont; PhD, University of Rochester.
- EUGENE S. ZORO (1969) Associate Professor. BM, MM, Eastman School of Music of the University of Rochester.

Affiliate Music Faculty

Byron Akita, saxophone
 Nicholas Bussard, oboe
 Michael Clark, percussion
 Gregory Cox, trombone
 David Feingold, classical guitar
 Karla Flygare, flute
 J. Christopher Leuba, horn
 June MacKerzie, voice
 Joan Penney, voice
 Milo Peterser, jazz guitar
 Francine Peterson, bassoon
 Pamela Vokolek, harp
 W. Ring Warner, double and electric bass
 Marianne Weltman, voice

Nancy Bussard, professional accompanist
 Lucille Oster, professional accompanist
 Curtis DuBois, electronic music technician
 David Steege, keyboard technician

MUSIC PERFORMANCE

All students majoring in music must be members of a major performing ensemble each quarter of residence except those quarters in which music education majors are enrolled in student teaching. Those ensembles designated as major performing ensembles are the Symphonic Band, Wind Ensemble, University Choir, Concert Choir and Symphony Orchestra. The participation requirement must be met through the student's major instrument or voice. Pianists, organists and guitarists may elect to participate in any of the major performing ensembles for which they are qualified. Pianists, 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 piano, 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 costume 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, on "Western Preview Day" in the spring, 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. 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, a Bach "Chorale" and a Bach "Two-Part Invention."

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).

OBCE — 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 "Concert-piece" or Telemann "Sonata in F Minor," or J. C. Bach "Concerto in Bb." Major and minor scales and arpeggios through four sharps and four flats (two octaves when possible).

SAXOPHONE — Two or three studies from "Twenty-five Exercises for Saxophone" by Klose. Solos selected from "Cantilena" by Benson, "Chant Corse" by Tomasi, or "Concerto" by Larsen. Major and minor scales and arpeggios through four sharps and four flats (two octaves when possible).

FRENCH HORN — Two or three etudes selected from "Method for French Horn" by Pottag, edited by Hovey. Mozart, "Concerto No. 3" or Saint-Saens "Romance." Major and minor scales and arpeggios through four sharps and four flats (two octaves when possible).

TRUMPET — One or two etudes from "34 Studies" by Brandt, edited by Nagel. Haydn "Concerto" (first and second movements), or Vidal "Concertino" or Thome "Fantasy in Eb" or Corelli "Sonata VIII," edited by Fitzgerald. Major and minor scales and arpeggios through four sharps and four flats (two octaves when possible).

TROMBONE (TENOR AND BASS TROMBONE) AND EUPHONIUM — Two or three studies from "Melodious Etudes" by Rochut, Book I (bass trombone should play one octave lower where feasible). Studies one through ten of the Blashe-

vich Clef Studies. Five selected studies from the Arban Method, Book I. 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 Weksselblatt. 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 CREDITS — TRANSFERS

Western will accept up to 6 lower-division (200-level) credits in music history for transfer. Students with upper-division credit (300-level or above) must take a history placement examination to determine what history courses remain to be taken.

PIANO COMPETENCY: FUNCTIONAL KEYBOARD PROFICIENCY

All music majors are required to successfully complete an eight-item Functional Keyboard Proficiency Examination in order to receive a Bachelor of Music degree. Examinations are scheduled at the end of each quarter. All eight items on the examination need not be completed when the examination is taken for the first time. Each student may take the examination as often as is necessary for successful completion. Freshmen who enter the department as a music major *must* take it prior to completion of six quarters of full-time study. Transfer students *must* take the examination prior to completion of three quarters of full-time study. Transfer students are urged to take the examination during their first quarter at Western. Students who complete Music 263 Intermediate Class Piano with a grade of "C" or better will satisfy this requirement.

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.

INTERDISCIPLINARY PROGRAM

It is possible to take an Interdisciplinary Arts major with a concentration in music. See "Interdisciplinary Arts" in the College of Fine and Performing Arts Interdisciplinary Programs section for full details of the major.

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.

Music Education Major 103 credits
(plus School of Education professional courses*)

Core Requirements 73 credits (common to all Music Education major concentrations)

- Theory/Aural Skills: Music 121, 122, 123, 124, 125, 126, 221, 222, 223, 224, 225, 226, 321, 323, 325
- Advanced Theory: Select 2 courses from Music 322, 324, 326, 422, 424
- Music History: Music 241, 242, 243, 341, 342, 343
- 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 above — each quarter in residence, except when student teaching (minimum 11 credits)

Elementary Music Education Concentration
30 credits

- Pedagogy: Music 164, two quarters of Music 264, 265
- Conducting: Music 351
- Music Education: Music 362, 363, 461
- Electives: 15 credits selected under advisement. Piano majors will take at least 4 credits of Music 466 as part of their electives

Secondary Choral Concentration 30 credits

- Pedagogy: 2 quarters of Music 264, 265
- Conducting: Music 351, 352, 353
- Music Education: Music 363, 462, 463
- Electives: 14 credits selected under advisement. Piano majors will take at least 4 credits of Music 466 as part of their electives

Secondary Instrumental Concentration
30 credits

- Pedagogy: Music 164, 6 quarters of Music 264, 265, 266
- Conducting: Music 351, 352, 353
- Music Education: Music 363, 462, 464

- Electives: 8 credits selected under advisement. Piano majors will take at least 4 credits of Music 466 as part of their electives

Professional Majors 125 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 credit hours.

Core Requirements 64-68 credits (common to all Professional Music major concentrations)

- Theory/Aural Skills: Music 121, 122, 123, 124, 125, 126, 221, 222, 223, 224, 225, 226, 321, 323, 325
- Advanced Theory (each concentration selects courses as follows from 322, 324, 326, 422, 424): Performance — three courses; Composition — four courses; History & Literature — four courses; Jazz Studies — two courses
- Music History: Music 241, 242, 243, 341, 342, 343
- 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; at least three credits in courses numbered Music 411-416 (minimum 30 credits)
- Chamber Music: minimum 8 credits selected from Music 275, 475, 478, 480, 481, 483, 484
- Conducting: Music 351
- Senior Recital: Music 499
- Electives: 16 credits selected under advisement. Piano majors will take at least 4 credits in Music 466 and 6 credits in Music 467

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; at least three credits in courses numbered Music 311-316 or above (minimum 12 credits)
- Pedagogy: select three courses from Music 164, 264, 265, 266
- Chamber Music: minimum 6 credits selected from Music 275, 475, 478, 480, 481, 483, 484
- Conducting: Music 351, 352, 353
- Composition: minimum 21 credits from Music 231, 232, 331, 431

*Music education majors should consult the Education Admissions Office, Miller Hall 202, for information concerning the School of Education professional courses and admission to the Teacher Education program.

- Senior Recital: Music 499
- Electives: 6 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; at least three credits in courses numbered Music 311-316 or above (minimum 12 credits)
- Chamber Music: minimum 8 credits selected from Music 275, 475, 478, 480 (minimum 4 credits), 481, 483, 484
- Conducting: Music 351
- Notation: Music 441
- Advanced History: minimum 12 credits from Music 442, 443
- Thesis: Music 490
- Electives: 17 credits selected under advisement
- Students in history and literature must pass a reading examination in French or German

Jazz Studies Concentration 71 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; at least three credits in courses numbered Music 311-318 or above (minimum 12 credits)
- Chamber Music: minimum 6 credits selected from Music 275, 475 (minimum 4 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 425).

BACHELOR OF ARTS IN EDUCATION

Elementary Music Major 47 credits

(plus Performance Requirement; the minor in Elementary Education; and the School of Education professional courses)

- Theory/Aural Skills: Music 121, 122, 123, 124, 125, 126, 221, 222, 223, 224, 225, 226

- Music History: Music 241, 242, 243
- 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
- Electives: 1 credit selected under advisement, except voice major replace 164 with equal credit in music electives

GRADUATE STUDY

For concentrations in music leading to the Master of Music, see the Graduate section of the catalog.

COURSES IN MUSIC

Courses numbered X37, X97, 300, 400, 417, 445 are described on page 28 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)

Open to all students. 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/READING 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.

122, 124, 126 THEORETICAL AND ANALYTICAL SKILLS I (2 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.

161, 162, 163 BEGINNING CLASS PIANO I, II, III (1 ea)

Prereq: open to music majors only; each course prerequisite to the next. Basic techniques, sight reading skills and functional application of the scale and harmonic materials learned in theory class.

Music

164 CLASS VOICE AND PEDAGOGY (1)

Prereq: open to music majors only. 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 will be on the role played by music in each society.

211-218 APPLIED INSTRUCTION (1-4)

Prereq: open to music majors only; 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/READING 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.

222, 224, 226 THEORETICAL AND ANALYTICAL SKILLS II (2 ea)

Prereq: Music 126; music major status; each course prerequisite to the next. Advanced study of and practical experience in using the materials of musical construction including extended, chromatic, and non-tertian harmonic structures and complex musical forms.

231 ELEMENTARY COMPOSITION (1-2)

Prereq: permission of instructor. Elementary craft of melodic, harmonic, rhythmic, instrumental and contrapuntal writing in traditional modes; participation in concomitant composition seminars. Repeatable for credit.

232 COMPOSITION IN POPULAR IDIOMS (1-2)

Prereq: permission of instructor, and Music 101. Creating ballads, blues, combo charts and the making of tapes; for demonstration. 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.

241 INTRODUCTION TO MUSIC LITERATURE — BAROQUE PERIOD (2)

Prereq: music major status or permission of instructor. Monuments of the Baroque era, including J. S. Bach, G. F. Handel, D. Scarlatti and A. Vivaldi. Stylistic analysis and relationship to artistic and political trends of the period.

242 INTRODUCTION TO MUSIC LITERATURE — CLASSICAL PERIOD (2)

Prereq: music major status or permission of instructor. Monuments of the Classical era, including Haydn, Mozart, Beethoven and Schubert. Development of sonata form. Relationship to literary and political trends of the period.

243 INTRODUCTION TO MUSIC LITERATURE — ROMANTIC PERIOD (2)

Prereq: music major status or permission of instructor. Monuments of the late 19th century. Development of lieder, program music, opera, sonata form. Music of Schumann, Chopin, Berlioz, Verdi and Wagner. Literary and political movements as they relate to music.

261, 262, 263 INTERMEDIATE CLASS PIANO I, II, III (1 ea)

Prereq: open to music majors only; each course prerequisite to the next. Functional techniques for utilizing the piano as a tool for musical study and preparation for piano competency examination. Successful completion of Music 263 with a grade of "C" or better satisfies the keyboard proficiency requirement for music majors.

264 INSTRUMENTAL LAB FOR SECONDARY INSTRUMENTS (1)

Prereq: open to music majors only. Pedagogy of and performance on secondary instruments, conducting, developing teaching strategies with goals and objectives. Repeatable for credit.

265, 266 STRING TECHNIQUES AND PEDAGOGY LAB (1 ea)

Prereq: open to music majors only; each course prerequisite to the next. Principles and techniques of playing and teaching string instruments.

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
- 311-318 APPLIED INSTRUCTION (1-4)
Prereq: open to music majors only, 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/READING SKILLS III (1 ea)
Prereq: Music 225; music major status; each course prerequisite to the next. The development of aural competence in and visual familiarity with the sounds and symbols of atonal, freely tonal and highly chromatic tonal systems; completion of extended tertian harmony. Exercises and drill in prepared and sight reading, dictation, error detection, accuracy of rhythm and intonation.
- 322 ANALYTICAL TECHNIQUES: MUSIC BEFORE 1800 (2)
Prereq: Music 225, 226. Formal and stylistic analysis of works from the major historical periods up to 1800.
- 324 MODAL COUNTERPOINT (2)
Prereq: Music 225, 226. Counterpoint in the style of the 16th century. Composition and analysis of pieces in two and three parts. Introduction to the setting of texts.
- 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 1720 (3)
Prereq: Music 225, 226, 241, 242, 243; music major status. Main styles, forms, terminology and composers up to 1720. Individual research projects.
- 342 HISTORY OF MUSIC 1720-1860 (3)
Prereq: Music 225, 226, 241, 242, 243; music major status. Main styles, forms, terminology and composers from 1720 to 1860. Individual research projects.
- 343 HISTORY OF MUSIC 1860-Present (3)
Prereq: Music 225, 226, 241, 242, 243; music major status. Main styles, forms, terminology and composers from 1860 to present. Individual research projects
- 351 BASIC CONDUCTING (2)
Prereq: Music 225, 226 and music major status. Basic conducting techniques, score reading and interpretive analysis.
- 352 INSTRUMENTAL CONDUCTING (2)
Prereq: Music 351 and music major status. Instrumental techniques, score reading, interpretive analysis and rehearsal techniques.
- 353 CHORAL CONDUCTING (2)
Prereq: Music 351 and 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 224 and 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.
- 411-418 APPLIED INSTRUCTION (1-4)
Prereq: open to music majors only; 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: MUSIC SINCE 1800 (2)
Prereq: Music 225, 226. Formal and stylistic analysis of representative works from the major historical periods after 1800
- 424 TONAL COUNTERPOINT (2)
Prereq: Music 225, 226, music major status. Counterpoint in the style of the 18th century. Composition and analysis of inventions in two and three parts. Introduction to the fugue.
- 431 COMPOSITION (3)
Prereq: Music 331 for at least two quarters. 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. Open to non-majors. 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 and music major status. The student in consultation with the instructor will select one or more given musical developments for individual research. Ongoing results of this research will be shared with other members of the seminar. Focus of the course will vary from quarter to quarter. Repeatable for credit.
- 443 **HISTORY OF MUSICAL MEDIA (3 ea)**
 Prereq: Music 343 and music major status. Development and literature of important musical media from their

origin to the present. Offered irregularly.

- 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 and 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 (1)**
 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. May be repeated for credit.
- 467 APPLIED MUSIC LITERATURE (1-3)
Prereq: Music 241, 242, 243; music major status; permission of instructor. A stylistic and historical survey of literature for instruments or voice. May be repeated 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. May be repeated for credit.
- 472 WIND ENSEMBLE (2)
Prereq: by audition. May be repeated for credit.
- 473 UNIVERSITY SYMPHONY ORCHESTRA (2)
Prereq: by audition; open to students who qualify. May be repeated 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. May be repeated 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. May be repeated for credit.
- 478 OPERA PRODUCTION (1-2)
Admission by audition. Preparation of opera scenes or a major musical production to include a public performance each quarter. May be repeated for credit.
- 480 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. May be repeated for credit.
- 481 APPLIED CHAMBER MUSIC (2)
Prereq: permission of chamber music coordinator. Open to piano, string, wind, brass and percussion performers. May be repeated for credit.
- 483 CHAMBER VOCAL ENSEMBLES (2)
Prereq: permission of instructor. May be repeated for credit.

- 484 VOCAL JAZZ ENSEMBLE (2)
Prereq: admission by audition; Music 101 through 103 sequence recommended. Preparation and performance of vocal works by major jazz composers. Open to all university students having the ability to sing in mixed chorus. May be repeated 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 28 of this catalog.

Admission to Graduate School or special permission required. See Graduate 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 will be 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, the student will be expected to participate in organ class performances and to hold a church-organist position throughout his residence for the degree.
- 512 INDIVIDUAL INSTRUCTION -- ADVANCED PIANO (3-4)
Prereq: permission of the department. In addition to regularly scheduled private lessons, a public performance will be expected each quarter.
- 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.
- 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.
- 515 INDIVIDUAL INSTRUCTION -- ADVANCED VOICE (3-4)
Prereq: permission of the department. In addition to regularly scheduled private lessons, a public performance will be expected each quarter.



521 TEACHING COMPREHENSIVE MUSICIANSHIP IN SECONDARY SCHOOLS (4)

Strategies, curricular design, materials, equipment, resources, philosophy for designing and teaching comprehensive musicianship in secondary schools

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)

Isolated phenomenon from various composers which have generated the major trends of the 20th century.

533 ANALYTICAL TECHNIQUES: LATE 19th CENTURY MUSICAL STYLES AND PRACTICES (3)

Techniques and practices unique to the late 19th century and their historical precedents in the works of Beethoven and Berlioz.

534 COMPOSITION (4)

Prereq: Music 431. Composition in the classic forms for solo instruments or small ensembles.

535 COMPOSITION (4)

Prereq: Music 431. Composition for solo voice accompanied by piano or small ensembles; composition of choral works both a capella and accompanied.

536 COMPOSITION (4)

Prereq: Music 435. Composition for large instrumental groups: band, orchestra or a combination of these with chorus, voice or solo instrument.

540 ADVANCED COLLEGIUM MUSICUM (2)

(May be repeated for credit.) Editing, coaching and performance of early music (before 1800) for chamber ensembles (vocal and instrumental). Students will be expected to prepare stylistically suited performing editions, coach these works and participate in their public performance. (Only 6 credits applicable toward M.A. degree.)

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 methods.

690 THESIS (1-6)

Students in the composition area of the Master of Music degree program may meet the thesis requirement by submitting a major original composition; students selecting the performance area 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/Dance

The Department of Theatre/Dance offers an academic major and minor in theatre and a minor in dance. The programs provide pre-professional training for those intending to pursue a career in the world of theatre and dance. The degree programs also provide a thorough background for those who wish to seek advanced degrees or, in conjunction with other specialties, to prepare for teaching careers.

THEATRE

An active production schedule involving students in all aspects of the arts and crafts of theatre makes theatre studies at Western exciting and fun. The class and studio work is related to the many productions whenever possible. The classes that lead to the Bachelor of Arts degree are set up so that students can learn how all the parts of theatre work fit together in theory as well as in practice. Every student chooses her or his own area of special studies: acting, directing, technical theatre, etc.

During the school year, a regular program of faculty directed and choreographed shows is produced. Plays range from the classics to musical comedy and recent Broadway offerings. In addition, some 30 to 40 student-generated productions are presented in connection with undergraduate and graduate theatre production course projects.

Western Theatre On Tour puts productions into the public schools of Western Washington and nearby portions of British Columbia, playing to over 30,000 persons.

Summer Stock is an intensive nine-week program designed to provide participants with experience in all phases of theatre production work—on stage, backstage, in the production shops and in the offices. Musicals, Shakespeare, comedies, dramas and plays for children are presented.

DANCE

Dance studies may lead to a minor in the Department of Theatre/Dance or, in conjunction with the School of Education, to a teaching minor. Both programs offer courses in dance technique, history and philosophy of dance. Studio and public performance are a regular feature of dance studies, including choreographic opportunities.

Other academic degree possibilities are available to the student of dance by combination of the department minor with other areas of study (see Interdisciplinary Arts following the department's course listings).

THEATRE/DANCE FACILITIES

Theatre/dance students at Western currently "learn by doing" in a variety of special classrooms including a 1,200-seat proscenium theatre, a 200-seat modified-thrust proscenium theatre, a well-equipped dance studio and related support facilities including costume, make-up, scene and paint shops. Two experimental theatre studios plus support facilities are also available for student use.

For information and guidance, contact the chair of the department, Mr. Dennis Catrell, Performing Arts Center 395, (206) 676-3878.

THEATRE/DANCE FACULTY

- DENNIS E. CATRELL (1966) Chair
Associate Professor. BA, University of Michigan; MA, Northern Illinois University.
- WILLIAM A. GREGORY (1968) Professor and Dean of the College of Fine and Performing Arts. BS, Central Michigan University; MA, Michigan State University; PhD, University of Minnesota.
- MONICA C. GUTCHOW (1960) Assistant Professor. BS, University of Oregon; MFA, University of North Carolina, Greensboro.
- DANIEL M. LARNER (1968) Professor and Dean of Fairhaven College. AB, Harvard College; MS, PhD, University of Wisconsin, Madison.

Theatre/Dance

DOL GLAS R. VANDER YACHT (1970) Associate Professor. BA, Western Washington State College. MA, Purdue University; PhD, Ohio State University.

THOMAS E. WARD (1977) Associate Professor. BA, Western Maryland College; MFA, New York University, School of Arts

Adjunct Faculty

Roger Germain (1970) BA, Western Washington State College. Victor H. Leverett (1977) BA, BA Ed, Western Washington State College. MA, Washington State University.

Lee H. Taylor (1967) BA, Goddard College. MA, University of Washington

BACHELOR OF ARTS

Major — Theatre 85 credits

- Required core (49 credits):
Th/D 101, 160, 201, 212, 222, 231, 250, 285, 322, 370, 380, 428a or 428b or 428c, and two courses selected from 325, 327, 328, 421, 422, 423, 480
- Concentration (18 to 20 credits) selected from:
 - a. Acting: Th/D 260, 360, 460 (each repeated once)
 - b. Children's Theatre: Th/D 350, 351, 450, 452 and 6 credits under advisement
 - c. Dance: Th/D 235, 238, 241, 242, 332, 333
 - d. Directing: Th/D 260, 314, 470, 471 and 3 credits under advisement
 - e. Literature: Th/D 325, 327, 328, 421 or 422 or 423, 480
 - f. Dramatic Writing: Th/D 385, 485, 486, 487, 488
 - g. Technical Theatre: Th/D 213, 311, 312, 313, 315, 411, 415
- Electives (16 to 18 credits):
Th/D 215, 255, 256, 257, 314, 453, 462

Minor — Theatre 30 credits

- Th/D 101, 160, 212, 222
- One of Th/D 201, 231, 250, 260, 285
- One of Th/D 314, 322, 350, 370, 385
- Electives under advisement

Minor — Dance 46 credits

- Th/D 232, 242 or 342, 241, 235, 238, 333, 336, 339, 440, 431 or 432, 433
- Supporting Courses: Th/D 231, Music 128, Interdisciplinary Arts 110, Biol 348

This minor is the core for several interdisciplinary dance study options. See Interdisciplinary Arts program following the department's course listings.

Extended Minor — Dance 36 credits

- Dance Theory & Literature: Th/D 231 (should be included as part of the GUR requirements), Th/D 336, 431

- Dance Technique: Th/D 333, 339
- Dance Improvisation/Composition: Th/D 241, 242, 233 or 254
- Dance Pedagogy: Th/D 434; PE 209, 326
- Electives under advisement

This minor is applicable to either the Bachelor of Arts degree or the Bachelor of Arts in Education degree.

Proficiency in technical skill above the 200-level technique courses should be established before taking this minor.

A student teaching experience through the School of Education is strongly recommended.

GRADUATE STUDY

For concentration in theatre and dance leading to the Master of Arts degree, see the Graduate section of the 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:

Film	01-09
Technical Theatre	11-20
Literature	21-30
Dance	31-45
Children's Theatre	50-59
Acting	60-69
Directing	70-75
History	80-84
Playwriting	85-90

Theatre 101 (Introduction to Theatre) and 600-level courses are not a part of this system.

It is possible to take an Interdisciplinary Arts major with a concentration in Theatre/Dance. See Arts, Interdisciplinary, in the College of Fine & Performing Arts Interdisciplinary Programs section for full details of the major.

COURSES IN THEATRE AND DANCE

Courses numbered X37, X97, 300, 400, 417, 445 are described on page 28 of this catalog.

Non-majors in dance are advised to take all technique classes Pass/Fail.

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.

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 will be on dance technique, creative movement experiences and developing an appreciation of the dance as an art form. Repeatable up to a maximum of 6 credits. Open to non-majors. S/U grading.



- 138 BEGINNING BALLET I (2)**
An introductory study of basic principles of the ballet as an artistic and physical medium. Emphasis on French terminology, basic barre exercises, simple combinations in adagio and allegro. Repeatable up to a maximum of 6 credits. Open to non-majors. S/U grading.
- 139 MODERN JAZZ DANCE (2)**
Emphasis on control and isolation of body parts, rhythm and alignment. Repeatable up to a maximum of 6 credits. S/U grading.
- 160 INTRODUCTION TO ACTING (3)**
Prereq: Th/D 101 and written permission of instructor. 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 framing, editing and camera usage. A nominal lab fee for cost of film.
- 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 STAGECRAFT-LIGHTING LABORATORY (3)**
Prereq: Th/D 212 or permission of instructor. Practical experience in planning, handling and rigging stage lighting and special effects; assignments on one major production.
- 215 STAGE MAKE-UP (2)**
Theory and practice of applying make-up for the stage. S/U grading.
- 216 STAGE COSTUMING (3)**
Prereq: Th/D 101. Costume design and execution; specific emphasis on basic sewing, use of patterns, materials and costume crafts, costume plots and wardrobe supervision.
- 222 UNDERSTANDING PLAYS (3)**
Prereq: Th/D 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 CULTURE (3)**
An historic overview of dance topics with emphasis on integrating the dance with its cultural role within various societies through the ages.
- 232, 233, 234 DANCE THEORY AND PRODUCTION (2 ea)**
Group and individual experience in dance as a theatre art; participation in the dance concert. A maximum of six hours may be earned. S/U grading.
- 235 BEGINNING MODERN DANCE II (2-3)**
Prereq: Th/D 135 and/or audition. Further development of movement principles established in Th/D 135. Repeatable up to a maximum of 6 credits. Open to non-majors.
- 238 BEGINNING BALLET II (2-3)**
Prereq: Th/D 138 and/or audition. Further development of principles of ballet. Increased difficulty and terminology, preparation for advanced levels. Repeatable up to a maximum of 6 credits. Open to non-majors.
- 241 BEGINNING MODERN DANCE AND IMPROVISATION (2)**
Improvisational approaches to movement exploration for the non-dancer and dancer; developing a creative sensitivity to time, space, energy, motion and body awareness
- 242 DANCE COMPOSITION I (3)**
Prereq: Th/D 235. 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, 257 THEATRE THEORY AND PRODUCTION (2 ea)**
Prereq: permission of instructor. Instruction and experience in all aspects of theatre organization and production. Repeatable up to a maximum of 6 credits. S/U grading.

Theatre/Dance

- 260 ACTING: STUDIO I (3)
Prereq: Th/D 160 and written permission of instructor. The physical, vocal, intellectual and emotional instrument of the individual actor will be explored in relation to character demands of a scene or play through the studio approach. Repeatable up to a maximum of 6 credits by permission of instructor.
- 285 INTRODUCTION TO DRAMATIC WRITING (4)
Prereq: Th/D 101 or permission of instructor. Beginning exercise in dramatic writing, with emphasis on primary forms and conventions.
- 311 STAGE, DESIGN TECHNIQUES (3)
Prereq: Th/D 212 or concurrent. Theory and practical experience in communicating technical and artistic information through drafting, color-rendering and model construction techniques.
- 312 ADVANCED STAGECRAFT (3)
Prereq: Th/D 212 and 311. Technical analysis of scripts; special effects and properties; laboratory work on productions.
- 313 ADVANCED STAGE LIGHTING (3)
Prereq: Th/D 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: Th/D 160 and 212. An in-depth study of the stage manager's role and responsibilities prior to, during and after production.
- 315 HISTORIC COSTUME FOR THE STAGE I (3)
Evolution of fashion from Ancient Greece through 1660 with reference to contemporary reproduction.
- 316 HISTORIC COSTUME FOR THE STAGE II (3)
Prereq: Th/D 315 or permission of instructor. A continuation of Th/D 315, detailing fashion from 1660 through World War I with reference to contemporary reproduction.
- 322 REPRESENTATIVE PLAYS (5)
Prereq: Th/D 101, 222. Introductory survey of historically significant and stageworthy plays from all periods.
- 325 MODERN EUROPEAN DRAMA (3)
Prereq: Th/D 222 and 322. Selected European plays and playwrights from 1850-1950.
- 327 MODERN AMERICAN DRAMA (3)
Prereq: Th/D 222 and 322. Selected American plays and playwrights from 1920 to 1950.
- 328 CONTEMPORARY DRAMA (3)
Prereq: Th/D 222, 322. Selected plays and significant trends in contemporary English, European and American drama.
- 331 INTRODUCTION TO DANCE/MOVEMENT THERAPY (1)
Required for acceptance into the pre-dance/movement therapy option. An introduction to the nature of dance/movement therapy through a review of literature and experimental sessions; professional organizations, graduate dance therapy programs and career possibilities.
- 333 INTERMEDIATE DANCE TECHNIQUE (3)
Prereq: 6 credits of Th/D 235 and/or equivalent evaluated on the basis of audition. This sequence consists of intensive application of principles established in Beginning Modern Dance II. Emphasis is placed on correct body alignment and concepts of spiral and curve and how these affect moving through space. Repeatable five times for credit by permission of instructor.
- 336 RHYTHMIC ANALYSIS AND ACCOMPANIMENT (3)
Prereq: Th/D 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.
- 339 INTERMEDIATE BALLET TECHNIQUE (3)
Prereq: 6 credits of Th/D 238. Study of classical academic technique through a strict adherence to fundamental principles. Students repeating Th/D 339 will gain an increase of terminology and movement vocabulary and learn increasingly difficult tours, jumps, combinations in adagio and allegro. Open to non-majors. Repeatable five times for credit by permission.
- 342 DANCE COMPOSITION II (3)
Prereq: Th/D 242, 333, 336. Further development of principles introduced in Th/D 242 with added emphasis on musical forms. Solo and duet studies. Music 128 strongly recommended for this course.
- 350 CREATIVE DRAMA (3)
Th/D 250 recommended. Principles and methods for using improvised drama as an experimental means of fostering the young person's growing awareness of himself and his world. Laboratory work with students at elementary and secondary schools.
- 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 (3)
Prereq: six hours of Th/D 260 and/or written permission of instructor. Continuation of the refinement of skills and techniques presented in Acting, Studio I, concentrating on major periods and styles of theatre. Additional concentration on work with scenes and short plays. Repeatable up to a maximum of 6 credits by permission of instructor.
- 370 INTRODUCTION TO DIRECTING (3)
Prereq: Th/D 101, 160, 314. Theory and practice of stage direction including selection of play, analysis, casting, floor plans, blocking, and production of a scene for public performance.
- 371 PLAY DIRECTION I (3)
Prereq: Th/D 101, 160, 314, 370. 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 Renaissance.
- 381 THEATRE HISTORY II (4)
Prereq: Th/D 380 or permission. Development of the theatre arts from the 18th century to the present.
- 385 INTERMEDIATE DRAMATIC WRITING WORKSHOP (4)
Prereq: Th/D 285 or 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: Th/D 312 and 313 or permission of instructor. Design for the modern theatre; emphasis on interpretation of the play through design; practical designs and techniques.

- 414 **BUSINESS MANAGEMENT FOR THE THEATRE (3)**
Prereq: Th/D 101, 201, 314, 370. 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 ea)**
Prereq: Th/D 222 and 322. In-depth treatment of playwrights influential in the development of drama.
428a Greek & Roman
428b British
428c Continental
428d North American
428e Contemporary
May be repeated under advisement as a,b,c,d, or e with different subject matter.
- 431 **WORLD HISTORY OF THE DANCE (3)**
Prereq: Th/D 231. The history of dance with emphasis on the evolution of dance from primitive cultures through the Middle Ages.
- 432 **HISTORY OF THE DANCE SINCE 1450 (3)**
Prereq: Th/D 431. 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 **LABANOTATION (3)**
Prereq: Th/D 231, 235, or equivalent. An elementary course in dance notation. Reading and writing bodily 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.
- 440 **ADVANCED MODERN DANCE TECHNIQUE (3)**
Prereq: Th/D 333 and audition. This course is intended for the student who wishes to obtain a pre-professional level of technical ability. Intensive work on rhythmical variation and phrasing. Repeatable to a maximum of 15 credits.
- 442 **DANCE COMPOSITION III (3)**
Prereq: Th/D 342. Principles of advanced composition: solo and group works, dance composition in relation to other art forms, advanced studies in theme and development, phrasing and movement manipulation.
- 450 **CREATIVE DRAMATICS LEADERSHIP (3)**
Prereq: Th/D 350. Advanced techniques: supervised teaching.
- 452 **CHILDREN'S THEATRE (3)**
Th/D 350 recommended. Plays for children studied for appreciation of their values for the child audience; principles of children's theatre play selection.
- 453 **TOURING THEATRE (5)**
Prereq: permission of instructor. Theory and principles of touring technique and problems; participation in college theatre touring program. S/U grading.
- 460 **ACTING STUDIO III: COMPANY (4)**
Prereq: 6 hours of Th/D 360 and audition. Continuation of refinement of skills and techniques presented in Acting Studio II. This course is devoted to advanced workshops and performance projects with directors and playwrights. Repeatable once for credit by permission of instructor.
- 462 **ADVANCED WORKSHOP IN SUMMER STOCK (15)**
Prereq: written permission of instructor required before registering. Offered only summer quarter. Contact Director of Theatre for details.
- 470 **PLAY DIRECTION II (3)**
Prereq: Th/D 212, 222, 314, 322, 370, 380. Producing and directing a one-act play for public performance; special emphasis on working with the actor.



Theatre/Dance

471 PLAY DIRECTION III (5)

Prereq: Th/D 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. This institute utilizes the resources of the concurrent acting workshop for high school students. Repeatable with permission of instructor. (Summer only.)

485, 486, 487 DRAMATIC WRITING WORKSHOP (4 ea)

Prereq: Th/D 385 or permission of instructor. Opportunity for disciplined expression in writing for stage, film, television or other media. May be repeated as 485, 486 or 487 to a maximum of 12 credits.

488 REVISION AND PRODUCTION SCRIPT PREPARATION (2)

Prereq: permission of the 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 Th/D 485, 486 and/or 487 when student's work is or is about to be in actual production. May be repeated for a maximum of six 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.

528b British

528c Continental

528d North American

529e Contemporary

a,b,c,d or e may be repeated once with permission of graduate adviser.

530 HISTORY/ANALYSIS OF DANCE IN THE TWENTIETH CENTURY (4)

Prereq: Th/D 431 or equivalent, or permission of instructor. Selected topics in Western theatrical dance histories since 1900: the Diaghilev Ballets Russes, development of ballet in England and America, the forerunners, pioneers and traditionalists of the modern dance, dance of the avant-garde, and a micro unit in musical theatre dance.

531 GRADUATE CHOREOGRAPHY & PERFORMANCE (4)

Prereq: permission of instructor only. Individual projects in problem solving, thematic development, and performance refinement at the advanced compositional level.

550 DRAMA IN EDUCATION (4)

Prereq: Th/D 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: Th/D 550. Strategies for the implementation of the techniques for theatre production in the public schools.

560 ACTING (4)

Prereq: permission of instructor only. Intensive 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: Th/D 560. A continuation of 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: Th/D 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: Th/D 571. Advanced principles and practices of play direction with individual student projects.

585 PLAYWRITING SEMINAR (5)

Individual projects in dramatic writing will be submitted for group discussion. (Also listed as English 503a.)

586 ADVANCED PLAYWRITING SEMINAR (5)

Prereq: Th/D 585 or permission of instructor. Individual projects in playwriting. (Also listed as English 503b.)

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.

690a THESIS (1-9)

690b RESEARCH PAPER (1-3)

Planning and execution of a publishable scholarly paper.

Graduate Courses

Courses numbered 500, 517, 545, 597 are described on page 28 of this catalog.

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

501 INTRODUCTION TO RESEARCH IN THEATRE/DANCE (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: Th/D 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: Th/D 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.

528a Greek and Roman

Interdisciplinary Program

Interdisciplinary Arts

BACHELOR OF ARTS

Major

Basic Core (Required in all options — 45 credits + 14 credits in supporting courses)

- Th/D 232, 242, or 342, 241, 235, 238, 333, 336, 339, 440, 431 or 432, 433
- Supporting Courses: Th/D 231, Music 128, Interdisciplinary Arts 110, Biol 348

Refer to Theatre/Dance Department for course description.

Interdisciplinary Dance Studies

Concentration 86-105 credits

Interdisciplinary dance study leading to the Bachelor of Arts degree in interdisciplinary arts offers courses in dance technique (modern, ballet, jazz), choreography, history and philosophy of dance. The program includes a dance core plus supporting courses and a choice of an option in pre-dance/movement therapy, performing-visual arts or liberal arts. Aside from the interdisciplinary dance studies concentration, it is possible, in conjunction with the School of Education, to earn an extended teaching minor (36 credits) in dance.

Option 1 — Pre-Dance Therapy 45 credits

Option 1: Pre-dance/movement therapy is specifically designed for students who wish to undertake graduate study in dance therapy.

Basic Core

- Th/D 331, PE 120, 122, 209
- 6 credits in internships in dance/movement therapy from Th/D 300 and 400
- 34 additional credits under advisement from: Psych 217, 313, 314, 352, 353, 431 or 432; PE 201, 302, 326, 402; SPA 465; EdCl 360, 361, 466

Option 2: University or College of Fine and Performing Arts (Select either A or B) 36-40 credits

Option 2: Visual/performing arts is concerned with the continued growth of dance as a creative/performing art experience.

Basic Core

- Dance/theatre performance emphasis: Th/D 160, 213, 215, 242 or 260, 233, 334, 339, 417, 431 or 432, 434, 442 (3-7 credits under advisement)
- 36-40 credits from music, theatre, visual arts or other university departments under advisement

Option 3: Liberal Arts

Option 3: Liberal Arts provides a broad liberal background as it examines performance in a social and cultural context.

Basic Core

- 36-40 credits from: Music 190, 240; Anth 247, 332, 335; Soc 302; Psych 315, 318, 342, 344; Lib St 121, 122, 123

Students should consult with the director prior to registering in order to assure that they enter the core sequence correctly, as well as in the selection of option 1, 2 or 3. This program may also be taken as a student/faculty designed major.

The interdisciplinary arts major shall have, under advisement, an option of taking one quarter in the College of Fine and Performing Arts Abroad program.

COURSES IN INTERDISCIPLINARY ARTS

Courses numbered X37: X97: 300, 400, 417: 445 are described on page 28 of this catalog.

110 INTERDISCIPLINARY ARTS (3)

An introduction to creativity and artistic expression. Students will be required to develop critical judgment.

HUXLEY COLLEGE OF ENVIRONMENTAL STUDIES

Dr. John C. Miles, Dean

As we approach the beginning of the twenty-first century, it is clear that one of the responsibilities of colleges and universities is to help society become aware of environmental problems and issues. A new synthesis of knowledge is needed that is global in its frame of reference, interdisciplinary in its character and experimental in its work.

Environmental studies at Huxley College centers on two program areas: environmental science and human ecology. Four academic concentrations leading to B.S. and B.A. degrees allow students to pursue both specialization and breadth in these areas, to acquire a synthesis of environmental knowledge, and to develop skills applicable to careers or to further advanced study.

At Huxley, faculty, staff and students alike are at work to create a teaching-learning environment that reflects the ideals and values of personal communication, independent learning, new approaches to education and a sense of community. Huxley is a gathering place and a focus for those genuinely concerned about the environmental well-being of the earth.

At Huxley there is real opportunity for students to contribute to the growth and functioning of the College. Students often attend faculty meetings, co-sponsor seminars with faculty members, and work with faculty and staff on decision-making College committees.

Huxley College was created in 1968 to develop programs of environmental studies that reflect a broad view of man in a physical, biological, social and cultural world. This interdisciplinary approach is supported by studies in ecology, environmental toxicology and nutrition, social assessment and policy, and environmental education. Most of Huxley's courses are at the junior and senior levels; lower division preparation may be completed at Western or at another institution, following the guidelines set forth under "background preparation" below.

The mission of Huxley College is to educate stu-

dents broadly; to teach environmental concepts that enhance environmental awareness; to cultivate interdisciplinary thinking; and to encourage rational and acceptable approaches to environmental problem-solving.

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 in the Cascades, pulp and paper manufacture, aluminum production, fisheries and aquaculture are key industries in the area.

Instruction and research at Huxley College are carried out in the Environmental Studies Center, a six-floor laboratory, classroom, and studio facility on the WWU campus. The center houses the Institute for Wildlife Toxicology, which provides opportunity for research and education on the effects of toxic substances on avian and mammalian species and 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.

About 200 students are currently enrolled in Huxley College. Huxley students are members of the WWU student body, which totals about 9,000. They have access to all library and computer facilities, and the academic, athletic and recreational activities of Western.

HUXLEY FACULTY

- JAMES R. ALBERS** (1971) Professor and Associate Vice President for Instruction and Planning. WWU. BS, Washington State University. MS, George Washington University. PhD (Physics), University of Washington
- DAVID BRAKKE** (1980) Associate Professor and Director, Institute for Watershed Studies. BA, College of St Thomas; MS, University of North Dakota; PhD (Zoology), Indiana University.
- DAVID E. CLARKE** (1966) Associate Professor. BA, MA, Trinity College (Cambridge); PhD (Political Science), Stanford University.
- CRYSTAL DRIVER** (1980) Lecturer. BS, Western Washington University; MS (Applied Biology), Western Washington University.
- ERNST L. GAYDEN** (1971) Associate Professor. PhB, University of Chicago; MS (City and Regional Planning), Illinois Institute of Technology.
- RONALD J. KENDALL** (1980) Associate Professor. BS, University of South Carolina, Columbia. MS, Clemson University. PhD (Fisheries and Wildlife Sciences), Virginia Polytechnic Institute and State University.
- THOMAS E. LACHER, JR.** (1981) Assistant Professor. BS, PhD (Biological Sciences), University of Pittsburgh.
- J. RICHARD MAYER** (1978) Professor. BS, Union College; MA, Columbia University; PhD (Organic Chemistry), Yale University.
- JOHN C. MILES** (1968) Associate 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) Associate Professor. BME, PhD (Zoology), University of Minnesota
- HERBERT H. WEBBER** (1970) Associate Professor. BSc, PhD (Zoology and Marine Biology), University of British Columbia.
- RUTH F. WEINER** (1974) Professor. BS, MS, University of Illinois. PhD (Physical Chemistry), The Johns Hopkins University
- MING-HO YU** (1970) Professor. BS, National Taiwan University. MS, PhD (Plant Nutrition and Biochemistry), Utah State University.

Adjunct Faculty

- LARRY W. BREWER**
Wildlife Research Biologist, Washington State Department of Game. MS (Wildlife Sciences) University of Washington.
- RICHARD E. FITZNER**
Research Scientist in Applied Ecology, Battelle Pacific Northwest Laboratories. PhD (Zoology), Washington State University.
- ALAN GOLDIN**
Leader, Whatcom County Soil Survey, Soil Conservation Service, U.S. Department of Agriculture. MS (Soils), University of Montana.
- BILL WILLIAMS**
Project Officer, EPA Corvallis Environmental Research Laboratories. PhD (Neuro-Physiology), University of Illinois, Champaign/Urbana.

Affiliated Faculty

- RANDALL S. BABCOCK**, Associate Professor, Department of Geology.
- A. CARTER BROAD**, Professor, Department of Biology and Director, Shannon Point Marine Center.
- LOWELL T. CROW**, Professor, Department of Psychology.
- MELVIN DAVIDSON**, Professor, Department of Physics and Director, Computer Center.
- CONSTANCE FAULKNER**, Associate Professor, Fairhaven College.
- GARLAND F. GRABERT**, Professor, Department of Anthropology
- KATHLEEN J. HASELBAUER**, Science Librarian, Wilson Library
- RAND F. JACK**, Associate Professor, Fairhaven College.
- MAURICE L. SCHWARTZ**, Professor, Department of Geology.
- DON C. WILLIAMS**, Professor, Department of Biology.

ADMISSIONS

Huxley's upper-division degree program is normally undertaken by students at Western who have junior standing (90 or more quarter hours) and by transfer students from other colleges and universities who have similar academic standing. Admission to Huxley College is accomplished by (1) being admitted to Western Washington University; (2) declaring an environmental studies major in the official Blue Book that will be provided; and (3) completing a "Declaration of Major" form in the Huxley College Office (Environmental Studies Center 539). A faculty adviser will be assigned (or a student may choose an adviser). Western students are urged to seek admission to Huxley College as soon as they become interested in Huxley's degree programs in order to obtain advisement and explore ways of participating in the activities of the college community.

Background Preparation — WWU Juniors

Western students pursuing an environmental studies major at Huxley College should complete as many of the following background courses as possible before beginning their upper-division studies:

- Biol 121
- At least three additional Biology credits in a course numbered above 121
- Chem 115 or 121
- Geol 211 or 214
- Math 105
- Engl 301 or 302 or demonstration of proficiency in English composition.
- Lib St 105 or Soc 202 or Anth 201
- Phil 112
- Econ 203

All of the specifically numbered courses shown above satisfy General University Requirements.

Background Preparation — Transfer Students

Transfer applicants are encouraged, since Huxley's curriculum is mainly an upper-division program. The first step in being admitted to Huxley College is application and admission to Western Washington University. Upon admission to Western, students will be admitted to Huxley at their request.

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 major in environmental studies should so indicate on the "Uniform Undergraduate Application for Admission to Four-Year Colleges and Universities, State of Washington."

Huxley faculty recommend that prospective transfer students complete as many of the following background courses as possible prior to transfer. (It may be helpful to discuss needed background courses with a Huxley adviser.)

- General biology: two college courses offered for science students; topics covered should include plant and animal biology. Transfer courses in principles of biology, general zoology, and general botany may be used toward this requirement.
- General chemistry: a college course offered for science students. Transfer courses in general chemistry or principles of chemistry are acceptable.
- Physical geology: a college course offered for science students. Transfer courses in physical or environmental geology are acceptable, as are five-credit courses in general geology.
- College algebra: a pre-calculus college algebra course. Transfer courses in college algebra, advanced algebra, pre-calculus or elementary functions can fill this requirement.
- English composition: a college course above the level of introductory composition, or demonstration of proficiency in English composition. Courses in reading and composition, rhetoric and composition, reading and argumentation, or advanced composition can fill this requirement.
- Behavioral studies: a college-level course. Courses in behavioral science, cultural anthropology, or sociology may fill this requirement.
- Philosophy: a college-level course, preferably one dealing with ethics or moral philosophy.
- Economics: one college-level course in micro-economics.

These courses may be one quarter, one semester or one trimester of work.

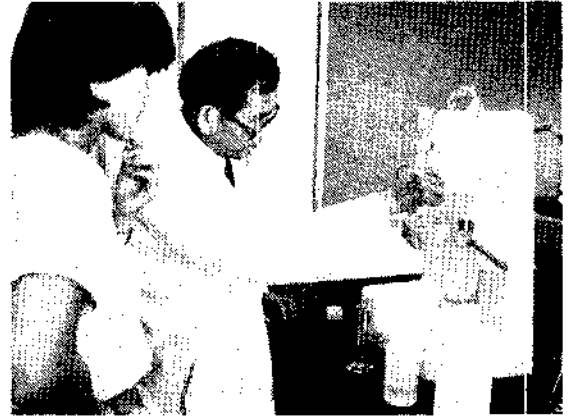
Background Preparation — Transfers from Washington State Community Colleges and Other Colleges

Students who have earned certain associate 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 associate degrees 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 GUR.

DEGREE PROGRAMS

To achieve its purpose in undergraduate education, the College has developed an integrated set of four concentrations within two broad program areas. These concentrations lead to a B.S. in Environmental Studies.



Environmental Science

- Ecology
- Environmental Toxicology and Nutrition

Human Ecology

- Social Assessment and Policy
- Environmental Education

In addition, the College offers interested students the opportunity to pursue a more general B.A. in environmental studies; student/faculty designed concentrations; or a minor in environmental studies.

Requirements for Bachelor's Degrees

- 180 quarter hours of credit; no fewer than 60 credits in upper-division study, including
 - The General University Requirements
 - A Huxley College concentration, student/faculty designed concentration, or the general environmental studies major as specified below.
 - Electives as needed for the 180 quarter hours total credit.
- Residence Study: At least one full year (45 quarter credits) as a member of Huxley College, including the final quarter before issuance of a degree.
- Scholarship standard: a cumulative grade average of 2.00 (C) or better, with no grades less than C- acceptable in Huxley background courses, courses that define a student's major and concentration or minor, professional education courses, or English composition. Admission to, and continuation in, the teacher education curriculum requires a minimum average of 2.50.

B.A. IN ENVIRONMENTAL STUDIES

(70 credits)

Huxley's Bachelor of Arts degree program is designed to help a student develop breadth in environmental studies. The basic college commitment to interdisciplinary study, concern for real-world problems and awareness of environmental values are stressed. By its nature, the B.A. program allows a student wide flexibility of choice among courses, many of which may be taken in other colleges at Western.

- Huxley background courses (selected with faculty advisement)
- Huxley core of five courses (18 credits)
- Huxley seminars (4 credits)
- Electives, under advisement, including at least 25 Huxley credits (48 credits)

MINOR IN ENVIRONMENTAL STUDIES

(24 credits)

Huxley's Environmental Studies minor is open to all students at Western.

- Hux 110 and 202 (6 credits)
- Two Huxley core courses selected from Hux 301, 302, 303, 401, 402 (6-8 credits)
- Electives, under advisement (10-12 credits)

B.S. IN ENVIRONMENTAL STUDIES

Huxley students pursuing B.S. degrees will complete certain "common requirements" and, in addition, specific course requirements for a concentration.

Huxley's concentrations are broadly conceived and allow students to elect coursework, seminars and independent learning experiences (called "Problem Series") in freshwater, marine, coastal and terrestrial ecology; air and water pollution; environmental chemistry; environmental toxicology; nutritional science; applied human ecology; teacher education; outdoor education and interpretation; mass communications; and environmental policy and administration.

A student whose interest lies in marine resources and problems of the marine environment, for example, may concentrate at Huxley in Ecology, with emphasis in such subjects as marine ecology, oceanography, marine ecosystems analysis, and coastal ecosystems management, selecting coursework from Huxley offerings and those of other units at Western.

Students interested in any of these degree programs should contact the Huxley office (Environmental Studies 539) for advisement on admission to Huxley College and selection of a faculty adviser.

Huxley Common Requirements

(32 credits)

These requirements consist of five core courses, Huxley seminars, and Problem Series (student independent study projects):

Core Courses (18 credit hours)

The core courses provide a common background of environmental concepts, knowledge and perspectives essential for understanding the role of man within an interdependent physical, biological, social and cultural world.

- Hux 301, 302, 303, 401, 402

Seminars (4 credit hours)

Huxley seminars, which are one- or two-credit courses, serve as a meeting ground for faculty and students to work together on topics of contemporary or special interest. Typically, a seminar will be limited to 15 students to stimulate discussion and foster communication across disciplinary boundaries. Students are encouraged to initiate and, with faculty involvement, to conduct seminars. Recent seminars include:

- Avian Toxicology
- The History of Resource Allocation in the Pacific Northwest
- Nutrition Case Studies
- Decentralism and the Intentional Community
- Writing a Research Proposal
- Environmental Policies of Foreign Nations
- Freshwater Invertebrate Ecology

Problem Series (4-15 credit hours)

The Problem Series is comprised of one or more independent study projects designed to give students a chance to focus their energy, ideas, experience and training on a specific topic. The Problem Series, normally taken in the senior year, is a special project guided by a faculty adviser or advisers. This project may reflect a single study topic or form part of a major investigation. It may take the form of field work or laboratory, library or community research (Hux 498a), or it may be an internship experience (Hux 498b). All Problem Series work must be completed with a written, taped, filmed or graphically portrayed document describing the process and the outcome of the investigation or internship. Two bound copies of the final report are submitted by the graduating student; one of these is kept on file in the Huxley library. The Problem Series report must be submitted in at least first-draft form by the third week of the student's last quarter of study.

Problem Series at Huxley consists of:

- Hux 498a, or Hux 498b (4 credit minimum)
- Additional credits of 498a or 498b (up to 6), for projects that are determined by the adviser to be complex or demanding beyond the four-credit norm, plus Huxley College electives to total at least 6 credits

or

Electives in Huxley College; courses to be selected under advisement, 6 credits.

Recent examples of Problem Series:

- Mercury Levels in Pacific Halibut (*Hippoglossus stenolepis*) from the Gulf of Alaska and the Bering Sea
- The Movement of Applied Lignosulfonates through the Soil Profile
- The Effects of Methylparathion on Starling Reproduction and Brain Acetylcholinesterase Activity
- The New SEPA Rules: The Changes and Their Effect

Recent examples of internships include work with:

- U.S. Forest Service
- Washington State Department of Ecology
- Georgia-Pacific Corporation
- Padilla Bay-Breazeale Interpretive Center
- Washington State Department of Game
- State Legislatures
- Public Schools
- Nature Centers and National Parks

Specific Requirements for Huxley Concentrations

Ecology (100 credit hours plus supporting courses)

The concentration in Ecology offers study in applied aspects of terrestrial, marine and freshwater environments. Program objectives include measurement and assessment of ecosystem structure and function; environmental sampling and monitoring; data analysis and interpretation; analysis of human impact on terrestrial, marine and freshwater ecosystems; and ecosystems management.

There are two options in the Ecology concentration. The first is a program in applied ecology; the second is a cooperative program with the Department of Biology with an emphasis in terrestrial ecology. Both programs require students to complete a series of supporting courses that do not count in the total concentration credits.

Career opportunities for Ecology graduates include entry-level positions to carry out monitoring, impact assessments, laboratory analysis, field studies, environmental management, and conservation for federal, state, county and local agencies as well as industry and business. This concentration also prepares students to pursue graduate studies in applied biology and interdisciplinary ecology programs.

Concentration advisers: David Brakke, Thomas Lacher, Jr., William Summers, Herbert Webber.

Option I — Program in Applied Ecology

- Huxley common requirements (32 credits)
- Required courses (44-45 credits)
Hux 321a, 333, 338, 363, 421a,b or 431; one of 433, 438, or 439; 436; Biol 310 or 311 or 312;

Biol 325; Chem 251 or 351

- Electives (23-24 credits) from the following list are recommended. Other courses appropriate to the student's concentration may be approved by the student's adviser. Hux 321b, 342, 358, 361, 421a,b; 431, 432, 433, 434, 438, 439, 446, 456, 458

Option II — Program in Terrestrial Ecology (cooperative program)

- Huxley common requirements (32 credits)
- Required courses (57-59 credits)
Two of Biol 310, 311, 312; 325; 379 or 403; 404; 452, 490; Hux 333; Hux 363 or Biol 340; Hux 431; Chem 251; Chem 333 or Hux 361
- Electives (9-11 credits)

Supporting Courses (required but not counted in the 100 credits for either option)

- Biol 121, 122, 123; Geol 211; Chem 121, 122, 123; Math 124



Environmental Toxicology and Nutrition (100 credit hours plus supporting courses)

The Environmental Toxicology and Nutrition concentration is concerned with the effects of environmental pollutants and toxins on living systems. In addition, the concentration deals with the influence of an organism's nutritional status upon its ability to cope with environmental stresses. Such problems as air and water pollution, food contamination, exposure to pesticides and other toxic substances, and radiation exposure are considered. With an increased awareness of the potential hazards of toxic chemicals and pollutants in our environment, more thorough risk analysis procedures are required. This concentration teaches the methods and tools to be used for assessing problems related to environmental toxicology.

There continues to be a need for people trained to monitor environmental quality; to participate in regulatory decision-making; to conduct field and laboratory research on environmental pollution, toxicology and nutrition problems; and to plan and manage environmental health programs. Students completing the Environmental

Toxicology and Nutrition concentration are prepared to work in programs in water supply and quality, air and water pollution, control of radioactive materials, food analysis, and in research pertaining to pesticides, wildlife toxicology, nutrition and pollutant toxicity.

The Environmental Toxicology and Nutrition program provides flexibility so that qualified students may participate in internship programs in both private industry and government. For those students interested in graduate education, coursework can be planned to meet graduate school entry requirements.

Concentration advisers: Crystal Driver, Ronald Kendall, Ruth Weiner, Ming-Ho Yu.

- Huxley common requirements (32 credits)
- Concentration requirements (43 credits)
Biol 348, 349; Chem 351 and 352 or 251; Chem 371; Hux 352a or 452; Hux 358, 361; Hux 363 or Biol 340; Hux 455
- Concentration electives selected under advisement (25 credits), which may include but are not limited to:
Biol 345, 408, 430, 462, 463, 465; Chem 333, 354, 375, 434; Hux 333, 338, 352b, 436, 446, 453, 454, 456, 457, 458, 462
- Supporting courses (in addition to Huxley background requirements of Biol 121, Chem 115 or 121, and Math 105):
Biol 122 and 123, Chem 122, Math 124

Social Assessment and Policy (75 credit hours)

The goal of Huxley's concentration in Social Assessment and Policy is to provide knowledge and tools for understanding the social and humanistic dimensions of environmental problems. Studies will focus on cultural premises, perceptions, and values both historic and contemporary, on social change necessary for environmental problem solving and ways to accomplish it, and on social policy and planning and its short- and long-term environmental costs and benefits.

The concentration is a general one designed to give students experience in a wide area of inquiry. It touches on cultural ecology, the dynamics of human population, environmental ethics, political action, ecosystems, pollution, and assessment of environmental impacts, among other subjects. Competent Social Assessment and Policy graduates have little difficulty in finding employment in federal agencies, local service organizations and elsewhere. The background these students acquire serves them well when facing the variety of challenges in their chosen careers.

Graduate study is a second option open to students. Several excellent graduate programs in the U.S. provide a continuation of in-depth study in human ecology and related areas of study; or the student may enter graduate programs in fields such as anthropology, sociology, geo-

graphy, political science or psychology. The concentration allows many opportunities for self-development in addition to professional and career preparation.

Concentration advisers: David Clarke, Ernst Gayden, Lynn Robbins, Ruth Weiner.

This concentration is based on two general objectives. Students choose most of their coursework from among courses meeting these objectives.

Objective I: Perspectives and Understandings of:

- (a) The social system and particularly the social and humanistic dimensions of environmental problems
- (b) The role of the social sciences in the analysis of environmental problems
- (c) The role of governmental structure and function in environmental problems and solutions

Objective II: Skills and Methods for:

- (a) Participating in environmental affairs, locally and generally
- (b) Socio-environmental problem-solving and conflict resolution
- (c) The logical and humane resolution of social and moral dilemmas related to environmental problems

- Huxley Common Requirements (32 credits)
- Three courses meeting Objective I (10-12 credits) from the following:
Hux 308, 377, 410, 467, 491
- Three courses meeting Objective II (11-12 credits) from the following:
Hux 365, 371, 411, 412, 413, 415, 418, 436
- Electives, under advisement, from Huxley or other WWU colleges (19-21 credits)

Recommended preparation for Social Assessment and Policy includes at least one college-level course in history and courses in introductory sociology and political science. Interested students should seek advisement early concerning their lower-division preparation.

Environmental Education

The general objective of the concentration 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. Three options have been developed within the program which will allow students with varied interests opportunities to work toward diverse career goals.

The concentration 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 from the environ-

mental 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 concentration have found positions 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 — Teacher Education — Elementary/Secondary (40 credits minimum) plus Professional Studies Program.

The goal of this option is not to train a specialist in environmental studies but to assist in the training of teachers of one of the traditional subject areas. It is possible to complete this option in the normal four-year college program only if advisement begins in the freshman year.

- Huxley core of five required courses (18 credits)
- Huxley seminars (4 credits)
- Two environmental education courses (8 credits):
Hux 371, 472
- Electives under advisement to total 40 credits
- Students in secondary education are *required* to complete an additional academic major under advisement from the School of Education
- Students in elementary education are required to complete the elementary education minor
- Professional studies program applicable to teaching level (see "Education" section of the catalog)

Option II — Outdoor Education and Interpretation (90 credit hours)

The goal of this option is to prepare people to pursue environmental education careers in non-formal educational and recreational settings. Persons choosing this option will design programs of study to prepare them for work as outdoor education leaders and interpreters of various environments.

- Huxley common requirements (32 credits)
- Six courses (23 credits):
Hux 371, 372, 373, 375, 472, 473
- Electives, under advisement (35 credit hours)

Option III — Mass Communication and Environmental Education (90 credit hours)

This option allows a student to combine his or

her interests in education, environmental studies, mass communication, and/or media technology utilizing extensively coursework in other colleges at Western which specialize in various aspects of communications.

- Huxley common requirements (32 credits)
- Four courses (16 credits):
Hux 371, 377, 466, 472
- Electives, under advisement (42 credits)

Recommended preparation for Environmental Education: Interested students should seek advisement early in order to formulate a degree program within any of the above options.

Student/Faculty Designed Concentration

Students who wish to design their own concentrations in environmental studies should obtain information on guidelines from the Huxley College office (ES 539). The student-designed concentration should 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.

Interdisciplinary Nutrition Program

The interdisciplinary program in nutrition provides students with opportunities to pursue the area of nutrition at Western Washington University. The program is designed to prepare students for employment or advanced study in one of several professions and occupations including public health nutrition, nutritional science and consumer advocacy in nutrition. The nutrition program draws upon faculty and courses offered at Huxley College and throughout the University. See Home Economics Department, located in the College of Arts and Sciences section, for further information, or contact Dr. Ming-Ho Yu (676-3504) or Janice Peach (676-3370).

GRADUATE STUDY

The Huxley College graduate program draws upon graduate coursework in Huxley College and Western Washington University's science departments, and leads to the Master of Science in Environmental Science degree. Three areas of program emphasis are recognized: wildlife toxicology, applied ecology, and environmental chemistry (a cooperative program with the Department of Chemistry).

A cooperative graduate program with the Department of Biology leads to the Master of Science degree in Applied Biology.

Program options and requirements are listed in the Graduate Section of this catalog.

INSTITUTE FOR WILDLIFE TOXICOLOGY

Director: Ronald J. Kendall

Huxley College has established an Institute for Wildlife Toxicology to encourage research and education on the effects of toxic substances on avian and mammalian species. While centered at Huxley, the work of the Institute is University-wide in scope, involving WWU faculty in several academic units. In addition, cooperative research in the Northwest region is underway with the Washington State Department of Game; Battelle Pacific Northwest Laboratories; and the Corvallis Environmental Research Laboratory, EPA.

Current field and laboratory investigations include:

- Effect of methylparathion on wild avian species
- Heavy metal impacts on waterfowl
- Reproductive toxicology of cadmium in Bobwhite quail
- Chemically-induced teratogenicity in avian embryos
- Behavioral toxicology of pesticides in wildlife.

Funding is provided for research and development by federal and state agencies and private industry.



The Institute for Wildlife Toxicology provides opportunities for both undergraduate and graduate students to pursue independent studies, participate in on-going research projects and undertake senior-level thesis and post-graduate research through Huxley's graduate program in environmental science.

THE CENTER FOR APPLIED HUMAN ECOLOGY/APPROPRIATE TECHNOLOGY

This Center serves faculty and students inter-

ested 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.

COURSE DESCRIPTIONS

Courses numbered X37; X97; 300, 400, 417; 445 are described on page 28 of this catalog.

Huxley courses and seminars are open to all students at Western. Students enrolled in other colleges and divisions at Western may apply credits earned at Huxley to their elective programs.

110 ENVIRONMENTAL STUDIES: A SCIENTIFIC APPROACH (3)

An introduction to environmental studies which stresses a scientific approach toward understanding the nature and scope of contemporary problems in man's environment. The course reflects application of physical, chemical, biological and geologic principles to define ecological change, both natural and man-made.

202 ENVIRONMENTAL STUDIES: A SOCIAL SCIENCE APPROACH (3)

An overview of the environmental macro-problem with emphasis on specific cases which reveal the complexity of environmental problems. Social, political, economic, humanistic and scientific issues in their environmental context. A basic introduction to environmental studies from the perspective of the social studies.

204 THE OCEANS. AN INTRODUCTION TO THE MARINE ENVIRONMENT (3)

Prereq: two quarters of college science courses. Structure, function and human use of the marine environment. The oceanic environment (resources from the sea, world fisheries, ocean circulation, oceans and weather, ocean basins, salinity). The coastal zone (coastal zone management, law of the sea, estuaries, waves, tides).

210 POLITICS OF ENVIRONMENT (3)

Pol Sci 101 or 250 recommended. A survey course dealing with the place of environmental concerns in U.S. politics and elections; environment and Congress; wilderness legislation; energy policy; environment and industry; natural resource use and conservation.

301 ENVIRONMENTAL SYSTEMS (3)

Prereq: two quarters of general biology; Geol 211. General systems theory; principles of natural systems; ecosystems structure, function and management. A Huxley core course.

Huxley College

- 302 ENVIRONMENTAL POLLUTION (4)**
Prereq: Math 105; Chem 115 or 121; general biology. An introduction to the problems of air and water pollution, pesticides, radiation, hazardous substances and noise. A Huxley core course.
- 303 HUMAN ECOLOGY (4)**
Prereq: Lib St 105, Soc 202, or Anth 201. 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. A Huxley core course.
- 308 ENVIRONMENTAL AND ENERGY ISSUES (3)**
Prereq: one of the following courses: Hux 110, 202, 301 or 302; or permission of instructor. Presentation and analytical discussion of current, ongoing environmental issues in the United States, and particularly in the Pacific Northwest. Each issue will be examined in depth and with reference to its place in, and contribution to, the development of environmental thought and the environmental movement in the U.S.
- 309 ENVIRONMENTAL STUDIES: COMPUTER APPLICATIONS (3)**
Prereq: CS 101; junior standing. Application of micro-computer programs with the objective of integrating data management, data analysis and reporting into a technical report. Other microcomputer programs used in environmental studies will be introduced.
- 321a OCEANOGRAPHY (3)**
Prereq: introductory biology and chemistry 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.
- 321b PHYSICAL OCEANOGRAPHY LABORATORY (2)**
Prereq: Hux 321a or concurrent. Introductory field and laboratory experience in the measurement and description of standard, physical oceanographic phenomena, such as waves, tides, currents and mixing events. Emphasis on coastal systems, including estuaries, especially in the northeast Pacific Ocean.
- 333 APPLIED LIMNOLOGY (5)**
Prereq: Hux 301 or Biol 325; Hux 361 recommended. Ecology and analysis of lakes and standing-water bodies, with emphasis on the physical, chemical and biological factors which determine biological productivity. Human impacts on lakes. Laboratory and field studies of natural and perturbed lake systems. Lab fee.
- 338 MARINE ECOSYSTEMS ANALYSIS (5)**
Prereq: Hux 301, organismal biology, general chemistry. A laboratory course dealing with structure and function of marine coastal ecosystems. Habitat types, dominant flora and fauna, extent of cultural modification and sensitivity to human impact. Methods of analysis of coastal ecosystems. Taught at Sundquist Laboratory, Shannon Point. Special fee.
- 352a,b PRINCIPLES OF NUTRITION / PRINCIPLES OF NUTRITION LABORATORY (4,1)**
Prereq: general biology and one year of chemistry; or permission of instructor. Register concurrently for 352a,b. Introduction to the discipline of food and nutrition with emphasis on relationship between nutrition and health. Laboratory involves dietary survey and application of nutrition principles to evaluation of individual diet. Lab fee.
- 358 EVALUATING TOXIC SUBSTANCES IN THE ENVIRONMENT (4)**
Prereq: general biology, general chemistry; Hux 302 or permission of instructor. Introduction to principles and methods of evaluating chemicals in the environment. Included are discussions on methods for identifying toxic substances, testing effects of these substances in non-human and human systems, techniques for analysis and monitoring of toxic substances and studies of transport of chemicals in ecosystems.
- 361 WATER QUALITY LABORATORY (4)**
Prereq: general chemistry, Hux 301 and 302. (Hux 301 and 302 may be corequisites.) 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. Lab fee.
- 363 STATISTICS FOR ENVIRONMENTAL STUDIES (4)**
Prereq: Math 105. Introduction to probability theory, sampling distributions and hypothesis testing. Analysis of enumeration, attribute and frequency data as well as continuous data. Emphasis on computer-based analysis packages (e.g., SPSS), with some discussion of computer modeling.
- 365 ENERGY AND ENERGY RESOURCES (4)**
Prereq: general physics or general chemistry or Hux 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)**
The process of environmental education is explored through reading and discussion focusing on environmental perception, attitudes and values in behavior, the educational environment, and the qualities of the environmental education curriculum. An introduction to environmental education and a review of current thinking in this dimension of education.
- 372 OUTDOOR EDUCATION (4)**
Prereq: Hux 371 or permission of instructor; concurrent enrollment in Hux 373, 375, and 473. Classroom and field study of outdoor education, an approach to environmental education. Traditional outdoor learning methods are reviewed. New developments and programs such as Outward Bound and adaptations thereof are reviewed. Field experience in various outdoor settings is included. Special fee.
- 373 EXPERIENTIAL LEARNING IN ENVIRONMENTAL EDUCATION (4)**
Prereq: Hux 371 or permission of instructor; concurrent enrollment in Hux 372, 375, and 473. 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. Special fee.
- 375 THE WRITINGS OF AMERICAN NATURALISTS AND OUTDOORSMEN (3)**
Prereq: concurrent enrollment in Hux 372, 373, and 473. There is a tradition of writing about the outdoors in American literature. This course describes and explores that tradition. The writings of Thoreau, Burroughs, Muir, Leopold, Carson, Eiseley, Borland, Beston and others are read and discussed.

377 ALTERNATIVE FUTURES (4)

Prereq: Hux 303 or two 200-level courses in the social sciences. Taught in alternate years. 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.

401 ENVIRONMENTAL ETHICS (3)

Prereq: Phil 112; Eng 301 or 302; 300-level Huxley core courses. An examination of philosophical dimensions of man-environment relations with emphasis upon ethical problems. Several contrasting views of man are considered and the influence of these philosophical positions upon environmental behavior examined. An attempt made to identify an environmental ethic which might be operable in modern society. A Huxley core course.

402 ENVIRONMENTAL DECISION-MAKING (4)

Prereq: completion of social sciences GUR, to include Econ 203 and one of the following: Bus Ad 271; Fair 211; Pol Sci 101, 250, or 311; 300-level Huxley core courses. An interdisciplinary investigation of the political, economic and technical forces that shape decisions on environmental issues; development of a typology of decision-making and its application through case studies; strategies for effecting improved environmental decision-making. A Huxley core course.

410 ENVIRONMENTAL PROBLEMS IN AGRICULTURE (3)

Prereq: senior standing. 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.

411 ALTERNATIVE ENERGY SOURCES AND SYSTEMS (3)

Prereq: senior standing. 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. Recommended preparation: general physics, general chemistry, Hux 365, Physics 207, 399.

412 APPLIED HUMAN ECOLOGY: SETTLEMENT DESIGN I (4)

Prereq: Hux 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.

413 APPLIED HUMAN ECOLOGY: SETTLEMENT DESIGN II (4)

Prereq: Hux 303 or Hux 377 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.

415 ENVIRONMENTAL DESIGN: PROCESSES AND PROBLEMS (4)

Prereq: senior standing. Taught in alternate years. 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.

418 SOCIAL IMPACT ASSESSMENT (4)

Prereq: Soc 310; recommend Soc 315. An interdisciplinary approach to the effects of technology, industry, commerce and public and private policy on the lives of human beings. Social science techniques are used to assess and evaluate problems, issues and strategies. Case studies are used to illustrate central issues. Emphasis is on environmental legislation and policy in social impact assessment.

420 POLITICS, ADMINISTRATION AND ENVIRONMENT (4)

Prereq: Hux 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. Taught in alternate years; listed jointly 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. Commercial fisheries, sport fisheries, freshwater fisheries and aquaculture will be examined.

421b FISHERIES MANAGEMENT LABORATORY (2)

Prereq: Hux 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.

431 APPLIED POPULATION AND COMMUNITY ECOLOGY (5)

Prereq: Biol 325, Hux 363, Math 105. Covers the study of ecology at the population and community level. Lecture emphasizes the development of theory and models; lab emphasizes both field and quantitative techniques.



432 STREAM ECOLOGY (5)

Prereq: Hux 301 or Biol 325; Hux 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. Lab fee.

433 WATERSHED AND LAKE MANAGEMENT (4)

Prereq: Hux 333 or Biol 402, Hux 432 and Geol 472 recommended. Management of watershed units and interaction between land and water (stream and lake) environments. Lake management and lake restoration procedures and applications. Biomanipulation as a management strategy.

434 ECOLOGY OF FRESHWATER COMMUNITIES (4)

Prereq: Hux 333. Ecology of freshwater organisms and factors that regulate structure and dynamics of populations and communities.

436 ENVIRONMENTAL IMPACT ASSESSMENT (4)

Prereq: senior standing, completion of analysis coursework within majors or concentrations, 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 (4)

Prereq: Hux 301, 338. Coastal zone management questions in the coastal ocean. Dredge and fill problems. Competing uses in estuaries, marine and port development, fisheries management, aquaculture.

439 TERRESTRIAL ECOSYSTEMS MANAGEMENT (4)

Prereq: Biol 404 and Hux 431, or equivalent courses. Conflicts arising in multiple-use management of forests, parks and wildlife. Topics include park and wildlife management. Management plans for renewable resource areas in a variety of socio-economic conditions.

446 AQUATIC CHEMISTRY (4)

Prereq: Chem 123. The study of aquatic systems, particularly the structure and composition of water; the chemistry of oceans, lakes and streams, chemical equilibrium; colligative properties, metal ions and ligands; aquatic complexes; trace substances in water.

452 NUTRITIONAL BIOCHEMISTRY (4)

Prereq: Hux 352a and Chem 371. Chemistry and biochemical role of essential nutrients and their interrelationship; intermediary metabolism of nutrients.

453 FOOD ANALYSIS LABORATORY (3)

Prereq: Chem 251 and Hux 352a, or equivalents. Basic laboratory techniques used in the analysis of various nutrients in food.

454 ENVIRONMENTAL NUTRITION (4)

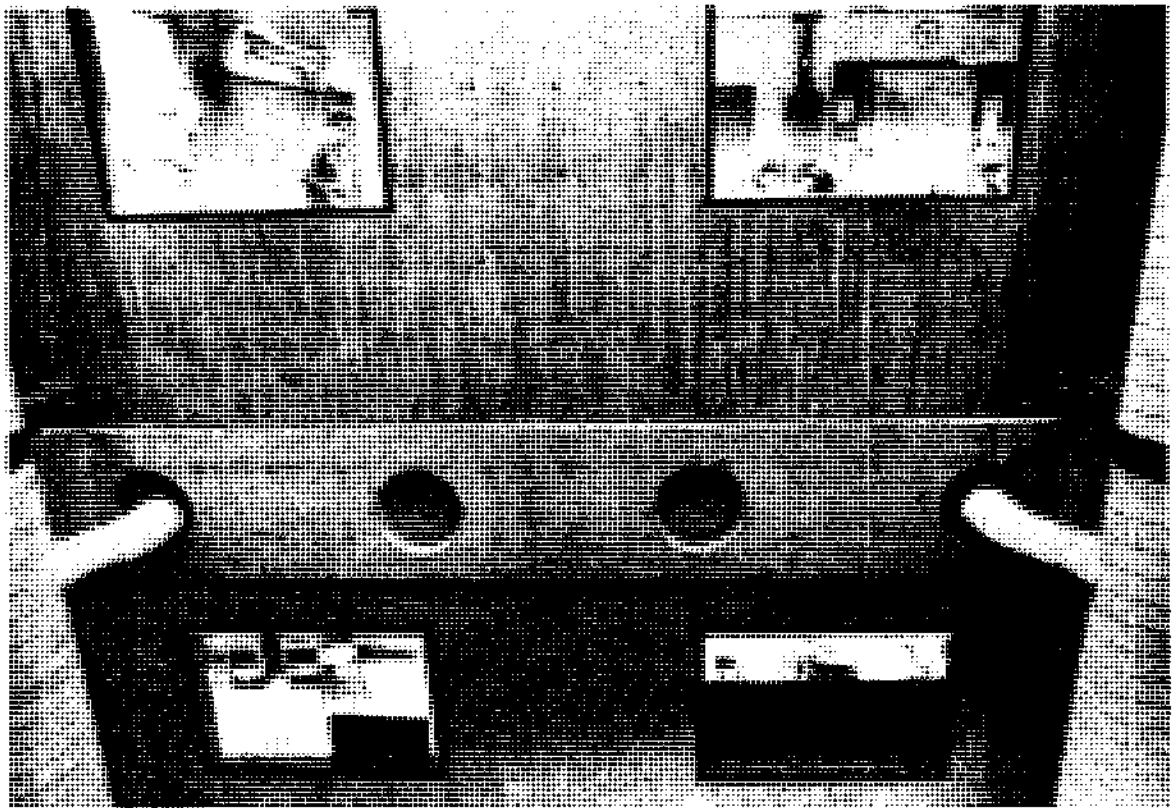
Prereq: introductory nutrition. Various current issues in nutrition including dietary sugar and fiber, vitamins C and E, food additives, obesity, vegetarianism, and nutrition and killer diseases.

455 BIOLOGICAL EFFECTS OF ENVIRONMENTAL POLLUTANTS (4)

Prereq: Hux 302 and Chem 371 or permission of instructor. Physiological and toxicological effects of common pollutants found in man's environment. Mechanism of action of individual pollutants, including cellular damage at molecular level.

456 ENVIRONMENTAL TOXICOLOGY (3)

Prereq: Biol 123, 349, Chem 353, 371, Hux 302 and 358 or permission of instructor. The toxicology of exposure to environmental contaminants in human and non-human biological systems will be addressed at various levels of organization, including organismic, organ, tissue, cell, sub-cellular and molecular levels.



- 457 ENVIRONMENTAL TOXICOLOGY LABORATORY (2)
Prereq: general biology, general chemistry, Hux 302, 358; or permission of instructor. Methods of experimentation with toxic substances in various test systems. Studies will be conducted to evaluate mammalian and avian exposure to pollutants. Lab fee.
- 458 WILDLIFE TOXICOLOGY (3)
Prereq: Chem 123, Biol 123, Hux 302, or permission of instructor. Effects of toxic substances on the reproduction, health and well-being of wildlife. Taught in alternate years.
- 462 AIR POLLUTION (4)
Prereq: Hux 302; general chemistry. 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.
- 466 SYSTEMS THINKING, GOVERNMENT AND ENVIRONMENT (4)
Prereq: Hux 202 or permission of instructor. Systems thinking as an emerging world-view. Origins in biology, neurology, operational research, cybernetics, ecology, etc. Applications to environmental control and political process. The promise and dangers of an "information society." Listed jointly as Pol Sci 466.
- 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 Pol Sci 467.)
- 472 THE ENVIRONMENTAL EDUCATION CURRICULUM (4)
Prereq: Hux 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 each student, based on his research into the matter.
- 473 ENVIRONMENTAL INTERPRETATION (4)
Prereq: concurrent enrollment in Hux 372, 373 and 375. A field-oriented course in methods, techniques and design of environmental education programs. Natural, historical, and cultural systems are interpreted. Special fee.
- 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. *This course is available only off-campus under the aegis of Continuing Education. It is not available to Huxley majors.* May be repeated for credit.
- 491 MULTINATIONAL CORPORATIONS AND GLOBAL ECOLOGY (4)
Prereq: Econ 203 or 204. 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.
- 498a PROBLEM SERIES (4-15)
Prereq: permission of instructor. Problem-solving experience in environmental problems. May be repeated for credit.
- 498b PROBLEM SERIES: INTERNSHIPS (4-15)
Prereq: permission of instructor. Internships in positions appropriate for the student's program. May be repeated for credit. S/U grading.
- 499a SEMINAR (1)
Prereq: senior standing or permission of instructor. Student-faculty interaction on topics of general interest. May be repeated for credit. S/U grading.
- 499b SEMINAR (2)
Prereq: senior standing or permission of instructor. Student-faculty interaction. May be repeated for credit. S/U grading.
- 499c SEMINAR (1)
Prereq: senior standing or permission of instructor. Student-faculty interaction on topics of general interest. May be repeated for credit.
- 499d SEMINAR (2)
Prereq: senior standing or permission of instructor. Student-faculty interaction. May be repeated for credit.

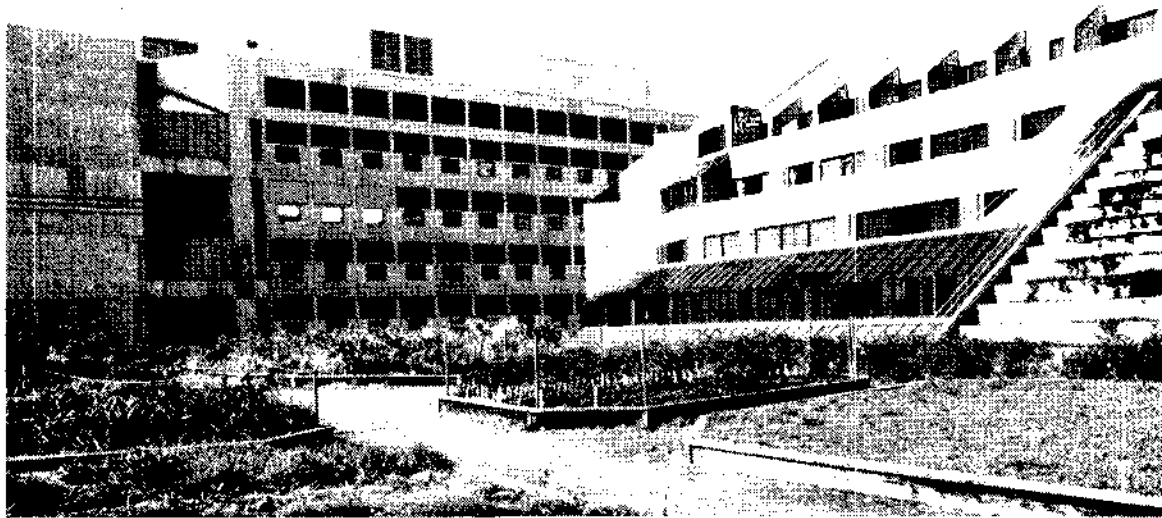
Graduate Courses

Courses numbered 500, 517, 545, 597 are described on page 28 of this catalog.

Admission to Graduate School or special permission required. See Graduate 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, Huxley/Biology Cooperative M.S. option in Environmental Biology, Huxley/Psychology Cooperative Behavioral Toxicology option, Huxley/Chemistry option.

- 501 GRADUATE SEMINAR IN ENVIRONMENTAL SCIENCE (1)
Prereq: graduate standing. Repeatable for credit three times. Presentation of approaches to and selected topics in environmental science.
- 530 ECOSYSTEM PRODUCTIVITY: PROCESSES AND MEASUREMENT (4)
Prereq: 25 hours environmental science (biology courses, including ecosystem ecology). Primary productivity of the biosphere, including global productivity patterns and method of productivity measurement. Discussion of secondary productivity in aquatic and terrestrial environments. Laboratory and field analyses of primary and secondary productivity. Emphasis will vary with offerings; may be repeated for credit up to three times for different subject offerings.
- 531 SAMPLING DESIGN AND ANALYSIS (3)
Prereq: Math 341, 342 or Biol 340; at least 10 hours 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 an introduction to numerical methods of analysis, including diversity, coefficients of association, clustering and ordination.
- 532 METHODS IN ECOSYSTEMS SAMPLING (2)
Prereq: Hux 531. Field methods in marine, freshwater and terrestrial ecological surveys. Emphasis is on methods used for population and community studies.



- 533 RESTORATION AND MANAGEMENT PRACTICUM (2)**
 Prereq: graduate standing; other prerequisites will vary with offerings; for example, lake focus prereqs are Hux 433, Geol 472. Design of monitoring programs. evaluation of restoration techniques and development of management plans. Focus will vary with offering (lakes, wetlands, watersheds, estuarine, coastal or terrestrial systems). May be repeated for credit up to three times for different subject offerings.
- 534 ASSESSMENT METHODOLOGIES AND ECOSYSTEMS MANAGEMENT (3)**
 Prereq: graduate standing, Hux 436 or 536 and a course in economics. The role of environmental assessment methodologies in ecosystem management practices. The problem of expressing the importance of ecosystem values in resource allocation decisions. Evaluation of ecosystem assessment procedures used worldwide (UNEP, the World Bank, U.S. AID) as such procedures relate to problems of ecosystem management.
- 535 COEVOLUTION OF POPULATIONS AND COMMUNITIES (3)**
 Prereq: graduate standing, Hux 301, and Hux 363 or Biol 325. Course will cover coevolutionary aspects of population and community ecology. Material covered will include population genetics, population processes, life-history evolution, food chain analysis, and the evolution of ecosystem structure and function. Emphasis on current empirical and theoretical research.
- 536 ENVIRONMENTAL IMPACT ASSESSMENT PRACTICUM (3)**
 Prereq: graduate standing. Preparation of an objective assessment description of a real natural area including the search for public documentation, evaluation of coverage and specific new analyses. Coordinating role in task group data assembly and editorial review of draft project summaries. Experience directly related to professional responsibilities in the environmental field. Review of assessment utilization in the EIS format and of significant legislation.
- 538 INTERDISCIPLINARY SEMINAR IN BEHAVIORAL TOXICOLOGY (2)**
 Prereq: graduate standing, Hux 458/556, or Psych 501a, or permission of instructor. Assessment of the impacts of toxic environmental chemicals on various behavioral processes.
- 544 APPLIED WILDLIFE TECHNIQUES IN ENVIRONMENTAL ASSESSMENT (4)**
 Prereq: Hux 431, 531. Lecture and field study concentrating on the application of wildlife ecology techniques to censusing and monitoring populations with regard to environmental assessment (pollution, toxic substances, other disturbances). Field work will be the principal component of the course.
- 551 ENVIRONMENTAL BIOCHEMISTRY 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. Special lab fee.
- 555 NUTRITION AND POLLUTANT TOXICITY (4)**
 Prereq: Hux 302, 352a, and Chem 371 or permission of instructor. Physiological and biochemical effects of major pollutants found in the environment; influence of various nutrients on pollutant toxicity.
- 556 ADVANCED ENVIRONMENTAL TOXICOLOGY (3)**
 Prereq: Biol 123, 349, 384, Chem 353, 371; Hux 302 and Hux 358 or permission of instructor. The toxicology of exposure to environmental contaminants in human and non-human biological systems at various levels of organization, including organismic, organ, tissue, cell, subcellular and molecular levels.
- 557 ADVANCED ENVIRONMENTAL TOXICOLOGY LABORATORY (2)**
 Prereq: general biology, general chemistry, Hux 302, 358, or permission of instructor. Methods of experimentation with toxic substances in various test systems. Studies will be conducted to evaluate animal exposure to pollutants. Special lab fee.
- 558 ADVANCED WILDLIFE TOXICOLOGY (3)**
 Prereq: Chem 351, Hux 301 or Biol 325, Hux 302, or permission of instructor. Effects of toxic substances on the reproduction, health and well-being of wildlife. Taught in alternate years.
- 561 ANALYSIS OF TOXIC SUBSTANCES (3)**
 Prereq: analytical chemistry or permission of instructor. One hour lecture; four hours laboratory per week. Course includes theory of commonly used instrumental analytical methods (gas chromatography, UV-visible spectroscopy, etc.) and application of these methods to field problems. Sampling and monitoring methods included.
- 562 ADVANCED AIR POLLUTION (4)**
 Prereq: graduate standing, Hux 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.
- 690 THESIS RESEARCH (1-12)**
 Prereq: permission of the thesis advisory committee. Thesis research in environmental science under faculty direction; an integral part of the environmental science M.S.

Urban Center

The Urban Center, a Seattle-based program of Western Washington University, offers an interdisciplinary Bachelor of Arts degree to urban adult students. To serve the needs of its students, most of whom are employed, the Center's classes are scheduled evenings and Saturdays.

The Center provides an academic program which builds upon the skills, competencies and knowledge which students have gained from prior study and experience. Classes are small, the setting is supportive, and individual counseling and advisement are readily available. In general, the Center is committed to developing an urban community of students who can identify and see solutions to the complex, interrelated problems of the city and modern life.

Students are required to complete 180 hours of credit, at least 60 of which are upper-division courses.

The program at the Center is primarily upper division; thus General University Requirements must be completed elsewhere. The Center offers concentrations in social services and public management. In addition students may, in conjunction with a faculty committee, develop a proposal for their own interdisciplinary concentration within these areas. This proposal defines the degree area, lists the components of the degree, discusses the way in which these components are integrated, and describes the course work and field experience for competence in the concentration area. Six general foundation skills courses are prerequisites to each concentration and a final project is also required of each student. Students may also do independent study in selected topics.

Admissions criteria for Western Washington University apply to prospective Center students. In addition, a Center application form and personal interview are required. Further information regarding courses and class schedule is available from the Director, Urban Center, 1805

Broadway, Room NP 101, Seattle, Washington 98122, phone 464-6103 (SCAN 576-6103).

INTERDISCIPLINARY BACHELOR OF ARTS DEGREE

Required of All Students

- General University Requirements (*GUR courses are not offered at the Urban Center*)
- General Foundation Skills Requirement: Urban Ctr 301*, 302, 303 (*a writing placement exam is given to determine if this course is required)
- 50-60 credits in elective courses
- Urban Ctr 498

Social Services Concentration

64 credits

The Social Services Concentration is designed to provide an understanding of helping and healing relationships, and of the agencies and organizations within which these relationships take place. It presents common casework situations and how to meet these, as well as the variety of cultural and community demands that are presented to workers in this area. There are electives, required courses and opportunities for independent study.

- Urban Ctr 321, 322, 323, 324, 331, 332, 333, 334, 418, 431, 432, 433, 441, 442, 443, 444
- Mgmt 302
- 6 credits of electives and/or independent study

Public Management Concentration

74 credits

The public management concentration is designed to provide in-depth instruction for students preparing for entry-level or already em-

Urban Center

ployed in professional and managerial positions. The program encourages students to contrast practical management application and experience with various management principles, concepts and theories. It is for students who are interested in careers in the public sector such as management of social or governmental agencies, non-profit and other business-related fields. All students are required to take the Core and choose one specialization: human resources management and organization, planning, urban policy, and law, general management and fiscal systems.

- Core Courses:
 - FMDS 356
 - Mgmt 302, 304, 322, 401
 - Urban Ctr 308, 309, 331, 335, 381, 410, 412, 420, 498
- Specialization Area (minimum of 20 credits):
 - Human Resources Management and Organization*
 - Mgmt 425
 - Urban Ctr 342, 395, 423
 - 5 credits of independent study
 - Planning, Urban Policy, and Law*
 - Urban Ctr 315, 317, 342, 345
 - Hux 335
 - General Management and Fiscal Systems*
 - Mgmt 330, 360, 495
 - Urban Ctr 423
 - 5 credits of independent study

Student-Designed Concentration

50-60 credits

In this option, the student, with faculty assistance, designs a program of study which meets his/her specific academic needs. The concentration may consist of any appropriate combination of coursework and independent study. It is the responsibility of the student to develop a concentration proposal under the guidance of his/her Concentration Committee. The committee must include the Urban Center director and an Urban Center faculty member. Other Urban Center faculty or community resource persons with expertise in the proposal concentration area should be added by the student with the concurrence of the director.

COURSES FOR URBAN CENTER

- 301 RHETORIC I (3)
Designed to improve writing ability with practice in the dynamics of language and basic writing skills
- 302 RHETORIC II (3)
Prereq: Urban Ctr 301 or placement. Writing of non-fiction prose. Informative and persuasive writing: the personal essay, biographical sketch, extended argument and other forms
- 303 TECHNIQUES OF RESEARCH (3)
How to find, organize and report information. Use of the standard bibliographic sources and citation indexes. Writing research reports.
- 308, 309 INTRODUCTION TO URBAN LAW (3 ea)
An introduction to the areas of law with which many people are likely to come in contact in their day-to-day lives: housing, domestic relations, individual rights, criminal law and environmental law. Students will participate in a mock trial one quarter and a mock administrative hearing the other quarter.
- 315 INTRODUCTION TO URBAN PLANNING (3)
Fundamentals of physical and social planning in urban areas. Physical systems include transportation, sewers, water, energy, environment. Social systems include the delivery of education, health and welfare services.
- 317 URBAN DYNAMICS (3)
Focuses on the issues and experiences related to the major urban institutions, the family, the school, the polity, the economic base and social institutions.
- 321 SOCIAL AND HEALTH AGENCIES (3)
Nature and function of community social and health agencies. How organizations operate internally and in the community.
- 322 CHILD DEVELOPMENT (3)
Study of the normal development of the child or adolescent. Determination and diagnosis of abnormal development.
- 323 FAMILY DYNAMICS (3)
Patterns of family interactions, disturbed roles and communications within the family, scapegoating of family members, double-binds, etc.; work of Satir, Haley and others.
- 342 ADULT DEVELOPMENT AND AGING (3)
Prereq: Urban Ctr 322, 323. Interdisciplinary perspective stressing the interaction of psychological, social and physiological factors affecting the aging process. Examination of the developmental stages and tasks of adulthood, with emphasis on the conflicts and pressures of adulthood relative to the social service field.
- 331 OTHER CULTURES, OTHER LIVES (3)
Customs, conditioning values, attitudes in various cultures the caseworker may encounter. Similarities and differences of other cultures. Guest lecturers from different ethnic backgrounds.
- 332 PSYCHOLOGICAL IMPACT OF POVERTY (3)
Prereq: Urban Ctr 331. How impoverished families see themselves and the world around them and especially the agencies and workers setting out to help them. Life on welfare and difficulties in attitudes toward the legal system
- 333 PSYCHOLOGICAL INSIGHTS IN LITERATURE (3)
Prereq: Urban Ctr 332. The use of literature to illustrate in a dramatic way some fundamental concepts in psychology and, conversely, the use of psychology to develop insights into works of fiction that would be overlooked by other methods of analysis.

- 334 **EXPLORATION OF THE SELF THROUGH ART AND LITERATURE (3)**
Increasing the prospective counselor's self-understanding through the appreciation of art and literature and through the experience of self-expression in drawing, painting and writing.
- 335 **MEDIA RELATIONS (3)**
Overview of government/media relations. Confidential information versus public disclosure.
- 341 **SOCIAL INSIGHTS IN AMERICAN LITERATURE (3)**
Major themes of the American experience as expressed through important and representative works of literature.
- 342 **SEMINAR IN PUBLIC ISSUES (3)**
Selected topics and problems in public issues.
- 343 **UTOPIAS (3)**
An examination of the writings of classical and modern authors on ideal social and political communities and of attempts to implement these ideas; the writings of Plato, Moore, Campanelli, Huxley, Skinner and others; the Oneida and Amana communities; modern communal and utopia experiments.
- 381 **MUNICIPAL BUDGETING (4)**
Prereq: introductory accounting series. Revenues, expenditures and debts of state, local and federal governments. Economics and legislative controls and problems of taxation.
- 395 **URBAN POLITICS (4)**
Review of current problems facing urban cities, such as housing, race relations, poverty, crime, welfare and citizen participation.
- 401 **CONCENTRATIONS (3-5)**
- 410 **PUBLIC POLICY ANALYSIS (3)**
Focuses on the methods of urban policy analysis as they relate to the family, education, housing, welfare programs, transportation, legal system and employment.
- 412 **PUBLIC POLICY AND ADMINISTRATION (4)**
Prereq: Mgmt 304. Current and future problems facing public organizations.
- 417 **SEMINAR IN BUSINESS (3)**
Prereq: permission of instructor. Selected topics in business. May be repeated for credit.
- 418 **SEMINAR IN SOCIAL SERVICES (3)**
Prereq: permission of instructor. Selected topics in social services. May be repeated for credit.
- 420 **LABOR MANAGEMENT RELATIONS (4)**
Prereq: Mgmt 322. Current trends in labor management relations. Statutory requirements for bargaining. Mediation and arbitration. Collective bargaining exercise.
- 423 **MANAGEMENT IN THE PUBLIC SECTOR (4)**
Prereq: Mgmt 302. Public sector versus private sector management. The role of the manager in a bureaucratic setting. Constraints and problems related to public management.
- 421 **THEORIES OF PERSONALITY (3)**
Presentation of the major theories in psychology today that attempt to explain why we think, feel and act as we do. Includes transactional analysis, gestalt therapy, psychoanalysis, radical therapy, existential-humanism, the work of B.F. Skinner and others.
- 432 **THE HELPING RELATIONSHIP (4)**
Prereq: Urban Ctr 431. Presents some ideas on how people help other people to change and grow. Includes common issues which arise in individual and family relationships, and how these can be dealt with to help others reach their goals and fulfill their potential.
- 433 **THEORY AND PRACTICE IN HELPING (3)**
Prereq: Urban Ctr 432. Integration of theory and specific helping techniques with individuals, families and groups.
- 441 **TECHNIQUES OF CASEWORK (3)**
Approaching the family, interviewing skills, clarifying goals, etc.
- 442 **ROLE OF THE CASEWORKER (3)**
Prereq: Urban Ctr 441. Functions of caseworkers in today's society; the tasks caseworkers perform; their responsibilities.
- 443 **CASEWORK THEORIES (3)**
Prereq: Urban Ctr 442. Controversies and conflicts within the profession; aims and goals of casework.
- 444 **THE JUVENILE AND THE LAW (3)**
Prereq: Urban Ctr 321, 322, 323, 433, 443. Examination of the legal basis for special treatment of minors; values, assumptions and philosophies behind laws; regulations as well as laws; abortion; adoption; guardianship; dependency; child abuse; neglect; compensatory education; delinquency; treatment and corrections.
- 461 **FUNDAMENTALS OF SOCIAL RESEARCH (3)**
Prereq: Urban Ctr 303. Introduction to concepts and methods of social research techniques as they apply to community research. Use of statistical analysis and routines such as SPSS for problem solving.
- 471 **TECHNIQUES OF COMMUNITY NEEDS ASSESSMENT (3)**
Prereq: Urban Ctr 461. Practice in community needs assessment in Seattle neighborhoods; research paper required.
- 498 **FINAL PROJECT SEMINAR (5)**
- The following courses are offered at the Seattle Urban Center through a special arrangement with the College of Business and Economics. Complete descriptions can be found in the specified departmental section in this catalog.**
- Mgmt 302 Introduction to Management and Organizational Behavior (4)
Mgmt 304 Introduction to Management (4)
Mgmt 322 Human Resources Administration (4)
Mgmt 330 Principles of Marketing (4)
Mgmt 360 Operations Management (4)
Mgmt 401 Organizational Theory II (4)
Mgmt 425 Industrial Relations Administration (4)
Mgmt 495 Business Policy (4)
FMDS 356 Quantitative Methods (2)
- The following Huxley College courses are offered at the Seattle Urban Center as part of the public management concentration. Please see the Huxley College section of this catalog for complete course descriptions.**
- Hux 335 Human Ecology (4)
Hux 480 Urban Economics (4)

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Riggins, Ronald D. / Physical Education
Ritter, Harry R., Jr. / History
Ritter, Marian B. / Library
Robbins, Lynn A. / Huxley
Roberts, Jane E. / Home Economics
Robinson, Walter L. / Foreign Languages
Rohy, Paul L. / History
Ross, G. Robert / Educational Administration &
Foundations
Ross, June R. P. / Biology
Rothwell, J. Dan / Speech and Broadcast
Ruce, John A. / Accounting
Rupaal, Ajit S. / Physics/Astronomy
Russo, Salvatore / Chemistry
Rutan, Gerard F. / Political Science
Rutschman, Carla J. / Music
Rutschman, Edward / Music
Rygg, Paul T. / Mathematics
Rystrom, David S. / Finance, Marketing and
Decision Sciences
- Safavi, Farrokh / Finance, Marketing and
Decision Sciences
Sailors, William M. / Accounting
Savay, Ronald N. / Accounting
Scandrett, Robert L. / Music
- Schlotterback, Thomas / Art
Schneider, David E. / Biology
Schwalm, Ray A. / Technology
Schwartz, Maurice L. / Geology/Educational
Curriculum & Instruction
Schwartz, Sy / Educational Administration &
Foundations; Educational Curriculum & Instruction
Schwarz, Henry G. / History
Schwemmin, Donald J. / Biology
Scott, James W. / Geography
Scott, William H. O. / Library
Seal, Michael R. / Technology
Seilo, Michael T. / Speech Pathology & Audiology
Senge, Steven V. / Accounting
Senger, Clyde M. / Biology
Shaffer, Ronald W. / Psychology
Shaw, Albert C. / Music
Simpson, Carl H. / Sociology
Singleton, William R. / Accounting
Skinner, Knute / English
Sleeman, Allan G. / Economics
Slesnick, Irwin L. / Biology
Smith, Alden C. / Speech and Broadcast
Smith, Richard G. / Geography
Solomon, Arthur L. / Speech Pathology &
Audiology/Speech
Southcott, Marvin A. / Technology
Spanel, Leslie E. / Physics/Astronomy
Speirs, James A. / Speech Pathology & Audiology
Sprague, Donald L. / Physics/Astronomy
Stannard, R. E., Jr. / Journalism
Steffens, Peter / Journalism
Stephan, G. Edward / Sociology
Stevenson, Joan C. / Anthropology
Stoever, William K. B. / Liberal Studies
Stoops, Robert F., Jr. / Liberal Studies
Suzcek, Christopher / Geology
Summers, William C. / Huxley
Sylvester, Charles D. / Physical Education
Symes, Ken M. / English
- Talbot, James L. / Geology
Taylor, Christopher J. / Psychology
Taylor, Herbert C., Jr. / Anthropology
Taylor, Ronald J. / Biology
Taylor, Sandra J. / Psychology
Templeton, David E. / Art
Terey-Smith, Mary / Music
Terich, Thomas A. / Geography
Thomas, Leslie J. / History
Thomas, Martha C. / Nursing
Thompson, Richard W. / Psychology
Thoreson, Hubert N. / Office Administration/
Business Education
Thorndike, Robert M. / Psychology
Tonjes, Marian J. / Educational Curriculum &
Instruction
Towner, John C. / Educational Curriculum &
Instruction
Tragesser, Cilla / Educational Administration &
Foundations
Trimble, Joseph E. / Psychology/Educational
Administration & Foundations
Truschel, Louis W. / History
Tyler, Vernon O., Jr. / Psychology
- Ural, Saim / Computer Science
Urso, Robert A. / Art
Utendale, John F. / Educational Administration &
Foundations
- Vander Velde, Philip B. / Educational Administration &
Foundations

Vander Yacht, Douglas R. / Theatre/Dance
 Van Sant, Vernon / Technology
 Vawter, Richard D. / Physics/Astronomy
 Veit, J. Joseph / Physics/Astronomy
 Vernacchia, Ralph A. / Physical Education
 Vike, Gene E. / Art
 Vogel, Richard F. / Technology

Wachbit, Robert E. / Philosophy
 Wallace, William L. / Liberal Studies
 Ward, Thomas E. / Theatre/Dance
 Waterman, C. Fred / Library
 Webb, Loren L. / Speech Pathology & Audiology
 Webber, Herbert H. / Huxley
 Weiner, Homer A. / Art
 Weiner, Ruth F. / Huxley
 Weiss, Rudolf / Foreign Languages
 Weyh, John A. / Chemistry
 Whalley, Pamela S. / Economics
 Whitmer, John C. / Chemistry
 Wicholas, Mark L. / Chemistry
 Williams, Don C. / Biology
 Wilson, H. William / Chemistry
 Wiseman, Don W. / Physical Education
 Wodzicki, Antoni / Geology
 Woll, John W. / Mathematics
 Wonder, Bruce D. / Management
 Wright, Evelyn C. / English

Yu, Ming-Ho / Huxley
 Yusa, Michiko / East Asian Studies

Zeine, Lina / Speech Pathology & Audiology
 Ziegler, David W. / Political Science
 Zoro, Eugene S. / Music
 Zurfluh, Linda / Educational Curriculum & Instruction

WILSON LIBRARY

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 Catalog Librarian. AB, Occidental College; MLS, University of California, Los Angeles.
 ROBERT J. CROSS (1969) Associate Professor and Associate Director for Public Services. BA, Carleton College; MLS, University of Washington.
 THOMAS FRAZIER (1964) Associate Professor and Humanities Librarian. BA, MA, MLS, University of Washington.
 ENID HAAG (1975) Associate Professor and Education Librarian. BS/Educ, University of Nebraska; MA/Educ, MLS, University of Denver.
 KATHLEEN J. HASELBAUER (1972) Assistant Professor and Science Librarian. BA, Western Washington University; MLS, University of Washington.
 RAYMOND G. McINNIS (1965) Associate Professor and Head Reference Librarian. BA, University of British Columbia; MLS, University of Washington.

DAN MATHER (1969) Associate Professor and Associate Director for Technical Services & Library Systems. BA, MLS, University of Washington.
 DONNA E. PACKER (1982) Assistant Professor and Head of Acquisitions. BA, BLS, University of British Columbia; MBA, Western Washington University.
 RICHARD K. PETERSON (1966) Associate Professor and Special Collections Librarian. BA, University of Washington; BA in Ed, Western Washington University; MA, PhD, MLib, University of Washington.
 CYNTHIA S. RICHARDSON (1978) Assistant Professor and Catalog Librarian. BA, Whitman College; MLS, University of Southern California.
 MARIAN A. RITTER (1969) Assistant Professor and Music Librarian. BMA, MLS, University of Portland.
 WILLIAM H. O. SCOTT (1960) Associate Professor and Documents Librarian. AB, AM, AMLS, University of Michigan.
 C. FRED WATERMAN (1967) Assistant Professor and Business Librarian. BS, MLS, University of Pittsburgh.

DEGREES AND CERTIFICATES

Degrees granted from August, 1983, to June, 1984, inclusive:

Master of Education	89
Master of Arts	55
Master of Science	34
Master of Music	10
Master of Business Administration	2
Bachelor of Arts in Education	294
Bachelor of Arts	1,048
Bachelor of Science	385
Bachelor of Fine Arts	6
Bachelor of Music	34
Bachelor of Nursing	7
Total	1,964

Recommended for certification to the State Superintendent for Public Instruction — August 1983, to June, 1984, inclusive:

Initial Teaching Certificate	398
Standard Teaching Certificate	160

Colleges/Departments

ARTS & SCIENCES, College of Old Main, OM 310	
Anthropology	Arntzen Hall, AH 316
Biology	Haggard Hall, HH 351
Chemistry	Haggard Hall, HH 207
Communication	College Hall, CH 109
Computer Science	Bond Hall, BH 302
Continuing Education	Old Main, OM 400
English	Humanities Building, HU 329
Foreign Languages	Humanities Building, HU 231
Geography & Regional Planning	Arntzen Hall, AH 217
Geology	Environmental Studies Center, ES 240
History	Humanities Building, HU 275
Home Economics	Old Main, OM 560
Journalism	College Hall, CH 109
Liberal Studies	Arntzen Hall, AH 314
Mathematics	Bond Hall, BH 202
Nursing	Old Main, OM 530
Philosophy	Humanities Building, HU 374
Physical Education, Health & Recreation	Carver Gymnasium, CV 102
Physics and Astronomy	Bond Hall, BH 152
Political Science	Arntzen Hall, AH 415
Psychology	Miller Hall, MH 220
Sociology	Arntzen Hall, AH 510
Speech Pathology/Audiology	Parks Hall, PH 017
Technology	Art/Technology, AT 105
BUSINESS & ECONOMICS,	
College of	Parks Hall, PH 419
Accounting	Parks Hall, PH 451
Economics	Parks Hall, PH 315
Finance, Marketing & Decision Sciences	Parks Hall, PH 343
Management	Parks Hall, PH 351
Office Administration and Business Education	Parks Hall, PH 343
EDUCATION, School of Miller Hall, MH 218	
Educational Curriculum & Instruction	Miller Hall, MH 322
Educational Administration & Foundations	Miller Hall, MH 206
Library Science	Miller Hall, MH 363
FAIRHAVEN COLLEGE Fairhaven College, FC	
FINE & PERFORMING ARTS,	
College of	Performing Arts Center, PA 365
Art	Art/Technology, AT 207
Music	Performing Arts Center, PA 273
Theatre/Dance	Performing Arts Center, PA 395
HUXLEY COLLEGE OF ENVIRONMENTAL STUDIES Environmental Studies Center, ES 539	

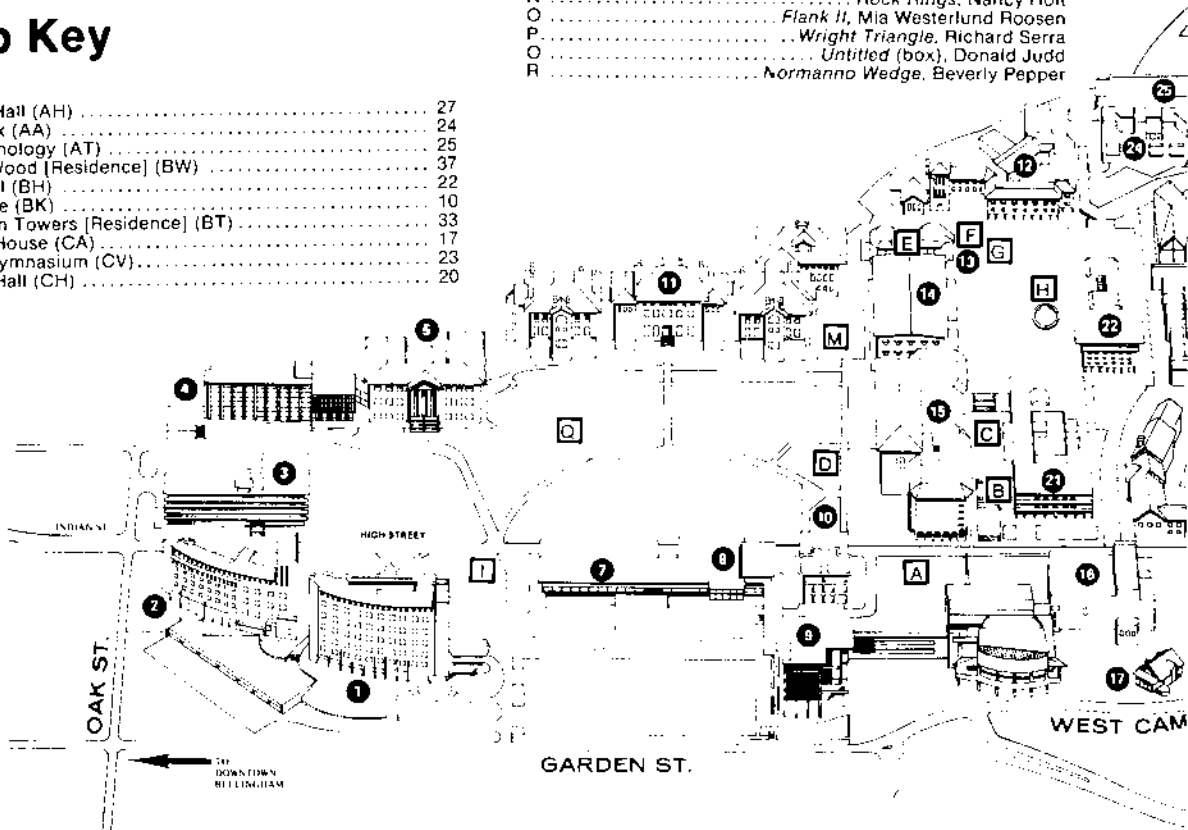
Commissary (CM)	34
Edens Hall (EH)	5
Edens Hall North [Residence] (EN)	4
Environmental Studies Center (ES)	28
Fairhaven College (FC)	32
Haggard Hall (HH)	21
Higginson Hall [Residence] (HG)	3
Highland Hall [Residence] (HL)	29
High Street Hall (HS)	18
Humanities Building (HU)	14
Lecture Halls (LH)	13
Maintenance-Motor Pool (MP)	35
Mathes Hall [Residence] (MA)	1
Miller Hall (MH)	12
Nash Hall [Residence] (NA)	2
Old Main (OM)	11
Parking Office (PK)	39
Parks Hall (PH)	40
Performing Arts Center (PA)	16
Physical Plant (PP)	36
Public Safety Building (PS)	31
Ridgeway Complex	30
Alpha [Residence]	Gamma [Residence]
Beta [Residence]	Kappa [Residence]
Delta [Residence]	Omega [Residence]
	Sigma [Residence]
Steam Plant (SP)	26
Stearns House (SH)	19
Viking Commons [Dining] (VC)	7
Viking Union (VU)	8
Viking Union Addition (VA)	9
Visitors Center	38
Wilson Library (WL)	15

Sculpture

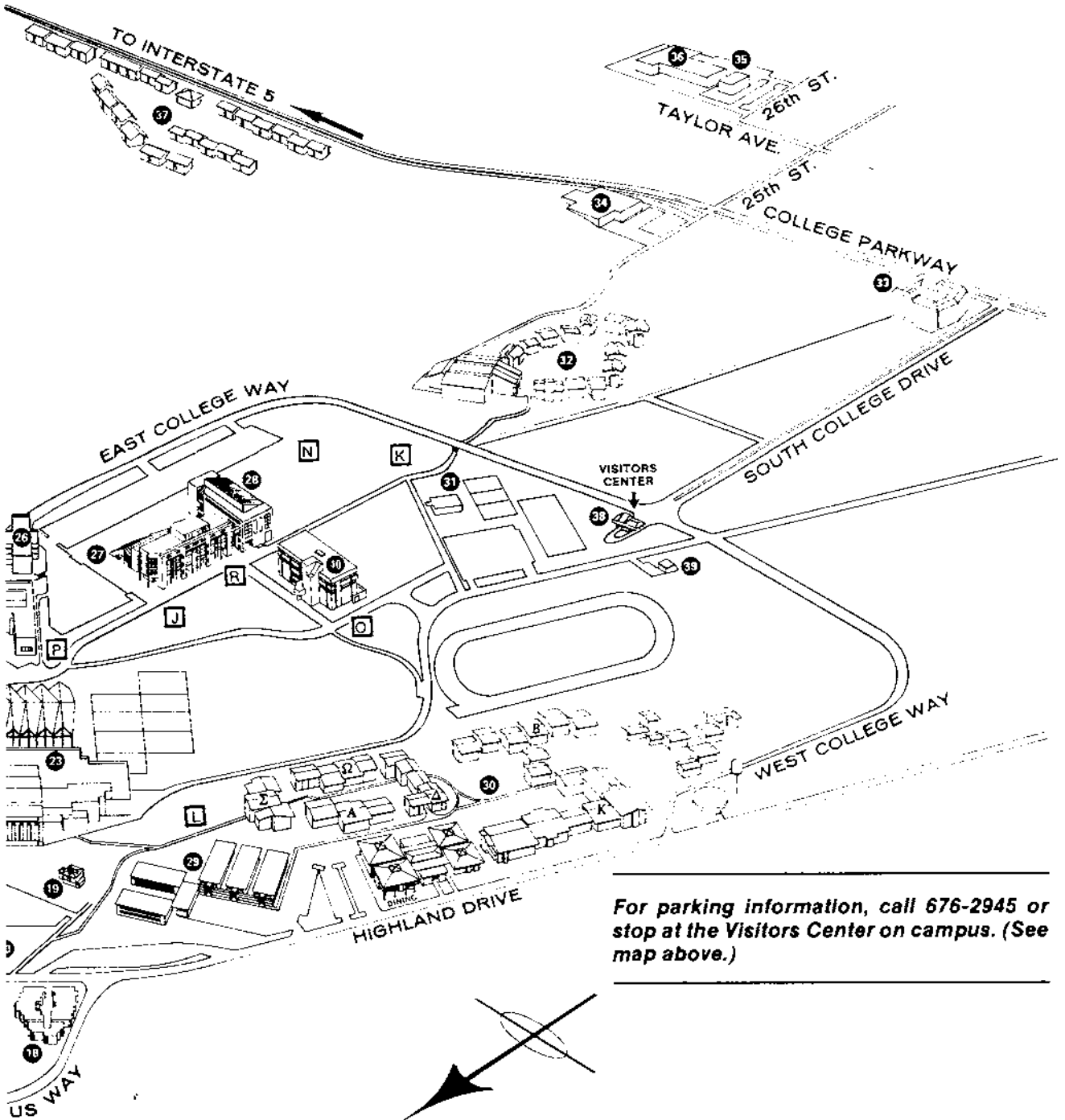
A	For Handel, Mark diSuvero
B	Rain Forest, James Fitzgerald
C	Alphabeta Cube, Fred Bassetti
D	The Man Who Used to Hunt Cougars For Bounty, Richard Beyer
E	Totem, Norman Warsinske
F	Scepter, Steve Tibbetts
G	Sky-Viewing Sculpture, Isamu Noguchi
H	Fisher Fountain, Ibsen Nelsen
I	Diagonal Curve, Robert Maki
J	Log Ramps, Lloyd Hamrol
K	Steam Work for Bellingham (1971), Robert Morris
L	Ridgeway Animals, Marian Melim, Noel C. Osheroff
M	India, Anthony Caro
N	Rock Rings, Nancy Holt
O	Flank II, Mia Westerlund Roosen
P	Wright Triangle, Richard Serra
Q	Untitled (box), Donald Judd
R	Normanno Wedge, Beverly Pepper

Map Key

Arntzen Hall (AH)	27
Art Annex (AA)	24
Art/Technology (AT)	25
Birnam Wood [Residence] (BW)	37
Bond Hall (BH)	22
Bookstore (BK)	10
Buchanan Towers [Residence] (BT)	33
Canada House (CA)	17
Carver Gymnasium (CV)	23
College Hall (CH)	20



When approaching Bellingham from the north or south on Interstate 5, take Exit #252, marked Samish Way and Western Washington University. Turn west onto Samish Way and follow the signs to College Parkway and the University campus.



For parking information, call 676-2945 or stop at the Visitors Center on campus. (See map above.)

Appendices

Appendix A AFFIRMATIVE ACTION/ EQUAL OPPORTUNITY POLICY AGAINST DISCRIMINATION

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, handicap, marital status or 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 insure 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.

The objectives of the Western Washington University Affirmative Action Program are to eliminate discrimination and to develop a work force and student body which reflect an equitable distribution of minority group members, women, veterans and handicapped individuals at all levels of employment and throughout all departments of the University.

Personnel Policies

The University recruits on the basis of qualifications without regard to race, color, religion, national origin, sex, age, handicap, marital status, or 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, handicap, or marital 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 Affirmative Action Director, 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 handicap 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 Office of Student Life. If further assistance is needed in obtaining these modifications or aids, the Affirmative Action Office 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, handicap, marital status, or Vietnam era or disabled veteran status is urged to utilize the internal grievance procedure provided by the University through the Affirmative Action Office as soon as possible after the alleged act of discrimination giving rise to the grievance. (See Appendix H.)

The Affirmative Action Office is located in Old Main 335, telephone 676-3306. Mary Robinson is the Affirmative Action Officer and is responsible for 504, Title IX, Title VII and all other affirmative action/equal opportunity laws.

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 and Dean of Student Affairs or designee. In some cases, the Assistant to the Vice President and Dean of 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 and Dean of Student

Affairs 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 and Dean of Student Affairs 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 and Dean of Student Affairs determines there is reasonable cause to believe that sexual harassment has occurred, the Vice President and Dean of Student Affairs 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 and Dean of Student Affairs 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 and Dean of Student Affairs 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.

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 516-22-100 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

Appendices

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.

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.

WAC 516-22-200 Alternative Judicial Proceeding. In cases where a clear or present danger does not exist but where repeated behavior which interferes with the rights of others or which materially or substantially obstructs or disrupts teaching, research or administrative functions has occurred, and/or where there is a question as to whether the student's mental health is such that he/she can

profit from a particular university experience, the case will be referred by the Dean of Students to the Vice President for Student Affairs.

(1) Prior to such referral, the Dean of Students shall have attempted to assist the student through counseling or referral to other agencies. There should be written indication that such attempts at assistance have been offered and that other students or faculty or the educational mission of the University has been adversely affected by the individual's behavior.

(2) The Vice President will confer with the student to determine whether there has been such repeated disruptive behavior, and to determine an appropriate course of action. A student may bring a non-lawyer advocate to speak in his/her behalf to the meeting with the Vice President. In the absence of such an advocate, the Vice President may appoint a person to assist the student before and during the meetings with the Vice President.

(3) If in the Vice President's judgment there has been such repeated disruptive behavior and/or there is a question as to the student's mental health and his/her ability to profit from a particular university experience, the Vice President shall decide upon an appropriate action based upon one or a combination of the following:

- (a) Continued enrollment.
- (b) Treatment to be determined by the student with the Vice President's concurrence.
- (c) Change of living environment.
- (d) Required medical leave of absence for a specified period. In the event of this action, the Vice President may require that the student provide reasonable evidence of readiness to cope with the University environment before he/she can be readmitted.

(4) The alternative judicial procedure set forth here is an informal proceeding, and a student has a right to an appeal through a request for a formal hearing in accord with RCW 28B.19.110 and WAC 516-08.

WAC 516-22-210 Committee on Student Rights and Responsibilities. There is established a Committee on Student Rights and Responsibilities to be composed of four students: one appointed by Inter-Hall Council, one appointed by the President of the Associated Students, one appointed by the Associated Students Governing Board, and one selected at large from the student body; one member of the Student Affairs staff appointed by the Vice President for Student Affairs; one faculty member appointed by the Faculty Senate; the Dean of Students; and the Director of Public Safety.

(1) The primary purpose of the Committee on Student Rights and Responsibilities shall be to evaluate the University's "Student Rights and Responsibilities Code." The Committee may provide interpretations or may recommend changes in policy concerning student rights and responsibilities.

(2) The Committee shall act as appellate group for decisions by the Vice President for Student Affairs to withhold certain records from students; shall act as appellate group in accordance with WAC 516-26-060 if informal proceedings fail to resolve complaints of students; and shall provide the review and revision mechanism for recommending changes in the "Student Records Policy," WAC 516-26.

WAC 516-22-250 Fairhaven College Jurisdiction. Fairhaven College shall have jurisdiction over all violations which occur within the College classrooms. It shall establish and maintain a judicial process which shall be published annually for Fairhaven College students. Violations of University policies by Fairhaven College students while on the main campus of Western Washington University shall be handled under the jurisdiction of the University judicial structure.

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, that is appropriating the literary composition of another or parts or passages of another's writing, or the ideas or language of the same, and passing them off as the product of one's own mind.

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.

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 Provost. A record of the violation is maintained in the Office of the Provost. 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 Affairs.

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 Public Law 93-380, 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.

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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 Public Safety do not have access to education records under WAC 516-26-080, the records and documents of the department which are kept apart from the 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; 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) a personal identifier, such as the student's social security number or student number; (d) a list of personal characteristics which would make it possible to identify the student with reasonable certainty; or (e) other information on 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 Washing-

ton 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 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 516-26-050 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 student;

(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 of 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 516-26-060 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 516-26-080 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, 516-26-80 or 516-26-85.

(2) The term "directory information" shall include information relating to the student's name, local and home address, telephone listing, class schedule, dates of attendance, degrees and awards received, participation in officially recognized sports, and weight and height if a member of an athletic team.

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 provide reasonable notification to students of the rights of students under this chapter.

(1) Notice will be provided to students under this section at least annually, and shall include the following:

(a) A statement of the types of education records maintained by the University;

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(b) The name and position of the employee of the University responsible for the maintenance of each type of record, the persons who have access to those records, and the purposes for which such persons have access.

(c) A copy of the rules and procedures set forth in this chapter; and
(d) A statement concerning the cost which will be charged to a student for reproducing copies of the student's records

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, (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 and Dean of 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 Provost for Instruction 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.

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(b) *Mediation.* A mediator may be appointed by the Vice Provost for Instruction 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 resolution 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 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 insure 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 or 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 or her share of faculty responsibilities for the governance of this institution.

Section 5

As a member of this institution, each

Appendices

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 or she should either request a leave of absence or resign his or 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 Mary Robinson, Affirmative Action Officer, Old Main 335, phone 676-3306.

A person who believes he or she has been discriminated against by the University because of race, color, religion, national origin, sex, age, handicap, marital status or Vietnam Era or disabled veteran status is urged to utilize the internal grievance procedure provided by the University through the Affirmative Action Office as soon as possible after the alleged act of discrimination giving rise to the grievance.

A. Informal Resolution

Any person may contact the Affirmative Action Office for informal discussion, advice and assistance. These contacts are kept confidential. The Affirmative Action director will act as facilitator upon request.

B. Formal Investigative Resolution

1. Any person may file a formal grievance against any employee, department or unit of the University if he or she believes illegal discrimination has taken place by filing a written description of the alleged act of discrimination with the Affirmative Action director on the form provided by the Affirmative Action Office. Statements should be as detailed and accurate as possible.

2. The grievant will 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 will be notified of the grievance within three working days.

3. The Affirmative Action director or an investigator designated by him or her must meet with the grievant within ten working days of receipt of the formal grievance. The grievant may be accompanied by an advocate or observer.

4. The Affirmative Action director (or his or her designee) will investigate the grievance, including meeting with the respondent (and the respondent's advocate/observer).

5. Within 15 working days following the first meeting with the grievant, the investigator will meet with the grievant, the respondent and their advocates/observers for further information gathering. The grievant and respondent must submit the names of all witnesses they

wish the investigator to interview and all documents they wish the investigator to study.

6. Following this meeting, the documentation and witness statements will be compiled and evaluated. The Affirmative Action director, in consultation with the President and after receiving legal advice from the assigned Assistant Attorney General, will prepare findings of fact, conclusions, and recommend remedies, if any. This report will be given to the grievant, the respondent, the appropriate Vice President, and the President of the University within 20 working days of the second meeting.

7. If the report of the Affirmative Action director is acceptable to the grievant, the respondent and the appropriate Vice President, the President may direct implementation of the report or may modify it.

8. If the grievant, respondent or the appropriate Vice President finds the report or President's decision unacceptable and wishes to appeal, a written appeal must be submitted to the President within 10 calendar days. The appeal must specify in detail which of the findings of fact, conclusions, recommended remedies or other aspects of the report or decision to which exception is taken as well as the reasons for the exceptions.

If the individual appealing has appeal rights under WAC Chapter 516-08, the hearing procedure contained therein will be utilized. Other appeals will be heard by a three member Appeal Panel to be appointed by the President within 10 working days of the appeal.

The Appeal Panel will receive the Affirmative Action director's report, case file and President's decision. Unless a manifest injustice would result, the Appeal Panel will not examine documents or call witnesses not previously submitted or consider aspects of the report or decision for which specific written exception has not been taken in the appeal.

The Appeal Panel will submit a written recommendation to the President. The Appeal Panel recommendation is not binding on the President or the Board of Trustees.

9. The President may make a final decision for the University for payments of \$2,000 or less to a 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.

C. Alternative Formal Resolution

The grievant may choose to utilize the formal grievance procedure of his/her group such as the faculty, student or labor agreement procedure. These alternative formal procedures are mutually

exclusive. A grievant choosing Alternative C and not finding the satisfaction sought may not turn to Alternative B. It is the prerogative of the body creating the grievance procedure under Alternative C whether they will entertain a grievance which has previously been heard under Alternative B.

D. Handicap Grievance

A person denied access to a program or activity or employment because of a determination that that individual's handicap disqualifies him/her may appeal the decision to an ad hoc handicap grievance tribunal consisting of a student and an employee (faculty if the dispute concerns an academic program), one of whom is handicapped, and an expert in handicap rehabilitation to be appointed by the President

A person who has been refused admission to Western Washington University and who believes his/her handicap 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 handicap, a person, usually a member of the faculty, with expertise in the rehabilitation of the handicap 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.

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
1601 Second Avenue Building
Seattle, WA 98101
Phone: (206) 464-6500

Office of Civil Rights,
Department of Education
2901 Third Avenue
Mail Stop 106
Seattle, WA 98121
Phone: (206) 442-1635

Office of Federal Contract Compliance
Room 3038 Regional Office or
Room 1104 Area Office
909 First Avenue
Seattle, WA 98174
Phone: (206) 442-4508

Equal Employment
Opportunity Commission
710 Second Avenue
Dexter-Horton Building, 7th Floor
Seattle, WA 98104
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 makes the parking currently available on and around the campus inadequate to cover the desires of the University community.

Western Washington University has established rules and regulations governing parking under Washington State Administrative Code 516-12. Although parking regulations are constantly under study and revision, all students who utilize parking facilities on campus are required to purchase a parking permit and register their car (or cars), motor bike or motorcycle at or before the time of official registration. The current parking permit fees vary from \$12 to \$26 per quarter depending on the location of the parking lot. Violators of parking regulations are towed away. For further information, contact the Parking Services Office on campus.

POLICY OF NON-DISCRIMINATION

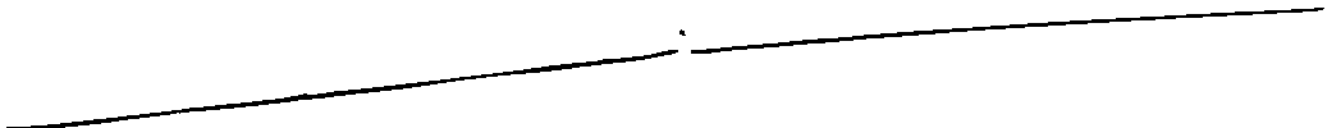
Western Washington University is committed to assuring that all programs and activities are readily accessible to all eligible persons without regard to their race, color, religion, national origin, sex, age, marital status, or the presence of any physical, sensory or mental handicap. The laws under 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 Educational Amendments of 1972, which prohibits discrimination based on sex in all federally assisted education programs.
 - Section 504 of the Rehabilitation Act of 1973, which prohibits discrimination against qualified persons having any physical, sensory or mental handicap by recipients of federal financial assistance.
 - The Washington State Law Against Discrimination RCW 49.60, which prohibits discrimination because of race, creed, color, national origin, sex, marital status, age or the presence of any sensory, mental or physical handicap.
- Persons having questions regarding University policies relating to these laws should contact Mary Robinson at the Affirmative Action Office, Old Main 335, (206) 676-3306.

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